ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DOTTORATO DI RICERCA IN LINGUE,

LETTERATURE E CULTURE MODERNE: DIVERSITÀ ED INCLUSIONE

Ciclo 36

Settore Concorsuale: 10/G1 - GLOTTOLOGIA E LINGUISTICA

Settore Scientifico Disciplinare: L-LIN/02 - DIDATTICA DELLE LINGUE MODERNE

METACOGNITION AND MOTIVATION IN READING COMPREHENSION: THE CASE OF ITALIAN AS A FOREIGN LANGUAGE

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Esame finale anno 2024

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Abstract

This dissertation focuses on the B1 level reading comprehension task of the high-school-leaving exam undertaken by Italian as a Foreign Language (FL) learners enrolled in *Allgemeinbildende Höhere Schulen* (AHS) in Austria. The research project aims to offer support to teachers and learners by examining the domain of reading comprehension through a metacognitive and motivational pedagogical lens.

The study adopts a pre-test and post-test design involving an experimental group and a control group. The experimental group undergoes a metacognitive-motivational training session specifically designed for the reading and comprehension task of Italian as a Foreign Language. The learning objectives of the experimental training are identified through a Cognitive Task Analysis (CTA) approach, utilizing a triangulation of methods to define task characteristics, cognitive-linguistic requirements, and strategic pathways. Additionally, the CTA examines learners' metacognitive awareness of reading strategies and their motivational attitude towards Italian as a FL.

The primary objective of this research is to assess whether the experimental training induces any changes in the complex dynamic system of the FL classroom. This assessment encompasses aspects such as performance, metacognitive awareness, and motivational attitudes within the sample. The study aims to contribute valuable insights into the effectiveness of metacognitive-motivational interventions in enhancing the reading and comprehension abilities of Italian FL learners in the Austrian educational context.

Preface

The inspiration for the research project explored in this dissertation is rooted in various personal experiences encompassing academic and professional spheres. Notably, my engagement in tutoring "Text Comprehension" at the DISPSC of the University of Salerno, the participation in a teacher training for Italian as a native language (L1) within the Alpha-mente Project (Literacy area) at the same university, as well as the Italian language assistantship in Austria during the 2019-20 academic year have all significantly contributed to shaping this research work. Despite the diversity of the linguistic landscapes, encompassing both Italian as L1 or Italian as a foreign language (FL) settings, these experiences unveiled major weaknesses in the effective adoption of metacognitive strategies essential for navigating text comprehension tasks in class. Moreover, both contexts registered a certain degree of demotivation among the learners towards both the reading comprehension task and the Italian language as a subject of study.

This dissertation specifically targets the context where Italian is adopted as a foreign language and this decision is driven by three primary considerations. Firstly, there exists a personal and empathetic desire to bolster the passion and dedication of teachers instructing Italian as a FL. Following this purpose, one of the aims of this work is to provide comprehensive knowledge in the realm of text comprehension, which is intended to serve as a valuable resource, always accessible to teachers who aspire to delve into the intricacies of teaching Italian as a FL. Moreover, a secondary objective working in this direction is to find renewed conceivable teaching techniques to impart meta-strategic knowledge, which might serve as inspiration for teachers aiming to enhance learners' comprehension skills. The second reason for addressing FL context revolves around the growing significance and prestige of Italian as a FL in recent years (Giovanardi and Trifone, 2012). To further elevate the appreciation and study of this language globally, it is imperative to focus on motivating learners and highlighting Italian as a valuable asset for their future professional careers. Lastly, the ultimate reason is rooted in the necessity to render the learning of the Italian language more practical and accessible. This reason underscores the need for the production of specialized learning materials, which may facilitate learners in achieving enhanced, meaningful, and comprehensive levels of competence in the Italian language.

Introduction

This thesis constitutes the final submission for the PhD course in "Modern Languages, Literatures and Cultures: Diversity and Inclusion", under the recently established LINGMOD (Modern Languages) curriculum. Within this curriculum, the principal areas of focus include linguistics and modern language teaching. Aligned with these overarching subjects, the current dissertation is conceived as an independent scholarly endeavour, delving into the realm of experimental language teaching and learning, specifically within the pedagogy of Italian as a Foreign Language (FL).

In this introductory section, we intend to present several aspects of our research work. Firstly, we will provide insights into the geographical and linguistic context that frames our study, alongside the educational setting upon which our attention is concentrated. Subsequently, we will expound upon the theoretical frameworks underpinning our research, elucidating the specific theories that comprehensively guided the realisation process of this research project. Following this, we will offer a succinct overview of the distinct developmental phases undertaken in the implementation of this project, from the initial scientific literature search to the ultimate process of scientific writing. Concluding this introductory discourse, we will furnish an outline of the thesis structure, delineating the theoretical, methodological, and experimental chapters, which collectively contribute to the overall composition of this dissertation.

Research context and theoretical positioning

The framework of our dissertation revolves around the context of Italian as a foreign language instruction at the *Allgemeinbildende Höhere Schule* (AHS) in Austria. More precisely, our research project delves into a specific facet within this context, i.e. the high-school-leaving exam, commonly known as *Maturaprüfung*, which learners of Italian encounter upon completing their secondary education at these institutions. The focus on this particular segment of Italian language education in Austria arises from the significant impact of the recent implementation of the new *Maturaprüfung* on the educational landscape in the region.

Since 2015, the *Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens* (BIFIE) has officially introduced a novel modality for the high-school-leaving exam in AHS and other institutes within the Austrian school system. This innovative approach deviates from its predecessor by incorporating standardized tests across various subjects, including foreign languages. The Ministry of Education initiated this change with the intention of aligning more tangibly with the European Union's directives on ensuring transparency and comparability of learner assessments across diverse educational frameworks (Konrad et al., 2018)[1].

However, the implementation of this new testing modality has resulted in a substantial shift in the pedagogical dynamics of Italian language instruction in Austria. This transformation stems from the inherent disparity often observed between the skills emphasized by the testing format and those taught in the classroom setting (Gorsuch and Griffee, 2018). The primary challenge with these top-down policies and subsequent adaptation processes is that both educators and learners frequently bear the consequences. Educators find themselves compelled to assist learners in navigating the language examination, relying on their relatively broad knowledge and experience. Conversely, learners experience demotivation when confronted with tests for which they perceive a lack of developed skills, potentially impacting their motivation to engage with the language itself as a subject of study.

Against this background, we have chosen to focus our research specifically on text comprehension, one of the language skills assessed by the newly introduced standardized FL tests. The reading comprehension task of the Austrian *Maturaprüfung* is intricately embedded within a highly detailed technical framework specifically tailored for the development of the high-school-leaving exam in FLs. In 2013, dedicated test-design committees were established for each FL, aligning their work with the Common European Framework of Reference for Languages (CEFR) (2001) as a foundational guide in the standardization of language examinations. The CEFR provided these committees with comprehensive and nuanced descriptors, facilitating the construction of tests suited to the

[1] Aligned with recent governmental policies, the restructuring of the Austrian Maturaprüfung engaged multiple academic institutions, including the Universität Innsbruck, along with other assessment experts. The collective objective of these institutions was to instigate and enhance the standardization procedures for examination tests, ensuring their reliability and widespread applicability.

language proficiency levels outlined in the Austrian ministerial directives (Kremmel et al., 2018).

In accordance with these directives, two predetermined threshold levels are established for FLs, intended to be achieved by learners upon the completion of their school career and the attainment of the high-school-leaving diploma. Specifically, the CEFR parameters for the first FL, typically English in Austria, are set around the B2 level at the conclusion of the school career. On the other hand, the threshold level for the second FL is defined within the B1 level of the CEFR. Within this second category, the FLs commonly taught in Austria as *Wahlpflichtfach* (compulsory subjects of the learner's choice), alongside English, include French, Spanish, Slovenian (mainly in proximity of the eastern border), and, notably, Italian[2].

The specifications outlined above serve to delineate the scope of investigation for this dissertation. In summary, the primary focus of the present research project is the B1 level reading and text comprehension task of the high-school-leaving exam undertaken by Italian FL learners enrolled in AHS schools in Austria. Having defined our research object, it is essential to elucidate the scientific standpoint from which we intend to approach this subject. As highlighted earlier, language teachers and learners have faced major complications in the process of adaptation to the requirements and challenges of the new *Maturaprüfung*. In this context, our research project endeavours to provide support to teachers and learners by exploring the domain of reading comprehension through a metacognitive and motivational pedagogical lens.

The decision to concentrate on the metacognitive and motivational pedagogical dimensions of the text comprehension task is grounded on various considerations. Firstly, there exists research findings (see Dignath et al., 2008) demonstrating the efficacy of combined meta-strategic interventions as a valuable learning aid. Additionally, fostering

[2] As aforementioned, this work centers its attention on Italian within the Austrian context, where Italian holds a distinctive position as a border language, transcending the confines of educational institutions (Diadori et al., 2015). Italian, in both its spoken and written forms, permeates the Austrian territories, particularly owing to the proximity of the Italian borders. This proximity fosters substantial tourist flows, allowing individuals to immerse themselves in various facets of the Italian culture, spanning from holiday destinations, typical food, and fashion to the realms of music, literature, and diverse film productions (Diadori et al., 2015). Notably, in specific geographical areas like Tyrol, Italian attains the status of a second official language, where it is actively used in bilingual contexts within regional institutions, households, and broader societal interactions.

both metacognitive awareness development and effective task strategies teaching serves as valuable support in cultivating learners' autonomy. The role of learners' autonomy is pivotal in enhancing learners' agency and sense of responsibility on their learning process and is regarded as a fundamental tool to sustain inclusion in the educational environment (Dam, 1995; Little, 2004; Ryan and Deci, 2017; Tassinari, 2022). Lastly, metacognitive-motivational teaching intervention are imperative to sustain uniform development of a specific set of skills throughout the language classroom. This aspect becomes even more relevant if it is acknowledged the equalitarian evaluation system presupposed by standardised testing measurements (Ridley, 2003; Wang et al., 2006). Standardised testing, in fact, compares learners' competence against a fixed set of skills, irrespectively of their cognitive differences, learning styles or acquired skills. For this reason, it is essential that all learners feel themselves adequately prepared for these examinations with a suitable array of strategies to enhance the efficiency of the task-solving process.

The formulation of a methodology, tailored to scrutinize the aforementioned research object under the lens of metacognitive and motivational pedagogy, introduced heightened intricacy to this study. It was precisely this complexity that emerged as a robust foundation from which to delineate and specify the key elements of our methodology. In navigating the complex and dynamic landscape of the language classroom's social environment (Larsen-Freeman and Cameron, 2008a; Larsen-Freeman and Cameron, 2008b; Tassinari, 2010; Oxford, 2017), our methodology was designed to focus on the needs of the primary actors of the language class system: teachers and learners. On the one hand, teachers needed to have a thorough understanding of the cognitive-linguistic requirements associated with the text comprehension task, as well as knowledge about metacognitive and motivational strategies that could enhance the task resolution. On the other hand, learners were required to comprehend their current strategies and the extent of the metacognitive awareness influencing their actions during performance. Within the scope of this dissertation, the needs of teachers and learners were unified under a single methodology, specifically Cognitive Task Analysis (CTA) (Morrison et al., 2019), intended to serve as a preliminary analysis of the experimental situation. Cognitive Task Analysis (CTA) emerges as a valuable asset in educational research, acting as a tool to enhance comprehension of educational issues, refine teaching practices, and significantly contribute to the discourse on educational policies. In line with these objectives, this study employed CTA to deepen the understanding of the task characteristics and identify

learners' needs. This facilitated the definition of learning objectives, enabling a more conscious and motivating approach to the reading comprehension task.

Within this thesis, CTA demonstrated its utility for various additional purposes, including the formulation of the research questions and the substantial contributions to the development of the survey instruments. Furthermore, the outcomes of CTA served as a crucial reference for crafting teaching materials intended for use in the experimental phase. This secondary yet indispensable use of CTA established a second methodological level, aiming to observe the effects generated by a metacognitive-motivational training designed to work on the reading comprehension task strategies.

In this secondary methodological level, the objective of this thesis was to implement metacognitive-motivational training designed to influence the behavioural and reflective patterns of Italian FL learners, specifically in the context of the reading comprehension task. The experimental design of this study adhered to a structure enabling a comparative assessment between a pre-test and a post-test phase immediately following the experimental training intervention. The subsequent analyses were aligned with the innovative theoretical frameworks of Complex Dynamic System Theory (Larsen-Freeman, 1997; Dörnyei and Ushioda, 2021; Sampson and Pinner, 2021; Larsen-Freeman and Cameron, 2008a). In accordance with this perspective, the interpreted results primarily embraced an explanatory viewpoint of the experimental situation, departing from the typical predictive orientation expected within the scientific tradition of language teaching.

This introduction has outlined a project of considerable complexity and depth, requiring a systematic organization and structure. Subsequent paragraphs will delve into the research process, elucidating its diverse phases, with the objective of providing a clearer and more structured presentation of the design of our research work.

Research process and research design

The investigation trajectory of this research project extended over a triennial period, which was characterized by intricacies and complexities. To enhance the accessibility of this dissertation, a succinct overview of the constituent phases of this trajectory is

proffered herewith. The progression of this research unfolds through the delineation of six discernible phases, each elucidated in comprehensive detail in the following paragraphs.

Phase 1: Literature Search

Language teaching, as a scholarly domain, inherently embodies an interdisciplinary nature. Consequently, this dissertation, in alignment with the established paradigm, systematically traverses and synthesizes insights from diverse scientific disciplines. The main objective was to comprehensively investigate metacognitive and motivational aspects intricately linked to the process of text comprehension in the context of language teaching. The multidimensional scope of inquiry encompassed evolutionary and educational psychology, pedagogy, applied linguistics, psycholinguistics, and language teaching, with a supplementary emphasis on elements associated with European policies governing language instruction. Within the initial phase of this project, various objectives were delineated. One of the primary objectives was to explore issues relevant to the development of proficiency in FL text reading and comprehension. This involved a dedicated focus on a teaching approach geared toward fostering learner autonomy, through a metacognitive and meta-strategic orientation. A secondary objective centred on the identification of methodological approaches essential for the formulation of precise research questions and the construction of a sounding experimental setting that could support the concrete realisation of our study.

Phase 2: Development of a Method for Identifying Learners' Needs and enhance teacher's knowledge about the task

Following a thorough examination of scientific literature, the subsequent phase of this study played a pivotal role in outlining the procedural measures necessary for the organization of the experimental framework. The primary focus of this procedure centred on devising a metacognitive-motivational training program tailored to reshape the strategic habits of Austrian learners with respect to the reading comprehension task of Italian as a FL. Serving as a pedagogical intervention, this training program required the establishment of specific learning objectives aimed at enhancing learners' understanding of metacognition and motivation related to the task. During this phase, the formulation of

learning objectives was facilitated through a CTA. The scientific literature provided a range of methodologies suitable for such an approach. In this dissertation, we adapted these methodologies to our objectives, constructing a triangulation of methods to provide a comprehensive perspective on the reading comprehension task.

This triangulation pursued three primary objectives. Firstly, it sought to comprehend the structural, thematic, and linguistic characteristics of the task, along with the cognitive-linguistic requirements and potential strategic pathways that learners could engage in. Secondly, another aim was to assess learners' metacognitive and strategic knowledge relevant to text comprehension, in addition to uncovering their motivational motives and attitudes concerning the task and the Italian language. Finally, the ultimate objective of the CTA was to understand the procedural steps actually employed by learners during the text comprehension task, facilitating real-time observation of the strategies deployed and of the difficulties encountered.

Phase 3: Realization of the Experimental Materials

The outcomes derived from the CTA served as a valuable guide in the construction of the experimental materials. Specifically, with regard to the experimental questionnaires, a specific set of metacognitive task strategies were identified as new and context-related. Likewise, in the domain of motivational aspects, a comprehensive array of bottom-up motives linked to the study of Italian as a foreign language was discerned, enriching the scope of our motivational investigation. Moreover, the insights regarding the structural, thematic, and cognitive dimensions of the task facilitated the development of instructional materials to be adopted during metacognitive-motivational training. This developmental process drew upon authentic materials extracted from language learning magazines and online resources. The adaptation of these authentic materials necessitated multifaceted adjustments, encompassing text length reductions, lexical-syntactic simplifications, and the alignment of the written texts with the original testing model through the formulation of task questions. These adaptations were essential to ensure the suitability of the materials in achieving the objectives outlined for the experimental training.

Phase 4: Sample Search and Refinement of the Experimental Phase

The process of sample acquisition involved substantial bureaucratic endeavours. In compliance with Austrian regulations, authorization from the pertinent regional educational bodies, namely the *Bildungsdirektion Steierm*ark and *Bildungsdirektion Tirol*, was requisite for conducting research within the Austrian educational environment. This authorization entailed a comprehensive presentation of the project by the research team and a scrutiny of the finalized questionnaires intended for administration within the educational institutions. Upon securing authorization from the *Bildungsdirektion*, an email was composed, providing a succinct overview of the project, and highlighting its potential benefits, particularly in the consideration of the impending high-school-leaving examinations. This email was disseminated to *Allgemeinbildende Höhere Schule* (AHS) institutes in key cities within the Steiermark region (Graz, Leibnitz, Leoben) and Osttirol (Lienz). Furthermore, a project presentation was conducted during the briefing day for Italian teachers in the Steiermark region (*Italienisch LehrerInnentag*). Regrettably, despite expressed interest, several schools were unable to accommodate the project, with the exception of one institution: the *Bundes-Oberstufenrealgymnasium* in Lienz. The scheduled training sessions, however, underwent variations in terms of duration and the specific types of testing covered by the strategic training. These adjustments were necessitated by considerations related to the availability of teachers and logistical constraints within the school.

Phase 5: Elicitation Procedure and Data Analysis

The elicitation procedure commenced with the subdivision of the identified sample into an Experimental Group (EG) and a Control Group (CG). Both groups underwent a comprehensive profiling and participated in an experimental survey session by responding to the experimental questionnaires. Following this, learners from both groups engaged in a pre-test session, facilitating potential post hoc comparisons of the results. The subsequent step in the experimental phase involved the division of groups for participation in the training sessions. The control group proceeded with independent training using two test models devised by the research team. In parallel, the EG utilized the same test models as the CG. However, within the EG, the first model served as instructional material for metacognitive learning facilitated by the teacher, while the second model functioned as a formative assessment of the newly acquired knowledge. In

the concluding session, the two groups were reunited to undergo the post-test, accompanied by a second set of experimental questionnaires. This reunification served the purpose of facilitating a comparative analysis with the pre-test situation, thereby allowing for an assessment of the impact of the training interventions on the learners' outcomes. Moreover, after three weeks, a small portion of the EG volunteered for a post-hoc interview that could collect learners' opinions about the experimental training. The subsequent phase entailed the systematic collection of data, organized to facilitate interpretation using the RStudio data analysis application. During the data analysis process, specific variables were organized into clusters aligning with the CDST framework established in this dissertation, in order to describe and explain the changes underwent by the language class system after the training sessions.

Phase 6: Scientific Writing

The composition of this dissertation is regarded as an integral component of the comprehensive research and design process. While the formal academic articulation of this dissertation was finalized in the concluding phase of the three-year research period, its preparatory stages were interwoven throughout the entire duration of the study. Beginning in the initial years, the development of this work gradually acquired structure, evolving through notes, observations, and insights. Additionally, academic presentations, contributions, and reports designed for administrative and disseminative purposes contributed to both the content and methodological aspects of this dissertation. These contributions, dispersed throughout the entire work, served to chronicle, and assess the ongoing progress of this research in its developmental trajectory.

Structure of the dissertation

The dissertation's structure will indirectly follow the six stages delineated in the preceding section. The initial four chapters of this work are dedicated to elucidating the theoretical framework and the current state of the art concerning the various theoretical components integral to this study. The fifth and sixth chapters are respectively allocated to expounding the methodology employed throughout the entire experimental work. Finally, the seventh and eighth chapters expound upon the experimental context and the resulting outcomes.

In the subsequent passages, a detailed exploration of the content encompassed within each chapter will be provided.

The first chapter will be exclusively dedicated to a thorough exploration of the concept of autonomy, recognized as a fundamental necessity for human development and serving as a theoretical foundation for the principles of metacognition and motivation. Specifically, the evolution of the autonomy concept will be meticulously presented, commencing with one of its earliest formulations in Maslow's theories (1970) and extending to the more recent formulation of Ryan and Deci's Self-determination Theory (SDT) (2017). Proceeding further, the exploration of this concept will be refined, situating it within the domain of learning, particularly in the context of foreign language acquisition. Within this framework, autonomy will be construed as a complex system inherent in the language classroom, functioning as a mechanism for the reclamation of learning agency and responsibility through cognitive, metacognitive, motivational, and affective components. Consequently, the second and third chapters meticulously elaborate on the discussion surrounding these sub-components present within the complex system of the learning autonomy in the language classroom. To be more specific, the second chapter scrutinizes the cognitive and metacognitive components, while the third chapter delves into the motivational and affective components.

Chapter two initiates the examination of metacognition by first addressing its conceptual intricacies and subsequently exploring its historical-scientific development. Additionally, this chapter explicates the relationship between metacognitive knowledge, control processes, and strategies, placing particular emphasis on distinctions made by scholars concerning language strategies. The second chapter concludes with a comprehensive overview of the predominant teaching approaches in the realm of instructing self-regulation strategies.

In chapter three, the focus shifts to the concept of motivation as an additional complex and dynamic subsystem, which constitutes a fundamental element of the foreign language classroom. Examined through the lens of the Complex Dynamic System Theory (CDST) (Larsen-Freeman, 1997; Dörnyei and Ushioda, 2021) which is also the theoretical and methodological reference model of this entire dissertation, motivation is explored precisely a complex and dynamic system. This chapter also breaks down the concept of second-language motivation into its various components. These include the interplay

between motivation, linguistic self-identity, and future self-visions, but also the role of emotions, and the motivation that learners develop in relation to the learning task.

The fourth chapter, serving as the final theoretical chapter of this dissertation, delves into an in-depth discussion of reading and text comprehension. Throughout this chapter, not only will the most contemporary theories on the functioning of this unique human capacity be presented, but also the distinctions and commonalities between native language (L1) and second language (L2) readers will be elucidated. Furthermore, the concept of reading for specific purposes will be explored, leading to an understanding of the objectives underlying reading comprehension tasks and the assumptions inherent in the standardized testing of this competence. Finally, we will introduce some of the most widely used tools in the field of textual comprehension and the close connection between these tools and the concepts of strategy and metacognition will be explicitly elucidated.

As previously noted, the subsequent chapters, specifically the fifth and the sixth chapters, focus on the methodological framework of this dissertation. These chapters are divided as they emphasize a distinction between the methodology employed for a preliminary study, discussed in its entirety in chapter five, and a methodology dedicated to the central experimental study of this research work, discussed in chapter six. Regarding the fifth chapter, the methodology for the preliminary study revolved around identifying learners' needs and delving into knowledge about the task. The first aim is linked more broadly to the objectives of classroom teaching, while the second is particularly useful for constructing teacher expertise. According to these objectives, in this chapter a Cognitive Task Analysis (CTA) is conducted, aiming to meet the previously defined objectives through a process of method triangulation. The chapter is accordingly divided into three analytical moments. The initial moment involves an Expert Analysis, examining the characteristics of the task, its cognitive-linguistic requirements, and the potential strategic pathways for its resolution. The second moment involves an examination of both learners' metacognitive awareness of reading strategies and the set of motivations accompanying the study of Italian as a FL. The third phase involves the observation of learners' actual performance through Think-Aloud Protocols (TAP) on the text comprehension task under examination. The chapter concludes with the definition of learning objectives for the experimental training.

Chapter 6, in contrast, is dedicated to the construction of the experimental setting, which serves as the focal point for the entire research project. In this chapter, the results of the

CTA are utilized to define the various surveys that will be administered during the experimental phase. Specifically, the chapter presents the profiling survey of the experimental sample, the pre-test survey also incorporating new metacognitive and motivational aspects derived from the CTA, the post-test survey designed specifically for the EG and CG, and finally, the post-hoc interview intended for the EG focus group. Additionally, leveraging the outcomes of the CTA, this chapter delves into the process of researching, defining, and adapting teaching materials for use during the experimental training. Finally, the planning of the metacognitive-motivational training is presented and detailed, encompassing both the original project and the modifications made following the definition of the experimental agreements with the local institution.

Chapters seven and eight are dedicated to the experimental phase of the study and constitute the final chapters of this dissertation. Chapter seven focuses on presenting the experimental sample and the challenges encountered in securing collaboration from institutions for research purposes. This chapter provides a comprehensive description of the data elicitation procedure, encompassing not only the administration of the pre-test and post-test surveys, but also the implementation process of the metacognitive-motivational training and post-hoc interview. At the end of the chapter, the intervention methods employed to analyse the collected data will be clarified.

In chapter eight, the results of this study will be discussed, offering descriptive specifications and potential interpretations to explain the changes observed within the complex system of the language classroom. A dedicated section of this chapter will address the limitations inherent in our study and explore potential future developments in the investigation of metacognition and motivation within educational framework where Italian is taught as FL. At the end of these chapters, the concluding reflections, the bibliography, and various appendices that contributed to the realization of this dissertation will be presented.

Chapter 1: Autonomy as a theoretical underpinning for metacognition and motivation

The reason underneath the choice to focus our investigation on the concepts of motivation and metacognition lies in our hypothesis that these two constructs can have a positive influence on the language learner's perception as a learner and as a speaker of a foreign language (FL). According to the Zimmerman (2009), it is not through the exclusive use of either motivational or metacognitive strategies that a learner can improve his or her perception and results in the learning experience, rather, it is through a combined approach and a more holistic perspective that the learner can become the protagonist of his or her own learning. Our hypothesis is that stimulating learners to reflect on their actions and training them to regulate their attitudes and the series of behaviours they put into practice will help them deal with the task. Moreover, learners may find benefits and may perceive themselves as more capable and able to learn the language day after day, thus reinvigorating their sense of agency and ultimately their motivation (Ryan and Deci, 2017). This opinion is also shared by the work of Dam (1995) and Little (2004), who have advocated over the years the idea that offering learners the opportunity to be the protagonists of choices useful for their learning nourishes their motivation.

Defining motivation is an arduous and difficult task, especially if the field in which this work is embedded is the rather specific field of motivation in the study of a FL. However, at this point in our work we will refer to the more general definition of the concept of motivation. According to the Oxford Dictionary of Psychology (2003), motivation is a multifaceted driving force which accompanies human actions and/or behaviours. More specifically, it determines the moment of initiation, the duration, and the vigorousness of a goal-oriented behaviour. Metacognition, on the other hand, is thinking about thinking. More precisely, it is the construct that allows us to develop ideas about our actions, behaviours and cognitive processes, to reflect on them and, most importantly, to control them. (Cornoldi 1995; Cornoldi et al., 2018). As one can appreciate from these two brief definitions, which we will elaborate on throughout this entire work, both concepts of Motivation and Metacognition accompany human actions and/or behaviours towards a specific goal to be reached. Moreover, these concepts share a reciprocal relationship in which metacognition invigorates motivation and vice versa, triggering a virtuous circle (Ushioda, 2011; Cornoldi et al., 2018). On the one hand, adopting a metacognitive

behaviour implies being a motivated learner capable of taking responsibility for one's own learning attitude, strategies, and actions. In this case, motivation is perceived as a prerequisite to self-regulatory behaviours. On the other hand, feeling a certain degree of agency in one's self-endorsed actions generates motivation and a feeling of empowerment in one's own demeanour (Lamb, 2007). In this case, instead, motivation is perceived as a by-product of self-regulation.

Regardless of the point of view, Metacognition and Motivation share a common ground, which is the capacity of the individuals to voluntarily and independently decide that a certain action is to be performed in a well-defined manner, directing one's behaviour, and promoting a certain attitude in those who perform it. It is precisely this volitional and motivational force that brings us closer to the concept of the individual's autonomy. Indeed, for Benson (2007), agency is the point of origin of autonomy, although this is not the only relationship that links autonomy to the concepts of Motivation and Metacognition. Another very important point is that both of these constructs are controlled by learners through strategies, and it is through the use of strategies that learners can become more autonomous. For this reason, we consider it necessary to delve into the concept of autonomy in order to give a comprehensive overview of the philosophical and scientific foundations underlying the concepts of Motivation and Metacognition.

In the following paragraphs, we will conduct a review of studies on the concept of autonomy, first as a perceived general need, then as fundamental psychological need fostering motivation and self-regulation in human beings, so as formulated by the Self-Determination Theory (SDT) of Ryan and Deci (2017). We will then dig into the concept of autonomy in the educational context, i.e. the meaning it takes on when dealing with the teaching and the learning of a foreign language. We will understand the complex nature of autonomy, in order to figure out the dynamics and the interplay of motivational components and metacognitive activities within a FL learning environment.

1.1 Autonomy in the path of the individual

As Ushioda (2011) points out, autonomous people are by definition motivated people that wisely adopt self-regulatory behaviours, feel protagonist and responsible of their lives. Starting from this general definition, it may be necessary to investigate what the conceptual roots of autonomy are, in order to understand why this concept is of such

importance to our discourse. The work of Tassinari (2022) allows us to reflect on the fact that individuals have a natural tendency towards autonomy, which is seen as «*menschlicher Antrieb*» (human propulsion, our translation) directed towards the achievement of certain needs through behaviours and actions. It is not a coincidence that autonomy is often assimilated to other terms like agency, independence, and free will. For instance, it is through an autonomous behaviour that the infant chooses to take its first steps, to say the first words or to learn all sorts of other activities: drawing, playing, swimming, working with tools and so on and so forth. As we may expect, all these autonomous actions are driven by the desire to be part of a community, first familial and then social. However, although social external factors exercise a meaningful influence on infants' free initiatives, other factors of more internal nature are to be considered responsible of human action. According to Tassinari (2022: 34): "*Unsere Handlungsfähigkeit und Entscheidungen werden einerseits durch unser Selbstbild, unsere Vorstellungen und Überzeugungen sowie durch unsere Vision und unser Lebensziel geprägt*", which is to say that in addition to responding to needs imposed by the society surrounding the individual, he or she answers to him- or herself, to needs that are intrinsic to his or her nature. In this passage, it was noted that the concept of autonomy is part of those desires and needs that naturally arise from early childhood and that accompany people for much of their lives, both in their decisions and in the ambitions and vision they have of themselves. For these reasons, it seems appropriate to explore the concept of need and in particular the origins of the need for autonomy. In this respect, in the next paragraphs we will elaborate on two different theories on the concept of need: the first provided by the work of Maslow (1970) in the earliest studies on motivation, and the second based on the Self-Determination Theory (SDT) of Ryan and Deci (2017).

1.1.1 Maslow's Pyramid of the individual's needs: discovering self-actualisation

The Maslow's hierarchy of needs is one of the most quoted theories in the field of human motivational psychology. The important work of Maslow aimed at destroying the negative view held upon the human individuals, which was a legacy of the Darwinist theories of evolution. According to this view, humanity is perceived as mainly fulfilling its animal instincts, prevailing on one another. In Maslow's book *Motivation and Personality*, there is an attempt to integrate the Darwinist perspective with a more positive one, including the need for love and belonging, for freedom and respect and most importantly for realisation of one's own potential.

Maslow (1970) refused the dichotomous assumptions between impulsivity and rationality held until then and embraced a more holistic approach of the human nature. Although holistic, Maslow's approach does not regard the human personality as a messy cauldron of needs and desires, but rather as having a hierarchical structure.

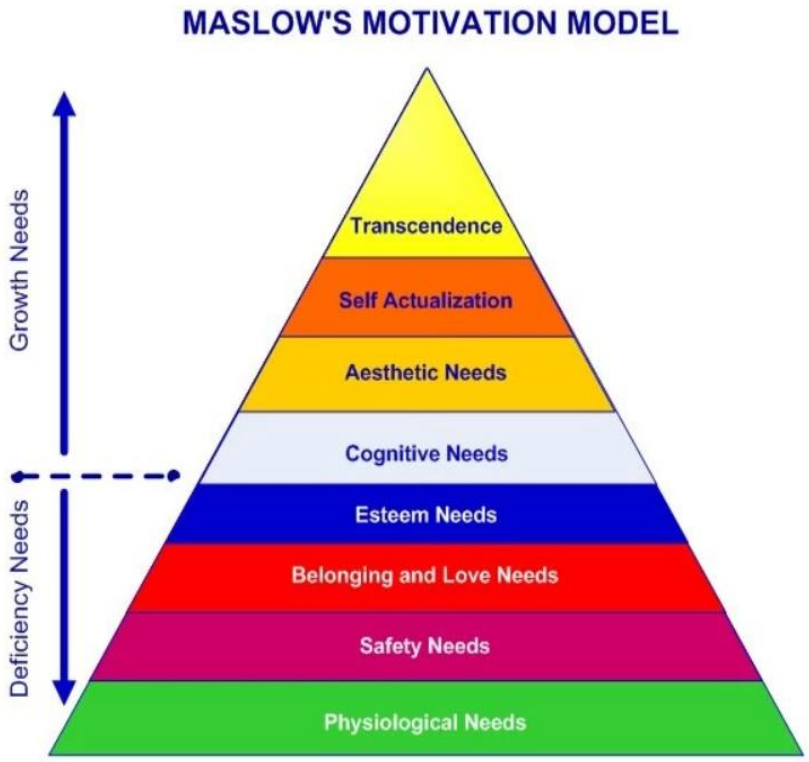

Figure 1 - Maslow's Pyramid of the individual's needs, taken from McLeod (2022)

According to Maslow's (1970; 1987) conception, motivation arises from the deprivation of certain needs that he defines as Deficiency Needs, such as Physiological Needs, Safety Needs, Belonging and Love Needs, and Esteem Needs. The fulfilment or, in Maslow's terms, the *gratification* of these needs is mainly dependant on the environment surrounding the person, which is to say that they are of a more extrinsic nature. In addition to these, there is a second set of needs which is not strictly related to survival but rather to the quality of life itself:

> Not only is it good to survive, but it is also good (preferred, chosen, good-for-the-organism) for the person to grow toward greater happiness, serenity, peak experiences, toward transcendence, toward richer and more accurate cognition of reality, etc. No longer need we rest on sheer viability and survival as our only ultimate proof that poverty or war or domination or cruelty are bad, rather than good. We can

> consider them bad because they also degrade the quality of life, of personality, of consciousness, of wisdom. (Maslow, 1970: 104)

Maslow calls these Growth Needs, such as Cognitive Needs, Aesthetic Needs, Self-Actualization, and Transcendence. In line with his theory, the gratification of growth needs can only happen once all the other deficiency needs have been fulfilled[3], or in Maslow's words:

> "[…] the gratification of any need, while putting that need to rest, allows other weaker needs that have been pushed aside to come to the foreground to press their claims. Needing never ceases. The gratification of one need uncovers another." (Maslow, 1970: 86)

To summarize, we might say that individuals necessitate the satisfaction of more urgent needs of hunger, thirst, safety, love, belonging, esteem, before being able to think about to their needs of understanding the world, appreciating the beauty and transcending the reality throughout the abstraction.

Among the other psychological needs, self-actualisation seems to be of interest to our discourse. Self-actualisation signifies making oneself independent from physical and social environment and propelling oneself towards personal growth, "*full use and exploitation of talents, capacities, potentialities, etc*." (Maslow 1970: 150). According to this definition, substantiating self-actualization means being able to be more autonomous, self-driven, and oriented towards self-realisation. The relevance of this concept will be clearer in the next chapters, in which we will address the modalities through which a self-actualising behaviour can be fostered in the learning environment and to specific scopes.

Although over the past years Maslow's scientific methodology has been heavily criticised (see McLeod, 2022; Tay and Diener, 2011)[4], Maslow's work remains a milestone in the field of motivation, since he is one of the first psychologists to defend an inclusive and holistic point of view on human motivation. Maslow must be credited with attempting to circumscribe the potentially infinite number of needs to which humans can be subjected. In fact, his prepotential hierarchy represents a macro categorization of human needs, a model that future scholars will also take into consideration. Furthermore, his ideas reveal

[3] As stated in Maslow's (1970) work, one need must not be fulfilled 100 per cent before another need emerges from the prepotency hierarchy of needs, since there is a principle of relative satisfaction that allows the gradual emergence of the next need in line.

[4] Maslow methodology was deemed unreliable in many aspects: the choice of the sample, the biographical analysis, the validity of his claims. According to Tay and Diener (2011), the needs he identified can be taken as universally recognised, yet these needs do not always respect the hierarchy Maslow designed, rather they support the claim that psychological needs can be met also when physiological needs remain unmet.

that the motor of human behaviours and actions although expressing themselves as physiological needs may entail needs of a deeper psychological nature and that more often than ever, this motor is driven by a self-improving tendency.

In order to better understand these internal needs, we will now turn to the theories of Ryan and Deci (2017), who have delved into the concepts of extrinsic and intrinsic motivation, providing us with a more detailed understanding of the factors at play within the motivational system.

1.1.2 Autonomy in the Self-determination Theory: the relationship between motivation and self-regulation

1.1.2.1 The Basic Psychological Needs

In contrast to Maslow (1970), Deci and Ryan (1985) attempt to set their theory, the Self-Determination Theory (SDT), on a more solid scientific basis. The two scholars borrow the notion of need from the biological field and define the Basic Psychological Needs as psychological and social nutrients of the individual which can be either satisfied or thwarted. In the first case, the satisfaction of these needs may foster well-being through personal development, growth and integrity[5]. In the second case, if these basic psychological needs are neglected, this condition will fuel frustration and an increase of defensive behaviours that may bring to serious psychological harms[6].

The three Basic Psychological Needs identified by Deci and Ryan (1985) and echoed later by Deci et al. (1991) and Ryan and Deci (2017) are namely *Competence*, *Relatedness*, and *Autonomy* and they can be regarded as three macro-categories explaining many different behaviours[7]. When these needs are fulfilled, they tend to be associated with satisfaction and positive feelings. As the two scholars theorise:

[5] The term integrity is used in SDT to refer to the human capacity to act while remaining true and thus completely in accordance with one's True Self. We will expand on this latter concept later in the text.

[6] Ryan and Deci (2017) enumerate a series of criteria that describe a Basic Psychological Need: firstly, it should have functional effects on the individual, i.e. it should have either thriving or detrimental repercussions; secondly, it should motivate the person towards an action and/or a behaviour which is mainly associated with positive feelings and possibly good results (although the latter is not a necessary condition); thirdly, it should accompany the individual across the whole developmental period as well as it should pertain to every possible culture; lastly, it should be confined to a short list of needs which may include "a wide range of disparate behaviours that are associated with need fulfilment or frustration." (ib.: 86).

[7] From this point on in the dissertation, we will mainly refer to the work of Ryan and Deci (2017), which is the most up-to-date version of the SDT by Deci and Ryan (1985) and subsequent works.

> when any of these three basic psychological needs is frustrated or neglected either in a given domain or in general, the individual will show motivational, cognitive, affective, and other psychological decrements of a specifiable nature, such as lowered vitality, loss of volition, greater fragmentation, and diminished well-being. Thus general need support will predict general vitality and well-being, but we can also look at need support within specific contexts, such as a classroom, a workplace, or an athletic team, expecting that basic need satisfactions versus frustrations will affect context-specific functioning and experience. (Ryan and Deci, 2017: 86)

The idea of Basic Psychological Needs emerges from the urge to explain the main factors influencing intrinsic motivation, values integration, and behaviours regulation as well as the whole psychological functioning and well-being.

The first Basic Psychological Need mentioned in the SDT, *Competence*, is explained as the possibility for every human being to exercise, expand and express their abilities and full potentials. Feeling competent not only has a functional effect on the environment people live in, but it also nourishes their selves, their sense of agency, which is to "*mobilize and organize action*" (ib: 95). The second factor influencing people's intrinsic motivation is *Relatedness*, which is conceived as the need for feeling connected to other living being and entails an enhancement of this feeling through both an active and a passive role in the caring process, which is to care and feel cared. This sense of belonging nourishes people's selves with importance, with significance in the eye of the others, and ultimately with self-esteem. Finally, to *Autonomy*, Ryan and Deci dedicate an entire chapter, since it is considered the central construct of the whole SDT. Autonomy is the need for all people to experience self-endorsing actions and behaviours which are a full expression of their agency and their volitional capacity. According to this theory, autonomy is the glue that holds together competence and relatedness when it comes to a concrete satisfaction of these needs. People experience competence when they decide to engage to a certain activity in which they can fully express their efficacy. Similarly, the need of relatedness is fully satisfied when a spontaneous and intentional care for the other person is displayed, alias when an intimate connection stems from it. In other words, autonomy and its volitional power represents the only mean through which human being are able to experience personal growth, which is through authentic engagement in their actions, behaviours as well as feelings.

1.1.2.2 Intrinsic Motivation and Extrinsic Motivation in the SDT

Those aspects mentioned last in the previous paragraph, namely authentic engagement, behaviours and feelings are normally triggered by an autonomous behaviour and represent the main characteristics of what Ryan and Deci (2017) define as intrinsic motivation. Intrinsic motivation is an internally engendered driving force deriving from the enjoyment and the effectance[8] that accompanies a behaviour. In their theory, intrinsic motivation is conceptually counterposed to extrinsic motivation, which is an externally generated motivation associated with either rewarding and socially approved or punishment-avoiding consequences. In line with SDT, the experience of intrinsic motivation is generally bound to the concept of autonomy which is also considered the discriminating factor determining the different kinds of motivation. Extrinsic motivation, on the other hand, is normally associated with the concept of heteronomy. Heteronomy is the experience of feeling either internally or externally compelled to act in a certain manner, implying that the behaviour towards which the person is pressured is perceived as alien to the person's self. Since autonomy and heteronomy are conceptualised as a continuum, in which the person may experience less and less volition while moving from an autonomous frame to a more heteronomous one, Ryan and Deci (2017) hypothesise that also motivation may follow a similar pattern. In other words, people feel to be intrinsically motivated if they experience a full degree of agency and autonomy, but their motivation may slide towards a more extrinsic value as their actions and behaviours are more and more externally driven.

1.1.2.3 The Organismic Integration Theory: the process towards self-regulation

In the SDT, the hypothesis of motivation following a parallel path to that of the autonomy-heteronomy continuum is incorporated by reference to a pivotal sub-theory, the Organismic Integration Theory (OIT)[9]. The OIT explains the processes through which an externally driven behaviour and/or regulation is transformed and integrated into one's

[8] Ryan and Deci (2017) borrow the concept of effectance from the work of White (1963). Effectance is the energy experienced by people, deriving from the satisfying and pleasuring feeling of exercising one's own capacities.

[9] For the OIT, integration is understood as that process of internalising values from social external sources. Manifestations of integration are essentially twofold: on the one hand, it causes the individual to assimilate practices present within the social context in which he or she lives; on the other hand, it coordinates and harmonises the value system of these practices with that of the person performing them.

own self-regulation, alias it describes the different stages at which an action might be integrated in a person's value system[10].

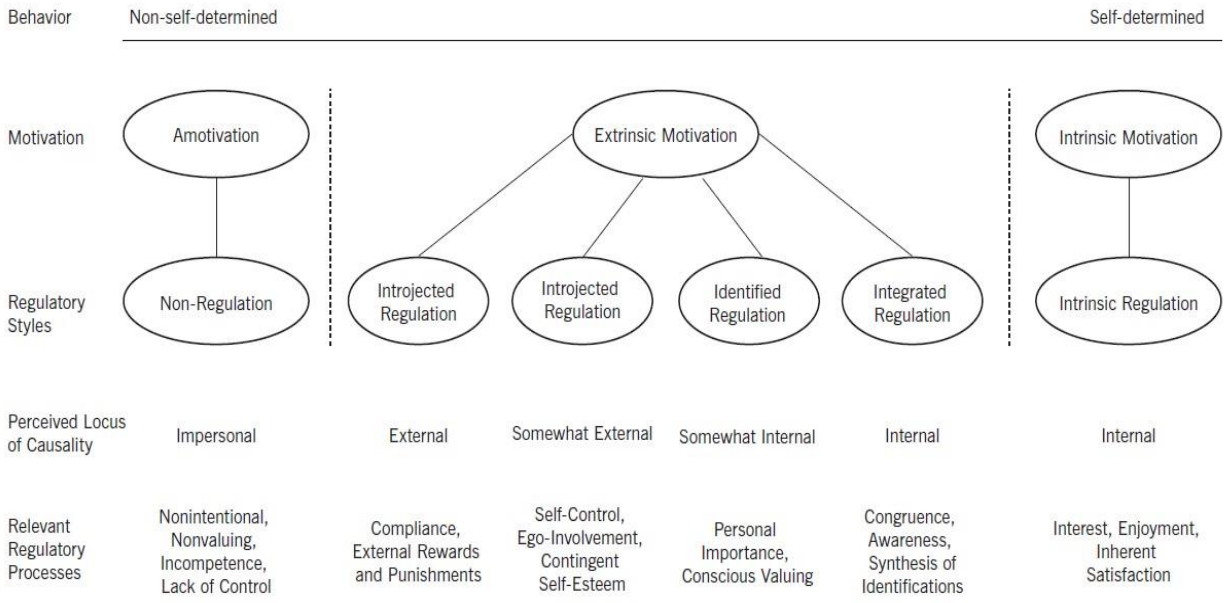

Figure 2 - OIT scheme, taken from Ryan and Deci (2017: 193)

As displayed by Figure 2, a given action or behaviour may have to go through several stages before it is fully internalised by the self-system of a person who experiences through this action an intrinsic motivation. These stages all fall under the concept of extrinsic motivation and reflect different regulatory styles which accompany the assimilation of the external behaviour/regulation in various ways. Moving along the extrinsic-intrinsic motivation continuum, the regulatory styles are arranged in the following order: External regulation, Introjected regulation, Identified regulation, and Integrated regulation.

External regulation is the regulatory style normally associated with either rewarding or punishing consequences. It characterises externally imposed behaviours that are performed under an underlying threat, whereby the persistence of that behaviour will be extremely temporary, and no assimilation of values will occur, as the perceived locus of

[10] According to Ryan and Deci (2017), the reason underneath the process of integration lies within the necessity for individuals to fulfil their basic psychological needs: competence, relatedness and autonomy. Meaning that, people tend to assimilate behaviours and regulations to feel capable of doing a certain action, to be part of a social group or to feel empowered (autonomous) to do something, and in doing so, he or she harmonises the values carried by that external behaviour/regulation with one's own value system.

casualty (PLOC) is external and not internally engendered[11]. An example of externally regulated behaviour might be that of a learner studying not because he is willing to, but because threatened by parents who will not give him the car on Saturday night. According to this regulatory style, the learner will be giving up his study once he will obtain the car by the end of the week, not getting the importance his parents associate to studying. Introjected regulation, instead, is typical of those behaviours that are internally compelling for the person. This kind of regulatory style generally allows more freedom of choice and is associated with a partial assimilation of values, yet it still depends on external approval. For instance, in this case, the same learner might be forcing himself to study, otherwise he might get a bad mark losing face in front of the class and of the teacher. In this sense, the learner feels internally obligated to study, thus not jeopardising his self-approval. With regards to Identified regulation, a person who regulates him/herself with identification, experience more autonomy, feeling compelled but also choosing to feel that way because it is important to oneself. In the case of Identification, the PLOC is perceived already as internally situated, although an external component is still present (see the push that society imposes on our vision as adults). As an example, the previously mentioned learner might choose to continue his/her own career by studying at university in order to enter a specific working world (associated with a peculiar socio-economic status), even though he knows this path will require sacrifice and effort. Lastly, Integrated regulation, is considered the most autonomous form of extrinsic motivation. This regulatory style describes people wholeheartedly endorsing a new behaviour and the values connected with it, thus enabling an intentional modification of the set of values held until that moment. An example, in this case, would be the same learner enjoying the learning path chosen at the beginning of his career, voluntarily putting effort and energies in it, although it may require some duties at times.

1.2 Autonomy in the language learning and teaching process

In the first part of the chapter, we have been analysing the role autonomy plays in the path of the individual, in order to understand the deep relationship this construct has with the concepts of Motivation and Metacognition. The focus on autonomy is essential to

[11] Ryan and Deci (2017) borrow the concept of perceived locus of casualty (PLOC) from de Charm (1968). It refers to the attributions that individuals give upon the reason why a certain event (or action, or behaviour) occurred. Those attributions might be perceived as external when the event is out of their control, or internal when they may perceive themselves as the cause of that event.

understand the relevance it assumes in people's lives, counting as one of the most important inner needs (Maslow, 1970) or as one of the basic psychological needs (Ryan and Deci, 2017) fostering personal growth. In particular, the SDT suggested that the path towards autonomy shares a deep connection with that directed towards intrinsic motivation. According to the OIT, people completely endorse certain behaviours when they also welcome the values carried with them, self-regulating themselves and feeling intrinsically motivated towards those behaviours. On the other hand, they execute certain behaviours with different degrees of detachment and involvement, because extrinsically motivated to adopt them. Depending on the perception they have of those behaviours and the values linked to them, also regulation varies, being completely external, introjected, identified or integrated.

In this second chapter, we will consider autonomy in the specific context of education, exploring the numerous dimensions to take into account when dealing with a class of FL learners. Lastly, we will tackle the topic of inclusion and the importance to develop a sentiment of autonomy (Aoki, 1999), through the use of metacognition and motivational strategies within the FL curriculum.

1.2.1 Autonomy as a complex system

Approaching the world of language teaching and learning means choosing a particular perspective from which to look at very broad concepts such as autonomy and its components, namely motivation and metacognition. Concurring with Benson's (2007) ideas on the contexts of application of autonomy in the study of FLs, we choose to adopt an internal perspective within the language classroom, thus excluding all cases of exercise of this capability beyond the institutional school environment. For this reason, whenever we shall address the learning environment, reference to the FL class (FLC) will be implied unless otherwise explicitly stated.

Already in 1997, Larsen-Freeman (1997) proposed a vision of the FL learning environment as a complex system in which many factors interact with each other in dynamic and chaotic ways. Along with this perspective, Kramsch (2002), Tudor (2003), and van Lier (2004) considered the FLC within the metaphor of a peculiar ecosystem[12],

[12] The metaphor refers here to the meaning of the compound words making up the word *ecosystem*: ecology, in biological terms, studies the relationships between the individuals and their counterparts, as well as their relationship with the environment; and system, on the other hand, is intended as an organised complex of elements intertwined with each other. In this sense, FLC is a community of organisms in interaction with and within the learning environment.

in which elements such as individuals and context establish a dynamic equilibrium[13] interacting with each other. Over the years, this view has been shared and embraced by various scholars (see Ushioda, 2015; Oxford, 2017), giving rise to a veritable theory: the Complex Dynamic Systems Theory (CSDT)[14]. This theory revolves around the complex and constant interactions among the elements present within the second-language (L2) learning system. These interactions trigger characteristically non-linear, emergent changes within the system (Dörnyei and Ushioda, 2021), which in turn remains adaptive to the fluctuations of the agents' interests and needs[15] of the system whenever they may occur (Borges, 2022). CSDT has also had an increasing acceptance (see Dörnyei and Ushioda 2021; Sampson and Pinner 2021; Larsen-Freeman and Cameron, 2008a) within the motivational research field, as it promotes a much more holistic view on the reality of the FLC.

In accordance with this theoretical framework, the study of autonomy in the FLC has also required a change of approach over the years, shifting from an individual perspective, to a social, and then a more complex one (Borges, 2022). The individual perspective mainly focused on the learner capacity of taking charge of his or her own learning, as well as on his or her ability to become independent by autonomously choosing to set goals, select learning materials and strategies to cope with the learning requirements. The social perspective[16], instead, broadened its attention to other individuals, or agents, in the learning community, suggesting that individual independence and growth are only allowed through learners' interdependence within the learning context. Finally, the actual line of research considers autonomy within a complex perspective. According to this view, the complexity of the system is generated not only from the learner studying a L2, but also from the interactions with other elements of the learning environment such as peers, teachers, and other contextual elements[17].

[13] According to Tudor (2003), every element within the system keeps re-establishing this balance through compensation, whenever any external element perturbates the stability of it.

[14] In this part of the text, only a quick reference to the main aspects of the theory will be made, as it will be developed in depth in the subsequent chapters.

[15] The agent is one of the structural components of a complex dynamic system. With regards to FLC, the word agent refers to teachers and learners, as well as all the people involved in the learning community, who share common interests and learning aims.

[16] Based on Vygotsky's sociocultural theory (1991)

[17] Ushioda (2015: 64) suggests that the term *context* has been adopted in quite general terms within the field of second language research, covering the meaning either of a learning environment (formal or informal, home, or abroad study) or of a teaching approach (task based, focus-on-form, etc.). In a complex perspective, context comes to mean the set of relationships, activities, experiences, places, as well as other macro- and micro system within the FLC.

Understanding the development of autonomy in a FLC and within a complex dynamic system (CDS) frame means being aware that the CDS related to autonomy is only one of the possible CDSs present within the second language learning environment. In this sense, FLC could be seen as a Chinese box system of CDSs (paraphrasing Tassinari, 2010; Oxford, 2017; Borges, 2022): the FL class, as said, is a CDS where learners, teachers, institutional and non-institutional components, learning opportunities and physical environment interact; but also the FL in itself is a CDS if considering the interplay of speakers keeping the object language in constant change, inside and outside the classroom; teachers and learners are in themselves CDSs with their, values, beliefs, emotions and their dynamic relationships; finally, autonomy development can be also regarded a CDS of motivational components, cognitive and metacognitive thoughts, relationships and opportunities to be grasped in the learning environment. In order to thoroughly understand how a CDS of autonomy development works, we will resort to one of the many explicative models portraying the dynamics[18] of a FLC learning how to be more autonomous.

1.2.2 An autonomy development model in FL learning

The reasons for presenting an explanatory model of the autonomy development process in a FLC in this part of the text are threefold: the first, rather obvious reason is that the observation of such a model can allow us to gain a closer look at the components that interact in the process of autonomy development of a FL learner; secondly, this in-depth look helps to clarify the reason for our choice to work with constructs such as motivation and metacognition in the study of a L2; and finally, because the study of this model aids to explain which factors we had to take into account during the preparatory and experimental phase of this research work.

Before presenting the model of interaction of autonomy learning in the FLC, it is important to present the contextual situation in which this model is embedded. To this respect, we adopt the terminology of Borges (2022), who embraces the perspective of autonomy as CDS within the second language learning environment and identifies three main contextual factors interplaying with each other and fostering autonomy, namely agents, affordances, and attractors. Agents can be all the people involved within the

[18] At this point, it is useful to point out that the dynamics taken into account by this type of explanatory model focus mainly on the structural components of the autonomy development process and not on the interactional dynamics specific to the language classroom environment (e.g. between teacher and learner, or peer dynamics).

learning environment such as teachers and learners, but also more competent peers, native speakers, or advisors[19]. Moreover, as pointed out by Tassinari (2010) and Oxford (2017), as agents may also be listed all the people external to the learning environment, who generally have an influence in the development of autonomous behaviours, such as parents, local and national institutions, as well as other random acquaintances of the learner, who may interfere with the learning process of a foreign or second language. Affordances[20], instead, are the opportunities available from the context and represent all the series of actions and resources the learner may choose to consider relevant for his or her own progression towards an autonomous learning behaviour in the L2 (Borges, 2022). Lastly, there are the attractors, which are preferred and stabilised states of the system, subjected to fluctuation between strong dynamic moments and moments characterised by more stability. These states of stability can be challenged, both positively and negatively, by the presence of perturbators (educators and/or external events), which can change the pattern of a learner's learning habits. In this respect, an example would be an advisor, who can instruct the learner on new learning strategies, trying to perturbate the learner's habitual path in a specific area of the FL learning[21].

The definition of an interaction model for the dimensions of autonomy was carried out by Tassinari (2010) with the aim of describing autonomy learning in a scientifically justified and practice-oriented way. Although anticipatory of the CSDT-related strand of studies, the concept of autonomy is composite and articulated and is defined by the author as a construct of constructs, or as a meta-capacity (from the German "Metafähigkeit"), which is the capability of reflecting, organising, and monitoring one's skills and self-system in the specific area of FL learning. The compositionality of autonomy learning is reflected in the inherent presence of several components, which the author lists as: cognitive and metacognitive components, motivational and affective components, actional and social components. These components are interlaced with each other and engender dynamic relationships in the teaching and learning practice. The cognitive and metacognitive components mainly contemplate the knowledge-related aspects of the learning autonomy: knowledge about the language, about the language learning, about

[19] The role of the advisor is presented by Borges (2022) as that of a linguistic expert who can stimulate learners throughout self-regulatory behaviours, thus fostering new trajectories in the development of automatization in a foreign language learning environment.

[20] Affordances may be for example learning materials, enhancement courses, tandems, readings, films, songs, social media, etc.

[21] The extent to which this affordance is accepted by the learner and produces the desired effects, however, depends entirely on the learner's decision as to whether this change is necessary or relevant to his or her learning path.

the task, about oneself as learner[22]. The motivational and affective components encompass on the motivational side, learner's attitude towards the learning process, towards autonomy learning, towards the language and one's own vision as a speaker of a FL, and on the affective side, emotions and feeling related to specific learning situations. Finally, the actional and social components cover all the areas of actions triggered by cognitive and metacognitive knowledge, such as taking decisions and acting along with them, cooperating with other agents within the learning environment, like teachers, peers, advisors and so on and so forth. The definition of these multiple components, as said, has not to be perceived as isolated compartmentalisations, but rather as components that overlap and mix with one another during the whole learning process.

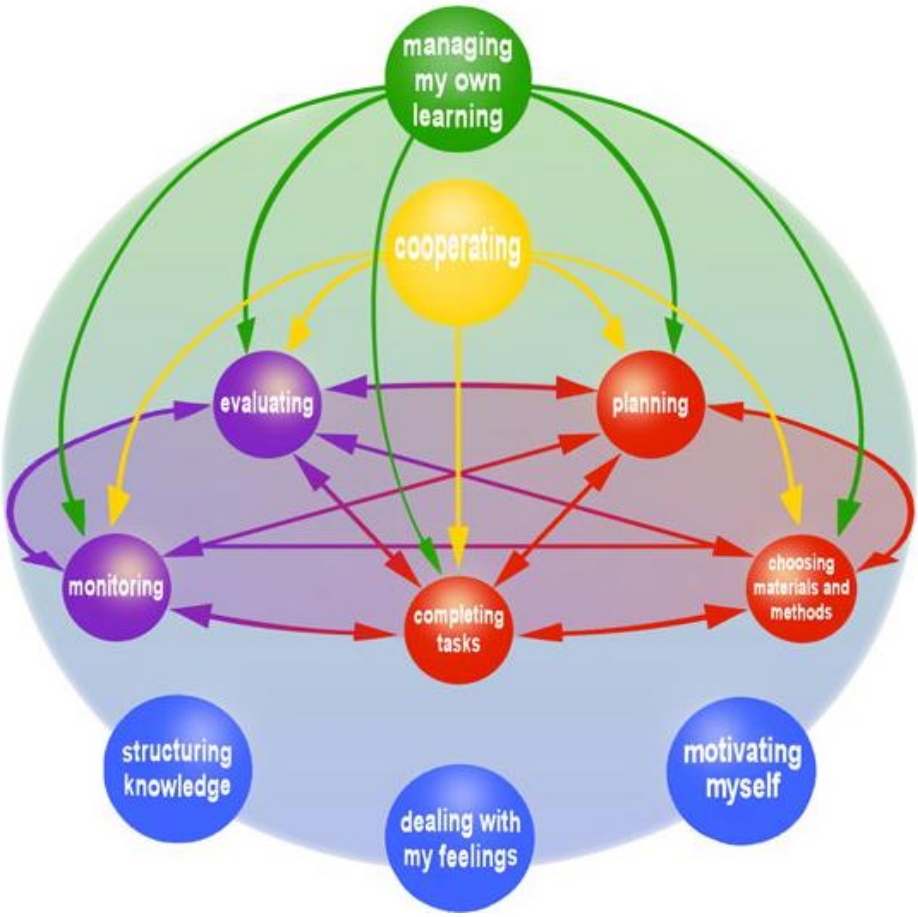

Figure 3 – Autonomy development model in FL learning, taken from Tassinari (2010: 203) (author's translation).

According to the model (Figure 3) of Tassinari (2010)[23], the six components, described above, are responsible for the development of different competences or fields of action.

[22] We will discuss the differentiation of this knowledge in the next chapter about metacognition.
[23] What makes this model specifically tailored to autonomy in the foreign language learning is the integration of each component of the model with self-diagnostic matrix descriptors oriented towards the

These competences are described within the three dimensions of the model: the metacognitive and motivational dimension (the half-sphere below in Figure 3); the synchronic, action-oriented dimension (the central circle in Figure 3); and the upper organisational dimension (the upper half-sphere in Figure 3). To the metacognitive and motivational dimension belong competences that might be more or less conscious to the learner such as structuring knowledge (in all its forms), dealing with feelings (positive and negative ones) and using them to motivate oneself during the learning process. The synchronic, action-oriented dimension, instead, implies the previously described dimension and transforms it into different actions that may occur simultaneously during the completion of the task. It involves planning (i.e. making decision about one's own learning), choosing materials and methods (such as strategies), monitoring (if the choices made are working properly), completing the task and evaluating the positive or negative results of one's own actions. The third dimension is mainly devoted to the (self-) organisation of autonomous work, which implies both the ability to know how to interact and cooperate with the different agents in the learning environment, and the more general ability to manage one's own learning by exploiting all the affordances at the learner's disposal.

1.2.3 The development of a feeling of autonomy

In the previous paragraphs we have been concerned with defining autonomy in its complexity and how this complexity interacts with the learning environment of a language classroom. However, we have not yet defined what is to be understood by autonomous learner of a FL. Identifying a definition of an autonomous learner is useful to guide those engaged in this field towards the characteristics and aspects on which this idea is built. Therefore, we resource to the definition given by Little (2000)[24]:

> Autonomy in language learning depends on the development and exercise of a capacity for detachment, critical reflection, decision making and independent action (see Little 1991: 4); autonomous learners assume responsibility for determining the purpose, content, rhythm and method of their learning, monitoring its progress and evaluating its outcomes. (Holec 1981: 3).

development of different skills both of a general and of a more specific nature. It is beyond the scope of this study to go into this topic in depth. For this we refer to a more direct comparison with the work of Tassinari (2010).

[24] Although it may seem that the definition provided refers to autonomy as a process, we agree with Benson (2007) that the combination of definitions given by Little (2000) rather refers to the language learner's exercise of autonomy.

Although the main capabilities and characteristics of an autonomous learner are comprehensively and accurately presented in this definition, Little's (2000) formulation raises two very important issues. On the one hand, it presents autonomy as a state of things, as a goal to be achieved and as an ultimate aim of language learning. However, as Tatzl (2016) states, autonomy should rather be understood as a process that is never fully completed and therefore constantly changing, i.e. a reflection of the dynamic relationships between agents and affordances within a complex learning environment. On the other hand, this definition mainly explains what the autonomous learner is capable of doing, but does not provide information about the process of development of autonomy (Benson, 2007) in itself. As seen before, Tassinari's (2010) model has already provided us with a closer look at the components at play in the development of the language learner's autonomy. Among other things, this model is also proposed as a (self-)diagnostic tool for those learners who are already either willing or embarked on a path towards autonomous language learning[25]. However, it does not clarify how to lead learners towards a progressively more autonomous attitude in the FLC.

School reality shows that autonomy is not something one is born with, yet it is something one eventually acquires in the learning environment. As already pointed out in the description of OIT, the development of self-regulation is possible thanks to a process of integration, i.e. the regulation of one's own behaviours according to different gradations along the heteronomy-autonomy continuum, moving from a more hetero-regulated to a more self-regulated demeanour (cf. 1.1.2.3).

In this process, the context is responsible for the progressive integration of the learning activity with one's own self-system. Jang et al. (2010), for example, offers some insights into the characteristics of the learning environment, explaining the role played by its structure. According to Jang et al. (2010)[26], two types of environments can be distinguished: high-structure environments and low-structure environments. In high-structure environments, learners are already clear about expectations, means, and modalities, and they are also offered guidance and support during the entire execution of the task. In low-structured learning environments, on the other hand, everything is less defined, expectations, ways and means are not clear, and even feedback is not helpful in

[25] Ushioda (2006) affirms that self-regulation is always accompanied by a genuine desire to exercise metacognitive behaviours.

[26] The distinction made by Jang et al. (2010) was inspired by the SDT of Ryan and Deci (2017)

regulating the learner's actions. Therefore, a highly structured learning environment together with a supportive orientation towards autonomy on the part of the teacher[27] foster the learner's sense of competence and predisposes him or her to become aware of his or her own regulatory system.

In this regard, as already described above (cf. 1.2.2), another fundamental component for the development of autonomy in FLC is to consider the relationships and interactions between the various agents of the learning environment. On the one hand, there are teachers, whose task is to stimulate the FL learner to develop a feeling of autonomy (Aoki, 1999), i.e. to help them ask themselves the right questions, to prompt them to reflect on their own learning style, on their own learning strategies and those of others, on the motivational aspects that bring them closer to or further away from language study, and on the emotions that accompany them during their own learning process. In addition, teachers should also make learners aware of the affordances present inside and outside the FLC and propose activities that ensure the participation and profit for all learners, allowing for differentiation and inclusion (Dam and Legenhausen, 2018)[28]. On the other hand, there are learners, who, from a constructivist perspective, can expand their monadic vision through cooperation with peers and linguistic experts. These social interactions can promote growth on multiple levels: cognitively and metacognitively, relationally and affectively, and also in terms of self-system. Confrontation with others, in fact, often becomes an opportunity to reflect on one's own abilities and self-efficacy (Bandura, 1997), but also a moment of reflection and questioning of one's own beliefs and values, feeding in turn self-regulatory knowledge and thus autonomy.

[27] Cornoldi et al. (2018) counterpose the supportive orientation towards learning autonomy to a controlling orientation that imposes objectives without satisfying the needs of competence, autonomy and relationship, rather favouring fear, sense of guilt, shame and uncertainty.

[28] This last suggestion is taken from Dam and Legenhausen (2018) who delineate ten golden rules to foster autonomy in L2 learning environments.

Chapter 2: Metacognition and Self-regulation

As seen in the previous chapter, autonomy and especially FL learning autonomy can be developed within complex systems that willy-nilly influence the way we learn, the beliefs we have about ourselves and others as learners of a FL. Furthermore, it has been emphasised that autonomy can be supported by self-regulatory mechanisms and/or behaviours, which keep learners alert to their own learning path. These self-regulatory behaviours, in turn, can be generated through reflection both on one's own actions in the learning process and on one's own thinking, at more or less conscious levels. This form of reflection is often referred to as metacognition, but what is metacognition in fact? Where does it originate from? In the first part of this chapter, we will deal precisely with the delimitation of the research field on metacognition. We will then go on to define the components of the metacognitive construct, i.e. metacognitive knowledge and control processes, as well as describe the functions to which these two components rise. Further on, the concept of strategy, its origin and meaning in the field of cognitive psychology will be clarified. In particular, the concept of linguistic strategy to which this paper will refer will be established, starting first from the traditionalist view of van Dijk and Kintsch (1995), and then moving on to Oxford's (2017) more comprehensive version of language learning strategy. Finally, the functioning of one of the strategic teaching models will be described, complementing it with subsidiary didactic approaches useful in the early stages of development of a self-regulatory attitude on the part of the FL learner.

2.1 The ontological basis of metacognition

2.1.1 A new turn in psychological studies: Metacognition

Metacognition studies symbolically originated in the late 1970s, when John H. Flavell published a scientific article in 1979 entitled *Metacognition and Cognitive Monitoring, A new Area of Cognitive-Developmental Inquiry*. Right from the start, the concept of metacognition took on a characteristic terminological vagueness. This term, in fact, has referred as much to the body of knowledge that an individual possesses about mental functioning, as to the set of thoughts that superintend the cognitive mechanisms enacted from an operational point of view, i.e., our actions (Cornoldi, 1995). In other words, metacognition has always been characterised by a reciprocal relationship between

knowledge that influences behaviour and behaviour that induces the formation of new awareness.

Studies on metacognition arose in response to the simplistic system adopted by behaviourist currents. For behaviourists, a certain way of acting could be explained as a response to environmental stimuli through a functional and simplistic relationship (Cornoldi, 1995). These kinds of relations, however, could well explain simple behaviours, but not more complex cognitive behaviours, such as reading or remembering. Soon, these complex behaviours were taken up by cognitivism, which sought to create models of cognitive functioning by identifying an architecture of the mind[29], the elaborative processes involved, but also the control processes that oversee the different cognitive aspects (ibid.).

One of the aspects that has allowed for the deepening of the field of metacognition is certainly the interest that cognitivist psychology has had in control processes. Metacognition, in fact, is defined by Cornoldi et al. (2018) as that construct that allows us to reflect on and control various cognitive processes, such as knowledge, strategies, modalities and processes. The idea of control expressed by this definition may lead us to think that the metacognitive work of the mind is necessarily voluntary and conscious. In actual fact, only a small part of it shows intentionality, all the remaining processes is instead automatised, as already showed by the earliest models, such as that of Atkinson and Shiffrin (1968). In this period, cognitivist psychology was concerned with the defining of control processes characteristics, namely their association with the use of attention and consciousness, their being subject to mnestic limitations, their modifiability and the possibility of their automatization. These characteristics have often been juxtaposed with another very recurrent term in metacognitive studies: strategies. Although very similar, strategies and control processes are actually different. Cornoldi (1995: 20) distinguishes the former as «*a path that the subject decides to follow in order to tackle a cognitive task*» and the latter as «*the operations that superintend the performance of the cognitive task*» (our translation). In other words, control processes tend to initiate, supervise, and deem appropriate the use of a certain strategy, which, in turn, is one of the possible, sometimes executive, processes chosen as an alternative to others aimed at fulfilling a well-defined purpose.

[29] In this period, Atkinson and Shiffrin (1968) hypothesised that the mind is composed of several structures, one predisposed to sensory perception and two others with the function of storing information: short-term memory and long-term memory.

The choice of one strategy over another is not an arbitrary process but is subordinate to the evaluations dictated by metacognitive knowledge. Metacognitive knowledge, in fact, can be considered a complementary element with respect to the control processes, i.e. the most cerebral component of the metacognitive construct, the one delegated to reasoning on the basis of the information possessed. Metacognitive knowledge can, for instance, opt for the use of a certain strategy on the basis of the subjective estimates[30] that an individual may have with respect to a task: the perceived degree of difficulty, the presence or absence of previous experience, the possible ways to tackle it, etc.

Below, Figure 4 offers a simplified view of the metacognitive construct and the possible interactions that nurture a degree of focus on one's actions and thus a metacognitive or self-regulatory attitudes. The figure of the semicircle was used for both components, i.e. metacognitive knowledge and control processes, precisely to indicate their constant presence, at the beginning, during and after the selection process of a strategy. In this sense, the strategic decision can be referred to as the central focus of the metacognitive construct, the result of the choices made by metacognitive knowledge in relation to the control processes enacted by our mind. In the following paragraphs, we will elaborate on the main components of the metacognitive construct: namely metacognitive knowledge, control processes and strategies with a peculiar focus on linguistic strategies.

Figure 4 - Simplified view of the metacognitive construct

[30] According to Cornoldi (1995), the subjective evaluations that the individual makes with respect to a specific task, are evaluations that draw on our experiential memory and allow us to estimate the degree of difficulty of a task during the learning process and to calibrate our actions on the basis of this knowledge. For this very reason, they are called knowledge estimates or metacognitive estimates by the author.

2.1.2.1 Consciousness, awareness, metaknowledge and metacognitive knowledge

The aim of this section is to offer an elucidation of the specific meaning assumed by certain terms in the field of developmental psychology. Words such as *consciousness*, *awareness*, *metaknowledge* and *metacognitive knowledge* are in fact often confused and used without distinction. We will then go on to define one of the fundamental components of the metacognitive construct, metacognitive knowledge, and will correlate this definition with the typical characteristics of this component in order to understand the mental dynamics that influence metacognitive thinking.

Although at the dawning of the newly born science of the mind, Comte believed it impossible that individuals, splitting themselves in two, could observe themselves reasoning, the idea of a science based on introspection had found convinced supporters[31]. For cognitivist psychologists (cf. Nelson 1994), the term «*consciousness*» designated what philosophers referred to as «*awareness*», i.e. an attentional capacity that individuals possess with respect to their ways of being, their ways of acting and the possibility of expressing these capacities through language (cf. Abbagnano, 1968). This awareness is thus taken as the foundation of human psychic activity, which, in this sense, is defined by Lehrer (1990) as a meta-mind. The idea of a mind that was capable of reasoning about itself and its *modus operandi* has thus been present since the beginnings of psychology. However, the current understanding of awareness is quite different from metacognition. Awareness is in fact a much more general concept, which can relate as much to the content of thoughts as to one's own performance, but which does not necessarily imply high levels of metacognitive reflection (Cornoldi, 1995).

Over time, a specific terminology has come to be used to indicate this kind of reflection. Although at present, the terms metaknowledge and metacognitive knowledge are used indiscriminately (ibid.), Flavell (1981) has been careful to specify what is meant by the use of these words. The first refers to the general knowledge that the individual possesses about his or her own psychic functioning[32]. The second, on the other hand, refers to the

[31] Cornoldi (1995) admits the presence of various methodological criticalities with respect to introspection: the subjectivity of the method, the opacity of observations, the distortion of what can be remembered, etc. However, the author considers the exclusion of a certain awareness of psychological processes to be problematic. Indeed, the interruption of certain cognitive processes, such as the mnestic activity of recollection, often leads the subject to question the procedural issues that generated such an error, i.e. to wonder which psychological processes went wrong. For the author, this represents tangible evidence of a mind capable of reflecting on the cognitive processes involved.

[32] The meanings of the term metaknowledge identified by Cornoldi (1995) are essentially three: the set of all psychological characteristics of the individual; the cognitive aspects of mental functioning; the set of processes that enable knowledge.

body of knowledge that the individual possesses with respect to cognitive processes. However, as anticipated, the current use of metaknowledge and metacognitive knowledge is almost identical and, in this work, these terms will be used to indicate a particular type of knowledge that has as its object the mental functioning of metacognitive processes[33]. This type of knowledge is developed and explicated in interrelation with cognitive behaviour, and precisely because it is related to various forms of experience, it is responsible for the acquisition of other types of knowledge (Cornoldi, 1995).

One of the aspects that makes metacognitive knowledge a promoter of the acquisition of new knowledge is undoubtedly its general applicability. In addition to generality and the possibility of broad interconnections with other knowledge, Cornoldi (1995) identifies other characteristics of metacognitive knowledge in his examination of the subject. Basically, metacognitive knowledge cannot do without the presence of information, experiences, and intellectual structures on which to base new metacognitive knowledge. Moreover, this type of knowledge tends to be oriented towards practical implementation, to access a wide range of applications through behaviour. Another peculiar trait of metacognitive knowledge is then the possibility of being verbalised although not all knowledge is at the same level of awareness and not all individuals possess the same verbalisation capabilities[34]. Finally, it is worth considering emotional poignancy as a core feature in the storage of new metacognitive information since the underlying meaning of a content of knowledge assumes greater significance when accompanied by meaningful emotions.

Up until this point, we have been concerned with clarifying the terminology to be used with reference to metacognitive knowledge, given a definition of this type of knowledge and described its characteristics. In the next section, we will clarify what metacognitive knowledge consists of, what kind of information it encompasses and the respective categorisations.

[33] According to Cornoldi (1995), the object of metacognitive knowledge can be confused with that of the psychology of cognitive processes, but the latter differs from the former precisely because it is domain-specific knowledge without necessary implications and/or behavioural changes.

[34] Beyond the disparity generated between the competence of younger and older individuals, another possible aspect that does not make verbalisation a fundamental trait of metacognitive knowledge is the fact that not all metacognitive knowledge can be learned explicitly, some metacognitive knowledge is in fact the object of cultural transmission.

2.1.2.2 Three types of Metacognitive knowledge

Similarly to all other forms of knowledge, metacognitive knowledge is a type of knowledge that is stored within our memory. If we consider the Modal model of Atkinson and Shiffrin (1968)[35], we might assume that this knowledge is stored within long-term memory where it can be retrieved and progressively modified and reconstructed. Within our memory store, metacognitive knowledge can be differentiated and categorised according to three main types (Bruning et al. 2011): declarative knowledge, procedural knowledge, and conditional knowledge.

The kind of definition we have given so far to metacognitive knowledge can be traced back to that of declarative knowledge. Schraw and Moshman (1995) define declarative knowledge as the 'know about' of metacognition. This includes beliefs and intuitions that the individual, and especially the learner, has about him/herself, the way he/she learns, the strategies he/she knows, and estimates of the results that can be achieved by his/her actions. Generally, this type of knowledge is possessed from childhood and progresses as the individual matures (Baker 1989), but substantial differences can also be identified between good learners and poor learners[36].

Procedural knowledge, on the other hand, concerns the so-called 'know how' of metacognition. It encompasses all knowledge about the executive processes necessary for a given action or strategy to be carried out by the learner. As reported by Schraw and Moshman (1995), a high degree of procedural knowledge often corresponds to more frequent automatization of processes and more effective strategic choices. Indeed, it is reported (cf. King, 1991) that the acquisition of flexibility in the use of procedural knowledge improves learners' online problem-solving ability.

Finally, conditional knowledge can be considered the 'know why and when' of the metacognitive construct. In its essence, this type of knowledge is very close to the definition of declarative knowledge, as it concerns all information on when and why to use a certain strategy. However, its implications also affect procedural knowledge, so

[35] Atkinson and Shiffrin's (1968) Modal model is a model of information processing within memory. It divides our memory into three sections: sensory memory, short-term memory, and long-term memory. Sensory memory is dedicated to the gathering of information by focusing the senses on a specific aspect of perceptual reality. The information that is collected is then sent to short-term memory, which reprocesses it and keeps it available for fast retrieval in case of need. If the retrieval time span exceeds 30 seconds, the information must be retrieved within the long-term memory, where it is encoded, processed, and always restructured with the enrichment of new information.

[36] According to Garner (1987) and Schneider and Pressley (1989), comparisons between poor learners and good learners revealed that the latter have more awareness of their memory and of what they can do with it.

much so that it is exploited by control processes to monitor the correct application of the chosen strategy for solving a task.

As mentioned above, these three types of knowledge constitute cognitive knowledge and should not be regarded as an unconnected and chaotic mass of ideas, but rather as a set of interrelated knowledge that each individual develops and organises as a personal «*theory of the mind*»[37] (Corndoldi, 1995: 45). A fundamental role in the development of this knowledge is played by what Flavell (1976) calls *sensitivity*, i.e. that sensitivity developed from an early age in being able to recognise when the situation requires a voluntary and intentional effort to achieve a given goal[38]. Later, Borokowski, Milstead and Hale (1988) call this sensitivity *general strategic knowledge*, while Cornoldi and Caponi (1991) prefer to speak of *metacognitive attitude*. The notion of metacognitive attitude extends that of strategic general knowledge with the intention of linking the cognitive aspect to the emotional aspect. In this sense, metacognitive attitude is seen as a correlate of ideas, emotional experiences and response tendencies that predispose the individual to reflect on the nature of his/her cognitive activity, its use and the possibility of extending it. The hypothesis of the existence of this particular ability (Cornoldi, 1995) and metacognitive predisposition stems from the need to explain differences in mental functioning, strategic choice, and the way they are applied between subjects in apparently similar situations.

As mentioned earlier, this predisposition or metacognitive attitude is certainly something learnt at an early age, in forms that may be more or less conscious, but that is not to say that metacognition cannot be learnt at a later age. Flavell (1976), in fact, emphasises the importance of making learners aware of metacognition as an incentive for the acquisition of self-regulatory behaviours. According to Cornoldi (1995), the transmission of metacognitive knowledge can take place in two ways, i.e. through spontaneous acquisition, or as an object of cultural transmission. In the first case, it is a less systematic type of knowledge with a certain emotional poignancy. In the second case, on the other hand, transmission can take place according to criteria that are more logical, but not necessarily more functional. We might add in this regard, that it is perhaps through the integration of this emotional-experiential component that this second type of knowledge may become more prone to behavioural use.

[37] A theory of mind refers to the awareness that one's knowledge and beliefs are molded by one's experiences as well as the information and beliefs of others. Around the age of three, children usually become aware of cognition and begin to distinguish it from perception (Kuhn, 2000).

[38] Although Flavell's (1976) considerations mainly concerned memory strategies, the author considers it necessary to let children learn this general sensitivity towards active, continuous, and goal-oriented efforts.

The distinction between the different types of metacognitive knowledge made in this paragraph is very useful for this dissertation, as it allows to determine which are the cognitive aspects of metacognition that should be taken into account and conveyed in the realisation of a didactic project oriented towards the development of metacognition. We have then specified, that this knowledge can and must be conveyed in order for the learner to mature a metacognitive attitude. In the next section, we will move on to describe instead the control processes that represent the other side of the coin of the metacognitive construct.

2.1.2.3 Metacognitive estimates and control processes

In the first part of this chapter (cf. 2.1.1), mention was already made of the close interconnection between metacognitive knowledge and control processes and the fundamental role this interaction plays in the identification of suitable strategies for solving a given task. A very representative exemplification of this interconnection is undoubtedly metacognitive estimates (Cornoldi, 1995; Cornoldi et al., 2018). Metacognitive estimates are defined by Cornoldi (1995) as multi-variable evaluations that the individual makes with respect to the resolution of a task, and in this case, of a learning task[39]. Estimates take into account not only the task, the familiarity with it, its structure and the perceived difficulty, but also the benefits of achieving the solving goal, potential consequences and costs (Corndoldi et al. 2018; Cornoldi 1995)[40]. Among other factors, awareness of having already tackled tasks of a similar nature, i.e. familiarity, is the one that most influences these estimates. This aspect is of vital importance in fostering proper self-assessment, but it cannot be interpreted merely as a repeated attempt at the task resolution, aimed at achieving the desired result. Rather, familiarity should relate to the ability to understand the constructs of a task and its demands, i.e. a careful consideration of its structure and possible ways of approaching it to produce estimates closer to reality[41].

[39] Here, we will not address an in-depth examination of the hypotheses on the nature of metacognitive estimation, as it falls beyond the scope of this work. For a more detailed discussion on the subject, please refer to Cornoldi (1995, chapter 4).

[40] Generally, these evaluations are very quick and effective, but it is thought that an explicit reflection on these kinds of evaluations may slow down or otherwise invalidate the decision-making process. According to Cornoldi (1995), metacognitive reflection can certainly modify the decision-making process, at least during the early stages. However, it cannot be denied that the speed and effectiveness of a certain decision is undoubtedly the result of reasonable ideas that previously inspired it.

[41] We will return later to our interpretation of the concept of familiarity and illustrate the value it assumes in specific learning contexts.

The use of these estimates is subdivided by Cornoldi et al. (2018) according to a temporal criterion: there are estimates that are used prior to task resolution, some that are used during the performance of the task and others that are formulated at the end of the task resolution process. This subdivision, which has its basis in the metacognitive knowledge the individuals have of themselves, is very important, since it relates to the structure of the activities employed by our mind to control what we learn, how we do it and why (Jacob and Paris, 1987; Schraw and Moshman, 1995).These mental activities that exert control over cognitive processes are referred to as control processes. The scientific literature (ibid.) identifies several regulatory abilities, but three are considered the most representative: planning, monitoring, and evaluation.

Planning can be defined as that control capacity that prepares a number of cognitive resources on the basis of metacognitive estimates generated by individuals prior to tackling a learning task. This control process includes predictions about performance, a list of possible strategies available to the learner, as well as the allocation of attentional resources to specific aspects of the task. In this sense, the planning activity is a decision-making process, allowing the task to be approached as effectively as possible.

Monitoring, also called on-line control process, concerns those control activities that are employed during the task resolution process. This type of process can be activated by a constant comparison with metacognitive estimates, which determine a judgement on the quantity and quality of the learning, on the proximity to task resolution, but also on the presence or absence of obstacles in the resolution process (Cornoldi et al., 2018). The identification of obstacles can in fact trigger a problem-solving procedure, which interrupts the task-solving process in order to handle the problem encountered adequately and with all the necessary attentional resources. From this point of view, problem-solving functions as a Chinese-box system of control activities, which involves the activation of new planning, monitoring and evaluation processes for the resolution of the problem and which returns, finally, to the main plan for the completion of the task (Van Dijk and Kintsch, 1983; Lumbelli, 2009).

Evaluation, on the other hand, is the control process that is activated at the end of the resolution of a task. It assesses whether the objectives set in the planning phase were actually achieved and takes into account how a certain type of result was achieved. Indeed, the estimates associated with this type of control process take into account the degree of success achieved and the difficulties encountered, which will influence the judgement of subsequent approaches to the task. From this point of view, an excellent

explanatory model of task resolution functioning in interaction with control processes and metacognitive knowledge is offered by the work of Borkowski and Muthukrishna (1992), presented in Figure 5.

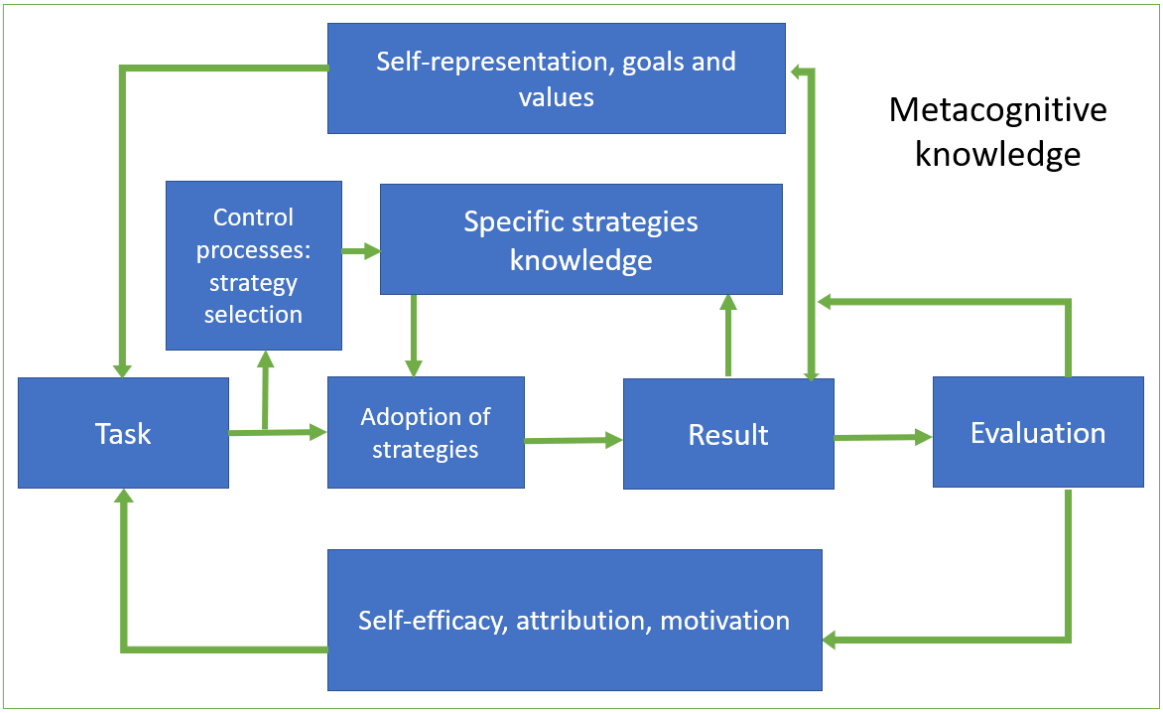

Figure 5 - The metacognitive model of Borkowski and Muthukrishna (1992)

This model is very important to understand how task resolution proceeds in a circular fashion. In fact, task resolution is inspired by the metacognitive knowledge one has of oneself and of the task, it proceeds under the supervision of control processes and the use of specific strategies that produce a certain result. Finally, it is precisely this result that through metacognitive reflection becomes the bearer of new knowledge, about one's self and one's sense of self-efficacy, about the motivations accompanying the performance of the task, and about the attributional styles related to the results obtained. We will examine some of these complementary aspects of metacognitive theory in the next section.

In the meantime, it is useful to emphasise how the reflection conducted on the metacognitive construct, and in particular on control processes, is fundamental to this work. Indeed, the distinction produced above on the three macro-categories of control processes allows for a better understanding of the nature and primary function of the metacognitive strategies adopted by learners. The criterion of functionality is of vital importance for the promoters of action-research activities, as it allows for a more systematic structuring of metacognitive reflection paths oriented towards learning a particular skill.

2.1.2.4. Implicit theories

Reference has already been made earlier in this chapter (cf. 2.1.2.2.) to the importance assumed by the concept of sensitivity and the need for learners to learn a metacognitive attitude (Flavell, 1976; Cornoldi, 1995) from the earliest moments of their learning journey. Other authors (cf. Aoki, 1999; Dam and Legenhausen, 2018) have preferred to speak of a feeling of autonomy or a more general metacognitive awareness (Schraw, 2001). Basically, all these authors refer to the possibility for the learner to be able to develop both knowledge about his or her own cognitive functioning and the ability to control the cognitive processes enacted in response to the performance of a given task. According to Schraw (2001), this type of knowledge can be taught through instruction in schools with different objectives, which this work identifies in the contrast that exists between two theories of the mind: the entity theory and the incremental theory.

Entity theory is a static metacognitive theory of the skills, or competences, that an individual possesses or does not possess with respect to his or her personal case (Cornoldi et al., 2018). It can be seen as a rather widespread position of convenience taken by individuals to justify possible failures and non-investment of cognitive resources in certain areas, because they are convinced that they are not suited for a certain thing. This theory has several implications that are not very functional for learning, as it generates an emotional and motivational impasse. On a behavioural level, this Entity Theory is observed in the tendency to choose simple tasks, in the avoidance of new situations in order not to lose face in front of the peers, and performance anxiety when tasks appear too difficult.

Running counter to the Entity Theory is the Incremental Theory[42], which, in contrast to the former, believes in the possibility of modifying and improving one's intellectual abilities, skills, competences and aptitudes with respect to various tasks. Basically, the individual, who is supported by an incremental theory of intelligence, believes that one's abilities can improve through practice, trial and error, and experience (Cornoldi et al., 2018; Dweck, 2000). This theory fosters motivation and a positive self-representation of the individual as a person who is capable of learning and making progress.

As seen in Borkowski and Muthukrishna's (1992) model, a representation of one's abilities is certainly the result of the evaluations that individuals generates about

[42] Rebecca Oxford refers to these theories respectively as Fixed and Growth mindsets.

themselves at the end of a task. In fact, the tendency towards an entity-based or incremental representation of one's ability is inextricably connected to the attributional styles that the individuals use to justify a certain outcome at the end of a task. Attributional styles are in fact reflections that the individual develops in order to identify the reasons that generated a certain result, namely reasons internal or reasons external to the self. In the first case, the learner attributes the cause of his or her own success or failure to his or her own efforts and actions. In the second case, the learner shifts the causality of the outcome to external events over which he or she has little power. These attributional styles are real cognitive habits that can be applied in a plurality of situations (Weiner 1985) and that can feed into certain attitudes towards task performance. A simplified view of the possible attitudes is offered below in Figure 6, where the entity and incremental theories intersect with attributional styles, generating four different types of behaviour: two of avoidance and two of persistence.

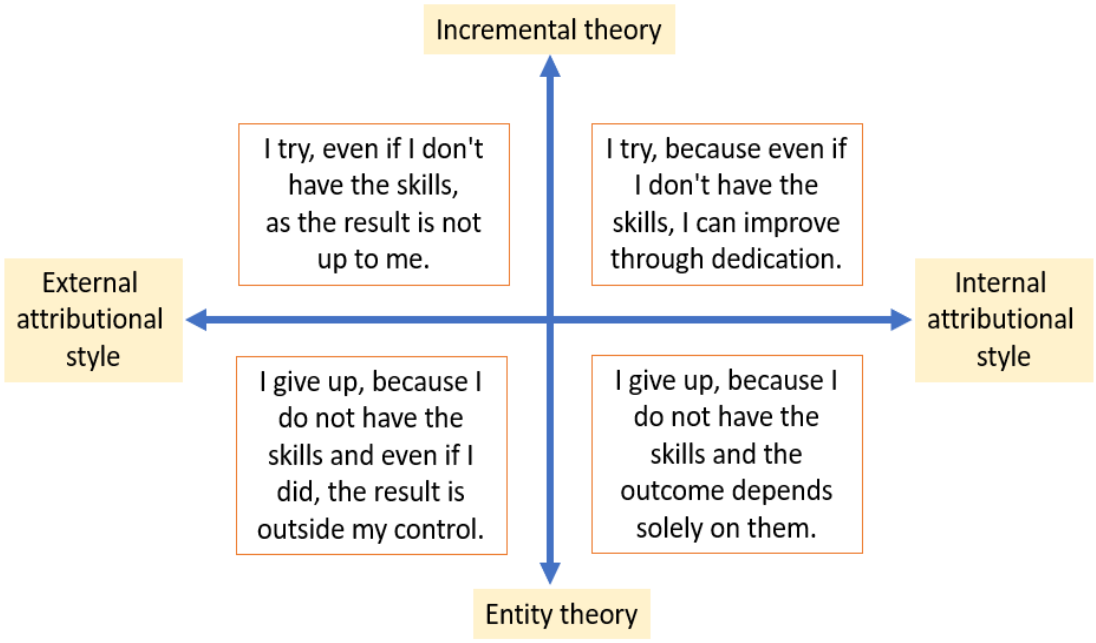

Figure 6 - Simplified view of the attitudes towards the task

In the light of the interactions between entity-incremental theory and the external-internal attributional styles adopted by the learner, it is possible to understand the importance of developing a metacognitive attitude in the learner. Metacognitive reflection can indeed help the learner to shift the attributive focus from external causes to the inner self, stimulating in them the idea of agency and responsibility for their own learning.

Moreover, shifting the causes of failure from one's actual abilities, to the tools and ways of learning adopted, can represent for the learner a door that is always open to improvement and learning new skills (cf. Cornoldi et al., 2018). In this sense, as stated by Schraw (2001), metacognitive awareness can help individuals better understand their own learning processes, identify areas where they need improvement, and develop strategies for improving their performance. Additionally, metacognitive awareness can help individuals become more independent learners who are better equipped to learn on their own outside of the classroom. Finally, by developing knowledge of cognition and the ability to regulate one's own cognitive processes, individuals can become more effective learners.

2.2 Strategies

2.2.1 Strategies in the cognitive world

In the previous examination of the ontological foundations of metacognition (cf. 2.1.), it was observed how metacognitive knowledge and control processes, as well as the interactions and exchange of information that characterise them are of vital importance for our mind, in order to carry out certain actions and achieve precise goals. Moreover, it has been established how the executive aspect of the task is governed by the use of strategies, determined precisely by the interactions between metacognitive knowledge and control processes. The interest in the study of strategies originated in the late 1970s, when research had focused on the range of behaviours adopted by the 'good learner' (Cohen, 2011), attempting to identify their characteristics and the constructs underlying their good performance. Ever since then, an attempt has been made to define what a strategy is and an attempt will be made here in this work to provide a comprehensive description of it.

First, it will be indicated what a strategy is not. As previously stated (cf. 2.1.1.), a strategy is not a control process, since the latter is to be understood as that component that superintends and supervises the correct functioning of a strategy (Cornoldi, 1995). Another frequent error is the identification of the concept of strategy with that of ability. Ability is in fact a strategy or an organised system of strategies that has been internalised into that series of mechanisms that are operated automatically during the execution of a task (Garner, 1987). There is a close connection between the two concepts, but while for

strategy the aspect of control and awareness is fundamental to the achievement of a precise objective, for abilities the flow of the executive act is so automated that the action is completed almost without one being aware of it (De Beni and Pazzaglia, 1995).

The etymology of the word strategy is to be found in the Greek word strategós (στρατηγός), which in ancient Greek meant the leader of military troops. Borrowing a thought from De Beni and Pazzaglia (1995), if strategós meant leader of troops, one can guess that the leader was trying to lead them to victory and not failure. According to this framework, it makes sense to adopt the idea that van Dijk and Kintsch (1995) provide us with of strategy as a particular and often personal representation of each decision to be made so that a course of action can achieve a specific goal. From a psychological-cognitive perspective, van Dijk and Kintsch (1995) were concerned with giving structure to an apparently elusive concept, to the point that a comprehensive definition of the term strategy was only provided later, with the work of Rebecca Oxford (2018). The systematisation work carried out by van Dijk and Kintsch (1995) can be represented through Figure 7, which shows a hierarchical view of general strategic functioning used by the authors, before delving into their theory on the categorisation and functioning of discursive strategies.

Figure 7 - Hierarchical functioning of strategy use.

In the view of the two authors, a tactic is an organised set of strategies oriented towards the achievement of long-term goals, such as choosing to study for a specific course of study, to graduate in order to get into a specific type of job. At a second level, so-called plans are identified, which represent a type of macro-information describing the possible actions contemplated in a global action. Consistent with the example above, a plan takes

into account several actions to be carried out in order to achieve the macro-objectives of the tactic, i.e. the choice between different faculties of study, enrolment in possible entrance tests, filling in the academic career path, etc. The strategy, on the other hand, is a mental representation of the choices to be made during the course of action. The choices made by strategies consider various factors[43], such as costs and benefits, speed of action, probability of success, and can also change during the course of action, as the starting conditions adjust. In the example adopted above, a strategy could be to opt for open-numbered faculties, or to commit to studying for those with restricted numbers, to choose the faculty that comes closest to our values (e.g. the one that is most spendable in the job market or closest to our passions), etc. Each of these strategies is in turn composed of a series of moves, i.e. a series of interlinked actions that are performed with the aim of modifying a state of affairs in order to achieve the set goal. Sticking to the previous examples, moves could be the choice of a textbook on which to prepare to pass the faculty entrance tests, the in-depth study of certain topics and the continuous testing of one's knowledge through models that come close to the exam, etc.

The examples given here can be read at different levels of task specificity, each task is in fact subdivided into subtasks to be solved. In this sense, the hierarchy designations defined above may shift as more specific subtasks are considered. In general, the hierarchy provided by van Dijk and Kintsch (1995) diverges somewhat from what is now understood by the term strategy. In the authors' view, the term strategy fulfils the tasks that today are assigned to control processes such as planning (cf. 2.1.2.3.), whereas in studies on metacognition the concept of strategy is much closer to the concept the authors give of move and action (see also Brown, 1975; Flavell, 1977). According to their definition, actions are means to transform one state of affairs into another. These transformations are the results of bodily activities that are guided by cognitive information such as purposes and their underlying wishes, needs, preferences, decisions, or other motivational structures.

As mentioned earlier, the definition of action is very close to that provided by Flavell (1979) on the concept of strategy. In particular, Flavell refers to a very specific type of strategy, namely the cognitive strategy. Traditionally, cognitive strategies are that series of operations, often related to behaviour but may also be mental in nature, that individuals employ to achieve cognitive progress, such as solving a task. A particular type of

[43] Using the words of Cornoldi (1995), these factors could be called metacognitive estimates. (cf. 2.1.2.3.)

cognitive strategy is the one that van Dijk and Kintsch (1995) call heuristic. Heuristics are a set of discovery operations, or acts aimed at gathering information about circumstances that could allow an agent to achieve certain objectives, usually in the context of problem-solving. They are frequently applied when a problem lacks an apparent algorithmic solution[44] or if the information at hand is insufficient or ambiguous. Different techniques are included in this strategy type, namely trial-and-error, working backwards from the objective, dividing an issue into smaller pieces, and using metaphors or analogies to comprehend a problem. Heuristics can be helpful in a variety of circumstances, but if they are not applied properly, they can also produce biases or mistakes.

As all cognitive strategies, heuristics work at an unconscious level and can be traditionally distinguished from other problem-solving strategies in which awareness and control play a more important role: metacognitive strategies. Metacognitive strategies are strategies that are used to reflect, plan, monitor, evaluate and make cognitive strategies more efficient so that they achieve their goal in accordance with a principle of cost-effectiveness[45] (Hacker et al., 2009). According to Alexander et al. (1998), a metacognitive strategy differs from a cognitive strategy in a number of characteristics, which are important to bear in mind especially to enable a more exact analysis of the metacognitive behaviour. First of all, a metacognitive strategy must be intentional, i.e. it must be able to aim at solving a concrete problem. Moreover, it can be demanding, especially in the initial stages of its use it may require the expenditure of a certain amount of time, cognitive resources and thus a greater mental effort. A metacognitive strategy is then volitional, i.e. it must express the will to choose that strategy among others of our knowledge and to use it for a specific purpose. In addition, it can be facilitative, especially in the advanced stages of use, a metacognitive strategy allows for a more immediate resolution of the task and possibly better results. Another very important feature is the flexibility of strategies, i.e. they can serve new purposes and be combined in novel ways. Finally, a metacognitive strategy must be necessary, i.e. it must be the only viable way among the alternatives to achieve its purpose.

[44] In van Dijk and Kintsch's (1995) view, the algorithm is a logical succession of rules that guarantees the achievement of the result at the expense of time and resources. In contrast to it, a cognitive strategy, such as heuristics, is not programmed according to a logical system of rules but makes use of an exploratory process that aims to achieve the set goals, while preserving time and cognitive resources. In this sense, goal attainment through strategies is not as mathematical as it would be through the use of an algorithm.

[45] Several considerations are involved in the principle of cost-effectiveness that is referred to: the possibility of solving the task more quickly and effectively, a reduced expenditure of attentional resources, or even the possibility of contingent positive effects or those associated with future experiences (Cornoldi, 1995).

The excursus on strategies in the cognitive world that has been described in this paragraph is very important for the clarification and the precise definition of the terminology in the field, with particular reference to the distinction between cognitive and metacognitive strategies, which will be used in this work. Furthermore, the outlined hierarchical structure overarching strategic functioning will be very useful in this work for the analysis of learners' strategic needs. Similarly, the characterisation of strategies provided by Alexander et al. (1998) will make it possible to disambiguate automated cognitive strategies from voluntary, goal-oriented metacognitive strategies. If in this section we have dealt with a complete profiling of the general concept of strategy with respect to the metacognitive construct, in the next paragraph we will go further with an in-depth study of linguistic strategies, albeit from a more complex perspective (cf. 1.2.1).

2.2.2 Language strategies

In the previous paragraph, it was embraced the idea of cognitive strategy as a mental or behavioural action that enables the resolution of a task, i.e. the change of one state of affairs into another. Among the others, this definition is associated by van Dijk and Kintsch (1995) with a particular type of cognitive strategy, the linguistic strategy. The two authors provide a number of reasons for their choice to identify linguistic strategies as a particular type of cognitive strategies. One of the arguments concerns the actionality of language; linguistic acts as such are in fact real actions of both a productive and receptive nature that respond to the need to act as quickly and effectively as possible. In order to be effective, a linguistic action must flow in a linear manner, i.e. occur rapidly and smoothly. However, precisely because language users possess a limited capacity of memory[46] (consider comprehension, for example), the human mind needs a system of strategies that manage the complex system of language and the many linguistic actions occurring simultaneously. From the perspective of van Dijk and Kintsch (1995), language retains all the features of an action system: all linguistic acts have a beginning and an end and the latter, in particular, normally coincides with the goal of these actions; the linguistic act is a complex task that can be subdivided into subtasks solvable step by step; finally, more than any other type of task, the linguistic one can often generate problems

[46] The two authors refer to the capacity of the working memory, which in the case of language is particularly limited, since it not only stores and retrieves information, but also integrates information with contextual and situational cues in real-time.

due to misunderstandings, lack of information or for information that is not immediately available, which inevitably brings into play a series of attentional resources oriented towards solving these problems.

The attribution of a specific category for language strategies together with the development of glottodidactic studies has generated questions among experts in the field. The question arose as to whether it was necessary to distinguish language strategies into *language use strategies* and *language learning strategies*. On the one hand, a separatist view of the two concepts (Gregersen and MacIntyre, 2014) categorises the former as those strategies used by the learner with the primary purpose of communicating, regardless of the level of interlanguage possessed (Cohen, 2011; Oxford, 2017). The latter, instead, is described as thoughts and/or behaviours adopted by the learner with the explicit aim of improving his or her knowledge of the target language (ibid.). On the other hand, there are amalgamators (Gregersen and MacIntyre, 2014), including Rebecca Oxford, who oppose such a dualistic view of language strategies, arguing that learning is a by-product of communication as much as communication is the result of learning. In her view, the use of strategies moves along a continuum in which it is the learner who decides the intentions and the most appropriate time to fulfil extemporaneous communicative or learning needs[47].

Rebecca Oxford's (2017) view, with which our work is associated, shifts slightly from traditional studies on metacognition and on the use of strategies to adopt less rigid parameters with respect to the classification of strategies. Indeed, one of the characteristics of strategies claimed by Oxford (2017) is precisely flexibility, i.e. the possibility that each strategy can be permeable to different roles or functions depending on the task, the physical context or even the learner's internal context. The demarcation of a concept such as strategy, that normally assigns it a precise category and purpose is for Oxford (2017) too rigid a view that does not reflect the complex character of the metacognitive construct and the interactions it entails, especially in a language learning environment.

As an example of the porosity (Oxford, 2017) associated with the categorisation of strategies, it has been decided to present the case highlighted by Cohen (1996), which is particularly relevant to this research work. In his analysis of strategies, Cohen (1996) noted that there is a degree of ambiguity present in the distinction between cognitive and

[47] The discussion will not be pursued further as it is beyond the scope of this work. A clarification of the two positions can be found in Gregersen and MacIntyre (2014) and Oxford (2017).

metacognitive strategies. The author displays the case of the summary strategy, which is often used for a better understanding of a text. This strategy can be interpreted as both cognitive and metacognitive and it is not possible to establish a clear distinction between the two functions. In the first case, the summary could be the result of a strategy involving a certain amount of planning useful for a faster understanding of the text. In this sense the strategy might be interpreted as metacognitive in nature. In the second case, the summary is the result of cognitive operations that reconceptualise the read paragraph in the form of keywords intended to reduce the amount of information. In this sense, the use of strategies must take into account the presence of constant interactions between the different functions, which is symptomatic of a complex system where the development of rigid taxonomies makes little sense (Oxford, 2017; Cohen, 2014).

The example of overlapping roles and consequently functions of the summary strategy validates Oxford's view of a flexible and less categorical conception of the concept of strategy. According to Oxford, in fact, the role, i.e. the purpose for which a strategy is adopted by the learner, is never univocal, but can assume different functions: cognitive, affective, social and motivational. These functions may occur at different times and may sometimes overlap, without there necessarily being any awareness on the part of the learner. While the lack of a clear-cut taxonomy certainly makes the research work more complex, an intersectional perspective of the roles of the strategies makes the research more adherent to the reality of language learning.

Once the importance of a characteristic such as flexibility and the concept of role have been clarified, an encompassing definition of language learning strategy can finally be provided, drawing on the words of Oxford (2018: 82):

> LLS (Language Learning Strategies) are purposeful, conscious (or at least partially conscious), mental actions that the learner uses to meet one or more self-chosen goals, such as (a) overcoming a learning barrier, (b) accomplishing an L2 task, (c) enhancing long-term L2 proficiency, and (d) developing greater self-regulation (ability to guide one's own learning). Like most aspects of L2 learning, LLS occur in real contexts (specific settings), are complex (with multiple, interacting factors), and are dynamic (flexible, usable in different ways, and changeable along with learners' changing needs). LLS can be learned with help from a teacher, a friend, a book, or the internet, although many learners creatively and effectively generate their own LLS.

While this definition corroborates and confirms what has been said so far about the flexible character of learning strategies, it also promotes the idea of the learnability and teachability of these strategies. In fact, both learning and teaching certain strategies

implies a certain degree of awareness and agency in their use. As mentioned earlier (cf. 2.2.1), the conscious, voluntary and actional character is what distinguishes a particular type of strategies: the metacognitive ones. However, the definition of a metacognitive strategy appears to Oxford (2017) to be too narrow and pigeonholed mainly in the monitoring of strategies with a cognitive function alone. For this reason, the author prefers to speak of a broader concept that accommodates the idea of conscious strategies with more than one function, namely metastrategies.

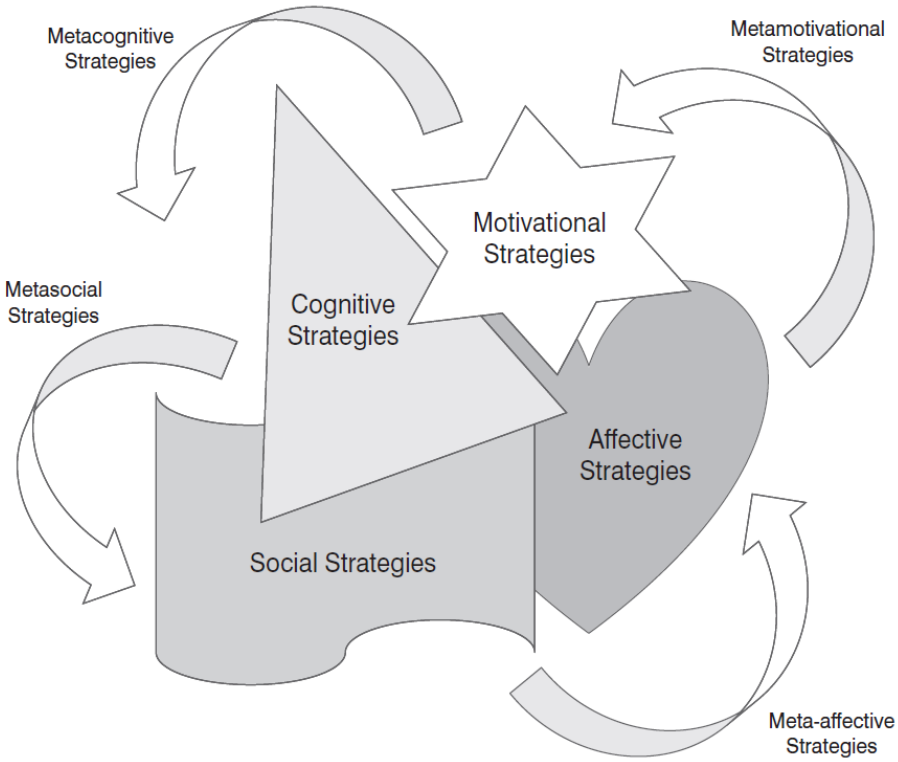

Figure 8 - Metastrategies as the Overarching Guides, taken from Oxford (2017: 178)

According to Oxford (2017), metastrategies are higher-order cognitive processes that allow learners to monitor, analyse, and customise their implementation of learning strategies in response to changing requirements and goals. In fact, metastrategies provide learners with a framework of possible strategies at play during learning: cognitive, but also affective, motivational[48] and social strategies. For this reason, metastrategies can differ according to the control exercised over a specific type of strategy. In this sense, there can be metastrategies with a metacognitive function (for cognitive strategies),

[48] The distinction between the two types of affective and motivational strategies is introduced by Oxford (2017) in order to differentiate strategies that regulate learner emotions (affective strategies) from those that support learner motivation such as identifying learning goals, incentivising learner interest or even managing one's own self-efficacy beliefs.

metamotivational (for motivational strategies), meta-affective (for affective strategies) and metasocial (for social strategies). With this differentiation, it might seem that somehow Oxford (2017) has fallen back into the old patterns of strategic categorisation. However, the distinction made here serves not only the needs for terminological clarity, but also the needs for teachability and learnability referred to earlier in this text. As Figure 8 shows, the flexibility and interactivity, even simultaneous (symbolised by the overlapping geometric figures and arrows in the graphical representation), of the different strategies persist and attempt to summarise the complex nature of the human mind's strategic system.

2.3 Teaching approaches to strategy development

2.3.1 The S^2R Model of Oxford

In the previous paragraph, it was explained that one of the main objectives that led Oxford (2017) to the distinction between the various strategies and metastrategies is undoubtedly the possibility for these to be taught and learned. Strategic and metastrategic teaching is fundamental so that the learner, through the development of self-regulatory skills, manages his or her own learning path effectively and autonomously. In this section, it will be reviewed how the research literature has tried to achieve these objectives, by considering a very specific didactic approach, namely Oxford's S^2R Model (Self-Strategic Regulation model), which draws on Zimmermann's (2002) cyclical phase Model of Self-Regulatory Feedback and subsequent modifications (Zimmermann and Moylan, 2009; Zimmermann and Schunk, 2011).

Before delving into the description of the model, however, it is appropriate to clarify the theoretical assumptions on which it is based on, starting from Zimmermann's theoretical perspective and attempting to integrate it with the more recent one of Oxford (2017). Zimmermann's (2002) Model of Self-Regulatory Feedback was developed by adopting a socio-cognitive perspective. However, this definition does not do justice to the potential richness of the model that can include more complex dynamics typical of learning environments and especially of the linguistic one.

As mentioned above, one of the theoretical components of the model, for example, is the Vygotskian socio-pedagogical component, according to which the learner learns thanks to the mediation and assistance of another more capable person (e.g. a more experienced

peer or group of peers, a parent or a teacher). This person can assist the learner in the appropriation and internalisation of knowledge (Oxford, 2017), within that potential that Vygotsky calls the Zone of Proximal Development[49]. To this theoretical component is then added the socio-constructivist component, in which the expert, through simplification practices such as scaffolding and task compartmentalisation, can allow the learner access to strategic and metastrategic knowledge (ibid.). Another important component is the cognitive-cultural component, whereby the type of strategies that are considered by the teacher are part of a very specific cultural context, recognised and shared as fundamental by the group of learners for the task objectives. Finally, Oxford's S^2R Model (2017) is based on a theoretical motivational component as much as on an affective component, where attention to emotions, interest, commitment, self-efficacy and attributional styles is considered essential factors for strategical and metastrategical teaching to be complete[50].

[49] The Zone of Proximal Development is the difference that exists between the learner's current level of knowledge and the potential level that the learner can achieve (Vygotsky,1978).

[50] In fairness, Zimmermann's (2002) model, although identifying itself as socio-cognitive, already included a focus on motivational components such as self-efficacy and attributional styles. The most important innovative interventions of Oxford (2017), in our opinion, concern the admission of a reciprocal influence of each of the three phases on all the others, the acknowledgement of the emotional component and the consideration that, however structured, a teaching model is not always respected in its phases, rather the order of these can change depending on the learner's approach to the task.

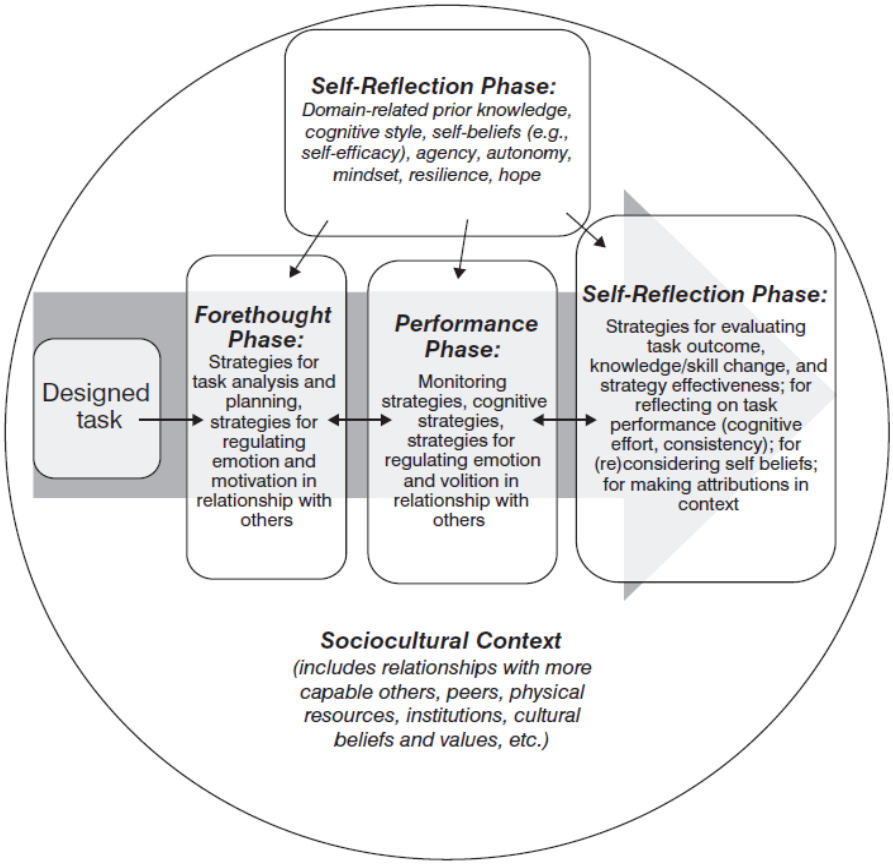

Figure 9 - Self-Strategic Regulation (S2R) model of Oxford (2017: 75)

The Self-Strategic Regulation model of Oxford is a three-stage model used for solving a learning task, and, in this case, a task that has to do with foreign or second language learning. According to the CEFR (2001: 10), a task is «*any purposeful action considered by an individual as necessary in order to achieve a given result in the context of a problem to be solved, an obligation to fulfil or an objective to be achieved*». Although previous versions of this model (cf. Zimmermann and Schunk, 2011) always represented it with a cyclic form, Oxford (2017) preferred to give it a certain linearity to indicate a progression towards task resolution. Moreover, the linear representation of the different phases allows the author to better show the continuous interactions of each of the three phases on the previous and the next one. More importantly, this model certainly allows for the representation of the socio-cultural aspects (at the bottom of the graphical representation) and the learner's internal metacognitive knowledge (at the top of the graphical representation) that influence the executive process of task resolution.

In the forethought phase, the learner is devoted to the analysis of the task, sometimes parcelling it out and breaking it down into smaller subtasks in order to simplify the solving process. The process of parcelling out is fundamental in order to then be able to move on

to an analysis of the objectives to be achieved and a planning of the strategies to be adopted for resolution. In this phase, the learner can usually also employ emotion management strategies, reflect on his or her own capabilities and expectations, and orient himself or herself towards action.

In the performance phase, the learner implements the strategic choices (cognitive, social, motivational and affective) that were identified in the forethought phase. In addition, the learner engages in monitoring the actual effectiveness of the strategic choices, through the use of metastrategies that enable him/her to self-observe and self-monitor during the executive resolution process, so that he/she can adapt strategies or replace them with others according to the results obtained (Zimmermann and Schunk, 2011).

In the self-reflection phase, the learner is engaged in an evaluative process of the performance just completed, a factor that also has inevitable implications for self-perception as a learner of a FL. In this sense, strategies, fluency of performance, efficacy, results obtained are all elements that in some way influence one's self-perception and the set of metacognitive knowledge possessed. This internal knowledge about one's own cognitive (and other) functioning fuels a defensive or adaptive attitude towards the task (Zimmermann and Schunk, 2011), triggering avoidance or participation behaviours.

As may have emerged, in this brief summary of the three phases, only marginal mention has been made of the description of the affective and motivational components at play, of their importance and their effects on the cognitive and behavioural components in this model. This decision was made in the light of a more detailed examination of these aspects in the next chapter and in order to focus attention on the didactic approaches best suited to strategic and metastrategic teaching. In the next and final section, we will conclude the framework on teaching with some complementary approaches to the Oxford's S^2R Model (2017) just presented.

2.3.2 Complementary teaching approaches

As emphasised by the word 'self' in the title given to the S^2R model of Oxford (2017), this model aims at improving learner self-regulation skills in learning a FL. However, before a learner can feel fully autonomous and responsible for his or her own language learning, it is necessary for him or her, from a socio-pedagogical perspective (cf. 3.3.1.), to be guided by a more experienced person in the process of introjection, identification, and integration of the need for autonomy (cf. Ryan and Deci, 2017). In this sense, the

integration process can begin if there is an experienced person, who prepares the ground for learner' self-regulatory behaviour through teaching. In other words, and in accordance with the SDT, it is through the didactic approach of the teacher that the learner can develop reflective skills, learn to formulate questions, identify strategies, recognise possible problems, engineer their resolution, and, finally, solve the task.

However, according to scientific research in the field, not much is known about the practices adopted by teachers in language strategies teaching, nor is much known about their metacognitive knowledge and beliefs (Hiver and Whitehead, 2018). Furthermore, although the beneficial effects of learning through the employment of metacognition are known, strategy teaching is hardly ever taken seriously as a focal point of language learning (Wilson and Bai, 2010). Indeed, Wilson and Bai (2010) suggest that a teacher is much more likely to test comprehension rather than to teach it. As reported by the authors' findings, one of the reasons for teachers' neglect in this regard is that teachers find it difficult to identify a starting point for metacognitive teaching. For this reason, this section will attempt to provide some insights into the introduction of metacognitive language teaching, integrating personal insights with other methodologies reported by Oxford (2017).

In general, metacognitive language teaching requires a great deal of language awareness: knowledge about language, knowledge about language learning and knowledge about language teaching (Haukås et al., 2018). Before venturing into any language strategies trainings, it is vital to collect information and deepen one's teaching knowledge about specific aspects of language learning that one wishes to improve in learners' learning habits. Beyond that, it is also important to define the goals of the metacognitive training and to identify the appropriate teaching approaches depending on the metacognitive level of the learners[51].

From our point of view, one of the approaches that best lends itself to transforming hetero-regulation into self-regulation is certainly the inductive approach. This approach contrasts with the traditionalist deductive approach, in which teaching focuses on the teacher, who is the bearer of knowledge towards the pupils who passively absorb what they are taught. According to the inductive view, on the other hand, it is the learner who is at the centre of the lesson, in which he or she is an active participant and engaged in the construction of knowledge, through his or her own experiences, efforts, questions, and reflections,

[51] The aspect of metacognitive educational intervention planning will be explored in more detail later in this work.

while the teacher acts as a guide in a maieutic process of knowledge co-construction (Prince and Felder, 2006). The inductive approach is based on the constructivist theory, whereby learners' knowledge is broadened through a learning method that promotes connections with pre-existing cognitive structures, namely old knowledge and beliefs of the learners. Generally, this approach is referred to as an umbrella term for a range of teaching methods that transfer the learning responsibility from the teacher to the learner, with a varying degree of involvement on the part of the teacher (ibid.).

One of the approaches that has adopted the gradual transfer of autonomy of action onto the learning process as a pivotal principle on which to develop learners' strategic competence is Cognitive Academic Language Learning Approach (CALLA). With this approach, Chamot and O'Malley (1996; see also Chamot, 2009) propose that learners cultivate, alongside basic communicative and interpersonal skills (BICS), a strategic competence that supports the acquisition of a second or foreign language. The strategic teaching envisioned by this method is explicit and involves support from the teacher, who gradually removes the scaffolding provided to the learner to foster greater autonomy. CALLA follows a structured five-stage process, wherein teachers can elicit prior knowledge, introduce new information, provide ample opportunities for practice, and promote self-evaluation. This method fosters the development of declarative knowledge in conjunction with procedural knowledge, allowing learners to gain a thorough understanding of the circumstances in which to employ a given strategy (see Jacob and Paris, 1987).

As previously said, there are a number of methods that support inductive teaching. It may involve project-based learning, discovery learning, problem-solving, or even inquiry (ibid.). All these methods have in common the learner's predisposition to agency, discovery, reflection and task resolution. In fact, according to a metacognitive perspective, task resolution cannot be restricted to a procedure to be followed, or rather, to mere procedural knowledge, since other knowledge such as conditional and declarative ones (cf. 2.1.2) are enhanced in tandem. In other words, the aim of metacognitive and inductive teaching is to stimulate the learner not to solve the task mechanically, but to make the learner become aware of the reflections, questions and motivations behind the strategic choices for resolution.

Regarding the implementation of a meta-strategic approach to language teaching, Wenden (1998a) provides a number of useful pointers to guide teachers in constructing lessons with metacognitive goals. Beyond explicit teaching and the progressive removal

of scaffolding already mentioned for the CALL approach, Wenden also attaches importance to contextual support, teaching material and the promotion of learner empowerment. For the author (ibid.), in fact, creating a collaborative and supportive learning environment is crucial for learners to develop an autonomous attitude regardless of the teacher figure. Furthermore, a valuable aid in meta-strategic learning environments are study materials, which can be adapted to incorporate not only the linguistic but also the strategic aspect. Finally, fundamental for Wenden (1998a) is to empower learners with means that can allow them to control their learning process and become effective agents of change within the educational context.

It is our opinion, that among the various methods previously presented, the inquiry method[52] is the one that best lends itself to introducing this kind of reflection. In fact, the inquiry method, while granting learners various degrees of freedom in the discovery process, also allows the teacher, at least in the early stages, to have control over this process, inducing learners to ask themselves the right questions and to elaborate the most suitable reflections (Lee, 2004). According to Lee (2004), it is quite common, in a responsibility-transfer learning process, from the teacher to the learner, to start with a more controlled type of inquiry and gradually give learners more and more freedom of action and reasoning. Therefore, in the early stages of developing metacognitive awareness, it is important to use a more structured type of teaching method, in which the teacher acts as a facilitator in the access of various forms of knowledge involved.

Depending on the degree of freedom offered to the learner, inquiry can be adopted using different techniques. As already mentioned, in an introductory phase of metacognitive training, in which teaching is more hetero-controlled, the inquiry technique that better suits the purposes of learners' reflective skills development is that of the Structured Inquiry (SI). During SI, learners are exposed to a series of questions by the teacher, aiming at stimulating reflection and planning. The response procedure to these questions is guided step-by-step by the teacher, who provides clarification as the focal points of the inquiry are elicited from the learners (Zion and Mendelovici, 2012). This technique does not require learners to discover new strategies, since the strategical path is already structured by the teacher. Rather, the teaching goal is precisely to raise awareness of the various knowledge involved and the specific procedures to be followed by the learners.

[52] Inquiry is a method that is often used in science education, on account of the focus on various experiments and procedures (Prince and Felder, 2006) to be tested and reflected upon by the learners.

This kind of SI technique shares similarities with other Vygotskian methods, such as the Dynamic Assessment (DA) of Feuerstein et al. (2006). The DA is not exactly a teaching method, but rather an assessment method of the learner's potential when he or she is supported by the help of an expert in the learning process. In the DA method, the role of the expert is very important as he or she advocates modifications and adaptations (e.g. contextual and/or linguistic prompts and cues), in order to optimise the learner's performance. In other words, it does not only provide an account of the benefits of this scaffolding on the learner's abilities, but can also be a report of the learner's level of autonomy and points of weakness (Donaldson, 2013).

There are different ways of applying DA and one of them is certainly Graduated Prompting. Graduated Prompting is a procedure that, as much as SI does, provides the learner with support structures that can vary in intensity as the learner becomes more proficient in the dynamic learning process (Lidz and Elliott, 2000). In other words, through Graduated Prompting, the scaffolding provided by the teacher is progressively dismantled as long as the learner can take initiative in the learning process. A second DA modality, equally interesting for its implications in terms of strategic teaching, is the mediation received by the learner through a test-teach-test process. Through this modality, the mediator establishes a dialogue with the learner tackling the task. This dialogue provides the basis from which to teach the strategies necessary for the learner's cognitive advancement. In turn, the learners are given the opportunity to test themselves in the use of the strategy and to be able to receive feedback from the teacher on how the strategy has been executed (Oxford, 2017). As pointed out by Kozulin and Garb (2002), the test-teach-test mode allows for the identification of learners' strengths and weaknesses, can provide learners with targeted feedback, which, in turn, help learners develop motivation and confidence in their learning process. This mode not only has advantages for the learners, but can also be an excellent tool for teachers in tailoring instructions and identifying learners' needs (ibid.) along the learning path.

Chapter 3: Motivation

The previous chapters have clarified how the learning activity in the language classroom is subject to complex dynamics involving the interaction of several CDSs simultaneously. In the learning environment, one of the driving forces that pushes the learning process forward is certainly the need for autonomy, identified, in the first chapter, as one of the fundamental needs of the individual, (cf. 1.1.2). In order to get a clearer picture of the ways in which learners' need for autonomy is supported within the language classroom, the autonomy model (Figure 3, cf. 1.2.2.) proposed by Tassinari (2010) was presented. This model graphically showed that within the language class, metacognition alone has little effect on language learning dynamics and that these dynamics additionally encompass a very complex motivational substratum, accompanying the language learner's metacognitive choices.

The involvement of much deeper dynamics entailing motivational, affective and social, aspects is also supported by Oxford's (2017) strategy theory, presented in the second chapter. Indeed, the author (ibid.) emphasises that the use of strategies to support the autonomy of the language learner cannot be limited to the metacognitive sphere alone but that motivational and affective as well as social aspects must be taken into consideration. Therefore, for the author (ibid.), the teaching of metacognitive strategies can only take place if in conjunction with meta-motivational, meta-affective and meta-social strategies, in order to accomplish the development of a comprehensive self-regulatory attitude with regard to FL learning.

Accordingly, whereas in chapter two we were concerned with introducing the reader to the concepts of self-regulation, metacognition and strategy, in this chapter an attempt will be made to present the concept of motivation, with a focus on motivation related to language learning. As it will be thoroughly explained in this chapter later on, the concept of motivation is multifaceted and complex, and, as such, an in-depth study of motivation requires taking into account a large number of factors at play in the learning environment. While admitting the need for a careful and exhaustive examination of the motivational factors at play, Dörnyei and Ushioda (2021) suggest caution with regard to the idea of managing to draw a complete motivational picture of the language classroom. For the two authors, in fact, it is unthinkable to conduct a didactic and/or experimental intervention

considering all possible motivational variables that exert an influence on motivation and learning, since some of them are so hidden deep within individuals' subconscious that one can never be fully aware of them. Moreover, this dissertation is characterised by the decision to focus on exploring the impact of motivation within a highly specific aspect of language education, namely text comprehension testing. This decision is a deliberate response to the notable dearth of research addressing the intricacies of learning motivation as critiqued by Ushioda (2016). Ushioda contends that in order for L2 motivation research to have practical significance for teaching, it must shift away from general inquiries and aim for a more precise examination of L2 acquisition processes (reading, listening, speaking, writing, etc.). According to the author (ibid.), this approach is the key to endowing motivation research with tangible applicability within the classroom setting.

In light of these considerations and with the aim of setting appropriate limitations for this study, it was determined that this chapter should include a description of motivational aspects relevant to the particular language teaching context in which this experimentation is situated. To begin, we will seek to define motivation in general terms, taking into account two fundamental characteristics: complexity and dynamism. Subsequently, we will examine motivation within the realm of language learning, drawing upon the theoretical framework of the CDST and the latest approaches in the field of L2 Motivation that align with this framework. We will then proceed with a structured breakdown of the motivational components under consideration in this study, moving from more general motivational traits to those specifically related to the experimental context of this research. In this vein, we will delve into the Integrative and Instrumental orientations proposed by Gardner (1985) and Dörnyei's (2005, 2009a) L2 Motivational Self System. Continuing our exploration and narrowing our focus to the components at play within the experimental setting, we will examine the CDS of affect with a particular emphasis on emotions. This decision is motivated by the suggestion made by MacIntyre and Vincze (2017) that positive affective components can significantly influence L2 learning motivation. Consequently, while recognising affect as a CDS in its own right, emotions will be integrated within this work's study of motivational components, acknowledging an intertwined relationship with the task motivation and a potential impact on language learning motivation. In this regard, we will also explore task motivation, considering its introduction by Julken (1989) and its interpretation by Eccles et al. (1983) through their Expectancy-value model. Finally, relevance will be given to the narrative approach, introduced by Dörnyei (2020b) as a complementary tool capable of capturing the

complexity of the learner's motivational journey, and it will be adapted to this study by restricting it to the experimental learning experience conducted.

3.1 Complexity and dynamism of Motivation

The purpose of this paragraph is to initiate an exploration into the concept of motivation by highlighting the challenge in defining the precise perspective from which to approach this concept. Subsequently, we will delve into its etymological origins, imbuing it with the complex and dynamic attributes that define its core nature. Ultimately, we aim to provide a definition of motivation aligned with the scope of this work.

At the root of the word motivation, it is possible to trace the past participle (motum) of the Latin verb *movere*, which means precisely to move. The etymology of this word allows to associate this concept with the propulsive drive experienced by people when deciding whether or not to take a certain action, whether to commit to it, whether to persist in it or simply abandon it (Dörnyei and Ushioda, 2021). Sticking to the idea of motion, the terminology referring to the concept of motivation has also borrowed some concepts from the world of physics such as those of direction and magnitude. The former represents the reason that pushes the subject to act in a certain manner. The latter, instead, determines the intensity and duration of the action itself (ibid.). The etymological definition and description of the characteristics of this concept provided above help to understand how this concept works, but never fully clarify what it is and what is meant by motivation.

Indeed, as documented by Walker and Symons (1997), the concept of motivation, since its inception within the circles of the American Psychological Association, has been enveloped in a certain level of ambiguity and complexity that persist to this day. According to Dörnyei and Ushioda (2021), the term “motivation” encompasses a variety of meanings, all of which revolve around placing the individual at the core and understanding how they interact with both the internal and external environment. For instance, it can signify the rationale behind an individual's decision. Moreover, it can denote the internal mental state that propels a person's actions—a state of mind prone to fluctuations and varying degrees of intensity. Viewed intransitively, from an external perspective, motivation can also represent a particular mood observed in other individuals. In fact, it is commonplace to characterize people with adjectives like "motivated" or "unmotivated" based on this perception. Additionally, "motivation" can

describe the attributes of an activity or task, such as being "motivating" or "demotivating." Finally, the term can take on a transitive role when used as a verb to describe intentional actions aimed at motivating oneself or others. The ambiguity that emerges from this array of meanings suggests that it is appropriate at this point to produce a clear statement of what is meant by “motivation” in this study.

An initial definition of the concept of motivation as it is understood today, i.e. in its non-static nature, is provided to us as early as 1998 with the work of Dörnyei and Ottó (p. 64):

> Thus, in a general sense, motivation can be defined as the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritised, operationalised, and (successfully or unsuccessfully) acted out.

Already in this work, Dörnyei and Ottó (1998) highlight the dynamicity that characterises this construct, and, building on Bandura's (1991) words, recognise how this dynamism is due to variations in intensity and directionality determined by different «*motivational forces*» (Dörnyei and Ottó, 1998: 64). The idea of the presence of several motivational forces exerting a pull-and-push action on the learner's overall motivation, carries with it the embedded derivative that there cannot be a linear and direct connection between only one of these forces and the learner's motivation. Rather, as suggested by Dörnyei (2009b), motivation is to be understood as a constellation of factors, both internal and external (the latter both temporal and environmental), in which each factor can amplify or mitigate the effects of another factor. This mutual influence, in turn, generates effects on the learner's overall motivation and thus on his or her actions in the learning environment. In the light of these studies, one can derive a primordial definition of motivation as a multifaceted concept, i.e. studded with several «*determinants*» (Bandura, 1991: 69), which characterise this construct as complex in its own nature.

As stated by Dörnyei and Ushioda (2021), the complexity that characterises motivation conceals the undeniable reality that a theory of motivation cannot fully encompass and incorporate the diverse array of motivational elements present in the learning environment. One of the reasons for this lies in the fact that the various motivational aspects cannot be studied in isolation from everything else. In this sense, every and each element always exert an influence on the other. In addition to this, a second reason is to be found in the methodological issue, whereby much of the information gathered for the

study of motivation relies on self-report tools, which are subjective in nature, and which overlook inner motivational aspects that are difficult to detect because of their characteristic unconsciousness.

The attributes of complexity and dynamism, encapsulating the broad notion of motivation, become particularly pronounced when examining the motivation specific to the study of FLs. Despite being prevalent, this distinction between general motivation for learning and the specific motivation for second language learning is not always recognized. Consequently, in the upcoming section, we will examine the importance of delineating between a broad motivation for learning and a focused motivation for learning a second language.

3.2 Second Language Learning Motivation

This second section offers an overview of the studies on language learning motivation. The intention is not only to show its origins, but also to identify its recent developments, questioning the need for L2 learning motivation to be treated as a completely independent branch from the more general studies on learning motivation. Finally, the future directions of this field will be shown, highlighting its increasingly holistic and complex perspective, to which this paper will attempt to adhere to a certain extent.

The origins of the strand of studies on motivation in language go back to the studies of Gardner and Lambert (1959, 1972). These studies started from an ethnographic and ethnolinguistic conception of motivation as representative of the Canadian multicultural context. In fact, the main motivational factors studied by the two scholars concern socio-psychological aspects, such as the relationship between belonging to a certain culture, the attitude towards learning a second language and a sense of belonging towards the target community. For Gardner and Lambert (ibid.), these motivational factors exert a directive influence on L2 learning behaviour, as this behaviour is shaped by an identitarian orientation that the authors call *integrativeness*. Integrativeness is the learner's desire to integrate into the target culture of the new language and to be able to become a valid member of the community of speakers of this language (Dörnyei and Ushioda, 2021). Furthermore, integrativeness is in itself a composite concept consisting of components such as the attitude towards the learning situation and the attitude towards second-language learning. Later on, however, the two authors recognised that integrativeness

could not be the only element fostering learners' motivation. For this reason, Gardner (1985) counterposed to integrativeness the concept of instrumental orientation, referring to those motives that are fuelled by a utilitarian desire, aimed at the achievement of personal goals through the learning and use of the L2.

Temporarily setting aside the question of separating these two orientations and the validity of their theory, it is undeniable that Gardner and Lambert's work (1959, 1972) marked a significant milestone in the advancement of research in this field. Notably, the issue of identity, driven by the aspiration for integration, stands out as a pivotal aspect in shaping the emerging realm of research on motivation in FL learning. In this context, one argument posits that language acquisition does not merely lead to the acquisition of new knowledge but also triggers a transformation in one's identity, often resulting from the adoption of specific behaviours characteristic of the target community. These behaviours encompass language use, expressive style, gestures, and even a distinctive *modus pensandi*, as expounded by Dörnyei and Ushioda (2021).

These two orientations have been the basis of L2 Motivation Theory for a long time but appear to be somewhat outdated today. On the one hand, the concept of integrativeness, which was linked to English learning for decades, has lost its meaning, as with the advent of globalisation identifying with a specific English community seems anachronistic. On the other hand, as stated by Ushioda (2012), integrative orientation together with instrumental orientation represent only two of the possible images of a future linguistic self, which in reality may admit much broader personal perspectives and goals. Working in this direction, Dörnyei (2005, 2009a), developed his L2 Motivational Self System, which, paraphrasing Ushioda (2012), reflects a theoretical reinterpretation of the unique social, psychological, cultural, and behavioural variables involved in Gardner and Lambert's (1959, 1972) L2 Motivation Theory[53].

While admitting, with the work of Dörnyei (2005, 2009a), a broadening of the spectrum of influences on the linguistic self, Ushioda (2012) points out that there are other types of influences, more related to the experiential sphere of learning, that also play an important role. From this point of view, the study of motivation for learning a FL has been increasingly assimilated with that of any other teaching subject. In this regard, cross-cutting motivational concepts such as the desire for achievement, self-efficacy,

[53] The L2 Motivational Self System Theory will be discussed in more depth later on in this chapter.

attributions, as well as intrinsic and extrinsic motivation have been increasingly discussed in investigations of L2 motivation (cf. Ushioda, 2012; Dörnyei and Ushioda, 2021). Considering these developments, Ushioda (2012) is cautious about giving L2 motivation a special status. In this regard, she argues that other school subjects can also generate a certain vision of the future self in the learner, shape their identity and encourage the adoption of certain behaviours. Therefore, in her work (ibid.), the author questioned whether the special status given to L2 motivation truly depended on the strong influence it exerts on the formation of linguistic identity and on shaping future images of the self, as argued by Norton (2000). In this regard, even recent research by Al-Hoorie and Hiver (2020) has advised caution in stating that L2 learning motivation may be qualitatively different from motivation towards other types of learning.

For the author, therefore, it is a question of redefining what the goal of research in L2 motivation is. While it is important to understand the links between the L2 Motivational Self System and the learning experience, it should also be relevant to embrace a more holistic approach in the study of motivation. According to Ushioda (2012), in fact, it would be appropriate to investigate how L2 motivation interacts with other types of motivation in shaping each learner's identity and vision of the future self. In this sense, Ushioda (ibid.) recommends understanding learners' personal experiences in relation to the context in which they are embedded. This 'person-in-context' perspective has considerable repercussions in terms of teaching practice, since it no longer relies, as it did in the past, on a generalised approach to the development of L2 motivation in learners. Rather, it values the knowledge of the individual narrative in order to engage their motivation in learning a FL, somehow in a personalised way.

In this section, an attempt has been made to clarify which aspects have made the study of motivation in L2 such a developed and independent field of research. In this study, we will use the term L2 learning motivation, to circumscribe the field in which our work fits. In addition, we will try as far as possible to adopt the person-in-context perspective, as a means of identifying the needs of learners from a motivational point of view in the context under examination. In the next section, we will go on to define the theoretical motivational assumptions on which the experimental part of this work is based.

3.3 Identifying motivational components within a Complex Dynamic System Theory

Before moving on to introduce the various motivational theories that were drawn upon for the definition of a set of motivational components that can best capture the experimental situation in which this study is embedded, the theoretical framework this work seeks to adhere to will be presented: the Complex Dynamic System Theory (Larsen-Freeman, 1997). In this work, the CDST is meant to be applied to the motivational-cognitive system in a group of FL learners. For this reason, we will detail the ways in which the motivational sphere of learners can be studied by adopting the CDST framework, referring to Dörnyei's (2020b) three tier motivational framework proposal.

3.3.1 The Complex Dynamic System Theory

The CDST originated as a theory to study systems that are naturally characterised by great variability, such as the meteorological system, the ecological system of animal extinction phenomena, but also that of the variations that characterise the economic market or even the social system that contemplates the developmental dynamics of an epidemic (Larsen-Freeman and Cameron, 2008b). Moreover, recent studies have seen the application of this theory also to human behavioural aspects studied by the developmental psychology (Holland, 1995; Thelen and Smith, 1994; van Geert ;1991), which considers and enhances the complexity of human nature and relationships. The first to hypothesise that this type of approach could also be suitable for studies in applied linguistics was Diane Larsen-Freeman in 1997. However, before attempting to understand Larsen-Freeman's (1997) approach to CDS, it will be necessary to define what a CDS is and what its characteristics are.

A CDS is a system made up of several components, called agents and elements, that interact with each other in a dynamic and non-linear manner, bringing changes at a micro and macro level, sometimes sudden and discontinuous, sometimes stable and relatively long-lasting, to the whole system (Larsen-Freeman and Cameron, 2008b). In the following Table 1, an attempt will be made to summarise the 10 characteristics that Larsen-Freeman (1997) attributes to a CDS.

Table 1 - Summary of CDS characteristics taken from Larsen-Freeman (1997)

Characteristic	*Description*
1. Complexity	CDS comprise a large number of interacting components.
2. Dynamism	Agents and elements in a CDS are constantly in interaction.
3. Non-linearity	Independently from the dimension of the causes, effects on the CDS are non-proportional.[54]
4. Messiness	A CDS is altered by abrupt changes, affecting the temporary stability of the system.
5. Unpredictability	The moment in which the effects of change will occur in a CDS is unforeseeable.
6. Sensitivity to initial conditions	CDS are sensitive to even slight changes that can have profound effects on the trajectory of the system.
7. Openness	CDS stability and equilibrium state are temporary and open to random changes in every moment.
8. Self-organization	CDS move from an entropic state to a new stable state in an autonomous way, displaying coherent patterns according to the change.
9. Feedback sensitiveness	A CDS might accept the changes raising entropy regardless of whether they may be beneficial or harmful for the system.
10. Adaptiveness	A CDS actively participates to change adapting to the requirements brought by the alteration.

The definition of the characteristics of a CDS allowed Larsen-Freeman (1997) to bring applied linguistics studies closer to the CDST framework. According to the author (ibid.), in fact, language is a dynamic system, in which the predominantly static components (morphemes, phonemes, grammatical rules, etc.) interact in an active and lively process whenever they are used by the speakers (the agents). Moreover, the dynamism of language is also observable in its development, i.e. not only in its synchronicity but also in its diachronicity. In fact, the diachronic development of language is deemed also unpredictable, i.e. it is not possible to determine which forms will become part of it, and it is changeable, meaning that its incremental development can vary from person to person. More generally, a system such as the linguistic one, which unfolds in the

[54] According to Larsen-Freeman (1997), linearity might be a characteristic of CDS as much as non-linearity. This means that small causes might have vast implications on the CDS, as much as they might have proportioned effects on it. In this sense, the development of a CDS depend on causes that might occur in parallel, inconsistent, disproportionate cause-effect manner (Sampson, 2021).

performance of its agents, and which is enriched and in constant revision, cannot be considered static, but takes on the increasing complexity to which each speaker contributes.

The complex dynamics that characterise the field of applied linguistics make even more sense when placed in an educational environment. In a learning environment, complexity increases as the number of CDSs involved increases (cf. 1.2.1.): the cognitive, the motivational, the individual and interpersonal, etc. The realisation that the world (and in particular that of learning) is traversed by complex dynamics calls into question not only the lens through which certain motivational concepts are observed, but also the methodologies adopted to study them. In this regard, Hilpert and Marchand (2018: 185) report:

> Theories in educational psychology describe complex, dynamic, and emergent processes that shape intra- (e.g., cognition, motivation and emotion) and inter- (e.g., teacher–learner, learner–learner, parent–child interactions, collaborative teams) person phenomena at multiple levels. These processes are fundamental characteristics of complex systems (CS). However, theory in educational psychology that implicitly or explicitly treats phenomena of interest to educational psychologists as complex is rarely examined using CS methodology, or tends to translate CS to linear cause–effect models that do not adequately describe the theory. CS approaches to research can be used to improve the alignment between theory and research method in educational psychology.

In this paper, the two authors, following in the footsteps of other colleagues in the field of educational psychology (Larsen-Freeman and Cameron, 2008a; Larsen-Freeman and Cameron, 2008b; Tassinari, 2010; Oxford, 2017), clarify what the aims of research are in working with CDST in the educational field. Indeed, the aim is no longer to find a variable interpreted as the cause of a certain effect, since this view implies the conception of a predominantly static, linear and non-changing system. Rather, the goal of a research design using the CDST framework is to intercept changes within the system, the variables that generated it, the formation of possible new patterns and the interactions that exist between these at multiple levels of analysis[55] (Hilpert and Marchand, 2018; Dörnyei and Ushioda, 2021).

[55] The idea that a CDS may contain within it several other CDSs makes it possible to identify different levels of analysis: individual, class, school and even territorial. Each of these CDSs is an entity characterised by specific and unique dynamics, even though it remains related to the other CDSs. In this sense, patterns

Once the research objective has been defined, Hilpert and Marchand (2018) move on to circumscribe the possible approaches to be used in a research design dealing with learning in the CDST framework. The two authors describe three approaches with different objectives and aims, namely time-intensive approaches, relation-intensive approaches, and time-relation-intensive approaches. The first approach uses short time observations to analyse the micro-level changes on a system variable and it is useful to produce inferences regarding macrosystem behaviours. The second approach, on the other hand, studies the relationships established between the system's components, which are useful for examining and describing its structure and how it interacts. Finally, the third approach combines the first two, in order to intercept both internal changes in the components and changes in the relationships between them (Hilpert and Marchand, 2018; Dörnyei and Ushioda, 2021). The description of these three approaches provides the scholars with a choice to better direct their research work, especially since working within the CDST framework has for a long time meant using a multitude of methods «*not typically explicitly framed, developed, or empirically investigated within a CS framework*» (Hilpert and Marchand, 2018: 185).

In the approaches described above, the focus is primarily on the components of the system, not intended as a component dominant system, meaning a system where there is a fixed number of components that are in a linear relationship with each other, rather it is to be understood as a softly assembled system. The definition of a softly assembled system makes it clear that the number of components that produces a certain result on the system is neither fixed nor rigid. Rather, the change generated by a certain number of components, their role and the relationship woven between them change as a function of time (Hilpert and Marchand, 2018).

In accordance with these considerations, the most complex aspect of using the CDST framework remains that of being able to establish which components can be considered valid for the study of a CDS at a very specific level. As mentioned above, a CDS can be analysed at both micro and macro levels. For example, in the case of a CDS studying motivation in a learning environment, it could involve the dynamics of the individual learner's motivational sphere, that of a class group, that of an entire institution, and so on (Larsen-Freeman and Cameron, 2008a; Mercer, 2022). Each of these levels can be

occurring at a micro level can also be observed at a macro level, precisely because the systems are nested within each other.

evaluated on different components and aspects, but the possibility that they may share common traits is not excluded[56]. The key to determine which components can best contribute to the description of changes in a given system, as indicated by Hilpert and Marchand (2018), remains the constant comparison between scientific methodology and research questions. However, as suggested by MacIntyre et al. (2021), research questions of an oriented research design in CDST should not focus on the identification of generalisable patterns through the evaluation of intra- and intergroup averages. Rather, they should aim to provide a description of experiences and dynamic processes observable at different levels of CDSs and within a specific time span. In the context of this dissertation, the guidance offered by these studies has directed us to establish a particular research scope. Specifically, we have chosen to focus on an investigation situated at a pedagogical level characterized by strategic and meta-strategic learning experience, particularly concerning the task of text comprehension adopted during the testing phase. It is important to emphasize that this specific focus was selected with the intent of advancing the specialization of motivation studies related to distinct L2 learning processes, aligning with the recommendations outlined in Ushioda's (2016) "Small Lens" approach. Taking these works into consideration, the next section will focus on how CDST can be a valuable approach to the study of L2 learning motivation.

3.3.2 The three-tier motivational proposal

Pinpointing the elements of a comprehensive CDS that effectively captures the nuanced dynamics of motivation in FL learning can pose a significant hurdle. Motivation is subject to varying interpretations based on the examining theory; however, the consistent aspect is viewing motivation as a construct encompassing multiple interacting components affected by temporal and contextual factors (Dörnyei and Ushioda, 2021). Additionally, the specific components analysed to study motivation may vary depending on the chosen angles (learners, teachers, class environment, institutions) as well as the defined research objectives. Considering the concept of motivation examined through the lens of the CDST, Dörnyei (2014) identifies three possible strategic strands that can be pursued in order to make research in L2 learning motivation meaningful. The research focuses that the author (ibid.) identifies are: focus on identifying strong attractor-governed

[56] In specialized terminology, MacIntyre et al. (2021) refer to the concept of systems exhibiting analogous patterns and consistencies across various levels of analysis as "Fractalisation.".

phenomena; focus on identifying typical attractor conglomerates; focus on identifying and analysing typical dynamic outcome patterns. Of the three possible strategic strands identified, this dissertation will focus mainly on the third one[57]. The third approach capitalizes on the explanatory capacity of identifiable phenomena in recurrent patterns of the system. This approach is guided by a retroactive process termed 'retrodiction' as coined by Dörnyei (2014). It begins with the observation of outcomes and subsequently reconstructs potential factors that, to some extent, displayed variability in their influence on the system. Based on these considerations and bearing in mind the research questions accompanying this paper, an attempt was made to identify the motivational components using a model provided by Dörnyei and Ushioda (2021).

Dörnyei and Ushioda (2021) introduce an initial differentiation between two perspectives on the motivational construct: one being trait-like and the other being state-like. In the first case, a trait-like perception of motivation defines a relatively stable and decontextualised individual personality trait. In the second case, a state-like perception of motivation refers to an aspect of individuality that is subject to variations in behaviour depending on the situation and is therefore more situated and contextualised. Although the two perceptions of motivation have been considered opposites of each other in the past, for Dörnyei and Ryan (2015) and Dörnyei (2017) both perceptions contribute to the formation of a more complete picture of learners' motivation. This same perspective, more holistic and inclusive, was primarily adopted by the American psychologist Dan McAdams under the name of 'The New Big Five' model (McAdams and Pals, 2006) and it was designed for the examination of individuals' personality, developing a three-tier personality model.

Drawing upon this framework, Dörnyei and Ryan (2015) and Dörnyei (2017) elucidate how McAdams and Pals' (2006) three-tier model for personality could serve as a pertinent framework for delineating individuals' motivation, i.e. by effectively capturing motivation across different degrees of situatedness and transience[58]. In accordance with these ideas, a few years later, Dörnyei (2020b) recasts the three-tier framework by

[57] The first strategic approach utilizes research methods that closely align with traditional approaches, focusing on identifying causality in linear relationships among highly relevant causal phenomena capable of independently determining specific effects on the learning environment. In contrast, the second approach is mainly based on the identification of a group of factors that have explanatory and predictive value with respect to the future behaviour of the CDS.

[58] We will not delve into the details of McAdams and Pals' (2006) three-tier model in this discussion. Instead, we will focus on presenting Dörnyei's (2020b) model, which encompasses the complete compositional aspect by substituting the notion of personality with that of motivation.

adapting it to the concept of motivation, though retaining the original conception of McAdams and Pals (2006). The three-tier, which Dörnyei (2020b) refers to in his model, are the dispositional motivational traits, the characteristic motivational adaptations, and the integrative motivational life narratives.

The first, the dispositional motivational trait, takes into account those perceptions that were previously called trait-like and characterise a more general innate attitude and/or inclination in the learner's learning behaviour. According to Dörnyei and Ushioda (2021), they may also encompass lasting patterns of thought and emotion that emerge within an individual in reaction to significant formative experiences during their childhood. The motivational components that this paper will consider as dispositional motivational traits are, for example, the second language learning orientations proposed by Gardner (1985), but also the self-concept of the FL learner, drawing inspiration from Dörnyei's (2005, 2009a) L2 Motivational Self System (L2MSS) Theory.

The second tier, the characteristic motivational adaptations, gathers all those motivations that are specific to a certain learning environment, contextualised in a precise juncture with the respective motivational demands and variations. This is the case of state-like perceptions regarding motivation, perceptions located at precise moments and characterised by transience within the learning environment. In this paper, emotions (Cahour, 2013; Dörnyei and Ushioda, 2021) and task motivation (Dörnyei, 2019; Kormos and Wilby, 2019) will be considered characteristic motivational adaptations, since their design is targeted to effectively capture the motivational aspects arising from a specific reading and comprehension task.

Finally, the third and last tier is the integrative motivational life narratives (Dörnyei, 2020b), this level collects the learner explanation on how he/she dealt with the motivational demands dictated by the learning situation, in relation to his/her own more general disposition. As per Lou and Noels (2019), these narratives provide learners with the chance to reflect on their experiences, formulating attributions (cf. 2.1.2.4) that not only explain past successes and failures but also wield significant influence on future ones[59]. For this last tier, this work will consider, for example, a focus group interview

[59]. Studies conducted by Hiver et al. (2019; 2020), have used narratives as a tool to investigate the influence that personal experiences may have on effort, persistence, and engagement in foreign language learning. The idea that motivational life narratives could be a potentially fruitful approach has not yet been fully explored, but from these early studies it appears certainly promising.

with some volunteer learners of the experimental group sharing impressions on the teaching intervention they experienced.

As stated by Dörnyei and Ushioda (2021), this three-level structure provides a useful conceptual framework that can incorporate motivational aspects at different levels of contextuality, while also allowing for their potential dynamic interplay. In the upcoming paragraphs, a thorough analysis on the three tiers will be conducted. These tiers encompass various motivational elements, and understanding their theoretical framework is crucial. The components that will be presented fall within the group of elements that have been considered relevant for the purposes of this study. Consequently, we will intentionally omit consideration of other motivational aspects that, while significant, do not align with the chosen focus of this research (Mercer, 2022; Ushioda, 2016).

3.3.3 Dispositional Motivational traits

In this section two motivational components will be considered as dispositional motivational traits: the orientations theorised by Gardner (1985) and Dörnyei's (2005, 2009a) L2 Motivational Self-System. The choice to consider these two components as trait-like and not as state-like constructs (cf. 3.3.2.) comes from the observation that the type of CDS considered in this work addresses a very specific level of the study of the Italian as a FL (Mercer, 2022). Considering the level of specificity, the components that are chosen to be included within the analysis also undergo a particularisation shift in order to fit the three-tier motivational model proposed by Dörnyei (2020b).

3.3.3.1 Integrative and Instrumental orientations

The need to reintroduce the concepts of Integrative and Instrumental orientations into the discourse on motivation emerges from two considerations. The first is that the Gardnerian and Dörnyean visions should not be seen in opposition, but rather as two points of view characterised by complementarity. The other consideration, descending from the first, admits the idea that the identity of the individual is not only to be seen as constituted by the internal projections that each individual develops for himself or herself, as in the Dörnyesian view, but also by those external influences that allow for the expansion of the individual's identity perception. According to these considerations and as Gardner (2020) suggests, learning a second language implies acquiring cultural knowledge about the

target language community, which, with time and proficiency, can also affect the self-identity of the learner[60]. These considerations are fundamental in order to admit the coexistence in this research work of two potentially overlapping, though not entirely, points of view: that of Gardner's (1985) orientations and that of Dörnyei's (2005, 2009a) L2MSS Theory.

As mentioned earlier (cf. 3.2), the L2 Motivational Self System was introduced by Dörnyei in response to a shift in the perception of the Gardnerian concept of integrativeness, as it was considered outdated in an increasingly globalised world, where the study of English as a FL (and the main object of study at the dawn of the strand of studies on motivation in L2 learning), did not coincide with the self-identification in a well-defined community. As Dörnyei himself admits (2020a), although his theory on L2MSS served the strand of Global English studies well, its adoption in place of the concept of integrativeness completely ruled out the idea of a possible identification of the learner with a target language community other than English. In fact, the strand of motivation studies focusing on so-called LOTEs (languages other than English) does not exclude a potential identification with other target language communities (Dörnyei and Al-Hoorie, 2017), as these do not benefit from the same global status as the English language. However, more than this, what really allows for a re-evaluation of the orientation concept can be understood through the words of Claro (2020: 253):

> But the ideal L2 self cannot replace integrativeness. Integrativeness (Gardner) and the ideal L2 self (Dörnyei) are complementary forms of identification that differ in locus of identification. Integrativeness represents identification with an external locus (role models and reference groups), while the ideal L2 self represents identification with an internal locus.

In this passage, Claro (2020) mainly refers to the concept of integrative orientation, but in this work we will also extend these considerations to the concept of instrumental orientation, since, as we shall see later on, a functional external goal is also considered to have implications for one's internal identity perception as a FL learner. An external instrumental goal could, for example, make it difficult for the learner to approach the cultural values of a target community (Gardner, 1985). Nevertheless, the external locus

[60] Giddens (1991) defines self-identity as the reflexive behaviour individuals exhibit in crafting a cohesive narrative about their own identity. This identity is not intended as a static concept, but it remains in a state of constant interaction with external events, allowing for ongoing evolution rather than constituting a completely rigid entity.

to which Claro (2020) refers is drawn directly from the theory that Gardner and Lambert (1959) delineated to shape the concept of integrativeness. This concept stems from the studies of Mowrer (1950) who ascribes the motivation to learn the mother tongue to the projection that infants form with respect to their first community of reference: the family. Similarly, the learner of a FL would invest effort and energy precisely because of the projection of him- or herself in a target community of which he/she wishes to be part of and whose cultural values he/she wishes to share. In this way, the learner projects his- or herself towards an external model to aspire to and at the same time internalises a new self-image as a speaker of the target FL, remodelling his or her self-identity.

Up to this point, we have been concerned with gaining a better understanding of the nature of the orientations with external locus with which FL learners can motivate themselves in their study. In the next section, we will deal with a better understanding of the motivations with internal locus that Dörnyei's (2005, 2009a) attempted to describe in his L2MSS Theory.

3.3.3.2 L2 Motivational Self System Theory

Pointing to the studies that validated his L2MSS Theory, Dörnyei (2009a) emphasises how the concepts of integrativeness and ideal self are actually moderately positively correlated. Their explanatory power, 32 per cent of the variance on the data for the former and 42 per cent of the variance on the data for the latter, can also be a very powerful interpretative tool if one considers the two concepts as complementary. The fact that the two constructs share common traits is nothing new (see Tremblay and Gardner, 1995), but for Dörney (2005) the concept of integrativeness was too limiting (cf. 3.2.). For this reason, the scholar felt the need to extend the Gardnerian concept, without, however, renouncing the progress that the data from the socio-psychological motivational school had brought about in the cognitive turn of linguistic motivation studies (Dörnyei and Ushioda, 2021).

Indeed, Dörney (2005) juxtaposes the recent discoveries of Gardner and Lambert's (1959) theory with the examination of self-system theories advanced by Markus and Nurius (1986). These scholars assert that the existing body of scientific literature within the motivational field provides limited discussion regarding the intricate connection between the self-system and motivational behavior. As expressed by these authors (ibid.), at the

core of this relationship lies a form of motivating discrepancy, wherein individuals grapple with the disparity between their current reality and their envisioned future as a fulfilled individual. This conception, proposed by Higgins (1987, 1996) is called Self-discrepancy Theory and states that the motivation of individuals originates in the match between each individual's self-concept and their respective future self-guides. For the sake of clarity, we will define self-concept as the set of knowledge the individuals have about themselves, derived from past experiences. Future self-guides, on the other hand, represent the ideas of potential selves, or, adopting the words of Markus and Nurius (1986), of possible-selves, to which the individual knows he or she can aspire. More precisely, paraphrasing the words of Carver et al. (1994), possible-selves are individuals' ideas regarding their potential achievements, aspirations, or fears of becoming.

To Dörney (2005; 2009a), the concept of possible-selves had a very relevant motivational power, as the drive towards a certain desire is fuelled by imagination. As Dörney (2009a) reports, imagination, as well as techniques that stimulate the construction of a powerful vision of the self, are tools that have always been used in the field of sport to stimulate athletes to achieve good results[61]. The comparison between sport and the study of FLs is quite recurring in Dörnyei's scientific literature, since what these two activities have in common is a long, sometimes tedious and effort-filled journey in which the presence of a powerful self-image sustains motivation towards the activity. Nonetheless, Dörnyei's conviction regarding the necessity for an intervention in the concept of integrativeness is primarily driven by the insights drawn from empirical data, which he, along with his colleagues, has diligently accumulated over nearly fifteen years of research. In these extensive investigations, Dörnyei and his research team (Dörnyei et al., 2006) identified that integrativeness serves as the most significant predictor of success in FL acquisition. In addition to integrativeness, two other variables emerged as notably pertinent in these studies: Instrumentality and Attitudes towards L2 Speakers. Noting these results and combining the theories of Marcus and Nurius (1986) with those of Higgins et al. (1985), Dörnyei (2005; 2009a) finally gives shape to his L2MSS Theory.

[61] In accordance with Dörnyei (2009a), for one's self-image to serve as a potent motivator, it should possess certain attributes. Specifically, it ought to exhibit effective availability, vividness, and plausibility. Moreover, to be efficacious, this self-image should remain active and align with societal external expectations (the Ought-to self). Lastly, the utilization of such an image should be complemented with guidance on procedural strategies, aimed at mitigating the potentially demotivating influence of the feared self.

Within his Theory, Dörnyei (ibid.) identifies three essential constituents of the motivational language self-system: the Ideal L2 Self (IS), the Ought-to L2 Self (OS), and the Language Learning Experience (LLE). The IS encompasses all the attributes an individual may aspire to possess in an ideal self-image, potentially encompassing the envisioned self as a proficient speaker of a second language. This component unifies both integrative and internalized instrumental motivations. While the integrative motive has been thoroughly elucidated in the preceding sections, the concept of internalized instrumental motivation remains somewhat obscure. We will provide a brief explanation of its nature before delving into the other two components.

Typically, in a future-self guide, individuals exhibit two distinct tendencies: approach and avoidance, as delineated by Higgins (1987). The ideal self predominantly aligns with the promotion focus, constructing an inherently positive vision of the future self. This perspective encourages individuals to strive for self-improvement and personal growth, pursuing individual gains. In this regard, the Ideal L2 Self incorporates instrumental motives that are intrinsically desired by the individual. For instance, learning a FL with the aim of enhancing one's prospects in a future professional career (Dörnyei, 2009a) exemplifies this concept. Furthermore, it is essential to recognize that instrumental motivation, when positively oriented, is viewed by Dörnyei not in opposition but in harmony with the concept of integrativeness.

However, as mentioned previously, among the inclinations of future-self guides, there is also an avoidance tendency that guards against undesirable outcomes. This prevention focus characterizes certain instrumental motives that Dörnyei (2009a) elaborates within the second component of the Language Learning Motivational Self-System (L2MSS): the Ought-to L2 Self (OS). The OS encapsulates an individual's self-guidance shaped by external expectations or obligations, such as societal norms, family values, or personal duties, which dictate what individuals should strive for or become (ibid.). In the context of language learning, this concept pertains to societal expectations regarding the acquisition of a specific FL. An example of this type of motivation, which could be termed extrinsic instrumental motivation, includes studying a FL to pass an exam or meet parental expectations (ibid.).

Finally, the Language Learning Experience (LLE) pertains to motivational aspects originating from the learning environment and the learning process per se, distinct from the individual's self-concept or identity. It concerns those executive aspects typical of the

learning environment, such as the impact with the teacher, the classroom, and experiences of success or failure. This component is, for Dörnyei (2009a), of vital importance, since although the self-guides of IS and OS are concepts that investigate the depths of human desire, they do not exhaust the complex nature of motivation in the FL learning environment. In this sense, the addition of this component aims to provide a more complete picture of L2 motivation, including both top-down (IS and OS) and bottom-up (LLE) components.

3.3.4 Characteristic motivational adaptations

In line with Dörnyei's three-tier model (2020b), we have selected motivational components for this section that could bring us closer to the learning situation and that are therefore configured as state-like motivational traits, meaning they are closely tied to the specific learning moment. The characteristic motivational adaptations to be considered will therefore be emotions and task motivation, observed both in their development as a line of study and as the object of study for this dissertation.

3.3.4.1 Emotions

In this text (see 3.3.1.), it has been reiterated that a CDS is driven by numerous interconnected components or subsystems. Fundamental to the human mind are the interrelations among cognitive subsystems ('I think'), motivational subsystems ('I want'), and affective subsystems ('I feel') (Dörnyei, 2009b; Dörnyei and Ushioda, 2021). Over the history of motivation research, the third component, affect, has undergone some fluctuations. In its early stages, prior to the emergence of linguistic motivation studies, Freudian theories ascribed significant influence to emotions in shaping human behaviour. Subsequently, during what Dörnyei and Ushioda (2021) term the cognitive turn in motivation studies, the focus shifted towards cognitive aspects (such as goals, expectations, self-efficacy beliefs, etc.) capable of modulating human behaviour, but leaving the emotional aspect aside. Nevertheless, recent advancements in psychology, particularly neuropsychology, as highlighted by Dörnyei and Ushioda (2021), have suggested that subcortical inputs linked to psychological needs and affect are pivotal in determining human behaviour. Therefore, considering the limited number of studies addressing the role of emotions within the language learning environment (Dewaele,

2022), a concise exploration of emotions has been integrated into this study to grasp the influence of this aspect on language learners' self-regulatory behavior.

Defining the concept of emotion is intricate and far from exhaustive within the confines of this brief dissertation paragraph. Nonetheless, this work will adopt Cahour's (2013) condensed interpretation of the concept to offer a comprehensive overview. Originally, emotions were conceptualized as an adaptive mechanism developed by individuals to deal with their environment (Plutchik, 2001). In this sense, feelings arise from individuals evaluating a situation, considering the meaning they assign to it, and factoring in their interests and goals, «*including beliefs, values, and aspects of previous experience that are mobilised in the situation*» (Cahour, 2013: 58). The purpose of these cognitive evaluations is essentially to ensure an individual's overall well-being, encompassing both mental and physical aspects. To achieve this, emotions are expressed through contextual manifestations over time and are identified based on their dual nature: one being psychological (involving associated mental processes and conscious awareness) and the other physiological (involving expressive behavior and bodily reactions). This latter aspect is often linked to a potent motivational force in influencing behavior, although there exists differing opinions regarding this notion. In fact, Dörnyei and Ushioda (2021) recognize that while emotional arousal can prompt an individual to act, this action may not necessarily be directed towards a specific goal, especially given the transient nature that characterizes emotions (Sampson, 2021). Indeed, it is precisely this ability to set the individual's behaviour in motion that has made emotions so popular in the field of Second Language Acquisition (SLA). In this regard, Baumeister et al. (2007) point out that there is no direct causal relationship between emotions and behaviour, but according to their feedback theory, emotion influences cognition, which in turn serves as an advisor for action and thus behaviour[62].

Up to this point, we have defined emotions and have delineated the relationship between emotions and behaviour. Equally significant for this dissertation is the elucidation of the mechanisms by which emotions are activated, along with the methodologies employed for their classification in the realm of psychological research. Concerning the first issue, many hold the view, including in scientific literature, that emotions are activated by specific events acting as triggers. However, Sampson (2021) contends that the

[62] Baumeister et al. (2007) admit the possibility that emotions can influence behaviour in some direct way, however they report that very often these behaviours are maladaptive (e.g., anger attacks) in the context of their occurrence.

conventional notion of a single triggering event for emotions should be replaced with the understanding that emotions stem from a CDS. Consequently, they result from an individual's interactions within the entire system, influenced by contextual factors, interpersonal relationships, natural predispositions, and emotional dispositions. Therefore, the trigger must be understood as a combination of multiple factors in the system generating an emotional response. The potential diversity of emotional responses available to the human organism, as discussed by Posner et al. (2005) and Barrier (2017), appears to be virtually boundless. These observations, which lead us to the second issue, explain the attempts made in the past to circumscribe and systematise the endless plethora of emotions, by classifying them as simple or complex (Plutchick, 2001; Cahour, 2013). Simple emotions, such as happiness, sadness, fear, and anger, have cross-cultural origins, stemming from primal instincts shared with other animal species. On the other hand, complex emotions often arise from the interplay of multiple emotions and perceptual information derived from past experiences, interpersonal interactions, environmental factors, and cultural influences (Barrier, 2017). Examples of complex emotions include pride, envy, gratitude, and shame. The dichotomy between simple and complex emotions is not the sole classification that characterizes the spectrum of emotions. Another crucial criterion often explored in studies related to emotions in language learning is the valence of emotions, referring to the pleasant or unpleasant tone of the emotional experience (Cahour, 2013; Barrier, 2017). However, it should be noted that, contrary to common perception, the positive or negative nature of an emotion does not definitively dictate its effects on behaviour (Oxford and Gkonou, 2021). Specifically, it should not be assumed that a positive emotion will invariably lead to positive behavioural effects, nor should the opposite be assumed for negative emotions. In this respect, aligning with complexity theory, Oxford and Gkonou (2021: 53) emphasize that:

> For specific contexts and people, ‘positive’ or ‘negative’ emotions might create unexpected results (e.g. contentedness might lower motivated effort, leading to failure and low self-esteem, while anger might increase motivated effort, resulting in focused courage and high self-esteem);

Moreover, in their study, Oxford and Gkonou (2021) critique the oversimplification of using valence as the sole factor in gauging the impact of an emotion. They highlight that considering factors such as intensity and duration of an emotion is crucial in

comprehensive emotion research[63]. While the insights from Oxford and Gkonou (2021) were highly relevant for determining which aspects of emotions to consider during the testing phase of this project, establishing specific criteria for selecting emotions for examination proved challenging. The field of language research has often concentrated on particular emotions. For instance, Horwitz et al. (1986) dedicated their research to studying anxiety, encompassing worry and nervousness, experienced by L2 learners. More recently, instead, MacIntyre and Vincze (2017) delved into the impact of positive and negative emotions on L2 learning motivation. Given the considerable importance of this aspect to the present dissertation, efforts were made to identify a model that could offer a clear classification of emotions based on their valence.

The Circumplex Model of Affect (CMA), as outlined by Russel (1980) and further developed by Posner et al. (2005), stands out as one of the most extensively employed models for organizing emotions within the realm of psychological research. Notably, the strength of this model lies in its foundation on two neurophysiological systems, emphasizing the reliance on scientifically objective data. The first system is centred around the emotional responses of pleasantness and unpleasantness evoked by a given emotion, while the second focuses on the levels of arousal induced by that particular emotion. Precisely, arousal pertains to the level of physiological activation associated with an emotion and serves as a more objective measure of the physiological response to that specific emotional state (Posner et al., 2005)[64]. Indeed, within this model, the two neurophysiological systems give rise to a framework where pleasantness and unpleasantness, alongside low and high activation levels (arousal), represent the extremes of a two-dimensional continuum.

[63] According to Oxford and Gkonou (2021), emotions can vary in duration, ranging from fleeting moments to potentially transforming into enduring moods or even becoming established as long-term emotional traits.

[64] The objectivity of this component is based on measurements of skin conductance, pulse rate, and records of cortical activity through electroencephalography (EEG).

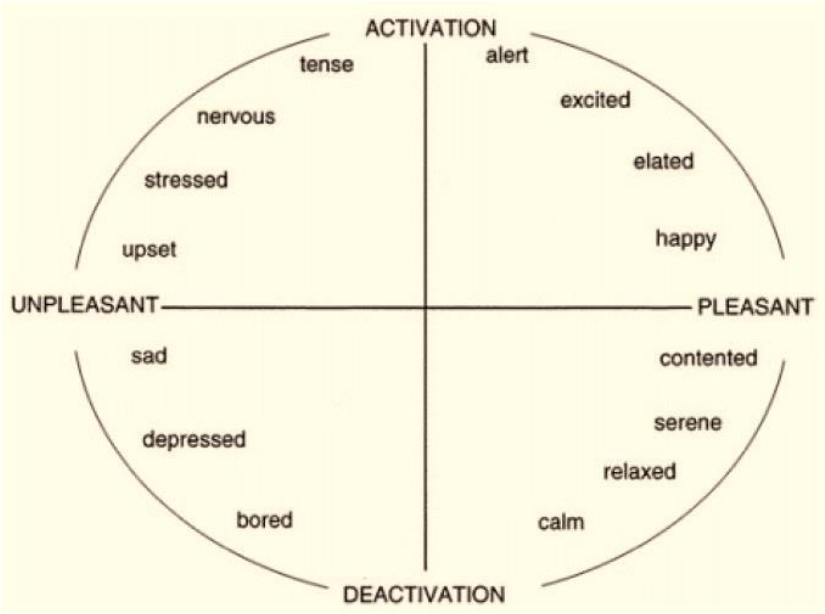

Figure 10 - The Circumplex Model of Affect, taken from Posner et al. (2005: 716)

The CMA distributes the range of emotions that align with the aforementioned dimensions in a circular pattern, allowing for a representation of various emotions, albeit acknowledging nuances not explicitly depicted in the graphical representation. For this project, emotions were selected by envisioning diagonals that intersect at the centre of the model's Cartesian axes. This approach was adopted to identify potentially opposing emotions that could form a continuum, aiding in situating the learner's emotional state during the experimental phase. Our selection of emotions of particular focus hinged primarily on the profound interconnection elucidated by Dörnyei (2019) between cognitive and affective facets within the domain of motivation research, particularly in the context of task motivation. This drove our intention to incorporate emotions that could substantiate various aspects explored within task motivation on an emotional level. Consequently, after analysing the type of task being conducted, a consensus was reached to include three pairs of emotions in the characteristic motivational adaptations: optimism-pessimism (closely tied to self-efficacy), interest-boredom (associated with task-related interest), and relaxedness-anxiety (mirroring the testing conditions of the task being scrutinized)[65]. During the experimental phase, these emotions were introduced using a sliding gauge format. This design aimed to convey the concept of a continuum

[65] The in-depth examination of task motivation will be thoroughly discussed in the subsequent section. In this portion, our aim is to elucidate the inherent relationship between the cognitive and affective dimensions within task motivation.

between the opposing emotions, ensuring that the extremes of the gauge represented the peak intensity of each respective emotion[66]. By utilizing this approach, factors such as intensity, which represents the subjective measure of the magnitude of experiencing a specific emotion (Russel, 1980), can be considered. It is essential to emphasize that stating this does not equate intensity with arousal. It is acknowledged that intensity involves the subjective assessment of an emotion's strength based on the individual's perception, while arousal is based on more objective measurements. However, research by Posner et al. (2005) has demonstrated that intensity is often associated with arousal, as heightened intensity tends to correlate with elevated arousal levels.

The discussion on emotions presented in this section serves as an introduction to a motivational dimension intimately connected to the learning environment, specifically task motivation. Subsequently, the following section will delve into the factors that underscore the significance of task motivation as a fundamental construct in the realm of L2 learning motivation and for the purposes of this dissertation.

3.3.4.2 Task Motivation

In the posthumously published book paying tribute to Dörnyei's career, Sarah Mercer (2022) emphasizes her colleague's significant contributions in redirecting the focus of L2 learning motivation towards aspects closely tied to classroom dynamics. Task motivation, in this regard, stands as a natural culmination of L2 learning motivation research, seeking to elucidate learners' behaviours in distinct learning scenarios (Dörnyei, 2002; Mercer, 2022). The decision for this dissertation to centre on task motivation aligns with Mercer's (2022) perspective, signifying a deliberate choice to operate within a specific level of detail within the CDS framework. In this instance, the chosen level of examination pertains to the learning environment, precisely addressing a highly specific linguistic task. Therefore, it is fitting to provide a brief overview of the origins of task motivation and its fundamental components in the following lines.

As highlighted by Dörnyei (2019), learning task studies initially emerged from educational psychology with a predominantly cognitive perspective, primarily aimed at evaluating learners' cognitive abilities. Up to that point, cognitive research primarily

[66] More details will be provided in the methodology section with reference to the experimental questionnaires.

focused on task structure, procedural aspects of task execution, and task difficulty. However, as motivation studies gained traction and started considering various influential factors in learning, there was a recognized need to balance the emphasis between cognitive and motivational strands of research. The introduction of the concept of task motivation in the context of FL learning was pioneered by Julkunen (1989). According to Dörnyei (2019), integrating the motivational component into the analysis of linguistic tasks proved to be successful, particularly from an ecologically explanatory perspective within real-life learning settings. Julken (1989) initially conceptualized task motivation as a blend of dispositional traits and state-like motivational perceptions (Kormos and Wilby, 2019). The validation of Julken's (1989) insight came years later through the work of Kormos and Dörnyei (2004), who discovered that a combination of task-specific and more general dispositional motivational traits could elucidate their study's findings. Specifically, the results demonstrated that positive dispositional traits related to the learning course bolstered motivation when the task was perceived as less engaging or interesting by the learners. In the previous paragraphs, we have already dealt with dispositional motivational traits in a relatively exhaustive manner, including aspects of the L2 Future-self propelling sustained motivation, which can describe the view of the self as an L2 speaker. In this paragraph, on the other hand, we will continue the discourse we have just initiated in the section on emotions (cf. 3.3.4.1.), defining those motivational components that are traditionally included in the concept of task motivation.

The components we decided to include in our representative conglomerate of task-motivation mainly concern learner-specific-factors (Dörnyei, 2019), i.e. cognitive, motivational and affective aspects directly experienced by the learner. However, some of these include task-related factors, such as the perceived degree of difficulty, the level of interest aroused or even the value attributable to the task itself. [67]. Research in the field of task motivation has long been characterized by a blend of metacognitive, motivational, and affective elements. Notably, Eccles and her colleagues (1983) endeavoured to unravel this intricate mix, giving rise to the Expectancy-Value Model, which serves as a foundational reference for our research. Originally conceptualized by Atkinson in 1964 and subsequently refined by Eccles et al. (1983), this model provides a theoretical

[67] According to Dörnyei (2019), what are truly regarded as task-related factors are the more objective and tangible aspects of the task. These include its structural elements, its content, as well as the characteristics of the learners for whom it is designed, and its capacity to offer supportive frameworks. In this context, the term "task-related factors" in the text is employed to signify elements that are perceived by the learner but also have the potential to characterize the specific task under discussion.

framework that closely links achievement performance, persistence, and choice to individuals' beliefs regarding expectancy and task value[68]. Expectancy beliefs, as defined by Eccles and Wigfield (2002), pertain to individuals' assessments of their anticipated performance on forthcoming tasks, whether in the short term or the long term. On the other hand, task-value beliefs relate to how individuals perceive the personal significance or importance of a particular task or activity. More specifically, expectancy beliefs encompass two key components: self-efficacy and outcome expectations. Task-value beliefs, on the other hand, encompass other components: interest value, attainment value, utility value, and cost value. In the following passages, these components will be described in more detail in order to clarify their role in the definition of task motivation.

Regarding expectancy beliefs, both outcome expectations and self-efficacy have been conceptualized by Bandura (1991; 1997). Outcome expectations, as described by Bandura, refer to the recognition that specific actions will result in particular outcomes (for instance, the notion that frequent language use will enhance fluency). On the other hand, self-efficacy pertains to individuals' confidence in their ability to achieve specific performance levels, which in turn, have a significant impact on events influencing their lives (for instance, believing in one's limited ability to easily acquire new languages, making the process of learning a new language more challenging). According to Bandura (1991; 1997), it is worth noting that the presence of outcome expectations alone does not guarantee the execution of a behaviour. Simply being aware that a behaviour can yield specific results does not automatically imply that an individual feels capable of performing that behaviour, as pointed out by Eccles and Wigfield (2002). In this regard, the key driver for engaging in a particular task undeniably lies in one's self-efficacy. Self-efficacy is a distinctive belief, as it is constructed on four fundamental pillars: mastery experiences, the influence of significant others, social persuasion, and emotional factors. More specifically, past experiences of success or failure, the presence of reference models and anti-models in individuals' lives, the encouragement or criticism received and the emotional state accompanying the performance of a certain behaviour, all concur to define a more or less strong perception of self-efficacy. It is also relevant to underline that, strength is merely one facet of self-efficacy, alongside which there are generality and difficulty. Generality refers to the presence of either a broad or domain-specific self-efficacy, suggesting that individuals may not all possess the same degree of adaptability

[68] It is worth noting that the behavioural aspects emphasised in this passage and linked to the task motivation are now studied under the name of task engagement (cf. Mercer, 2022).

when it comes to engaging in tasks that are either general or specific in nature. Conversely, difficulty represents the level of challenge inherent in a task and suggests that not everyone may feel confident in taking on a tough task, even if they have the necessary skills to do so. This dissertation will investigate the concept of self-efficacy concerning the experimental task, therefore will be directed towards a domain-specific type of self-efficacy. In particular, it will explore dimensions such as self-assessment, self-assessment in comparison to peers, and the perceived presence of the necessary skills to undertake the task at hand.

As previously declared, Eccles and Wigfield's (2002) model includes a second set of beliefs related to task motivation, which focuses on task values. Among these task values, we begin by examining interest and specifically situational interest (Hidi et al., 1992). Situational interest emerges as an affective state in interaction with the learning environment, including tasks and their content (Kormos and Wilby, 2019). While in the earlier section on emotions (see section 3.3.4.1), interest was discussed as an internal perception of the learner's emotions in relation to the learning experience as a whole (individual interest), we now explore interest as an attribute of the task itself. In this context, interest is defined as a construct comprising two dimensions: one cognitive, directly tied to the individual's willingness to become involved in a specific task, and the other affective, associated with the level of enjoyment derived from the task (Renninger et al., 2008). Including the dimension of situational interest is very relevant to this work, since, as stated by Hidi and Renninger (2006), situational interest contributes significantly to learner motivation and learning outcomes when in interaction with other individual interest traits. A second type of belief that is very important for examining task motivation is that of attainment values, i.e., the importance that task completion may hold for a given learner. In other words, the effort expended by the learner in performing the task may depend on the relevance it has for the learner’s self-concept (Eccles and Wigfield, 2002). In this sense, investigating attainment implies getting acquainted with the importance learners attribute to these tasks, since these tasks allow individuals to articulate or validate crucial facets of their identity. The third category of belief, utility values, is closely connected to attainment values. This is because, based on personal relevance, learners may gauge a task's usefulness for their self-concept and personal objectives. In essence, a task might not initially pique learners’ interest, but they might still engage with it because they view it as a valuable learning opportunity for their future aspirations. In this context, incorporating L2 Future self as one of the dispositional traits could shed light on

how a task is perceived as beneficial for their future career. The last type of beliefs is that of costs, Eccles and Wigfield (2002) frame them as encompassing the adverse aspects associated with task involvement, including factors like performance anxiety, apprehension about both failing and succeeding, the level of difficulty required for achievement, and the missed opportunities that arise from selecting one option over another.

3.3.5 Integrative motivational experiential narratives

The last element of Dörnyei's (2020b) three tier motivational proposal that is examined in this dissertation is that of Integrative motivational life narratives. In this section, we will begin by providing a historical overview of this methodology and then elucidate its application within our work, drawing from Ushioda's (2016) "Small Lens" perspective.

The methodology known as narrative identity (Singer, 2004) finds its roots in qualitative research, which emerged as an alternative to the predominant quantitative research methods, often relying on psychometric instruments within the realm of personality studies. The pioneer in employing this methodology was Bruner (1986), who underscored the hermeneutic perspective that individuals bring to their own life stories, emphasizing the profound capacity of narrative to infuse meaning into their life experiences. As suggested by McAdams et al. (2004), the ability to construct narratives is one of the most distinctive and essential human faculties, enabling individuals to retrospectively impart meaning and purpose to their life journeys. In this vein, the methodology of narrative identity, as utilized by McAdams et al. (2004; also, McAdams and McLean, 2013), encompasses an individual's internalized and continuously evolving life story. It involves the integration of one's reconstructed past, perceived present, and anticipated future to bestow a sense of unity and purpose upon their life. What distinguishes this methodology from others is its capacity to accommodate the dynamic nature of human experience by enabling individuals to reshape and reinterpret their life stories in response to new events.

Recognizing these distinctive characteristics, Dörnyei (2020b) made the deliberate choice to incorporate this methodology into a framework, already mentioned as the three-tier motivational approach, designed to capture the intricate facets of L2 learning motivation across various dynamic dimensions. Beyond the dispositional and situational traits already discussed, integrative motivational life narratives extend to the narratives and

interpretations that language learners provide regarding their own motivational language learning journeys. However, the adoption of this methodology in this study differs from Dörnyei's (2020b) original intent, which aimed to uncover the motivational journey accompanying the acquisition of a specific language. As mentioned earlier, this research is primarily concerned with investigating the motivational dynamics associated with a particular aspect of language learning, specifically text comprehension in a pedagogical testing context. To align with Ushioda's (2016) "Small Lens" approach, we will apply the narrative methodology with a focus on the strategic and meta-strategic experiences of learners in relation to the task of reading and text comprehension. To reflect this shift in emphasis from narratives encompassing broader motivational experiences (life narratives) to those intimately linked to the learning process, we have chosen to label this final tier differently. It is important to note that this methodology was implemented with a small group of willing participants who shared individual and collective reflections and interpretations of their experiential learning event.

Chapter 4: Reading comprehension in L2 settings

In the previous chapters, we conducted an in-depth analysis of the notions of autonomy, self-regulation and motivation in the context of learning, outlining their inherent complexity. Subsequently, we directed our investigation towards the field of second language learning, focusing in particular on FL learning. It is only in the third chapter that, introducing the concept of the 'Small Lens approach' proposed by Ushioda (2016), we defined the specific field of study of this dissertation, namely the focused analysis of text comprehension skills in the L2 context. This analysis, precisely by virtue of a holistic perspective, includes both specific aspects related to motivation and aspects concerning the self-regulation of this ability. In the following lines, we will delve into the significance of research in this field, particularly concerning L2 contexts. Additionally, we will outline some of the challenges that research in this domain entails. Prior to detailing the chapter's structure, we will elucidate the motivating factors that drove our exploration into the realm of text comprehension within FL contexts.

It is worth noting that the examination of text comprehension is not a novel research area, as several decades of dedicated studies have already been conducted on reading and reading comprehension skills. However, it is imperative to underscore that a significant portion of this research is centred on native language (L1) learners. Notably, substantial data, as reported by Grabe and Stoller (2019), reveal that 89% of the global population possesses at least basic reading skills. This statistic not only reflects the outcomes of extensive literacy policies implemented worldwide over the years but also underscores the paramount significance of reading and text comprehension as foundational skills necessary for ensuring an adequate quality of life. Nevertheless, with the onset of the new millennium and the increasing specialization of competencies that contemporary society demands from its citizens to meet productivity and efficiency standards, text comprehension skills in one's L1 are no longer sufficient. In reality, literacy skills, which generally encompass a range of proficiencies beyond reading and text comprehension, have expanded to include additional languages acquired during individual education process. In the current social context, where the value of literacy is being redefined and

elevated, it becomes imperative to grasp how to facilitate the acquisition of this skill in a FL[69].

As Grabe and Stoller (2019) point out, research on reading and text comprehension in L2 contexts poses quite a few obstacles. Among the issues enumerated by these authors, a particularly noteworthy concern pertains to the diverse profiles of L2 learners under examination, encompassing factors such as age, social status, and learning objectives. Additionally, a second discriminative factor emerges in the form of the learners' L1, with variations therein potentially yielding results that are intricate to extrapolate into broader generalizations. Grabe and Stoller also lament the paucity of robustly conducted studies within L2 contexts, thus underscoring the scarcity of dependable research methods. To these complexities, it is pertinent to append the challenge of identifying groups of learners within educational institutions who are willing to partake in experimental courses aimed at enhancing their L2 reading and text comprehension skills. In conclusion, it is essential to recognize that the disparity in L2 reading and comprehension research is not solely contingent upon the learner and the educational context. The intrinsic attributes of the text itself play a pivotal role. Indeed, each text is associated with distinct reading modalities, each serving unique purposes (Colombo, 2002), which, in turn, delineate diverse methods of engaging with the text.

The decision to centre the discourse of this dissertation on the subject of reading and comprehension within L2 environments is grounded in personal experiences within the didactic realm, encompassing both Italian L1 and Italian L2 instructional settings. These experiences have unveiled a conspicuous absence of pedagogical approaches geared toward the cultivation of cognitive and metacognitive skills in the language learning classroom. In this regard, personal experiences align with the findings of American scholars Grabe and Stoller (2019). According to these scholars, despite over two decades of research emphasizing the importance of fostering strategic reading abilities among learners, the educational landscape continues to neglect the explicit teaching of reading strategies. Consequently, the decision to explore this specific theme serves the purpose of advancing the body of knowledge pertaining to text comprehension within the context of FL education. Furthermore, since the majority of research efforts in this domain have

[69] The concept of literacy will be better described in later sections of this chapter.

predominantly centred on the study of English as a FL, our contribution transcends this linguistic boundary to encompass the language of our focus, which is Italian as a FL.

In this final chapter addressing the current state of research, we will first present the theoretical assumptions concerning text reading and comprehension, from which this dissertation intends to build. Subsequently, we will elaborate on the process of text comprehension, with a primary emphasis on findings derived from studies conducted in native language contexts. Despite its origination in investigations involving native speakers, this research substantially enhances our comprehension of the cognitive mechanisms that underlie the ability to comprehend text in a second language. Following this, we will undertake a comparative analysis between readers in their native language and second language, elucidating the distinctions that differentiate them while also illuminating the shared attributes that unify them in the domain of reading and comprehension skill acquisition. Additionally, our focus will be directed towards a specific category of text comprehension designed for the assessment of reading and comprehension skills via the application of standardized tests. Ultimately, the discussion will culminate with an examination of the correlation between metacognition, strategies, reading, and text comprehension, with a specific focus on the existing methodologies employed to examine readers' metacognitive attitudes.

4.1 Theoretical assumptions about reading and comprehension

Before delving into the cognitive discourse surrounding the constituents of this competence, it is pertinent to commence with the theoretical assumptions underpinning this dissertation's examination of reading and comprehension. Initially, we shall elucidate how the reading and comprehension task can be construed as an active competence in the realm of language acquisition. The attribution of the comprehension process as active is essential to assume that changes in learners' reading habits can be implemented. Subsequently, we will outline the hallmarks of a comprehension process that can be described as fluid and properly functioning. The explication of these distinguishing features is imperative for understanding the assumptions upon which text comprehension tests, frequently administered to FL learners, operate. Lastly, an examination will be undertaken of the terminology employed by research to delineate proficient and non-proficient readers. This distinction can be both beneficial and limiting, for this reason, a

semantic reevaluation of the terminology is necessary, in order to welcome an applied perspective within the domain of language teaching and learning.

Considering both L1 or L2 readers, the task of text comprehension, whether in oral or written form, has traditionally been associated with "passive" language skills as opposed to "active" ones (Balboni, 2012; Daloiso, 2013)[70]. The characterization of reading comprehension as a receptive skill is rooted in the traditionalist perspective, which posits comprehension as a process of abstraction of the meaning inherently present in the text (De Beni and Pazzaglia, 1995). According to this viewpoint, the reader is perceived as a passive participant in the comprehension process, tasked solely with absorbing the information conveyed by the text. However, with the emergence of cognitivism, there is a paradigm shift in this conceptualization. Comprehension is reconceptualized as a dynamic process involving interaction between the information presented in the text and the reader's existing knowledge (Kintsch and van Dijk, 1978; Johnson-Laird, 1983; De Beni and Pazzaglia, 1995). In this sense, the reader's role undergoes a reassessment, acknowledging its active and potentially productive nature, particularly in the process of new vocabulary acquisition and in the generation of elaborative inferences bringing new knowledge to reader's mind. However, Stafura and Perfetti (2017) do not totally agree to this idea and propose a nuanced perspective, contending that the comprehension process is not inherently active. Instead, they argue that it relies on continuous and unconscious access to working memory, which automatically favours the integration of information between the text and the reader's mind. On the other hand, they (ibid.) welcome the idea that the comprehension process becomes actively engaged when inconsistencies arise between the information in the text and the integrated understanding of the reader. From this standpoint, as suggested by Lumbelli (2009), comprehension becomes an active process because the automatic flow of mental operations is interrupted and transformed into a problem-solving process, where the reader is constantly monitoring a coherent construction of the textual meaning.

In the concluding lines of the preceding paragraph, the concept of automaticity within the framework of text comprehension was recurrently addressed. Indeed, according to De

[70] The categorization into "passive" or receptive activities and "active" or productive activities, encompassing written production or oral communication, is considered obsolete. This classification presents a dichotomy that inadequately aligns with the nuanced mechanisms of language acquisition skills. Although it may persist as a functional framework for guiding glottodidactic practices (cf. CEFR, 2018), it inadequately reflects the intricate nature of acquisitional processes, frequently arising from the amalgamation of both receptive and productive skills (Balboni, 2012).

Beni and Pazzaglia (1995), automaticity constitutes one of the two discernible attributes of this cognitive process, encompassing perceptual and mental operations that may not always be consciously apprehended by the reader. Additionally, a second indispensable characteristic of the reading and comprehension process is its concurrent execution, wherein information processed at various levels – namely, visual, phonological, orthographic, lexical, syntactic, semantic, cognitive, and metacognitive – simultaneously contributes to the construction of meaning (ibid.). From this perspective, text comprehension can be defined as the ability to understand and interpret information from a text (Grabe and Stoller, 2019). However, as the authors point out (ibid.), this definition, while seemingly simple, incorporates aspects of this process that are not at all obvious. Proper and smooth text comprehension, as understood by Stafura and Perfetti (2017), requires rapid, efficient and interactive processes that are simultaneously strategic and flexible to reversals. Moreover, before it becomes a process of meaning metabolization, comprehension is a linguistic process that evaluates the information conveyed by the text, orienting the comprehension toward a specific purpose. Last but not least, comprehension can be understood as a constant learning process, including vocabulary, grammar, rhetoric of written language, and information content conveyed by the text. These attributes are inherent to the process of comprehension, implying that the process itself extends beyond a mere amalgamation of textual content with the reader's pre-existing knowledge[71].

While automaticity is considered one of the attributes of comprehension, the actual process of automatization demands a considerable effort. The equation of automaticity with simplicity is a logical and prevalent assumption; however, in the context of comprehension, not all readers possess equivalent abilities to automate processes. Scholarly investigations, particularly within Anglo-Saxon research, frequently draw a distinction between individuals capable of navigating the comprehension process with a degree of fluency and those encountering repeated interruptions and difficulties. The psychological tradition in this domain, along with recent contributions by Grabe and Stoller (2019) specifically addressing reading and text comprehension in both L1 and L2 contexts, designates the former as "good readers" and the latter as "poor readers". This differentiation, as highlighted by Daloiso (2013), centres on the qualitative dimension of reading, conceiving proficient reading as an outcome that is either present or absent,

[71] These reflections prompt the consideration that the evaluation of text comprehension skills through standardized tests consistently falls short of comprehensively addressing the intricate cognitive landscape intrinsic to the aforementioned comprehension process.

without delving into the causative factors of suboptimal performance. Conversely, Daloiso (ibid.) opts for an alternate terminology more closely linked to the experience of reading and comprehension. The author delineates between "experienced readers" and "inexperienced readers." The former denote individuals with adept command over the micro and macro processes underpinning the comprehension process, while the latter encompass those whose diminished performance stems from inadequate management of the strategies associated with the micro- and macro-processes of comprehension. In this section, we refrain from an exhaustive exploration of the micro- and macro-processes as conceived by Daloiso (ibid.), yet it is imperative to clarify that this differentiation aligns closely with the *Simple View of Reading* (SVR) model (Gough and Tunmer, 1986; Hoover and Gough, 1990)[72]. In this dissertation, the terminology proposed by Daloiso will be employed to precisely differentiate learners who adeptly employ reading strategies from those who have limited experience in this domain. This decision aligns with our objective to transition from the linguistic determinism inherent in traditional terminology, characterized by an entity-oriented perspective, to an incremental view of the learner reader (cf. 2.1.2.4.). Moreover, this perspective assigns a pivotal role to glottodidactic action in furnishing learners with the tools to enhance their reading and comprehension experiences (Daloiso, 2013).

4.2 Reading and comprehension as interaction of bottom-up and top-down processes

This section endeavours to explore the intricacies of reading and text comprehension to gain a full understanding of their underlying cognitive mechanisms. In the context of this dissertation, text comprehension is selected as the central focus for investigating metacognitive and motivational dynamics within the Italian as a FL classroom. However, the discussion in this section will approach reading and comprehension processes through the lens of first language readers. Two primary reasons guide this approach: firstly, the research in this domain is more extensively developed in comparison to studies in L2 settings, and secondly, L2 learners commonly acquire this skill by directly transferring elements of competence from their native language (Grabe and Stoller, 2019). First, the

[72] A more detailed presentation of this and other explanatory models of comprehension processes will be presented later in this chapter.

discourse will delve into the concept of literacy and its contemporary relevance, centring the focus predominantly on reading literacy and the comprehension of written text. Subsequently, a succinct presentation will be made of the preeminent models of reading within the realm of psychology, which serves to elucidate the procedural components of text comprehension. Lastly, a specific consideration will be given to the Reading Systems Framework model (Perfetti and Stafura, 2014), clarifying the role of bottom-up, top-down, and memory mechanisms in both accurate and erroneous processing of text comprehension. This detailed examination of the mechanisms of reading and text comprehension is essential to grasp, within the scope of this dissertation, the multiple levels at which the language teacher can intervene, addressing specific cognitive reading abilities through strategic instruction.

In the context of reading and text comprehension, the term "literacy" is commonly employed as an almost synonymous descriptor for this concept, yet it encapsulates a broader scope of potentialities. In contemporary discourse, literacy denotes the cultivation of a diverse set of skills. There are numerous international associations defining this field, including the World Literacy Foundation, the International Reading Association, the National Literacy Trust, the International Literacy Association, and UNESCO with its Global Alliance for Literacy committed to advancing youth and adult literacy. The Literacy Glossary provided by the International Literacy Association (ILA) offers a definition of literacy as:

> The ability to identify, understand, interpret, create, compute, and communicate using visual, audible, and digital materials across disciplines and in any context. Over time, literacy has been applied to a wide range of activities and appears as computer literacy, math literacy, or dietary literacy; in such contexts, it refers to basic knowledge of rather than to anything specific to reading and writing.[73]

This citation underscores the diverse expressions of literacy while highlighting its foundational nature, providing individuals with the capacity to navigate various facets of human existence and societal organization (ibid.). Amongst the various forms of literacy, proficiency in reading and comprehension assumes a pivotal role in the assimilation of individuals into the broader global society. This is owing to the functional role played by reading and understanding within contemporary society, representing an indispensable

[73] "Literacy Glossary | International Literacy Association," n.d.

skill crucial for individual sustenance and the exercise of active citizenship (Colombo, 2002). Furthermore, as previously noted (cf. Chapter 4), evolving standards of living, intertwined with both social structures and occupational prospects, have prompted a substantial segment of the global population to extend their literacy proficiency in reading and comprehension beyond that confined to their native language alone. Given the societal significance of this proficiency and acknowledging its intricate nature, this dissertation will constrain the term "literacy" to the domain of reading and text comprehension. Consequently, within the scope of this study, literacy will be defined as the aptitude to recognize graphemes and phonemes, their correlation with lexemes, and functional words instrumental in constructing the meaning of a written text. Moreover, the maturation of literacy is intricately linked to the capacity to comprehend and interpret written texts of diverse lengths, forms, and styles, by extracting and interpreting pertinent information for varied purposes.

As previously indicated, to effectively intervene in the literacy development of language learners, it is imperative to possess a comprehensive understanding of the operational mechanisms of this capacity. In the realm of psychology, several models have been employed to elucidate the processes governing text comprehension. Among these, a prominently referenced model is the reading framework formulated by Gough and Tunmer (1986) and Hoover and Gough (1990), recognized as the Simple View of Reading (SVR). According to this model, comprehension can be succinctly expressed through the mathematical formula C = D x L, where C represents text comprehension, D denotes decoding, and L signifies language comprehension. The foundational premise of the SVR model posits that text comprehension is contingent upon both proficient decoding and authentic language comprehension, as one cannot subsist without the other. By the former term , it is meant the precise identification of words and their correct pronunciation. In contrast, the latter encompasses a spectrum of knowledge pertaining to the meaning of words, their syntactic significance, and the background knowledge already assimilated by the learner, often acquired through oral comprehension.[74]. In this model, there is an initial polarization of the involved processes, and various authors have defined this polarization

[74] Grabe and Stoller (2019) assert that the SVR model is highly valuable for comprehending the main components involved in the acquisition of literacy skills. Nevertheless, a notable limitation lies in its inability to elucidate the mechanisms of the comprehension process itself, particularly when both decoding, and language comprehension processes are well-automated.

differently based on their respective theories[75]. The cognitive psychological tradition is used to define comprehension processes according to the Human Information Processing (HIP) model, dividing between bottom-up and top-down processes. This model was theorised by Lindsay and Norman (1977) and compares human brain processing with computer information processing, dealing with batch and parallel processes. Despite the enduring allure of the comparison with computer information processing, its explicative power is deemed insufficient (De Beni and Pazzaglia, 1995). Consequently, alternative models have steered away from the dichotomous examination of top-down mechanisms, endeavoring to offer a more concrete elucidation of the comprehension process. An example of such a model is Kintsch's (1998; 2012) Construction-Integration (C-I) model, which centres on the construction and integration of meaning with the reader's knowledge. According to this model, the reader engages in a clause-by-clause meaning construction process wherein pertinent information is preserved, while less crucial information is suppressed, culminating in the generation of a textual meaning model. Subsequently, in the second stage, this text model is integrated with the reader's knowledge, giving rise to a situational model stored in long-term memory as the definitive representation of the text's meaning and interpretation. An additional model, of significant relevance and closely aligned with the Kintschian perspective, is unquestionably the Landscape Model of Reading developed by van den Broek et al. (1999). As outlined in this model, fresh information from the text initiates a network of connections within the reader's cognitive framework, facilitating the revision of the text's representation. Subsequently, this updated representation serves as a backdrop for a continual updating process, enriching the representation of textual meaning as new additional information is elaborated by the reader. While prior models have endeavored to elucidate the integration of text meaning into the reader's background knowledge, they often lack a detailed exploration of word recognition and word-to-text integration (Grabe and Stoller, 2019). A significant contribution with regard to these aspects was recently made by Charles Perfetti, a preeminent figure in cognitive and educational psychology with over four decades of dedicated research in this field. In one of his recent works (Perfetti and Stafura, 2014), Perfetti and his collaborators amalgamate numerous research contributions on reading comprehension to formulate a novel model known as the Reading Systems

[75] The more traditional terminology indeed distinguishes between bottom-up and top-down comprehension processes (Lindsay and Norman, 1977), but other popular pairs of terms are also: micro- and macroprocesses (Colombo, 2002; Daloiso, 2013); lower- and higher-level processes (Grabe and Stoller, 2019; Perfetti and Stafura, 2014).

Framework (RSF) (see Figure 11). In the following paragraphs, we will expound upon this model in greater detail. In presenting the RSF within this dissertation, we opt for the conventional terminology that delineates between bottom-up and top-down processes. It is important to note that this choice is not grounded in theoretical alignment, as this work aligns with the more contemporary perspective presented by Stafura and Perfetti (2017). Rather, the adoption of conventional terminology serves the purpose of facilitating a sound analysis of individual mechanisms. This involves distinguishing processes that originate from sensory perception and are directed toward the mind (bottom-up) from those that are internally developed at a cognitive level and directed at the integration of perceptual information (top-down).

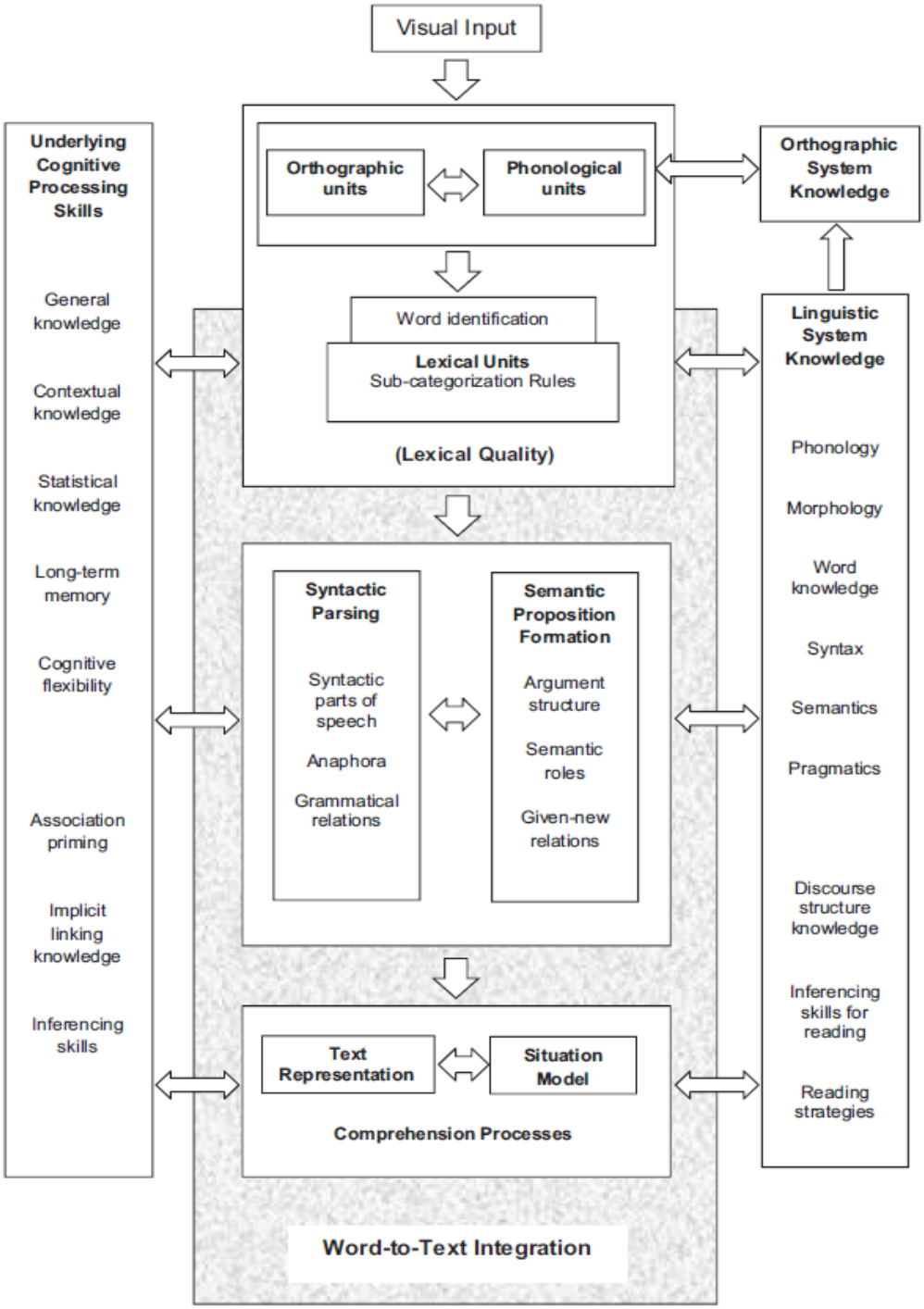

Figure 11 - Reading Systems Framework (adapted from Perfetti and Stafura, 2014), taken from Grabe and Stoller (2019: 71)

4.2.1 The Reading Systems Framework

Perfetti and Stafura's (2014) RSF model, similarly to preceding models, is set in motion thanks to the visual perception. This perception, in turn, functions as a trigger for the initiation of the decoding process, by which written text is systematically encrypted and integrated into the reader's knowledge system. In this dissertation, introducing the concept of perception is deemed imperative, since it serves as the foundational stimulus from which the entire reading process commences. In accordance with Cornoldi et al. (2018),

perception is described as a cognitive process that assimilates sensory information, organizing it into cohesive objects, events, and situations to construct a unified sensory unit. Fundamentally, perception is posited as a constructive process that arranges sensations from diverse modalities (auditory, visual, tactile, olfactory, gustatory) to effectively address challenges pertinent to human psychomotor actions in daily life, among which reading abilities are contemplated.

Upon the arrival of the visual stimulus to the brain, an information decoding process is initiated. Consequently, the human brain becomes actively involved in interpreting the graphical symbols on the paper, leveraging a spectrum of pre-existing knowledge to facilitate the decoding endeavor. From the outset of the reading process, it becomes evident that the utilization of cognitive-level knowledge, and thus the employment of top-down processes, is intricately intertwined with decoding processes (bottom-up). These two systems collaboratively operate towards a unified objective, namely the successful accomplishment of the textual comprehension task. From this perspective, the comprehension process is conceptualized as a capacity in which bottom-up and top-down processes continually function in a seamlessly simultaneous and integrated manner (De Beni and Pazzaglia, 1995). Many scholars regard the decoding process as a pivotal element, asserting that the entire comprehension process would come to a standstill without it. From this perspective, the Reading Systems Framework (RSF) builds upon the foundations laid by the Simple View of Reading (SVR). However, Perfetti and his colleagues take a step further by elucidating the underlying reasons for this fundamental role.

According to Perfetti and Stafura (2014), the decoding process transcends a mere grapheme-phoneme pairing; it also involves the recognition of morphological and syntactic components that facilitate access and assimilation of the word's meaning[76]. De Beni and Pazzaglia (1995) underscore the significance of the decoding process, particularly when viewed through the lens of automatizing this process, since it serves as

[76] These processes hold particular significance in the initial phases of reading skill acquisition, as delineated by Frith (1985). In the early stages, the reader progresses from a logographic stage, where words are read in a holistic manner, to an alphabetic stage, where a grapheme/phoneme conversion is applied. Subsequently, the reader acquires the ability to form more intricate associations encompassing syllables, suffixes, and grammatical morphemes. Ultimately, the reader attains the capability to automatically recognize words, directly accessing their phonological form, thereby expediting the reading process (Cornoldi et al., 2018).

a catalyst for transitioning to higher-level processes[77]. Contrary to this perspective, Taylor and Perfetti (2016) assert that the processes involved in constructing textual meaning are not inherently top-down. The authors (ibid.) elucidate how the automatic access to the meaning of individual words initiates semantic connections with other words, enhancing their semantic specificity (semantic depth) and concurrently facilitating the assimilation of new vocabulary (semantic breadth). Moreover, automaticity streamlines access to the semantic realm of the text's vocabulary, fostering the formation of networks of meanings and propositional meanings. As the reading unfolds, these networks enrich the representation of textual meaning in the reader's mind with minimal cognitive effort.[78]. In this context, the traditional view of top-down processes involving the active generation of bridging inferences (Lumbelli, 2009) is, according to Perfetti and his collaborators, now incorporated into an automatic bottom-up word-to-text integration process. Within this process, the reader elaborates the anaphoric elements of the text by leveraging a pre-existing background of knowledge activated automatically through lexical access and resulting in the generation of paraphrasing linkages[79].

As previously indicated, part of the decoding process involves the activation of connections at the semantic level, drawing upon information directly retrieved from long-term memory. These connections facilitate the establishment of a textual model (Kintsch, 2012), which serves to assist the reader not only in forming a coherent representation of the text but also in triggering mechanisms of anticipation and suppression of information in alignment with this model. An example of connection conducive to the formation of a cognitive representation of textual content is embedded in the concept of schema. According to Anderson (2018), schemata constitute mental frameworks accountable for the organization of information and the consequential establishment of connections

[77] The automatization of linguistic decoding processes holds particular significance in scenarios where word recognition, such as in cases of dyslexia, poses a hindrance to comprehension. However, the capacity to recognize words does not entirely tackle the challenge of comprehension. De Beni and Pazzaglia (1995) includes among the comprehension issues the cases of hyperlexic learners, individuals for whom the decoding process is proficiently automatised, yet challenges in comprehension persist. In these instances, recent studies by De Beni et al. (2013) and Mancilla-Martinez and Lesaux (2017) suggest that both word-reading skills and lexical and syntactic knowledge are indicative predictors of inadequate comprehension.

[78] In this perspective, Perfetti and his colleagues adopt an approach akin to the C-I model proposed by Kintsch (1998; 2012).

[79] The production of paraphrasing linkages through diverse modalities constitutes a central aspect of textual anaphora generation. One of the predominant modalities employed for this purpose is the repetition of concepts, entities, occurrences, or characters, achieved through the utilization of pronouns or alternative synonymous expressions, as elucidated by Grabe and Stoller (2019). Additionally, of considerable significance are semantic relationships, as identified by Stafura and Perfetti (2017), encompassing associations such as part-whole relationships, subordinate-superordinate relationships, member-member relationships, and complementary pairs.

among the stored elements. Moreover, as anticipated, schemata play a pivotal role in the focalization and suppression of information during the process of comprehension. Additionally, they contribute to the inferencing capacity and the retrieval of interconnections among information encapsulated within the designated schema. More generally, the adoption of schemata facilitates the generative process involved in forming a mental representation of textual content, thereby actively maintaining the information within the working memory. From a glottodidactic perspective, the textual representation model plays a pivotal role in enabling the learner reader to construct a succinct summary of the information conveyed by the text.

4.2.1.1 The role of inferences

Simultaneously to the construction of a text representation, the reader also initiates the construction of a situational model. This model can be defined as the outcome of the interpretation of the text representation and emerges as a correction of the propositional meaning of the text. In this construction, the interpreting process is influenced by the reader's reading purposes, motivation, task and text difficulty, as well as pre-existing knowledge and drawn inferences (Grabe and Stoller, 2019). In this regard, we seek to elucidate the specific function attributed to inferences, a topic that has been a focal point of scholarly discourse on text comprehension for numerous decades (Kintsch and van Dijk, 1978; van Dijk and Kintsch, 1983; Kintsch, 1998; De Beni and Pazzaglia, 1995; Lumbelli, 2009; Cornoldi et al., 2018). Within the framework of the RSF, the role of inferences diverges from the perspective posited by the HIP model, wherein comprehension was construed as an ongoing (top-down) inferential integration process. As previously alluded to (cf. Section 4.2.), the inferential process operates distinctively, deviating from the automated word-to-text integration processes, and actively overseeing comprehension, particularly in instances of failure or difficulty. In accordance with Cornoldi et al. (2018), the inferential capacity conventionally embraces two distinct definitions. On the one hand, inference pertains to the (primarily anaphoric) connections that a reader can establish among the information within the text. On the other hand, inference embodies a genuine deductive capacity through which the reader incorporates and deepens information not explicitly stated in the text, leveraging their background knowledge. In the former case, Kintsch and van Dijk (1978) refers to these as connective inferences, while in the latter, they are referred to as elaborative inferences. However,

both processes, as asserted by Stafura and Perfetti (2014), are considered to be activated automatically from the initial stages of lexical recognition. According to these scholars, and in alignment with Kintsch's earlier work (1998), an authentic inference is that which intervenes in the comprehension process in the face of difficulty and transforms it into a reparative process. The initiation of what could be termed a problem-solving process (Kintsch, 1998; Lumbelli, 2009) engages a comprehensive array of strategies operating on multiple levels. These strategies are specifically tasked with reinstating the local and global coherence of the text through various means. According to Cornoldi et al. (2018), they encompass strategies facilitating lexical access and disambiguation (lexical inference), strategies for explicating covered and uncovered meanings embedded in the text (semantic inference), and strategies for establishing connections between disparate points within the text (bridging inferences).

4.2.2.2 The role of memory

Inferential capacity, as delineated previously, constitutes an active cognitive process necessitating the mobilization of the reader's attentional resources for the monitoring of the comprehension process. According to Grabe and Stoller (2019), the recall and direction of attentional resources, both toward the comprehension process and the evaluative processes discerning comprehension success from failure, are ascribed to the central executive processor activated within the working memory. The significance of memory in the comprehension process is often undervalued, yet it holds a pivotal position in this discourse. To elucidate this role, reference will be made to Baddeley's widely employed and recognized cognitive model (2015; also Baddeley et al., 2015) in the subsequent discussion. In accordance with this model, memory is conceptualized as a series of active, interconnected complex systems responsible for handling the multimodal information assimilated from the external environment. The reason for characterizing as multimodal the information undergoing encoding, storage, or retrieval functions lies in Baddeley's (1984) depiction of memory as a system comprising several sub-memories. Within this framework, Baddeley distinguishes between two principal stores: long-term memory and working memory.[80]. Long-term memory serves as the repository for an

[80] The two subsystems delineated by Baddeley (1984) find their roots in the theoretical framework proposed by Atkinson and Shiffrin (1968). In Baddeley's (1984) revised nomenclature, what was formerly known as short-term memory is now termed working memory. This designation not only acknowledges its role as a

individual's comprehensive knowledge and can be subdivided in different mnestic subsystems[81]. Within the context of text comprehension, one of the most prominent mnestic subsystems engaged is semantic memory. This subsystem encompasses encyclopedic knowledge, cultural background, and more specifically, elements such as vocabulary, schemata, textual prototypes, and purpose-oriented reading and comprehension procedures (Cornoldi et al., 2018). Conversely, working memory assumes the responsibility of encoding sensory information and functions as a temporary repository for multimodal information with a more constrained capacity compared to long-term memory[82]. In one of Baddeley and Hitch's (1974) models, working memory comprises three subsystems. The first is verbal memory, tasked with recognizing linguistic information. The second is visual-spatial memory, pivotal in spatial localization and mental image formation. Lastly, the episodic buffering system integrates the visual-spatial component with the temporal aspect, unifying and integrating information from the other subsystems. The coordination of these three subsystems is facilitated by the central executive processor, which not only integrates multimodal information but also exercises voluntary control by identifying effective strategies to align individual intentions with external information. Due to a substantial portion of working memory being dedicated to the conscious management of this processes, its capacity to support information (span) is inherently limited. Because of these characteristics, Pressley (2006), for example, underscores the necessity of automatising lexical access operations to liberate mnemonic resources for word-to-text integration. Moreover, findings by De Beni et al. (1998) highlight the significance of memory span in the updating capacity of information during the mental construction of text representation. These observations underscore the mnemonic nature of text comprehension, preceding its role as a meaning discovery activity (Cornoldi et al., 2018). Therefore, for this dissertation, the capacity to

temporary store but also underscores its responsibility for actively processing the transient information retained within it (Cornoldi et al., 2018).

[81] Cornoldi et al. (2018) summarise certain mnemonic subsystems, each characterized by distinct functionalities. Sensory memory, for example, is explicated in the context of perceptual information derived from the five senses, alongside a differentiation between procedural and declarative memory. Notably, declarative memory is further categorized into episodic memory, which encapsulates spatio-temporal information, and semantic memory, denoted as the repository of meanings. The latter exhibits a close association with sensory memory, as together they possess the ability to make salient the information stored within the human brain. The aforementioned descriptions represent a condensed selection of pertinent insights for the present dissertation; interested readers are encouraged to consult the cited source for a more comprehensive examination of these concepts.

[82] The information retained by working memory remains accessible to the reader for a duration ranging from 15 to 25 seconds. In contrast, long-term memory exhibits a capacity to retain information for periods extending from a few minutes to the entire individual's life (Atkinson and Shiffrin,1968).

adeptly manage the volume of information that can be processed by the readers emerges as a critical aspect of the comprehension process and affects the teaching strategies that might be considered towards a teaching session.

4.3 Differences between L1 and L2 readers

In the preceding paragraphs, our inquiry was directed towards unravelling the cognitive dynamics intrinsic to the processes of reading and comprehension, acknowledging that, as previously delineated (cf. Section 4.2), these processes exhibit similarities between L1 and L2 learners. However, the present section is dedicated to a more nuanced examination of the distinctive characteristics that set apart L1 readers from their L2 counterparts. It is imperative to note that within this discourse, due consideration will be accorded to any shared attributes between the two groups. The insights presented herein are largely derived from the comprehensive observations of Grabe and Stoller (2019), who, across multiple editions, have deeply delved into studies focused on reading comprehension skills in the context of a second language.

As elucidated earlier (cf. Section 4.2), scholarly investigations into reading and comprehension have consistently maintained unequivocal significance, predominantly centring on L1 readers individuals acquiring the skill of reading in the language native to their environment. Conversely, L2 readers, denoting those acquiring the ability to read in a language foreign to their native tongue, whether within their home country or abroad (Vedovelli, 2002), have historically received comparatively limited attention. Exploring research within this secondary domain provides ample opportunities to enhance our understanding of how learners approach reading in a second language. This exploration may corroborate previous research findings, particularly if derived from languages other than English, or contribute insights beneficial for educators in adopting engaging teaching practices and designing pertinent learning materials to enhance learners' proficiency in reading and comprehension in a FL.

Recently, Grabe and Stoller (2019) have undertaken a comprehensive exploration in this domain to discern the variations in the comprehension process of a text between L1 and L2 readers. According to these authors, the comparison of L1 and L2 readers reveals three distinct categories of differences: linguistic and processing differences, individual and experiential differences, and socio-cultural and institutional differences. In the

forthcoming subsections, a detailed examination of each of these disparities will be conducted. Subsequent to this, our focus will shift to an exploration of various insights derived from research, offering guidance on the formulation of an effective reading comprehension syllabus, enabling the development and refinement of this cognitive skill.

4.3.1 First set: linguistic and processing differences

When L1 readers embark on the process of learning to read at the early age of 5-6, they approach text with a substantial reservoir of words acquired from their family and native environment. Beyond acquiring new vocabulary, they possess familiarity with specific sounds and the grammatical structure of their native language. These elements contribute significantly to the decoding process of reading, encompassing the identification of letters and sounds, as well as the recognition of written words and their meanings.

In contrast, L2 readers engage in learning to read in a new language concurrently with acquiring letters, sounds, vocabulary, and grammatical structures. Their cognitive load is heightened with a plethora of information, which is not as readily processed as their L1 peers. This intricacy affects aspects such as pronunciation, fluency, and word recognition. Another aspect to take into account is the transparency of the language being learned. Transparency plays a pivotal role, since it denotes the one-to-one correspondence between letters and sounds (as in Italian or Spanish), distinguishing transparent languages from more opaque ones, such as Chinese or Japanese (non-alphabetic languages).

A second distinguishing feature of L2 readers is their capacity for metalinguistic awareness, i.e. the ability to reflect on the new language they are acquiring. Metalinguistic awareness serves as the conduit through which readers transfer aspects of their reading abilities, encompassing both positive and negative habits, from the L1 to the L2 system. However, Cummins (1976), in his Threshold Hypothesis, posits that this transfer occurs only when learners attain a sufficient level (the threshold) of linguistic and metalinguistic awareness, either independently or with the assistance of more proficient expert like a teacher.

Consequently, L2 readers can employ a dual set of strategies: those cultivated in the L1 and those acquired during L2 training. This dynamic interplay holds particular significance and can positively influence learners' processes of reading and comprehension in the new language.

4.3.2 Second set: individual and experiential differences

Experience with the task significantly impacts the development of L2 reading skills. Proficient and self-aware L1 readers may leverage their comprehension strategies when reading in the L2, seeking to apply these strategies in the new language. Furthermore, L2 readers often come from varied motivational backgrounds, where self-perception, self-esteem, self-efficacy, emotions, interests, and engagement play pivotal roles in second language acquisition (Dörnyei and Ushioda, 2021). Occasionally, prior motivational experiences in the L1 schooling environment may clash with the expectations of the L2 reading class, influencing the process of learning to read in another language.

Text exposure is another influential factor, where increased exposure to L2 texts leads to the automatization of decoding skills and the augmentation of available cognitive resources for the comprehension process. The difficulty associated with L2 texts also plays a crucial role. Simpler texts may fail to align with readers' cognitive abilities in the L1, diminishing reader interest. Conversely, authentic L2 textual material often requires shortening or simplification due to the heightened cognitive effort demanded of the reader's working memory.

In comparison to L1 readers, their L2 counterparts may rely on distinct linguistic resources, including glosses in the reading text, the utilization of bilingual dictionaries, and familiarity with topics, textual structures, specific vocabulary, and the like. These various factors collectively contribute to the complex interplay influencing the L2 reading experience.

4.3.3 Third set: socio-cultural and institutional differences

Learners' motivations are substantially shaped by the societal values prevalent in their cultural context. For instance, religious societies may place a significant emphasis on the importance and truthfulness of sacred scriptures, whereas capitalistic societies might utilize writing more extensively for utilitarian purposes, such as in advertisements, education, and mass media.

In this regard, each culture develops a distinct system of textual norms, contents, structures, and styles that can profoundly impact how individuals perceive and interpret various readings. Transitioning from one cultural system to another entails navigating a

different set of values, and learning to read in an L2 involves embracing a system that may clash with one's own cultural background.

Institutions, including government bodies, schools, and universities, are inherently influenced by these cultural values, reflecting the broader societal ethos. Consequently, national education and examinations typically impart to literacy a set of values representative of the culture from which they originate. This cultural interplay underscores the intricate relationship between language, literacy, and societal values in the educational landscape.

4.3.4 How to deal with L1-L2 reading differences

The distinctions elucidated above present a nuanced perspective that adds layers of intricacy to the already complex cognitive mechanisms inherent in the act of reading. In this section, an endeavor will be undertaken to delineate how this heightened complexity can be leveraged beneficially for the effective implementation of sound language teaching practices.

Pressley et al. (2006) emphasize the importance of crafting a syllabus for training L2 readers that takes into account the unique distinctions between L2 and L1 readers. This entails not only offering pedagogical support, such as aiding learners in developing metalinguistic awareness and providing performance feedback, but also instructing them on how to effectively utilize past experiences, differentiate between native and second language cultures, and foster self-regulation. This includes the cultivation of metacognitive and motivational strategies specifically tailored to enhance the processes of reading and comprehension.

In addition to the insights provided by Pressley (2006), we would like to incorporate recommendations from the Italian academic community engaged in the field. Notably, Michele Daloiso stands out as a scholar dedicated to enhancing practices in the teaching of reading comprehension within the national context. In one of his works (Daloiso, 2013), the author delineates a framework of competences that a new reading comprehension syllabus should consider to either recover or enhance this skill. Daloiso identifies three overarching areas of intervention: technical competence, strategic competence, and metastrategic competence. Technical competence primarily pertains to knowledge associated with the micro-processes of decoding and word recognition,

encompassing aspects such as syllabic and morphemic breakdowns that facilitate semantic recognition. Instead, strategic competence involves a complex array of strategies often engaged unconsciously, which activate cognitive macro-processes and, consequently, invoke long-term memory. An illustrative instance is found in connective inferences, bolstered by anaphora and connectives, aimed at preserving cohesion and coherence in the reader's mental representation of the text. A second facet is embodied by expectancy grammar (Goodman, 1967), wherein comprehension aligns with linguistic, para- and extralinguistic, contextual, as well as experiential cues[83]. Yet another dimension of strategic competence pertains to textual re-elaboration, encompassing activities such as text reduction, summarization, paraphrasing, and even translation. Last but not least, the metastrategic competence assumes significance. This competence empowers the reader to maintain vigilance over the comprehension process, facilitating the selection of the most suitable strategic procedures based on prevailing conditions (cf. 2.1.1.). In practical terms, according to Daloiso (2013), monitoring can also be taught and developed as a competence that aids the learner in reading and comprehending the text. Daloiso's pedagogical perspective (ibid.) proves highly beneficial and pertinent for the objectives of this dissertation. However, it is noteworthy that his work only marginally addresses the affective and motivational components. In our view, a comprehensive approach to skill development necessitates consideration of additional aspects, including the enhancement of learners' self-efficacy, the cultivation of interest, and heightened awareness regarding their emotional states. This includes an understanding of emotions such as boredom, frustration, test anxiety, and engagement, along with an exploration of their origins and impacts on task completion.

4.4 The multifaceted nature of comprehension: reading for specific purposes

The aforementioned recommendations pertaining to pedagogical practices are evidently of a general nature, and they fail to encompass the extensive array of text types and purposes for which a given reader engages with written material. According to Grabe and

[83] Goodman (1967) characterized comprehension as a psycholinguistic guessing exercise involving active cognitive engagement, where individuals utilize their cognitive abilities to predict the unfolding content. Rather than passively absorbing information, readers and listeners actively interpret the text by generating hypotheses about its meaning. In this sense, reading (but also listening) and comprehension becomes a sort of guessing game (Balboni, 2015). Within this framework, Expectancy Grammar plays a pivotal role in shaping expectations and guiding the formulation of hypotheses regarding the text during the comprehension process.

Stoller (2019), it is rather obvious that the ultimate objective of reading should be comprehension; however, the modalities through which comprehension occurs remain less evident. Thus far, our focus has been on comprehending the inherent dynamics of the reading process, yet our understanding of the body of knowledge that intersects with it, thereby equipping the reader to deploy their reading skills effectively, remains limited. In their handbook, the authors (ibid.) merely enumerate several factors that may impact reading skills, such as task type, motivation, goals, and the language proficiency of the learner-reader. While these assertions hold a degree of validity, we posit that it is imperative to contemplate a model that delves into this matter with greater depth: namely, the tetrahedral model proposed by Ann Brown and her collaborators (Brown et al., 1983; Baker and Brown, 1984). Brown's model represents a paradigm of meta-understanding, systematically categorizing metacognitive knowledge integral to the reading process and its consequential impact on its execution. Among the facets of metacognitive knowledge within this framework is an emphasis on the nature of the text, encompassing aspects such as its structural characteristics, level of complexity, and overall clarity[84]. A second facet of metacognitive knowledge pertains to the demands inherent in a given task and the diverse objectives for which comprehension is sought. Additionally, another kind of metacognitive knowledge involves understanding the applicable reading strategies employed to enhance comprehension. Lastly, there is a metacognitive knowledge of one's individual attributes as a reader, encompassing aspects such as motivation, self-efficacy, as well as personal interests and experiences that collectively form one's background knowledge base.

Within this discourse, our primary focus will be directed toward the initial two aspects, concentrating on a specific genre of comprehension, which is cultivated for the context of reading comprehension tests in FLs. The examination of knowledge pertaining to strategies and individual characteristics will be deferred to the subsequent paragraph for a comprehensive exploration.

[84] In the context of this passage, the term "text structure" not only pertains to the visual arrangement of the text but also encompasses its internal composition. This internal makeup involves the presence of narrative, descriptive, or argumentative segments designed for various purposes, such as conveying information, providing entertainment, persuading, or evoking aesthetic sentiments (De Beni and Pazzaglia, 1995). While taxonomies have historically been employed to categorize textual purposes, as exemplified by Brewer (1980), it is widely acknowledged that the reality of textual content is considerably more heterogeneous. Texts often serve a multitude of purposes, at times concurrently and at other times in coexistence, reflecting a nuanced and varied landscape.

4.4.1 Reading and comprehension testing

In this segment of the chapter, our focus shall be directed towards elucidating a reading comprehension mode tailored for a specific genre of text—specifically, that which serves as a comprehension test within diverse language examinations or language proficiency certifications. This category of reading inherently intertwines with metalinguistic and metacognitive knowledge, manifesting an introspective evaluation of both textual attributes and the methodology employed in task resolution.

Commencing our discourse, we shall delineate the significance of the comprehension purpose in shaping the nature of reading and the metacognitive expectations engendered within the reader's cognitive framework concerning the comprehension task. Subsequently, we will expound upon the pivotal role of the reading comprehension task from an educational standpoint, illuminating its historical evolution within the context of language pedagogy, particularly within the European educational milieu. Within this precise context, the reading task assumes the form of a standardized test, encompassing objectives extending beyond the mere evaluation of learners' performance and comprehension skills. Consequently, a comprehensive exploration of the characteristics, objectives, merits, and potential pitfalls associated with standardized tests will be undertaken in subsequent sections. Ultimately, the historical narrative surrounding the incorporation of standardized tests within the Austrian Matura will be delineated. This account will encapsulate the challenges encountered during its implementation, along with the solutions discerned by the test-developing committee in the pursuit of establishing a novel tradition of standardized testing within the nation.

In the scholarly inquiries hitherto examined, spanning from the seminal work of van Dijk and Kintsch (1983) to the investigations conducted by De Beni and Pazzaglia (1995), progressing through the analyses of Colombo (2002), extending to the contributions of Pressley et al. (2006), and traversing the insights offered by Daloiso (2013) up to the contemporaneous discourse advanced by Grabe and Stoller (2019), a discernible consensus emerges. This consensus underscores the unanimous acknowledgment that disparate reading purposes are concomitant with distinct modalities of reading and comprehension. For example, selective reading or scanning, as expounded by Colombo (2002), represents a cognitive process wherein the reader strategically identifies and extracts highly specific information from a given text in order to answer a specific kind

of reading and comprehension question. This example underscores the pivotal role of reading purposes in shaping the procedural and strategic knowledge underpinning the process of some reading and comprehension testing. In alignment with foundational principles delineated by Kintsch and van Dijk (1978), Colombo (2002) establishes a taxonomy comprising two overarching macrocategories of reading purposes: reading for entertainment and reading with functional objectives. Within the latter macrocategory, more granular classifications include understanding for information, understanding for occupational purposes, and understanding for scholarly pursuits, albeit acknowledging occasional interplay and intersectionality among these delineated purposes[85]. In the scope of this study, particular emphasis will be accorded to the latter category, namely, understanding for study, as the textual typology under scrutiny in the discourse at hand aligns with this classification: reading and comprehension testing texts.

The selection of this specific textual typology aims to instigate specific metacognitive expectations within the cognitive framework of the learner-reader regarding the inherent characteristics of the text. An example of such metacognitive expectations involves the anticipation of encountering a text that closely aligns with one's linguistic proficiency, characterized by both local and global coherence, and structured with a discernible layout complemented by question items strategically positioned to assess comprehension competence. In confronting this task, the learner, drawing upon past experiences, cultivates a heightened sensitivity to the text (De Beni and Pazzaglia, 1995). This sensitivity is capable to discern and evaluate grammatical, semantic, and resolution challenges intrinsic to the assigned task. Furthermore, familiarity with this textual typology triggers metacognitive expectations intertwined with the evaluative aspect, as this form of assessment assumes a pivotal role in validating the proficiency of the learner in reading and comprehending texts. The recognition of such metacognitive underpinnings underscores the intricate interplay between textual typology, cognitive preparedness, and the evaluative dimension inherent in comprehension assessments.

[85] It is imperative to recognize that while the acts of reading and comprehension are inherently directed towards the attainment of specific objectives, it is not uncommon for a given reading to concurrently serve multiple purposes, thereby fulfilling secondary goals. Consider, for instance, the act of perusing a magazine for recreational purposes. In this scenario, it is conceivable that the act of reading, ostensibly pursued for entertainment, may seamlessly assume an informative dimension as well. Thus, it is evident that a singular reading instance has the capacity to accommodate diverse and interwoven purposes, exemplifying the nuanced and multifaceted nature inherent in the convergence of reading objectives.

The exercise of text comprehension stands as a longstanding teaching practice that has enduringly permeated language classrooms, particularly those dedicated to the acquisition of a FL[86]. As previously noted (see Chapter 4), the employment of the text comprehension exercise is directed not only at monitoring the progression of literacy in both first and second language acquisition but also at fostering the development of functional skills essential for active citizenship, as articulated by Colombo (2002). However, the landscape of language learning policies has evolved over time in response to dynamic socio-political changes (Morris, 2011). Notably, there has been a paradigmatic shift from perceiving text comprehension solely as an exercise in receptive skills to conceptualizing it as a tool for assessing linguistic competence by delineating standardized proficiency levels[87]. On a more philosophical level, one could posit that the practice of comprehension has experienced a shift in values, transitioning from a qualitative-functional perspective to one predominantly quantitative (Popham, 1999). In essence, the emphasis has shifted from the importance of adopting comprehension for navigating the intricacies of daily life – be it in education, active citizenship, or interpersonal relationships – to a significance placed on comprehension primarily for the purpose of meeting socio-economic standards. This transformative shift has been historically accompanied by discernible changes in the European context. The formation of a union comprising multiple nations engaged in economic, social, and cultural exchanges has necessitated the establishment of educational benchmarks that can be universally embraced by all member states. A pivotal milestone in the standardization of FL proficiency levels was undeniably marked by the formulation of the CEFR (Council of Europe, 2001)[88]. Following the identification and dissemination of these threshold linguistic levels, the imperative arose to establish universally applicable testing methodologies, harmonized across diverse languages and cultures, capable of evaluating and quantifying language proficiency in alignment with the CEFR descriptors. In this regard, the level tests developed by Cambridge English

[86] Balboni (2015) reports that the 'reading method', even before being a form of competence to be developed and tested, was used as a true teaching method for language learning. This method, predominantly employed in Italy during the tumultuous periods of the great wars and dictatorships spanning from 1914 to 1945, vested learners with complete autonomy in their language-learning endeavors. However, a notable drawback of this method was its limited focus, as it did not cultivate other communicative facets such as oral proficiency or listening skills.

[87] In this context, Morris (2011) contends that standardization serves not only as a mechanism for evaluating learners' accomplishments but also as a common instrument for assessing the efficacy of educational methodologies, programs, and systems.

[88] The genesis of the CEFR emerged at the confluence of the objectives pursued by stakeholders from Cambridge English and the Council of Europe's Common European Framework Project. These entities actively engaged in a collaborative undertaking aimed at delineating threshold levels in foreign language learning across the European landscape (Van Ek and Trim, 1998a; 1998b).

(Cambridge English Research Group, n.d.) have undeniably emerged as a reference model within the European educational landscape. The decision to use these testing models and to develop similar ones for other European (and non-European) languages represents the starting point for a knowledge standardisation process. As Popham (1999)[89] comments, «*developing standardized achievement tests is to create an assessment instrument that, with a handful of items, yields valid norm-referenced interpretations of a learner's status regarding a substantial chunk of content*».

4.4.1.1 Standardised Testing

Standardized tests are typically assessments developed externally and subsequently utilized by educational institutions. Those employed within educational settings are often commissioned by governmental bodies, thereby exerting a direct influence on the teaching and evaluation policies of these institutions. In this context, the standardization of assessment and evaluation methods assumes a top-down nature and, as exemplified by the European Union, is frequently a consequence of broader governmental policies. The primary objective of standardized tests is to formulate questions and scoring procedures that yield a specific interpretation of the learner's knowledge. Furthermore, for the effective functioning of standardized tests, it is imperative that these interpretations remain consistent across a more or less extensive sample of learners in diverse educational institutions (Popham, 1999; Morris, 2011).

Standardized tests serve two primary assessment purposes: formative and summative. Formative assessment involves evaluating the learner to assist the teacher in gauging the effectiveness of a specific teaching module or methodology on the learner's preparation. Moreover, as reported by Popham (2011), formative assessment proves highly beneficial in discerning learners' strengths and weaknesses, along with tracking their developmental progress over time. Conversely, summative assessment is employed to appraise the learner's overall performance with potentially high-stakes consequences (Morris, 2011), such as implications for the learner's future career as a professional or university learner. Within the context of this work, we will focus on the latter of these two assessment types. According to Wang et al. (2006), one of the most advantageous aspects of summative assessment based on standardized testing is the elimination of ambiguity or secrecy, in

[89] The quotation was extracted from the digital version of the article, situated within the corresponding paragraph: “Accurate Differentiation As a Deity”.

contrast to traditional forms of assessment. Additionally, as outlined by the authors (ibid.), standardized testing can serve as a valuable facilitator for learners from diverse socio-economic and cultural backgrounds in the cultivation of new cognitive skills. Ridley (2003), indeed, asserts that the brain's neuroplasticity remains receptive to novel learning experiences from the external environment, particularly when bolstered by robust internal motivation. From this perspective, standardized tests emerge as a useful tool for inclusivity, tailored to meet the demands of contemporary society. While the enumerated advantages are correlated with the utilization of standardized assessments, it is imperative to acknowledge that these assessments may impose constraints on the intellectual potential of learners (Wang et al., 2006). Standardized tests are specifically structured to assess a predefined set of skills that, however, may not comprehensively encapsulate the entirety of learners' intellectual capabilities. Additionally, as highlighted by Gandal and McGiffert (2003), these tests frequently exhibit a bias towards low-level standards, thereby promoting low-order thinking skills (Hillocks, 2002).

A secondary application of standardized tests is as evaluation tools. Morris (2011) characterises this function as low-stakes, wherein evaluations derived from learners' performances are employed by governmental institutions to oversee the progress of learners in fulfilling national standards. The outcomes, particularly when on a broad scale, become a focal point for contemplation through which educational leaders can scrutinize programmatic reforms within the educational system. Furthermore, the low-stakes ramifications of this evaluation serve both as a reward and a sanction for schools or teachers, as their capacity to enhance learners' performance in attaining national standards is subject to scrutiny. According to Popham (2011), this secondary utilization of standardized tests for evaluative purposes is incongruent with the intended purpose for which these tests were developed. Consequently, the inferences regarding the quality of teaching that the test results are intended to generate become significantly distorted. Moreover, as underscored by Hout and Elliot (2011), employing standardized tests for evaluative purposes has the potential to engender distorted teaching practices. A system that incentivises standardized testing through the accountability of educational institutions and teachers may compel the latter to prioritize the improvement of test results, potentially undermining the autonomy and the intrinsic value of their teaching creativity.

4.4.1.2 Standardised testing in the Austrian Maturaprüfung

A common critique of governmental interventions in educational policies within schools is that educational institutions often perceive a sense of isolation when confronted with abrupt changes in assessment methods, inevitably impacting teaching practices. This concern is also applicable to the Austrian context, where the introduction of new examination methods for the FL domain occurred relatively recently (Kremmel et al., 2018). Commencing in 2001, with the release of the initial version of the CEFR (Council of Europe, 2001; 2018), Austrian educational institutions embarked in a comprehensive reform process within the Austrian educational system, particularly in the realm of FLs. The objective of the language teaching reform was to afford equal significance to all competences assessed by the CEFR and to delineate threshold levels to be achieved by the conclusion of schooling: B2 (for the primary FL) and B1 (for the secondary FL). Following the implementation of the new reform, Austrian institutions recognized the necessity to adjust the structure of the high-school-leaving examination in alignment with the revised language policies. As detailed by Kremmel et al. (2018), a few years subsequent to the reform, in 2007, the University of Innsbruck initiated a government-funded project to formulate the inaugural standardized high-school-leaving examination for English (B2), subsequently for French (B1), and ultimately for Italian and Spanish. The initial testing methods devised pertained to listening and reading skills. Subsequently, assessment tests encompassing lexico-grammatical skills (Language in Use) and writing competence were also incorporated. Meanwhile, from 2007 to 2009, the cadre of item writers for the questions items and assessment descriptors witnessed a nearly threefold increase. Initially, linguistic test-developing experts were engaged for the identification of examination materials and the formulation of question items. However, at a later stage, this responsibility was delegated to new professionals, predominantly teachers from the entire nation, who were representative of a diverse range of schooling experiences (Konrad et al., 2018). The involvement of teachers in the FL high-school-leaving examination development project was driven by a dual objective. On the one hand, the involvement of teachers as testing developers would have bestowed credibility and confidence upon the new high-school-leaving reform. On the other hand, teachers would have served as guarantors of a certain level of test validity, incorporating their teaching experience with the target population into the process of material selection and question item formulation (Kremmel et al., 2018). Moreover, the extension of the project to include teachers would have ensured additional support for material

development during the transition from the initial test development phase to the nationwide dissemination (Konrad et al., 2018). With the enactment of a legislative decree in 2010, the standardized examination for the Austrian Matura became mandatory; however, it was not until 2015 that this measure achieved comprehensive dissemination and implementation throughout the nation.

While Konrad et al. (2018) have identified several advantages associated with the inclusion of teachers in the development of the Matura Prüfung, there remain various steps necessary for the comprehensive acceptance of the new examination methods. Indeed, the authors (ibid.) have observed positive effects on classroom testing, a more profound comprehension of the newly established standard for evaluation, heightened ownership, and a corresponding sense of trust and confidence in the novel exam. Furthermore, the authors (ibid.) emphasize that the teachers involved play a pivotal role in disseminating knowledge about the exam. In particular, a more in-depth understanding of the exam's structure, its cognitive demands, and strategic approaches to solving it are deemed crucial. Nevertheless, as of the present, the reception at this level seems somewhat subdued, a sentiment corroborated by insights shared by certain Italian educators with whom this research team had the privilege of engaging. Indeed, notwithstanding the passage of several years since the inception of standardized language tests, there persists a perception among certain educators that these assessments tend to evaluate proficiencies extending beyond the scope of classroom instruction. Moreover, it is widely held that these tests inadequately capture the diversity and breadth of pedagogical practices prevalent within the educational landscape. Considering these perspectives, it is imperative to underscore the potential efficacy of integrating diverse approaches and methodologies within language instruction to align learners more closely with the competencies demanded by contemporary examination paradigms.

While this section has delved into the developmental process of a standardized test for the Austrian high-school-leaving examination in FLs, specific aspects pertaining to the reading tasks within the Italian test will not be extensively discussed herein. A comprehensive exposition of the reading test will be undertaken in the subsequent chapter, wherein not only its structural elements but also nuanced information regarding its composition and associated cognitive demands will be expounded upon. In the next section, instead, the role played by metacognition in the learning process, and in reading

in particular, will be explored. In fact, we will learn about some useful tools for approaching metacognitive knowledge in reading and text comprehension practices.

4.5 Metacognition, reading strategies and performance

In this concluding segment of Chapter Four, our examination of reading and comprehension within L2 (second language) settings draws to a close. Prior to our conclusion, it is imperative to provide a comprehensive account of the interplay between metacognition, defined herein as self-regulation, and the act of reading. Furthermore, insights into the advancements and outcomes of metacognitive applications in conventional educational frameworks will be expounded upon. Subsequently, we will proceed to delineate various tools that have been developed within the scientific domain of meta-comprehension (De Beni, 1989). These tools possess the capability to assess learners' metacognitive awareness, exemplified by metacognitive inventories, as well as learners' tangible implementation of strategies during the execution of reading tasks, as evidenced by methodologies such as Think Aloud Protocols and Post-hoc interviews.

As articulated by Jacob and Paris (1987), the multifaceted nature of metacognition underlies both its widespread diffusion and the notable success that has attended studies in this domain. While metacognition has, on the one hand, engendered a degree of perplexity within scientific realms due to its polysemous character (as discussed in Section 2.1; De Beni and Pazzaglia, 1995), on the other hand, it has proven to be a valuable perspective within applied sciences. Jacob and Paris (1987) assert that thanks to metacognition, the active role of the reader, the strategic dimensions of reading, the intrinsic significance of the reading task, and, most importantly, the imperative need for metacognitive teaching interventions in this cognitive domain have been underscored. However, De Beni and Pazzaglia (1995) also bring attention to a surge of criticism associated with the adoption of teaching methodologies oriented towards fostering metacognitive awareness and practices. Certain educational institutions perceived the utilization of metacognitive methods as a potential jeopardy to the cultural development of learners. In accordance with these critiques, it has been contended that redirecting the emphasis of learning from the acquisition of content to acquiring the skills of learning would disproportionately prioritize the methodology of studying over the substantive content of study. This shift, as argued, might lead to a gradual decline in the quality of

overall learning. Nonetheless, as posited by Paris and Winograd (1990: 22), «*metacognition should not be regarded as a final objective for learning or instruction*», rather as an opportunity to «*provide learners with knowledge and confidence that enables them to manage their own learning and empowers them to be inquisitive and zealous in their pursuits*».

In this regard, empirical investigations within the field, exemplified by studies such as that conducted by Palincsar and Brown (1988), have dispelled any reservations by demonstrating a discernible correlation between the implementation of metacognitive training and notable enhancements in task performance. These enhancements extend across both mnestic and content-specific domains, encompassing improvements in comprehension, written text production, and mathematical proficiency. Moreover, a comprehensive meta-analysis undertaken by Dignath et al. (2008) on the impact of self-regulated programs, grounded in the instruction of cognitive, metacognitive, and motivational strategies, has yielded noteworthy insights. Notably, the study revealed that interventions fostering metacognitive awareness, particularly those providing explicit guidance on strategy selection and its consequential effects, as well as those that encouraged metacognitive reflection, demonstrated the highest effect sizes on learners' overall academic performance. Furthermore, the amalgamation of self-regulated programs with a dual focus on metacognitive and motivational facets accentuated the observed effect sizes, underscoring the synergistic impact of combining these dimensions. These findings align seamlessly with the reservations articulated by De Beni and Pazzaglia (1995) concerning the intricate interplay between metacognition and performance. According to the authors (ibid.), the nexus between metacognitive awareness, the actual implementation of strategies, and subsequent performance is subject to the influence of a myriad of factors. These factors encompass motivational elements, such as anxiety and low task engagement, as well as cognitive considerations, including a cost-benefit analysis pertaining to the perceived utility or futility of strategy adoption within a specified task.

Over time, strategies, particularly those pertaining to the specific task of reading comprehension, have assumed an indispensable role in guiding the language acquisition process. Notably, comprehension skills have gradually garnered increased attention, concomitant with the scrutiny devoted to the associated strategies. Additionally, reading-specific strategies have been acknowledged by the Common European Framework of

Reference for Languages (CEFR) for the first time. Both the 2001 version and the updated 2018 edition of the CEFR offer comprehensive guidance regarding strategies conducive to enhancing reading and text comprehension abilities[90]. Within these guidelines, key areas of intervention are delineated, encompassing planning, execution, and monitoring/evaluation. Specifically, the CEFR (2018) identifies planning as the phase of contextualization within the text, facilitating learners' activation of cognitive schemata requisite for processing subsequent inferences. With respect to execution, inferences derived from textual coherence, such as the recognition of connectors, and those derived from personal knowledge and classified as 'elaborative' by Lumbelli (2009), are briefly elucidated. Furthermore, the CEFR (2018) introduces the concept of reading styles for the first time, which vary depending on the purpose of reading. Within the realm of the executive process, skimming and scanning are considered, respectively, with the former serving as a mode of reading for general orientation and the latter serving as a mode for the retrieval of specific information. Regarding monitoring and evaluation, instead, little or no specification have been made within the CEFR. Notwithstanding the great amount of provided information, it is our contention that the considerations pertaining to reading strategies outlined within the CEFR still lack comprehensive elaboration. Notably absent are references to reading support strategies (Mokhtari and Richard, 2002), such as note-taking, identifying key information in the text, and summarizing skills. Nevertheless, the CEFR (2001, 2018) undeniably serves as a foundational and guiding resource for those embarking on their first foray into metacognitive strategies within language learning. Indeed, many of the requisite strategies are contingent upon the specific tasks one seeks to undertake and thus necessitate insights that can only be gleaned from the consultation of specialized literature and from action research.

In this passage, an examination of the relationships between metacognition and, more broadly, the utilization of strategies, and their impact on learning performance within a scholastic context was undertaken. Subsequently, the forthcoming subsection will expound upon the methodologies employed for the measurement of metacognitive awareness, particularly within the realm of reading and text comprehension.

[90] In the 2018 version of the CEFR, aspects that had already been mentioned in the 2001 version are expanded upon, but in little detail.

4.5.1 The MARSI model: Metacognitive Awareness Reading Strategy Inventory

In the preceding section, we described the considerable popularity that studies on metacognition have garnered. Concurrently, there has been a discernible trend toward the specialization of metacognitive fields of study. De Beni (1989), for instance, characterizes meta-comprehension as the domain within metacognitive studies specifically oriented towards text comprehension. The pronounced emphasis within this domain on metacognitive reflection and the strategic utilization of cognitive tools has prompted the development of instruments designed to identify efficacious strategies, thereby enhancing readers' overall performance. Several such tools include, among others, Think Aloud Protocols, Post-hoc interviews, and Eye-tracking, which are diverse observation methodologies, varying in their objectivity, yet uniformly directed towards capturing both cognitive and metacognitive strategies. While a comprehensive exploration of these instruments is beyond the scope of this discussion, it is noteworthy that they serve as foundational elements for the creation of other instruments, such as strategy compendia (see Tierney and Readence, 2005) and metacognitive awareness inventories. The substantive distinction between these two tools lies in their respective functions: the former serves as a compilation of potential strategies, while the latter functions as a tool for quantifying metacognitive awareness. The ensuing discussion will concentrate on the latter instrument, namely, metacognitive awareness inventories, which are deemed more adequate to the objectives of this work.

In the field of meta-comprehension, several attempts have been undertaken to devise instruments dedicated to the quantification of metacognitive awareness concerning reading strategies. Noteworthy examples include the Index of Reading Awareness formulated by Jacobs and Paris (1987), Pereira-Laird and Deane's (1997) self-report measure denoted as Reading Strategy Use, and the questionnaire engineered by Schmitt (1990) specifically designed to gauge the strategic awareness of reading processes among primary school learners. According to Mokhtari and Richard (2002), each of these works has, in its own manner, contributed to valuable insights towards the conceptualization of a genuinely effective and reliable instrument[91]. Nevertheless, the authors contend that the metacognitive reading inventories developed exhibit certain limitations. These may

[91] Jacobs and Paris (1987), for example, focused their model on a number of highly relevant strategic aspects, such as planning, regulation, conditional knowledge and evaluation. Pereira-Laird and Deane's (1997), on the other hand, included both strategies classified as cognitive and metacognitive in their study, specialising their strategic investigation on predominantly narrative and expository texts.

include the tailoring of instruments for highly specific educational targets, the utilization of scales featuring a limited number of items, levels of reliability and validity deemed questionable, and, consequently, insufficient psychometric properties.

Drawing upon the abovementioned models, Mokhtari and Richard (2002) undertook the development of a novel instrument known as the MARSI (Metacognitive Awareness Reading Strategy Inventory) with the aim of addressing identified limitations and deficiencies observed in prior research. The MARSI serves as a tool designed to gauge the levels of strategic awareness among learners ranging from 6th to 12th grade when engaging with academic or school-related materials. Notably, the MARSI model is structured to assess not only the extent of knowledge but also the perceived utilization of these strategies. Its foundation rests on the premise of a reading process facilitated by a proactive reader, actively making intentional, purposeful, and deliberate strategic choices. Moreover, an ancillary yet equally significant objective in the development of the MARSI was to furnish learners with a tool for self-awareness, thereby empowering them to exert control over their own learning processes (Alvermann and Guthrie, 1993). Although the creative process underlying this model was intricate and protracted, the resultant product, even in its initial version (Mokhtari and Richard, 2002), stands as a model explicitly tailored for the comprehensive reading process, encompassing the stages before, during, and after reading, targeting a notably extensive group of learners[92].

The first version of the MARSI takes the form of an inventory comprising 30 distinct strategies, enabling the learner to delineate both their degree of familiarity and perceived implementation of the chosen strategy. Employing a five-value Likert scale, the learner can attribute a value of 1 to signify total ignorance and non-utilization of the designated strategy, while assigning a value of 5 denotes a high level of proficiency and frequent utilization of said strategy. Additionally, the MARSI is systematically organized into three subcategories of strategies, specifically labeled as Global Reading Strategies (GRS) encompassing 13 items, Problem-Solving Reading Strategies (PSRS) comprising 8 items,

[92] The creative development process of the MARSI model encompasses four substantive phases. In the initial stage, the authors conducted a thorough review of instruments developed with analogous objectives. Subsequently, a panel of experts curated potential items for the inventory, engaged in a selection process, and categorized them according to internal criteria. In the ensuing phase, insights regarding the structure and formulation of items were derived from existing tools, facilitating the comprehensive construction of the inventory and its subsequent preparation for extensive and reliable field testing. Lastly, the results obtained from the field testing underwent a factor analysis, evaluating the reliability of the items, their representation within the sub-categories of the instrument, and the extent of ambiguity both in terms of wording and the potential for overlap with other items.

and Support Reading Strategies (SRS) containing 9 items. These subcategories are discernibly delineated based on the functional role of the strategy across all three phases (before, during, and after) of the reading comprehension process.

In the years subsequent to the validation process of the MARSI, the authors (Mokhtari and Richard, 2002) incorporated various suggestions from researchers and experts who had utilized the tool in both scholarly and educational contexts. These recommendations prompted Mokhtari et al. (2018) to revise the initial version of the metacognitive inventory, resulting in the creation of a new iteration named MARSI-R (Revised). The modifications to the MARSI-R predominantly centered on two dimensions. Firstly, there was a reformulation of the strategy statements aimed at enhancing readability and comprehensibility to cater to a broader audience. Secondly, there was an enhancement in the format of the scale and the expected response types, with the intention of rendering references to awareness and strategy use more explicit and facilitating a more nuanced interpretation of responses. Following the implementation of a confirmatory factor analysis to validate the instrument, the MARSI-R underwent a substantial reduction, approximately halving the number of strategy statements. The subdivision of strategies into the subcategories of GRS, PSRS, and SRS, which was a feature of the earlier version, remains consistent in the revised version and is standardized. Each subgroup encompasses 5 strategy statements, amounting to a total of 15 strategy statements. Notably, the results of factorial invariance testing indicate a certain uniformity in the interpretation of statements across gender and ethnicity. From our perspective, this interpretative consistency positions the MARSI-R as a versatile tool applicable across diverse cultural contexts. Indeed, throughout the course of our project, both versions of the MARSI (2002) and the MARSI-R (2018) served as instrumental tools in the preliminary stages of investigating learners' needs, as well as in the subsequent testing phase.

As previously indicated, the two versions of the MARSI (Mokhtari and Richard, 2002; Mokhtari et al., 2018) were purposefully designed to capture an overview of learners' strategic habits throughout the entire reading process. However, when dealing with a reading and text comprehension task, such as the Austrian high-school-leaving exam for the Italian language, this instrument appears to be inadequate. This inadequacy stems from the fact that the task resolution process entails additional strategies (MacNamara, 2011) that are not encompassed by the MARSI. Consequently, in the subsequent section,

we will delve into alternative tools within the domain of studying reading and strategies for resolving reading comprehension tasks.

4.5.2 Alternative tools to observe metacognitive behaviour while reading

In their book on text comprehension, De Beni and Pazzaglia (1995) comprehensively examine a variety of observational methodologies employed in the investigation of text comprehension. For instance, the Rapid Serial Visual Presentation (RSVP) method is utilized to scrutinize specific hypotheses concerning the cognitive processes implicated in comprehension. This involves manipulating segments of the text presented to the reader within a designated timeframe. Another observational approach worth mentioning involves eye-tracking, which serves to monitor cognitive timings in relation to certain comprehension processes, such as lexical access or the inferential process, across texts of varying complexity. Eye-tracking systematically observes eye movements, encompassing fixations, pauses, and eye regressions, rendering it a rather precise and dependable method albeit one that is both time-consuming and intricate to decipher. Equally noteworthy is the priming method, which, unlike online comprehension studies, relies on the examination of the effects of comprehension under specific assumptions. This method has been employed over the years to explore activation hypotheses of concepts during the reading process and the organization of information in long-term memory. Specifically, this method investigates how a reader's response to a stimulus can be influenced by the prior presentation of a more or less associated item (De Beni and Pazzaglia, 1995).

While these methodologies hold considerable interest, the methodological approach undertaken in this study diverged in orientation. The primary consideration was to identify a method capable of capturing not only the strategic aspects specifically associated with reading but also, concurrently, those strategies linked to the resolution of a very specific type of text comprehension task. The deliberate choice of the text comprehension task pertaining to the Austrian high-school-leaving exam in Italian allowed for the establishment of a precise target method for our investigation. This orientation was more aptly aligned with a task analysis for instructional purposes, as outlined by Jonassen et al. (1998). Nevertheless, given that our perspective extends beyond a mere analysis of the activities involved in task execution and encompasses the identification of resolution strategies, the applicable methodology in these instances is that of Cognitive Task Analysis (Morrison et al., 2019). CTA facilitates a nuanced

examination of cognitive and metacognitive strategic processes entailed in both the overall execution of a task and the specific application during the reading process.

Originally emerging as a specialization within behavioural task analysis, CTA found initial application in delineating computer system interfaces and in military trainings (Clark et al., 2007). The evolution of cognitive psychology research highlighted a critical oversight in earlier observation methods, specifically the neglect of a crucial element in task performance, namely, the strategic-cognitive component (Morrison et al., 2019). From its inception, CTA was conceived as a method designed to identify covert cognitive operations associated with observable psychomotor behaviours (ibid.). Moreover, Kartoshkina and Hunter (2014) recognize CTA as a valuable asset in educational research, serving as a tool to augment understanding of educational issues, refine teaching practices, and contribute substantively to the educational policy discourse. Various methodologies exist for the implementation of CTA, encompassing a range of approaches. Fundamentally, CTA relies on behavioural observation methods conjoined with Think Aloud Protocols (TAP), which are specifically geared toward discerning the strategies employed by experts during task execution. According to Chi (2006), the involvement of experts is integral to CTA. Experts possess the capacity for in-depth analyses, systematically identifying optimal solutions to a set of problems inherent in the task. Their ability to recognize task features that novices may overlook is a crucial aspect. Additionally, experts demonstrate a heightened deployment of strategies, establishing connections across multiple knowledge domains, given their more developed self-regulatory abilities. However, as highlighted by Crandal et al. (2006), the versatility of CTA as a methodology, applied across various knowledge domains such as military applications, incident investigation, new technology insertion, and guided training, allows for adaptability in its execution methodologies based on the defined objectives of the analysis. The specific application of this method within our study will be elucidated in the subsequent chapter (Chapter 5). Before delving into that discussion, we aim to provide elucidation on an observational method which is part of our CTA application and that has been briefly referenced thus far: the Think Aloud Protocol (TAP).

TAPs represent an observational tool historically employed in the domain of metacognition, grounded in introspective methodologies where subjects provide an immediate account of their mental activities (De Beni and Pazzaglia, 1995; Knorr and Schramm, 2012; Heine and Schramm, 2016). Distinguishing TAPs from Post-hoc

Interviews, wherein the subject's account is presented at the conclusion of task performance, Heine and Schramm (2007) highlight that TAPs involve subjects narrating their mental processes in real-time as they navigate through the task. This real-time narration allows the observer to gain insight into the reasoning employed by the reader during comprehension. It is essential to note that TAPs do not presuppose the narratability of all the subject's thoughts during experimentation. Instead, they posit that a subset of the processes engaged in comprehension can be consciously controlled by the reader and thus can be verbalised. Observable processes may include connective and elaborative inferences, planning for task resolution, recognition of comprehension difficulties, and other processes not entirely automated. The proper implementation of this tool necessitates the establishment of rigorously defined protocols, mandating a training phase for the subject to cultivate the ability to articulate thoughts aloud. Conversely, for the observer, strict adherence to non-interference in the resolution process is essential to prevent any disruption in the natural flow of thoughts. Similar to all scientific instruments, TAPs entail drawbacks for both the observer and the subject under observation. From the observer's standpoint, challenges arise in encoding and interpreting the reports collected, which may encompass verbal as well as voluntary and involuntary behavioural domains (Bohn-Gettler and Olson, 2019; Bohn-Gettler and Kendeou, 2014). On the other hand, the observed subject contends with difficulties stemming from sensitivity to instructions and variations in verbalization capabilities among individuals (De Beni and Pazzaglia, 1995; Knorr and Schramm, 2012; Heine and Schramm, 2007). Heine and Schramm (2016) posit compelling evidence that the introspective process does not encroach upon the cognitive resources dedicated to task performance. However, for cautionary purposes, De Beni and Pazzaglia (1995) and Knorr and Schramm (2012) advocate the coupling of TAPs with Post-hoc Interviews to safeguard the integrity of the collected data.

Chapter 5: Methodology: Preliminary Study of learners' needs and teacher's knowledge about the task

The previous four chapters have outlined the theoretical foundations on which the present research work is based. It has been observed that, at the core of individual human needs, the imperative for autonomy emerges as a paramount factor for personal development, and this necessity is deeply ingrained in the self-regulatory capacities inherent in each individual. Within the realm of learning, particularly in the domain of FL acquisition, it has been elucidated that self-regulatory capacities are intrinsically tied to the motivational phases that characterize the actions of each individual, as posited by Ryan and Deci (2017). Moreover, Tassinari (2022) extends this perspective by incorporating environmental, emotional, and inter-relational aspects into the calculation of influential factors, thereby imbuing the discourse on autonomy learning with a sense of complexity. In our discourse, complexity assumes a pivotal role, as the proposition to intervene in learner autonomy within the sphere of FL learning confronts us with a Chinese-box system of complex subsystems. It is worth considering, for instance, the broad spectrum encompassing learning itself, motivation and emotions, the intricate system of meta-strategies implicated (Oxford 2017; 2018), and the language system, which represent just a subset upon which the present work endeavours to exert influence. The formulation of a didactic intervention designed to reshape learners' learning habits within the specific domain of FLs necessitated comprehensive expertise across various domains, as expounded upon in the course of these four chapters. The exploration of metacognition, for example, has afforded us an understanding of the intricacies of the human mind, elucidating both strategies and the learner's awareness of these facets. The investigation into motivation, instead, has permitted the identification of factors directly and indirectly impacting our emotional disposition and engagement in a given learning pursuit. Lastly, examinations into text comprehension have revealed noteworthy disparities in comprehension mechanisms between L1 and L2 learners. Most importantly, these investigations have facilitated our acquisition of knowledge concerning tools that prove instrumental in formulating precise learning objectives about comprehension. Particularly relevant is their applicability in crafting training programs geared towards addressing metacognitive habits and the emotional-motivational disposition of learners when confronted with the task of text comprehension in a FL.

Therefore, this chapter will be entirely dedicated to delineating the first part of our methodology, which is the identification of learning objectives pertinent to the aforementioned training initiative as well as a comprehensive understanding of the task under examination. To accomplish this, an exhaustive learning needs analysis and a thorough task investigation will be conducted, specifically within the domain of text comprehension task of Italian in the Austrian high-school-leaving exam. Additionally, considerations will be extended to elements associated with the administration mode of the task, encompassing the testing instrument employed. Consequently, the identification of learning objectives will entail a comprehensive examination across various dimensions of the task, namely the linguistic, discursive, and the cognitive and metacognitive (meta-strategic) domains, as well as the emotional-motivational sphere.

The subsequent sections will explicate the theoretical foundation guiding our utilization of the Cognitive Task Analysis for the development of a bespoke methodology aligned with our research objectives. Subsequently, the sequential stages of analysis integral to the articulation process of the learning objectives will be deliberated upon. Finally, a detailed exposition of the identified learning objectives will be provided, serving as a valuable resource for formulating teaching materials, experimental surveys and intervention procedures tailored to the target population under scrutiny in this study.

5.1 Theory of learning needs and task-knowledge identification

According to Grabe and Stoller (2019), thorough consideration of the needs of learners scheduled to participate in a FL literacy skills training course is imperative prior to its planning. Consequently, preceding the development of instructional materials and the immersion into the experimental context, our team set out to conduct a preliminary analysis focusing on the cognitive and metacognitive objectives that the training should encompass (see Jonassen et al. 1998; Dole et al., 2009; Merriënboer et al., 2017; Morrison et al., 2019). As alluded to in the preceding theoretical chapters, this study encompasses various levels, specifically the linguistic, cognitive, and meta-strategic domains (encompassing both metacognitive and motivational-affective dimensions), which intricately interplay in the resolution of the text comprehension task. This multi-level interaction poses a formidable challenge in encapsulating within a straightforward procedural analysis the intricacies involved in executing the text comprehension task. In

Chapter 4, the CTA was introduced as a valuable methodology for dissecting tasks that entail executive aspects, encompassing both cognitive processes and the more elusive meta-strategic dimensions. Guided by the framework outlined by Crandall et al. (2006), we embarked on a process of customizing the tools to be incorporated in the CTA for this project.

The foundational concept guiding our customization process of the CTA was centered on a dual exploration: understanding the requirements of the learners and those of the trainers tasked with implementing metacognitive-motivational training. The employment of CTA aimed at attaining a comprehensive perspective of the task, aligning with the recommendation posited by Morrison et al. (2019). Furthermore, our analytical approach drew inspiration from the work of Merriënboer et al. (2017). In their work, the authors delineate a ten-step guide tailored for instructional designers, focusing on the development of training materials for complex learning. Complex learning, as defined by Merriënboer et al. (2017), involves the integrative process of transferring knowledge, skills, and attitudes to everyday life and work. In the context of our study, the knowledge derived from the training sought to empower learners in the execution of the reading and comprehension task within an educational environment. In the endeavor to delineate the learning objectives for an intervention, specifically at step 5 of Merriënboer et al.'s (2017: 170) guide, two complementary approaches are proposed for the analysis of strategies integral to task performance. The first entails scrutinizing the performance of an expert executing the task under examination, while the second considers the intuitive cognitive strategies naturally possessed by learners when confronted with the task. As emphasized by the authors (ibid.), a comprehensive analysis encompassing both cognitive and metacognitive strategies not only contributes to the development of task and problem-solving guidance but also facilitates the design of new subtask classes that may assist learners in acquiring nonrecurrent strategies beneficial to task resolution. Furthermore, this knowledge holds the potential to aid trainers in formulating supportive information that can be delivered as valuable feedback to learners engaged in task execution.

These considerations steered our customization approach to the CTA, partially deviating from the conventional perspective that primarily focuses on the experts' knowledge and their performance, to encompass other pertinent dimensions. While the expert's analysis can furnish valuable insights into defining the formal characteristics of the task, its texts, and the associated cognitive and strategic demands, it remains silent on the learners'

awareness and behavior. Consequently, a deliberate decision was made to incorporate a more inherently metacognitive analysis of the learners, entailing an exploration of both their metacognitive awareness and the strategic patterns characterizing their performance. Below, we present a schematic breakdown of the CTA conducted in this study, aimed at delineating the didactic objectives of metacognitive-motivational training, which is the ultimate goal of this scientific work. This breakdown encompasses three distinct stages:

1. Exploration of task characteristics and required strategies: examination of task components and of the textual features, as well as identification of potential strategies and cognitive demands from an expert performance perspective.
2. Exploration of Learners' Awareness of Reading Strategies: investigation into the awareness of reading strategies among the learners.
3. Exploration of Learners' Attitude and Behavior Toward the Task: in-depth exploration of learners' attitudes and behaviours concerning the assigned task.

The culmination of these three sequential steps is an amalgamation with insights derived from relevant scientific literature (Pressley and Afflerbach, 1995; Pressley et al., 2006; Daloiso, 2013). This synthesis aims to define objectives that are grounded both in conceptual foundations and empirical evidence (Brown and Green, 2016). This process aims at ensuring that the identified objectives are robust and well-founded, contributing to the effectiveness and relevance of the training course.

5.2 Cognitive Task Analysis for instructional purposes

5.2.1 Moment 1: task characteristics and possible strategies

To execute this segment of the learner needs analysis, a limited sample of tests was gathered from those administered by the Federal Institute for Education Research, Innovation, and Development within the Austrian school system (BIFIE, an acronym translated by Eberharter and Frötscher (2012). These tests were specifically sourced from the *Lebendefremdsprachen* category, which translates to modern FLs (our translation)[93]. The compilation of this dataset was facilitated through the resources accessible on the website of the BIFIE, recognized by the acronym SRDP (Standardisierte Reife- und

[93] The official title of the BIFIE institution is: Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens.

Diplomprüfung)[94]. The BIFIE permits learners in Austrian schools to avail themselves of up to three opportunities to retake the high-school-leaving examination throughout their academic career. To facilitate this, the BIFIE schedules three annual examination dates, each approximately four months apart, specifically in May (Haupttermin, HT – main date), September (Nebentermin 1, NT1 – secondary date 1), and January (Nebentermin 2, NT2 – secondary date 2). The information presented here is relevant to our discourse, as the standardized tests in reading and text comprehension selected for our analysis are associated with these three designated timeframes. The scope of the published tests that we have chosen to focus on in this phase spans from 2020 to 2022, encompassing a total of six reading booklets, selected for their similarity in the type of tasks administered to learners[95]. The following table provides a concise summary of the six booklets under consideration:

Table 2 - Reading comprehension booklet corpus

R&C Booklet corpus
1. Nebentermin 2 – 17th January 2020 2. Haupttermin – 13rd May 2020 3. Nebentermin 1 – 25th September 2020 4. Nebentermin 2 – 19th January 2021 5. Haupttermin – 12th May 2022 6. Nebentermin 1 – 29th September 2022

5.1.1.1 Task characteristics

In the initial segment of this Needs Preliminary Analysis, our focus centers on delineating the structure of the Italian reading and text comprehension tests designed for the Austrian high-school-leaving examination. The primary objective of this test description is to cultivate a comprehensive understanding of the task's nature, its requisites, and the written

[94] The official platform exclusively dedicated to the Austrian high-school-leaving examination (Matura) is accessible through the following link: https://www.matura.gv.at/.

[95] Commencing from the 2015/2016 academic year, during which the mandatory implementation of the standardized high-school-leaving examination transpired across all secondary schools, notable adjustments and refinements have been made to augment the accuracy of learner assessments (Weiler and Frötscher, 2018). In recent years, a discernible trend has emerged among item writers, extending beyond the standardization of the examinations themselves to encompass the uniformity in the type of reading comprehension exercises administered to learners. As a consequence, the selection of booklets to be analysed in this dissertation has been delimited to the historical period expounded upon in the text.

texts employed for evaluating the comprehension skills of Austrian FL (FL) Italian learners.

Subsequent subsections will expound upon the formal configuration of the examination booklet, explicate the operational mechanics of the task, and elucidate textual attributes based on a corpus of examination booklets. Specifically, concerning textual characteristics, endeavors will be made to ascertain the potential identification of an average difficulty level of the texts, delineate their thematic and stylistic attributes, and explicate the cognitive demands inherent in the task while intricately intertwining them with the textual domain.

These identified characteristics, as earlier alluded to, assume pivotal significance for educators seeking a comprehensive and lucid comprehension of the task intended for learners. Furthermore, this descriptive analysis serves as a robust point of reference, offering teachers a reliable foundation should they aspire to discern and construct instructional materials precisely aligned with the established test model (Gorsuch and Griffee, 2018).

5.1.1.1.1 The reading and comprehension tasks in the Austrian Matura exam

The final examination in Italian reading, as administered in Austrian schools, specifically within the AHS and BHS, is categorized based on the proficiency level of the learners, specifically designated as either B1 or B2. This classification is contingent upon the duration of Italian language studies within the Austrian educational system, delineated as four years for B1 proficiency level and five (or more) years for B2 proficiency level. Within the scope of this dissertation, emphasis has been placed on the former typology, as the predominant group of Austrian learners undertaking Italian studies is confined to a four-year duration. It is imperative to note that the Italian reading final exam constitutes an integral component of the array of written assessments for the *Lebendefremdsprache* (modern foreign language, our translation)[96]. In order to successfully pass the written

[96] In the context of the Matura examinations conducted at Austrian AHS institutions, individuals studying a foreign language, such as Italian, have the option to elect either a written or an oral examination. It is imperative to note that both the written and oral Matura assessments are exclusively available to those learners who have designated Italian as their primary foreign language (B2 level), as opposed to English. The Austrian framework for the B1 oral examination in Italian as a foreign language, established by the Bundesministerium für Bildung und Frauen in 2013, comprises two distinct tasks. The first task entails a monologue, wherein the candidate is required to independently express their thoughts or opinions on a given topic. The second task involves a peer dialogue, necessitating the candidate to engage in a

examination, candidates are required to attain a minimum of 60 points out of a total of 100 points. The written examination for Italian B1 encompasses four distinct test types, with two falling under the category of receptive tests and the remaining two classified as productive tests. Each test type carries equal weight, accounting for one quarter of the final examination grade. The receptive tests consist of a reading comprehension test and a listening test, whereas the productive tests involve exercises centered on the practical use of language in context and a written production test[97]. It is important to note that this study exclusively concentrates on the receptive competence tests, specifically focusing on the reading and comprehension component. In this context, emphasis will be placed solely on the reading and comprehension segment, which necessitates a flawless performance for candidates to accumulate a total of 32 correct answers. These correct responses are further distributed across four distinct tasks, each elaborated upon in the subsequent sections. For the purpose of this description, a reading and comprehension test booklet dated 25th September 2020, will serve as the reference material.

5.1.1.1.2 Reading task with multiple choice questions

The reading task, comprising multiple-choice questions, is delineated across two pages and is structured into three distinct segments. On the first page, the task is initiated with the assignment number presented on the left-hand side (number one), while the corresponding page number for the response section is indicated on the right-hand side of the page. The initial part also includes instructions for the learner. In accordance with the original Italian version, the learner is directed to read the text and subsequently complete sentences 1 to 7 by selecting the appropriate option from the choices A, B, C, or D. Additionally, the learner is advised to mark the correct answer on the designated answer

conversation with another individual, thereby showcasing their ability to communicate effectively in Italian within a conversational setting. This rigorous examination structure reflects the Austrian commitment to evaluating linguistic proficiency and communication skills in Italian at B1 level, serving as a comprehensive assessment for those who have selected Italian as their secondary foreign language of study.

[97] Language in context exercises are instructional activities that involve manipulative or multiple-choice tasks, requiring learners to associate a given word with the appropriate context in which it is needed. In contrast, the written production test, as outlined in the Lebende Fremdsprachen (n.d.) guide, is designed for B1 levels and encompasses four potential text types: a report, an article, a blog entry or commentary, and an email. In this segment, candidates are tasked with composing a text of up to 200 words, contingent upon the examination framework established by the ministry. As detailed in the Lebende Fremdsprachen guide, assessors possess an evaluation grid to appraise various facets of the written production test. This grid takes into consideration not only the content, grammatical accuracy, and expressive formulations but also the structural organization and layout of the text. The intention is to furnish an evaluation that aligns closely with the concept of a standardized assessment, ensuring a comprehensive and fair appraisal of the candidate's written proficiency in the target language.

page. It is noteworthy that sentence 0 has already been answered as an illustrative example.

The second part of the task is also situated on the first page. This section incorporates the textual content, featuring a bold title at the center of the page and the text organized into distinct paragraphs, devoid of any co-textual aids except for standard spacing.

The third part of the task is allocated to the second page, encompassing the set of questions. The question segment comprises a total of 8 items presented as sentences, each accompanied by four response options. A clear differentiation is maintained between questions and answers, with the former identified by a numbered bold format, and the latter distinguished by capital letters (A, B, C, and D) presented in standard font. Notably, the solution to question number 0 is conspicuously provided, highlighted in grey for reference.

5.1.1.1.3 Reading task with short answers

Similar to the first task, the second type of reading task, involving short answers, is structured across two pages and comprises three distinct sections. As in the first case, on the first page, the task in introduced by the number of the reading task, which designates the task number (number two), while the right-hand side indicates the page number for the answering section in the booklet. The instructions for the second task instruct the learner to peruse the article and respond to questions 1 to 8 using a maximum of four words. Subsequently, the learner is directed to transcribe the answers onto the provided answer sheet, with answer 0 serving as an illustrative example.

In contrast to the first task, the second part of the reading task is introduced by a visual element, typically a picture, providing the reader with a visual representation of the main topic of the article. Following the picture, the title is presented, followed by the publication date of the article. The text is segmented into various paragraphs, each demarcated by consistent spacing. Within the text, foreign words are emphasized through the use of italic styling. A portion of the text extends onto the second page.

The third part of the task features a table with two columns. The first column lists question numbers from 0 to 8, and the second column contains the corresponding nine different questions. The row corresponding to question number 0 is highlighted in grey for reference.

5.1.1.1.4 Reading task with phrase matching

The third task, designated as a reading task with phrase matching, adheres to the customary format of being divided across two pages and is composed of three integral parts. In the initial segment, the left-hand side of the page displays the task number (number three), while the right-hand side indicates the page number for the corresponding answering section in the booklet. The instructional directive entails the learner's engagement with a text containing omitted portions. The learner is required to select the correct phrase from the provided phrase list (letter A to K) and match it with the corresponding gaps (number 1 to 8) in the text. The learner is duly cautioned that two of the phrases in the list serve as distractors. Furthermore, it is recommended that the learner record their responses on the answer sheet, with answer 0 already provided as an illustrative example.

The second part of the task is accompanied by an illustrative image positioned immediately above the title of the text. The text, distributed across different paragraphs spanning the two pages, is characterized by the customary formatting. In addition to the introductory paragraph, subsequent paragraphs are introduced by bold subtitles. Each paragraph incorporates at least one gap, identified by the gap number in brackets followed by two underscore characters. Occasional footnotes elucidate culturally specific acronyms, and foreign words are denoted in italics.

In the third part on the second page, a table is featured, divided into two columns. The first column encompasses all the letters corresponding to the potential answers, arranged in alphabetical order (A-K). The second column presents the list of the 11 possible answers. One row is conspicuously highlighted in grey, with the corresponding letter crossed out to signify the answer already provided as an example.

5.1.1.1.5 Reading task with question-paragraph matching

The fourth task, denoted as a reading task with question-paragraph matching, adheres to the conventional structure of being distributed across two pages and comprises three distinct components. In the initial segment, the left-hand side of the page displays the task number (number four), while the right-hand side indicates the page number for the corresponding answering section in the booklet. According to the provided instructions,

the learner is required to peruse a group of texts and subsequently select the appropriate text (A-G) for each question (1-9). The learner is duly informed that the texts may be employed more than once, and responses are to be transcribed in the respective section on the answer sheet. Consistent with the established pattern, answer 0 is already provided as an illustrative example.

In the second part, a visual depiction pertaining to the main theme of the group of texts precedes the title. Each text is identified by a letter of the alphabet (A-G) and is followed by consistent spacing between paragraphs. The seven texts are distributed across the two pages.

The third part pertains to the questions, maintaining the customary format. This segment features a prompt introducing the questions, accompanied by a table with two columns. The first column comprises the list of questions to be addressed, while the second column designates the corresponding numbers for each question (0-9). Notably, one of the questions exhibits two numbers, and an accompanying note in Italian beneath the question clarifies that the learner is expected to provide two answers in this specific instance. The example for answer 0 is already furnished and highlighted in a grey row.

5.1.1.1.6 Pool of Topics

The standardization of the Italian high-school-leaving examination in Austria not only entails the alignment of examination methods at a national level but also encompasses the standardization of curricular subjects deemed eligible for examination. As elucidated in the Matura examination guide (Stadtschulrat für Wien, 2013), this ministerial decision is underpinned by multiple rationales. Primarily, it furnishes the teachers' council with a spectrum of topics within which to formulate the study syllabus, affording them methodological autonomy in presenting these topics. Additionally, this strategic choice facilitates the cultivation of an expansive vocabulary among learners in accordance with the CEFR (2001; 2018), aligning harmoniously with curricular themes prevalent in other national educational institutions. Furthermore, this approach enables learners to seamlessly transition between different types of educational institutions, as the substantive content of curricular themes remains consistent across institutions and forms the basis for the examination. The thematic selection for learners of Italian B1, pursued for four consecutive years as a second FL, is succinctly outlined in a table derived from

the ministerial guidelines (Stadtschulrat für Wien, 2013: 12). This compilation encompasses 18 main topics, including: 1. family and friends; 2. housing and neighbourhood; 3. food and drink; 4. clothing; 5. body and health; 6. daily and annual routines; 7. festivals and celebrations; 8. school; 9. world of work; 10. hobbies and interests; 11. handling money; 12. experiences; 13. travelling; 14. intercultural and cultural aspects; 15. art and culture; 16. media and communication; 17. nature; 18. modern technologies. The selection of texts is undertaken by the high-school-leaving examination committee, drawing from authentic materials sourced from the internet. These materials are authored by Italian mother tongue users and tailored for an audience proficient in the Italian language. The chosen texts align with the overarching themes outlined in the ministerial guide. However, the textual genres encompass a spectrum ranging from articles and short stories to personal blogs. Following the selection process, the texts are typically adapted for the target audience of B1-level learners. Finally, modifications are introduced to align with the specific requirements of the assigned tasks.

B1 – 4-jährig

1.	Familie und Freunde	10.	Hobbys und Interessen
2.	Wohnen und Umgebung	11.	Umgang mit Geld
3.	Essen und Trinken	12.	Erlebnisse
4.	Kleidung	13.	Reisen
5.	Körper und Gesundheit	14.	Interkulturelle und landeskundliche Aspekte
6.	Tages- und Jahresablauf	15.	Kunst und Kultur
7.	Feste und Feiern	16.	Medien und Kommunikation
8.	Schule	17.	Natur
9.	Arbeitswelt	18.	Moderne Technologien

Figure 12 - Pool of topics for the Italian high-school-leaving exam in Austria (Stadtschulrat für Wien, 2013).

5.1.1.1.7 Text complexity level

This examination of assessment materials incorporates an evaluation of text complexity, a concept broadly defined as a set of inherent characteristics within a text that contribute to determining its complexity in relation to a specified target audience (Davidson,

2013)[98]. Quantitative attributes, such as text, sentence, and word length, lexical frequency, and text cohesion, as well as qualitative features, including domain-specific vocabulary, idiomatic expressions, semantic structure, potential levels of meaning, and textual genre, are encompassed within the scope of text complexity. While a textual complexity analysis yields valuable insights into the nature of texts administered to learners and the appropriateness of textual selections by the scientific committee, it surpasses the primary focus of this analysis. The principal objective of this study is to gather information pertaining to specific characteristics of the texts, facilitating a more nuanced description and comprehension of these texts in alignment with their didactic purposes. The parameters addressed in this section encompass the length of the texts, their readability, syntactic periodicity, as well as the lexical and semantic difficulty inherent in the texts.

The initial characteristic under consideration in this section is the length of the texts, measured in terms of word count. The word count, as ascertained, excludes the title and other co-textual components such as delivery instructions, pages, possible sources, or glosses, as well as questions or answer options. This exclusionary approach is adopted to facilitate a comparative analysis of different text lengths without the need for intricate criteria for incorporating task-related components (questions and answer options). Consequently, the word count within the examination booklet significantly exceeds that reported in Table 3. Each examination paper subjected to analysis comprises four texts corresponding to the four tasks of multiple choice, short answer, phrase matching, and question-paragraph matching, resulting in a total corpus of 24 texts. Learners are typically allocated 60 minutes to read and comprehend the four texts within the examination booklet, with an average length of approximately 482 words per text. More specifically, the average word count tends to increase from the first task (multiple choice) to the final task (question-paragraph matching), culminating in an average total count of just under 2000 words. A detailed breakdown of the word count per analysed text is presented in the subsequent Table 3.

[98] Within the scientific literature, the distinction between text complexity and text difficulty lacks precision. Broadly speaking, text complexity predominantly denotes characteristics inherent to the text, whereas text difficulty is more centered on the reader. Consequently, text difficulty pertains to the level of accessibility experienced by the reader, encompassing considerations of reading speed, accuracy, and comprehensibility of the text (Fulcher, 1997; Morris, 2005). However, for the purposes of this dissertation, the terms "text complexity" and "text difficulty" will be employed interchangeably.

Table 3 - Corpus texts word count

	Multiple Choice	Short Answer	Phrase Matching	Question-Paragraph Matching	Total word Sum
1. NT2 17. January 2020	435	505	467	475	1882
2. HT 13. May 2020	405	502	486	588	1981
3. NT1 25. September 2020	532	428	516	537	2013
4. NT2 19. January 2021	519	456	493	390	1858
5. HT 12. May 2022	444	452	480	506	1882
6. NT1 29. September 2022	330	558	527	540	1955
Word Mean	444,17	483,5	494,83	506	1928,5

A second feature undertaken by this descriptive study is an analysis of the readability of the various texts within the corpus. Readability encompasses the ease with which a reader can comprehend a written text, considering factors such as vocabulary complexity, sentence structure, organizational coherence, and the reader's familiarity with the topic (Kember and Varley, 1987; DuBay, 2004). It is not limited to individual characters but extends to the overall understanding of the text. Additionally, readability extends beyond linguistic elements to visual aspects, including font choice, line length, spacing, and formatting, focusing on the overall comprehension and fluency of reading larger text bodies[99]. In a practical sense, readability is often quantified using formulas that yield numerical scores reflecting text complexity, typically correlated with academic grade levels or standard scores. As asserted by McNamara et al. (2012), poor readability generally corresponds to heightened text complexity. This assertion finds support in the notable correlation between readability indices and word length, where longer words tend to be more challenging, as well as in the correlation with sentence length, where longer sentences are typically more intricate. However, the author (ibid.) acknowledges that the quantitative dimensions of readability indices do not comprehensively address the issue of text complexity. Within the domain of test design, nonetheless, readability indices emerge as a pragmatic tool. The author (ibid.) underscores the prevalence of using

[99] Within the literature on text comprehension, as expounded by Kember and Varley (1987), a distinction is commonly made between readability and legibility. In contrast to readability, legibility pertains to how easily individual characters or symbols can be distinguished from one another. It involves the capacity to identify and differentiate letters, numbers, or symbols. Various factors influencing legibility encompass the design of characters, font type, size, spacing, and the contrast against the background. Ensuring clear and distinguishable characters is essential for legibility, particularly across different viewing distances and under various display conditions.

readability indices for selecting text passages to construct reading tests, emphasizing its commonplace status in the test-design field. Typically, the test-design committee opts to include a range of readability values within which to situate text passages, thereby mitigating potential disparities in complexity among various texts. Consequently, in this analysis, our objective is to ascertain the readability range characterizing the texts featured in the Austrian reading comprehension examination in Italian. The chosen readability index for these analyses is the Gulpease index (GI), specifically tailored for the Italian language. This index was selected due to its linguistic appropriateness and its established relevance to Italian text readability assessments[100]. The GI is calibrated on a scale of 100 value points, segmented into three bands that serve as indicators for the scholastic grade levels. These bands are representative of the learners' ability to read texts within the designated band without encountering difficulty. Notably, the GI value aligns with the scholastic levels of the Italian national school system, distinguishing readability bands for the primary school leaving certificate (100-80), middle school leaving certificate (100-60), and high school leaving certificate (100-40). GI value points below forty are ideally associated with specialized text types typically found in the university environment, known for their increased difficulty. Methodologically, akin to the word count, the text subjected to the Gulpease Index calculation excludes the title and other co-textual components. However, any graphic signs related to the insertion of answers are included in the calculation, as are the spacings between different paragraphs, as structured in the graphic layout of the booklet[101]. The numerical GI value points, as identified by the algorithm in relation to the selected corpus of texts, are presented in Table 4 below.

[100] The Gulpease Index originated from the collaborative efforts of a group of linguists at La Sapienza University of Rome, led by the well-known glottologist Tullio De Mauro. Established in 1987, the group, operating under the name GULP (Gruppo Universitario Linguistico Pedagogico), has pursued various scientific objectives, including the development of the first readability index specifically tailored for the Italian language. This initiative was inspired by the English Flesch Reading Ease model introduced by Rudolf Flesch in 1946 (subsequently modified). In contrast to English-language models that considered the average number of syllables, the Gulpease index employs a formula that assesses the readability of a text based on word length and sentence length, in interaction with the total number of letters in the text (Lucisano and Piemontese, 1988).

[101] This specification is essential due to the observation that the calculation of the Gulpease index is sensitive to the layout of paragraphs, resulting in a slightly varied numerical value as reported by the algorithm (https://farfalla-project.org/readability_static/).

Table 4 - Corpus texts numeric GI value points

	Multiple Choice	**Short Answer**	**Phrase Matching**	**Question-Paragraph Matching**	**GI Mean per session**
NT2 17. January 2020	**55**	**58**	63	73	62,25
HT 13. May 2020	62	61	67	71	65,25
NT1 25. September 2020	**56**	**54**	64	63	59,25
NT2 19. January 2021	64	**52**	70	**53**	59,75
HT 12. May 2022	**55**	73	61	69	64,5
NT1 29. September 2022	62	72	79	77	72,5
GI Mean	59	61,67	67,33	67,67	

Table 4 presents an overview indicating that the GI value points characterizing the selected texts primarily fall within the range of middle school leaving certificate value points (60-80). However, it is noteworthy that a subset of texts (29%, highlighted in bold in the table) exhibits markedly lower GI value points, signifying heightened difficulty for learners (McNamara et al., 2012). The analysis of the corpus reveals an average higher complexity in texts associated with the multiple-choice task, with a discernible pattern of decreasing difficulty as one progresses through subsequent tasks. An additional noteworthy observation from the averaged GI values per examination session is the tendency for texts in the primary sessions to exhibit a lower average complexity compared to those in the second and third examination sessions.

As previously delineated in accordance with the perspective presented by McNamara et al. (2012) regarding textual complexity, raw-textual features (Grego et al., 2017) constitute merely one facet among numerous components integral to comprehensive textual analysis. Beyond considerations of text length and readability, Grego et al. (2017) enumerate additional features encompassing lexical, morpho-syntactic, and discursive dimensions. Traditionally, the analysis of texts and the selection of texts for evaluative contexts were predominantly orchestrated by expert personnel (Bachman and Palmer, 2010; Purpura, 2014; Grego et al., 2017). However, in contemporary times, there has been a discernible shift towards the utilization of increasingly precise, sophisticated, and digital text analysis tools. The specialization evident in these tools is reflective of the multifaceted purposes for which such analyses are undertaken, serving both descriptive and inferential functions. Notwithstanding the evolving technological landscape, the focus of textual analysis in this section is directed towards providing a comprehensive yet

succinct overview of lexical, morpho-syntactic, and discursive features within a limited corpus of texts. Consequently, the methodology employed herein aims to retrace, albeit perhaps with a degree of moderation, the path paved by the initial modes of analysis, deferring to the expertise of an experienced linguist.

The outcomes derived from this analysis indicate that the lexical, morpho-syntactic, and discursive features under scrutiny distinctly align with the B1 proficiency level (CEFR), which corresponds to the intended linguistic proficiency targeted by the selected texts. From a lexical perspective, the vocabulary employed in the texts is representative of fundamental Italian lexicon (De Mauro and Chiari, 2016). The terminology utilized pertains to the general domain and is notably devoid of technical terms, albeit Anglicisms are occasionally adopted in substitution of Italian words and in accordance with the prevalent trend within the Italian language. Morpho-syntactically, the texts predominantly employ the present tense, past tense, or imperfect indicative forms. Instances of present and past subjunctive forms are infrequent and are primarily used in association with the conjugation of auxiliary verbs ‘to be’ or ‘to have’. In terms of sentence structure, there is a discernible inclination toward SVO (Subject, Verb, Object) construction, with the exception of occasional rhetorical questions and sentences where the subject serves an anaphoric function. Additionally, the textual composition predominantly features paratactic structures, with sporadic instances of hypotactic forms, primarily identified in temporal, causal, and relative clauses. Finally, from a discursive standpoint, the texts exhibit a high degree of cohesion, facilitated by the extensive and clear use of connectives. This cohesion is further bolstered by a well-defined paratextual framework, including paragraph spacing, occasional subtitling of paragraphs, and the presence of some glosses. These characteristics collectively contribute to the overall complexity of the analysed texts.

5.1.1.2 Sequencing of the task and possible strategic paths available for the resolution

This component of the task analysis necessitated a comprehensive investigation into the resolution trajectory of the task by an expert linguist. The expert underwent video documentation throughout the resolution process. Subsequently, a careful scrutiny of the expert’s resolution moves for each of the four tasks led to the formulation of a resolution path model. This model was conceived to surmount the divergences inherent in the resolution paths associated with each of the considered tasks. A delineation of the

plausible resolution moves for each of the tasks under consideration is presented in Figure 13.

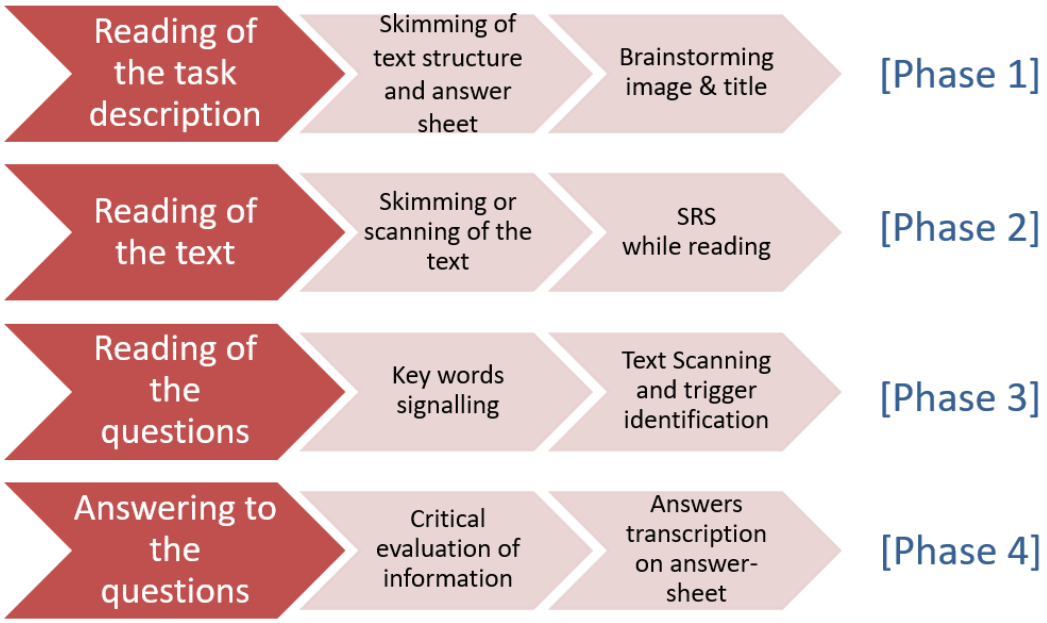

Figure 13 - Reading and comprehension examination task sequencing.

For the expert linguist, the initial stage of the problem-solving process commences with a thorough examination of the instructions that delineate the general description and resolution of the task, typically situated at the top of each examination booklet page. Following the perusal of these instructions and the identification of distinct sections within the booklet (namely, the text, questions, and answer sheet), the examinee may proceed to an initial brainstorming phase. This phase serves the purpose of cultivating expectations regarding the textual content. During this segment of the assessment, the title of the text and the image presented on the initial page of the booklet can aid the learner in conceptualizing the information. Subsequently, the second and third phases can be regarded as interchangeable. The decision to commence with the reading and processing of the questions, involving the identification of key information, as opposed to commencing with the text itself, is a strategic choice guided by the efficiency of the solution process. This selection often hinges on the nature of the task; for instance, a reading comprehension task with multiple-choice elements may more readily lend itself to initially perusing the questions and subsequently identifying key information within the text. An essential consideration for both the second and third phases involves the implementation of reading support strategies, such as underlining, circling key words,

and crafting concise summaries for specific paragraphs. These reading support strategies serve to alleviate the cognitive burden on the learner, given that the volume of information requiring accommodation in working memory is reduced. Finally, in the concluding phase, after the identification of the answer to the question, the expert linguist recommends a strategy of pinpointing textual counterevidence before transcribing the final answer onto the answer sheet.

5.1.1.2.1 Cognitive-linguistic requirements of the task

In the preceding lines, our primary focus was directed towards strategies conducive to task resolution. In this part, we will dedicate our attention to the linguistic skills requisite for the task, intimately linked with the nature of reading. As depicted in the aforementioned Figure 13, the expert linguist identifies two modes of reading that accompany text comprehension: selective reading or scanning, and exploratory reading or skimming (Colombo, 2002). These reading modes assume significance in light of the task demands, elucidated through exemplification in the subsequent examples. Within the forthcoming figures, we will present textual excerpts alongside their corresponding reference questions, the lexical cues facilitating answer identification (enclosed in a blue box), and the identification of the lexical aspect (enclosed in a red box) mandated as part of the learner's competence. It is pertinent to note that, for illustrative purposes, no differentiation will be made among the examples based on the task type from which they were derived, as their applicability remains consistent across all four analyzed task types. The figures presented herein serve as illustrative representations and encompass only select facets of the lexical competence requisite for the four tasks; additional aspects will be expounded upon in the descriptive section accompanying each figure. The examples chosen for this presentation are sourced from the examination booklet dated 19th January 2021.

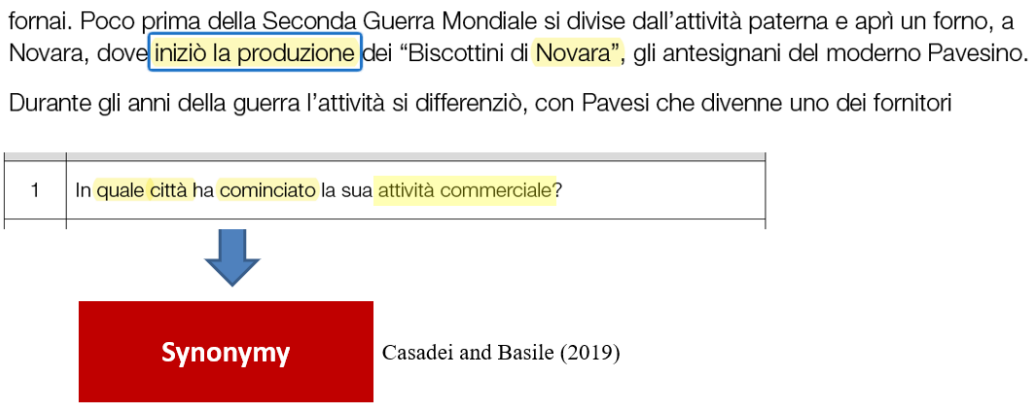

Figure 14 - Cognitive-linguistic task requirement: synonymy.

The initial example pertains to what is commonly referred to as horizontal links between words, as outlined by Casadei and Basile (2019). In this context, the task necessitates the learner's ability to discern synonymous words or expressions within the given text. Notably, the requirement to identify synonyms, as opposed to antonyms, is a recurrent occurrence in examination tests. In the provided illustration, the words 'iniziare' and 'cominciare' exemplify synonymous terms that can serve as triggers for response identification. Furthermore, the word 'produzione' is identified as a synonym for the expression 'attività commerciale' albeit with an implicit element of connective inference involved in this identification, as expounded by Lumbelli (2009).

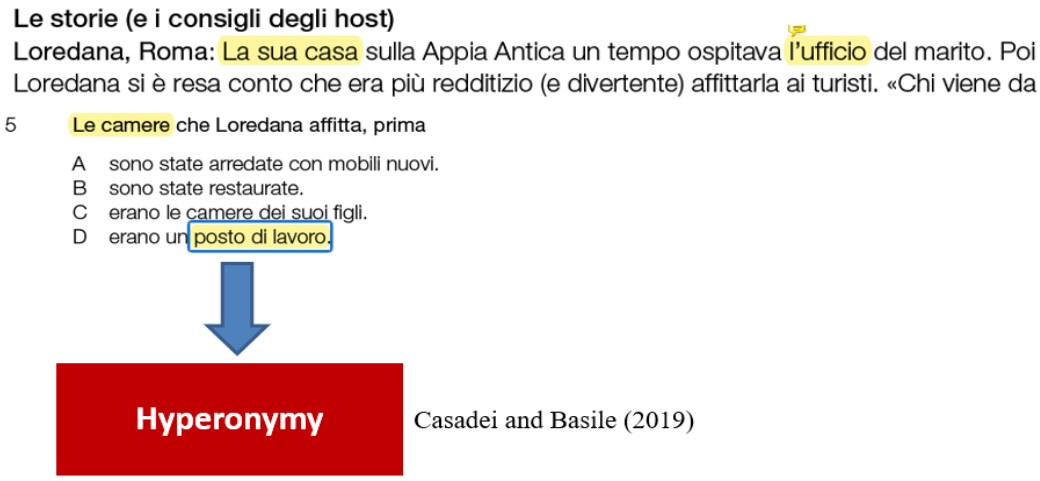

Figure 15 - Cognitive-linguistic task requirement: hyperonymy.

The subsequent example pertains to what is commonly referred to as vertical links between words. In the context of examination booklets, the linguistic demand frequently centers on the learner's capacity to recognize more general terms (hypernyms) and

establish connections with more specific terms (hyponyms). In the provided illustration, the hyponym ‘ufficio’ is to be correlated with the hypernym ‘posto di lavoro’, analogous to the relationship between the hyponym ‘casa’ and the hypernym ‘camere’.

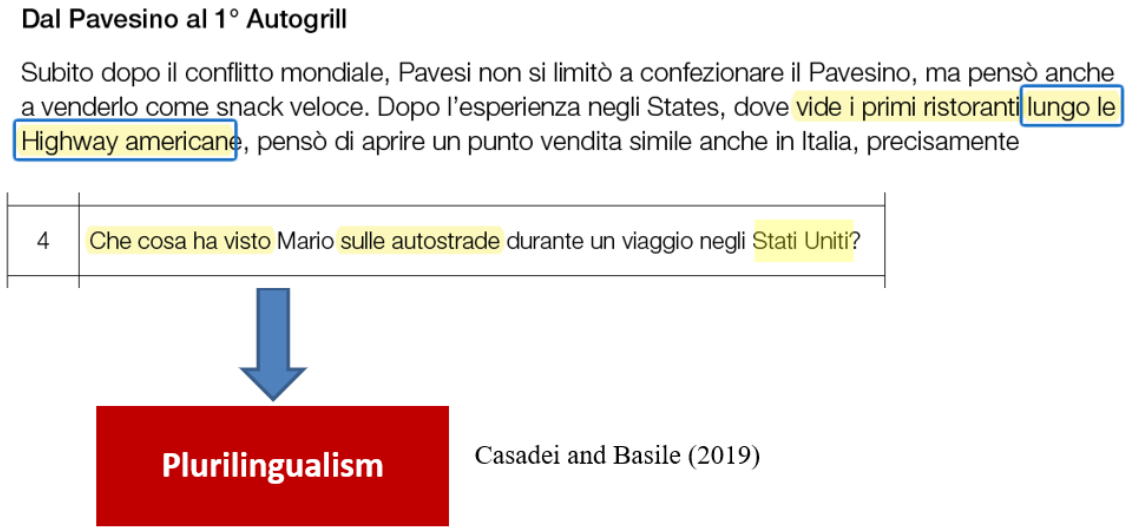

Figure 16 - Cognitive-linguistic task requirement: plurilingualism.

An additional linguistic facet considered by the task is the learner’s plurilingual proficiency, characterized by the ability to identify and comprehend terms from another language within the linguistic framework under examination. In consonance with the prevailing trends in the Italian language, which over the past two decades has incorporated sophisticated, often sector-specific borrowings from the English lexicon (D’Achille, 2011), the plurilingual competence discussed herein frequently pertains to the recognition of anglicisms within the text. In the provided example, the English term “highway” is delineated as an elevated loanword concerning the Italian term “autostrada,” thus representing a manifestation of plurilingual competence in alignment with the CEFR guidelines (Council of Europe, 2001; 2018).

per questo che la figura dell'host, cioè del padrone di casa, è importante quasi quanto la casa stessa». D'altronde, un recente studio sull'impatto degli affitti a breve termine in Italia, condotto dal Laboratorio Ladest del dipartimento di Scienze politiche dell'Università di Siena, ha rivelato che l'offerta di case all'interno dei centri storici del nostro Paese è tra le più elevate del mondo: si va dall'8% di Roma al 18% di Firenze fino al 25% di Matera.

Cosa puoi fare tu

«Uno dei punti fondamentali per risultare in cima alla lista degli annunci è la velocità di risposta alle richieste, che non deve mai superare le 24 ore. I migliori host, però, rispondono entro un'ora» sottolinea Calcaterra. «Non sempre, poi, le case più belle hanno i commenti migliori. Piace di

1 I padroni di casa più bravi

A offrono delle case perfettamente pulite.
B reagiscono immediatamente alle domande.
C preparano anche la colazione per gli ospiti.
D garantiscono un soggiorno perfetto.

Connective inference

Lumbelli (2009)

Figure 17 - Cognitive-linguistic task requirement: connective inference.

Another aspect, less strictly linguistic and more closely related to the discursive level, pertains to the proficiency in connecting intratextual information through inferences generated by textual anaphora. The explicit correlation between the English word "host" and the Italian expression "padrone di casa" is established at a juncture in the text that is notably distinct from the location of the answer to question 1. The cognitive demand imposed on the learner is directed towards the capacity to forge appropriate connections within the text, thereby precisely assessing inferential aptitude. In this particular example, inferential ability is directly intertwined with multilingual competence; however, it is imperative to note that such instances represent unique occurrences rather than recurring phenomena within examination booklets.

Ma quali piatti? Li realizza tutti con materiali non commestibili. Schiuma da barba, spugne, spray per capelli, lucido da scarpe, tavolette per il water. Scatta le foto ai piatti, (2) ___ con l'aiuto dell'amico grafico Tristan e mette tutto online. Il 5 maggio, dopo un controllo del sito, TripAdvisor gli invia la conferma: la community lo ha accettato.

H	si lamenta dei prezzi
I	realizza il logo del suo ristorante
J	compra piatti pronti

Elaborative inference

Lumbelli (2009)

Figure 18 - Cognitive-linguistic task requirement: elaborative inference.

A concluding example, once again at the discursive level, pertains to the learner's capacity to formulate elaborative inferences. Elaborative inference, as elucidated earlier (refer to Section 4.2.1), represents a cognitively more intricate form of inference, as it relies on the learner's reservoir of cultural knowledge. However, precisely due to their heightened complexity, such inferences are markedly less prevalent within the examination booklet compared to the connective type inferences discussed previously. In the provided example, the term 'grafico' is expected to prompt a connection in the learner's cognition that proves instrumental in identifying a professional capable of producing graphic designs and logos for a brand. If the reader has successfully established this mental connection, then the term 'logo' could serve as a triggering mechanism for discerning the correct answer from the array of options available.

The instances encapsulated in the aforementioned examples delineate the diverse types of linguistic and discursive cognitive requisites imposed on the learner during the phase of task resolution. Occasionally, these requisites are coupled with a transition in the lexical category of reference. An illustration of this phenomenon is the transition from the verb category (e.g., 'vedere') to the noun category (e.g., 'vista') in the course of answer identification.

5.2.2 Moment 2: learners' awareness of reading strategies

In this segment of the needs analysis, our attention is directed towards the systematic observation of the mean level of awareness regarding reading strategies exhibited by a subset of Austrian learners partaking in the Italian reading comprehension test as part of their high school leaving examination. The primary objective of this analysis is not to discern the precise strategies employed by the learners during task execution. Instead, it seeks to compile statements from learners, specifically addressing the metacognitive strategies commonly utilized in the context of the Italian reading comprehension test.

5.2.2.1 Methodology: composition of the questionnaire

The research team developed a survey in the German language using the online software Qualtrics, comprising 21 questions that encompassed closed questions, Likert-scale matrices, slider gauges, and open-ended questions. The survey aimed to investigate three principal facets: learners' profiles, reading and comprehension strategies, and motivation

concerning FL and task value. Delving into more granular detail, the section on participants' profiles sought information about gender, age, mother tongue, region of origin, type of school, and current school year. Queries pertaining to reading and comprehension strategies were adapted from the MARSI instrument (Metacognitive Awareness Reading Strategy Inventory, 2002), translated into German by Hochschule Osnabrück and directly obtained from the authors of the MARSI model (Mokhtari and Reichard, 2002). The motivation segment comprised inquiries about task appreciation, task value, and prior task experiences in other languages. In addition, the motivation questions specifically addressed language appreciation and the reasons for selecting Italian as second FL of study after English.

5.2.2.2 Elicitation and description of the sample

The survey compiled responses from 44 learners situated in the eastern area of the Tirol region in Austria. The questionnaire specifically targeted learners enrolled in the 4th and 5th classes of BHS (Berufsbildende Höhere Schule) schools, as well as learners in the 7th and 8th classes of AHS (Allgemeinbildende Höhere Schule) schools, representing the final two years of schooling before the graduation exam (Matura Reifeprüfung). Through descriptive analysis, it is evident that the average age of the learners is approximately 18 years old. More precisely, 52% of the respondents are in their last year of school (16% AHS, 36% BHS), while the remaining 48% (23% AHS, 25% BHS) are in the 11th grade. The majority of the learners are female (89%), with only 9% identifying as male; one learner did not declare a gender according to the binary convention. Additionally, the survey reveals that 16% of the learners attend school in Tirol but originate from a different region (Kärnten).

5.2.2.3 Results: MARSI responses

The section addressing reading and comprehension strategies aims to discern the learners' level of awareness regarding these strategies. The utilization of the MARSI instrument facilitates an initial determination of the overall level of awareness, enabling a subsequent identification of the specific types of strategies that are predominantly favored or overlooked by the learners. According to Mokhtari and Reichard (2002), the spectrum of strategies involved in reading and comprehension processes can be categorized into three

overarching groups: global reading strategies (GRS), problem-solving reading strategies (PSRS), and support reading strategies (SRS). Aligned with the three levels of awareness delineated by the MARSI instrument, respondents can be classified into high, medium, and low levels of metacognitive awareness.

The aggregate level of metacognitive awareness analysis indicates that a substantial majority (57%) of learners demonstrate a medium level of awareness, while 36% already exhibit a high level of metacognitive awareness. Conversely, 7% of the surveyed learners appear to lack awareness and declares to apply a diverse range of metacognitive strategies during reading. These proportions remain consistent when examining the sample in accordance with GRS. However, variations emerge in the case of PSRS and SRS. PSRS find extensive utilization by the majority of the sample (80%), with only 16% adopting these strategies with a moderate frequency, and 5% displaying limited awareness of these strategies. Conversely, with respect to support-reading strategies, only 11% of learners claim extensive adoption, half of the sample falls into the category of medium users, and 39% indicate limited use of these strategies. A summary diagram of the distribution of sample awareness and utilisation averages with respect to the three types of reading strategies (GRS, PSRS and SRS) is provided by the pie charts presented below in Figure 18.

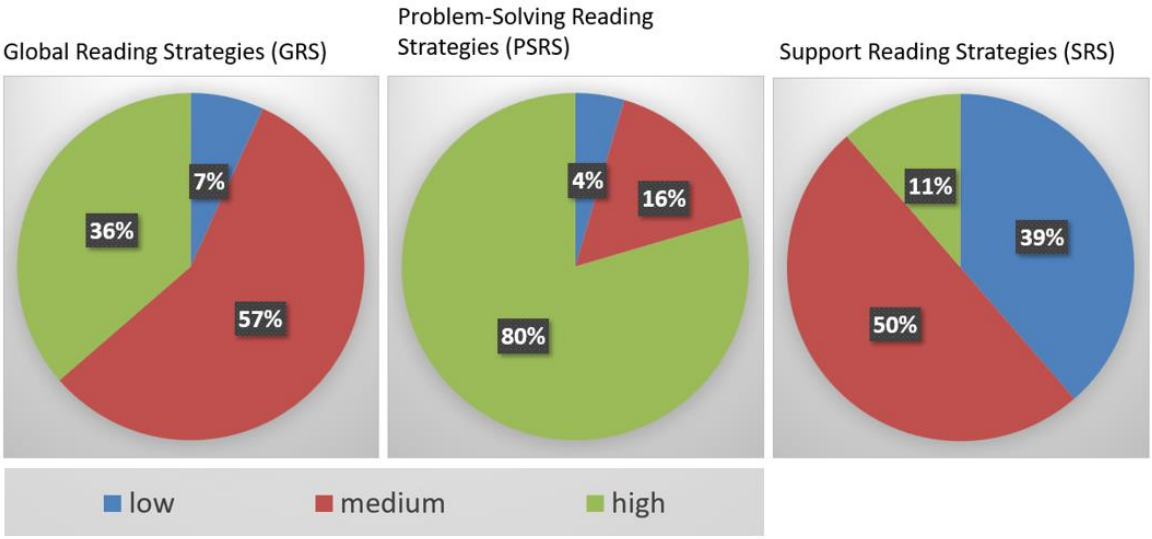

Figure 19 - Pie chart of learners' metacognitive reading strategy awareness

Analysing the data more deeply, it is worth mentioning that the highest mean scores are collected within the category of problem-solving reading strategies and two of the most

frequent strategies state "*11. Ich versuche, wieder in den Text hineinzufinden, wenn ich einmal die Konzentration verloren habe*" (11. I try to get back on track when I lose concentration.) and " *27. Wenn der Text schwierig wird, lese ich bestimmte Passagen noch einmal, um mein Verständnis zu erhöhen.*" (22. When text becomes difficult, I re-read to increase my understanding.). Conversely, the lowest mean scores appear among the support reading strategies and the least frequent strategies adopted assert "*2. Beim Lesen mache ich mir Notizen, um das, was ich lese, leichter zu verstehen.*" (2. I take notes while reading to help me understand what I read.) and "*29. Ich prüfe beim Lesen, ob meine Erwartungen an den Text korrekt oder falsch waren.*" (29. I check to see if my guesses about the text are right or wrong.). This difference is accentuated if we explore the answers collected among female and male learners, since female learners tend to be more strategic than their male counterpart. This analysis found no marked difference between the two kinds of schools in matter of awareness of reading strategies, learners from both general education environments and, more specifically touristic-oriented schools share similar mean scores.

The findings delineated in the preceding sections pertain to overarching characteristics of the entire sample. Consequently, it was deemed pertinent to examine certain intergroup variances. The potential groups under scrutiny include intra-gender disparities (male, female, non-binary) and distinctions between types of schools (AHS and BHS). Due to the limited representation of males and non-binary individuals in comparison to females, comparisons with the latter were deemed unreliable and non-informative. Consequently, the initial form of intergroup analysis was omitted.

The second focal group revolves around the two categories of schools. Within this analysis, a differentiation will be established between self-reported strategies acknowledged as most recognised and employed (SRMRES), and those self-reported as least recognised and employed (SRLRES) by each group (AHS and BHS). The criterion for this differentiation will be predicated on the MARSI mean values, with $x > 3.5$ indicating the SRMRES, and $x < 2.4$ signifying the SRLRES. Additionally, these values will be categorized based on the type of strategy employed, specifically GRS, PSRS and SRS.

Table 5 - SRMRES and SRLRES

	AHS.SRMRES	AHS.SLMRES	BHS.SRMRES	BHS.SRLRES
GRS	1. I have a purpose in mind when I read. 3. I think about what I know to help me understand what I read. 19. I use context clues to help me better understand what I'm reading. 25. I check my understanding when I come across conflicting information. 26. I try to guess what the material is about when I read.	29. I check to see if my guesses about the text are right or wrong.	1. I have a purpose in mind when I read. 4. I preview the text to see what it's about before reading it. 22. When text becomes difficult, I re-read to increase my understanding. 25. I check my understanding when I come across conflicting information.	29. I check to see if my guesses about the text are right or wrong.
PSRS	All of them except 18. With medium values.	-	All of them except 18. And 21. With medium values.	-
SRS	20. I paraphrase (restate ideas in my own words) to better understand what I read.	2. I take notes while reading to help me understand what I read. 5. When text becomes difficult, I read aloud to help me understand what I read. 6. I summarize what I read to reflect on important information in the text.	12. I underline or circle information in the text to help me remember it.	2. I take notes while reading to help me understand what I read.

5.2.2.4 Results: Motivational responses

Although the sample displayed several reasons for choosing Italian as language of study, about 39% of the learners did not manage to explain the motives underlying their choice. On the other hand, the 16% of 44 learners declared that their choice lies within the geographical proximity of Italy and Austria. Another reason, which we summarise in the concept of appreciation of the language and culture, includes motives related to the sound of the language, to the beauty of the culture and of the nation itself. As far as this complex conglomerate of motives concerns, about 27% of the learners seemed to enjoy the language because of the intrinsic cultural values it conveys. The 16% of the sample also acknowledged that Italian might represent a useful instrument for their future working career and the remaining 2% studied Italian for personal reasons, mainly concerning cultural identity.

As regards the motivation related to the task, it specifically addressed previous task experiences in other languages, task appreciation, and task value. Most of the learners declared to have dealt with the reading and comprehension task in languages other than Italian and the main language in which learners experienced this kind of task is English. The appreciation of the reading and comprehension task displays a regular distribution within the whole sample, the 30% of the learners seems not to like the task, but the remaining 33% and the 37% of the learners displays respectively a medium and high appreciation of the task per se. Apparently, the task is deemed useful by the majority of the learners, but the 25% and the 12% ascribe respectively a medium and low level of usefulness to the task.

5.2.3 Moment 3: learners' attitude and behaviour towards the task.

For the third moment, i.e., exploring learners' behaviour and attitude towards the task, the aim was to collect data that could answer to these research questions:

1. Which pattern of moves do learners have when they perform the task?
2. Do learners have a plan of how to solve the task, or do they leave it to the inspiration of the moment?
3. Which reading strategies do learners use when they read a text and/or encounter difficulties while reading the text or the questions?

4. How do learners use instruments (pencil, fingers, symbols) to focus attention on specific pieces of information?
5. Do learners respond to the task requirements, or do they give up when the task becomes too difficult?
6. Do learners proof check their answers, or do they stick with their first choice?

As to provide a complete overview of the experiment designed to answer these questions, it will be presented information about the methodology, concerning the selected tasks, the sample, and the reasons that accompanied the development of a think aloud protocol.

5.2.3.1 Think Aloud Protocols

Although the complexity of the exam task has been already described in the previous lines of this work, our team deemed necessary a complementary comprehension of the metacognitive strategies involved in the performance. As emerged from the suggestions of Merriënboer et al. (2017), the analysis of an expert performance of the task under investigation constitutes a first approach to the problem of identifying strategies. A second approach suggested by the authors (ibid.), on the other hand, concerns the possibility of investigating the learners' metacognitive habits as they tackle the text comprehension task. Only by knowing the learners' habits, in fact, can one guess which strategic aspects to work on during the metacognitive-motivational training for the Austrian high-school-leaving exam. Furthermore, this second approach allows the teacher to prepare for any problems that may arise during the learners' performance and to prepare for any constructive feedback to be given to the learners during the performance.

One possible way to perform an analysis of the strategies involved in the process of resolution of the task is the Think Aloud Protocol (TAP), accompanied by a retrospective or Post-hoc interviews of the performance to consolidate the data collected during the TAP. In this part of the work, we are going to focus mainly on the analysis of the intuitive cognitive and metacognitive strategies performed on non-expert learners.

The conception phase of the protocol demanded the assistance of a volunteer who could be interviewed with a preliminary TAP. This phase was fundamental in the adjustment of the final protocol, which was ultimately translated in German (mother tongue of the sample).

The protocol consisted of four parts that can be schematised as follows:

1. Presentation of the experiment
2. Training 1
3. Training 2
4. Experiment and retrospective interview

In the first part, the learner could hear the experimenter explaining the experiment and the main objectives of it. After the explanation, the learner could watch a three-minutes video, where another German volunteer was reading a German article, commenting it through a TAP. This video was meant to be an example for the sample who had never had a think aloud experience before.

In the second part, because the interviewed learners were supposed to train their thinking aloud capacity before the experiment, they were asked to perform a task with no need of instruments. This example training was taken from Someren et al. (1994) and, according to the task, learners were supposed to count the windows of their parents' house while thinking aloud. This training was fundamental to get the sample acquainted with the TAP and the fact that it did not require any instruments was facilitative of this process.

In the third part, we deemed necessary to stimulate the thinking aloud capacity with a task which could be quite similar to the experimental one. The second training was a reading and comprehension task in German with a multiple-choice question, taken from the general PISA examinations. The learners were supposed to read the instruction and then move to either the question or to the text, while thinking aloud, and perform the comprehension task.

In the fourth part, the experimental task was finally administered to the learner. We will not go further into details for the task since we have already presented it in the previous section. However, we are going to present the complementary part of the think aloud interview. We decided to prepare a set of questions as retrospective interview. In line with the work of Edwards-Leis (2006), the main intension of this retrospective interview was to investigate learners' meta-ability when recalling emotions, difficult moments, and self-efficacy about the task. To this end, we deemed fundamental to stimulate learners only through semi-structured questions, in order to rely on spontaneous recall and the most important bits of information coming from the short-term memory of the learner's performance. As suggested by Edwards-Leis (2006), little recall capacity is associated with little metacognition, that is to say, learners with a greater recall capacity of emotions,

difficult moments, and self-efficacy perception tend to be more metacognitively active. The learners were interviewed on their general attitude towards the task, their appreciation of the task, their difficult moments during the performance, their emotions during the performance and during difficult moments, their self-efficacy perception about the task performance, their general appreciation of the Italian language and the motives for this sentiment. In the end, the subjects were thanked for taking part to the experiment.

The experimentations were scheduled in two-weeks' time and every session lasted about one hour, for a total of four hours. During each session, the subject has been filmed starting from Training 2 till the end of the experiment. Within the video frame, the subject is filmed in half-length, including his upper limbs and the desk with the task booklet and a pencil on it.

After the conclusion of the experimentations, the videos were uploaded in the software ELAN 6.0, where two independent tiers where created, one for the interviewed and the other for the interviewee. With regards to the tear of the interviewed, two more dependant tiers where mould, one for the transcription of gestures and mimicry and the other for the transcription of actions during the performance of the task.

Verbal language of the interviewed and interviewee have been transcribed adopting the Modokit project's framework for orthographic transcriptions and annotations (Voghera et al. 2020). This framework is a valuable instrument that allows a precise readability of recorded discourse of language speakers. However, it was decided that gestures, mimicry, and actions during the performance could not fit as mere annotation in the transcription process. Instead, they should have had more room, since they entail relevant aspects that could help recognise routinary automatised strategies adopted by the sample during the experimental session. For this reason, through the development of separate tiers on ELAN 6.0, we integrated the Modokit with a second framework of reference, taken from the work of Mondada (2018). In the end, the '.txt' file produced by ELAN 6.0 has been transferred on an Excel working sheet for the coding process.

5.2.3.2 The coding of TAP

The formulation of the coding schema has proven to be a complex undertaking, given that each coding system is intricately tailored to address specific research questions. Consequently, the initial phase in defining the coding structure involved a clarification of

the analytical questions that needed resolution. Subsequently, we proceeded to delineate the specific aspect of metacognition to which these questions pertained, culminating in the establishment of five overarching macrocategories for the coding system. The ensuing Table 6 enumerates the identified macrocategories alongside the corresponding questions from which they emanate.

Table 6 - Coding macrocategories scheme

Research questions	**Macrocategories**
Which pattern of moves do learners have when they perform the task?	Planning (P)
Do learners have a plan of how to solve the task, or do they leave it to the inspiration of the moment?	
Which reading strategies do learners use when they read a text or questions?	Reading Strategies (RS)
Which reading strategies do learners use when they encounter difficulties while reading the text or the questions?	
In what manner and at what junctures do learners concentrate their attention during the process of reading?	Attention focus (AF)
Do learners respond to the task requirements, or do they give up when the task becomes too difficult?	Engagement (En)
Do learners proof check their answers, or do they stick with their first choice?	Evaluation (Ev)

Upon the delineation of the macrocategories, our subsequent endeavor involved a thorough examination of the descriptive elements encompassed by each of them. Descriptive elements, in this context, encompass both conscious and unconscious behaviours, comments, reasonings, as well as gestures and facial expressions. These microcategories are derived through both a deductive and an inductive process. The microcategories identified through deductive process were informed by the expert's expectations regarding task resolution. On the other hand, the inductively identified microcategories were based on the observations collected during the experiment. The ensuing Table 7 will elucidate these microcategories as descriptors corresponding to each macrocategory.

Table 7 - Coding microcategories scheme

Macrocategory	**Microcategory**
Planning (code P)	• Declaring a procedure • Following undeclared a procedure • Inspect the paper sheets • Reading instructions • Reading the title • Reading the questions first • Reading the text first • Answering the task in an orderly manner • Saving difficult points for revision phase • Revising the answers • Transcribe the answer on the answer sheet • Deciding when the task is completed
Reading Strategies (code RS)	• See Table 8
Attention Focus (code AF)	• Keeping track with the pencil/finger(s) • Underlining or circling information • Taking notes • Noting down reminder symbols • Getting closer to the text • Doing some gestures to help focus • Identifying a difficulty in the text • Annotation of the answer • Identifying a problem in the text (comments) • Folding the paper for quick glance at Questions • Tiredness • Bumping into important information • Making a correction
Engagement (code En)	• Sticking to the task • Giving up to the task • Comments or Signs of impatience/difficulty • Interest in the topic • Appreciation of the task • Distraction
Evaluation (code Ev)	• Proof reading answers • Evaluating the correctness of the answer with explanation • Evaluating the correctness of the answer without explanation

The principal challenge encountered with the identified coding system pertained to the differentiation between strategies directly related to task resolution and those predominantly implicated in the reading process itself. Consequently, a decision was made to implement dual or triple coding for specific segments of the performance, as the two aspects exhibited overlapping dynamics during the execution of the task.

It is noteworthy that reading strategies are not explicitly enumerated in the Table 6, as they were entirely extracted from the Metacognitive Awareness Reading Strategy Inventory (MARSI, Mokhtari and Reichard, 2002). This inventory, originally designed to encapsulate strategies employed by learners reading a text in their L1, was adapted for coding reading strategies employed by FL readers in our study. Consequently, some strategies required integration and modification to align with our research objectives. For instance, we discerned the sixth Global Reading Strategy (GRS) from the newly incorporated fourteenth GRS, scanning. While the former primarily involves focusing attention on specific pieces of information (such as a sentence or a paragraph) to enhance comprehension, the latter predominantly entails swiftly identifying the location in the text where the necessary information is situated. Although the distinction between these two strategies is subtle, the former underscores a comprehension-oriented process, while the latter is oriented towards locating specific information within the text. Another change we brought to the MARSI (2002) involved the eighth Support Reading Strategy (SRS) which was modified to adapt it to the task the learners were performing. It stated: *I go back and forth in the text to find relationships among ideas in it;* and was modified into: *I go back and forth in the text to find relationships among questions and information within the text*. Moreover, we added a new SRS which was mainly used by foreign language learners to better understand the text they were reading: 10. *I translate what I read to better understand its meaning*. On the other hand, we eliminated two other SRS, that could not fit within the task learners were performing: 4. *I discuss what I read with others to check my understanding* and 6. *I use reference materials such as dictionaries to help me understand what I read*. This item were removed because learners are not supposed to speak to one another or use any reference material while performing the high-school-leaving exam task of Italian. The changes we brought to the MARSI (2002) are observable in Table 8, where gray frames represent the items which were eliminated from the inventory.

Table 8 - Coding Reading Strategies within the MARSI (2002) inductively revised.

Marsi type of strategy	**Strategy**	**Coding descriptors/ definition**
Glob.	1. I have a purpose in mind when I read.	Reading purpose
Glob.	2. I think about what I know to help me understand what I read.	Previous knowledge

Glob.	3. I preview the text to see what it's about before reading it.	Reading preview
Glob.	4. I think about whether the content of the text fits my reading purpose	Content expectation verification
Glob.	5. I skim the text first by noting characteristics like length and organization	Length and structure skimming
Glob.	6. I decide what to read closely and what to ignore.	Select important information/Scanning
Glob.	7. I use tables, figures, and pictures in text to increase my understanding.	Use of Co-textual aid
Glob.	8. I use context clues to help me better understand what I'm reading.	Use of context clues
Glob.	9. I use typographical aids like bold face and italics to identify key information	Use of typographical aid
Glob.	10. I critically analyze and evaluate the information presented in the text	Analysis and evaluation of info
Glob.	11. I check my understanding when I come across conflicting information.	Check understanding
Glob.	12. I try to guess what the material is about when I read.	Guessing about the content
Glob.	13. I check to see if my guesses about the text are right or wrong.	Verify guess about the text
Sup.	1. I take notes while reading to help me understand what I read.	Take notes
Sup.	2. When text becomes difficult, I read aloud to help me understand what I read.	Read aloud
Sup.	3. I summarize what I read to reflect on important information in the text.	Summary
Sup.	4. I discuss what I read with others to check my understanding	Discuss with others
Sup.	5. I underline or circle information in the text to help me remember	Underline or circle info
Sup.	6. I use reference materials such as dictionaries to help me understand what I read	Use of reference material
Sup.	7. I paraphrase (restate ideas in my own words) to better understand what I read.	Paraphrasing
Sup.	8. I go back and forth in the text to find relationships among questions and information within the text	B&F in the text
Sup.	9. I ask myself questions I like to have answered in the text.	Ask oneself questions
Sup.	10. I translate what I read to better understand its meaning	Translation
Prob.	1. I read slowly but carefully to be sure I understand what I'm reading.	Reading slowly
Prob.	2. I try to get back on track when I lose concentration	Get back on track
Prob.	3. I adjust my reading speed according to what I'm reading.	Adjust reading speed
Prob.	4. When text becomes difficult, I pay closer attention to what I'm reading.	Pay closer attention to reading
Prob.	5. I stop from time to time and think about what I'm reading	Stop from time to time to think
Prob.	6. I try to picture or visualize information to help remember what I read.	Picture info
Prob.	7. When text becomes difficult, I re-read to increase my understanding	Re-reading when difficult
Prob.	8. I try to guess the meaning of unknown words or phrases	Guess unknown words

The coding table layout was inspired and adapted from the work of Bohn-Gettler and Olson (2019). The table is subdivided into four columns, namely code, process and definition, text excerpt, and participant comment. In the first column, we entered the macrocategory code, followed by the number of each macrocategory appearance during the performance. In the second column, it is specified what kind of strategies or which process is being executed using the descriptors listed in the table for each macrocategory. In the third column, it is reported an excerpt of the text the learner is referring to. Sometimes, mostly when the learner is reading in mind, it is not easy to trace back the specific excerpt the learner is reading, unless he or she reads aloud bits and pieces from text. Some of the excerpts have also been recognised thanks to the video recording, especially when the learner used a finger or a pencil to keep track of the text while reading. In the fourth column, the four tiers of Interviewed, Interviewer, Gesture and Mimic, and Actions are listed in chunks of conversation. The conversational chunks have been subdivided according to meaningful conversation turns or longer pauses.

5.2.3.3 Elicitation: Participants

While the reading and comprehension task under investigation is specifically designed for Austrian learners of Italian, our decision to conduct the analysis of cognitive strategies took place in a different setting. We opted to select a sample from a Gymnasium school in Germany for three principal reasons: firstly, these learners of Italian were situated in a German-speaking country, thereby sharing the same mother tongue as the Austrian target group[102]; secondly, they matched the age and linguistic proficiency level (B1) of our target group; and thirdly and most importantly, they had not been exposed to the specific reading and comprehension test under consideration. Thus, the choice of this sample provided an unexplored ground upon which our investigation could unfold.

We selected four participants for our study, comprising three male learner and one female learner, with ages ranging between 16 and 17 years. These individuals were enrolled in the 11th class of the Maria-Theresia-Gymnasium Augsburg, chosen from a pool of

[102] The chosen school is situated within the Bavarian jurisdiction in the city of Augsburg. The rationale behind selecting this particular sample was to transfer the experimental setting to a cultural and geographical milieu not significantly distant from the Austrian region. This strategic choice aimed to ensure accessibility to the requisite experimental conditions essential for the present experiment.

volunteers within the class. The selection process relied upon the guidance of the teacher, who intentionally picked learners exhibiting diverse levels of linguistic competence, basing her choice on criteria of school achievement. All four participants relied on an overall linguistic competence at the B1 level according to the Common European Framework of Reference for Languages (CEFR), and they were randomly assigned to one of the four available subtasks within the Italian reading and comprehension test.

The decision to work with a relatively small sample size was motivated by the time-consuming nature of CTA, a method demanding the involvement of multiple individuals. Furthermore, conducting experiments within the school setting presents challenges in recruiting volunteers, as the experimenter's presence can disrupt the scholastic routine, a situation not always well-received by teachers. Nonetheless, the opportunity to allocate a substantial timeframe of four hours for experimentation, encompassing a diverse group of learners engaging in the task, was deemed valuable for discerning the primary objectives of our metacognitive-motivational training.

It is acknowledged that administering each of the four tasks to every participant in the sample would have been ideal. However, this approach would have required a significant time commitment of almost four hours for each participant, each time. This amount of time would have led to a potential disengagement of the learners in the experiment and to a quadrupling of the transcription and coding time for the experimenter.

5.2.3.4 Analysis

Given the small sample, we decided to conduct a qualitative analysis of the data, in which we will answer the research questions of this needs analysis according to each of the four learners of the sample[103]. This analysis will be describing the kind of strategies adopted with no judgment of the performance, then we will compare the performance of the four learners and interpret the results of this analysis.

Planning and Engagement

In this segment of the analysis, we intend to present qualitative reflections on both cognitive and metacognitive behaviours, focusing on the planning and engagement

[103] The raw data will soon be made available on the open-access online archive of the University of Bologna, which may allow the replicability of the study

aspects of learners in relation to the task. The decision to amalgamate the two macrocategories of planning and engagement stems from the strong interconnection between the two, as engagement is intricately linked to the decisions learners make during the task resolution management occasions. The choices, whether more or less conscious, that learners make concerning their performance are, to a certain extent, influenced by the motivational and emotional states that permeate them during the task. Therefore, our presentation will commence with initial reflections on planning, followed by considerations pertaining to engagement.

The first two research questions of our CTA deal with the concept of planning which for our coding system assumed both the meaning of deciding what steps to take before doing an activity and having a procedure figured out while performing the task. The two questions guiding our planning strategy identification were:

- Which pattern of moves do learners have when they perform the task?
- Do learners have a plan of how to solve the task, or do they leave it to the inspiration of the moment?

To answer these questions according to the collected data, we are going to follow the order by which learners have been taking part to the experimentation.

The first learner we consider is Emily, who dealt with the reading and comprehension multiple-choice task. The performance of Emily lasted 22.40 minutes and reached the result of 2 correct answers out of 7. According to the first two research questions, we coded 15 occurrences of the planning macrocategory. The descriptors associated with the macrocategory reveal that the planning strategies mainly adopted by Emily are in the order: reading the title first (1), declaring a procedure (6), answering the task in an orderly manner (5), saving difficult points for revision phase (1), inspect the paper sheets (1), and finally deciding when the task was completed (1).

The second learner we take into account is Tino, who performed the reading and comprehension task with short answer (max. 4 words). The completion of the task required Tino 31.05 minutes, and he managed to achieve a score of 4 out of 8 answers, although at least 3 of the 5 wrong answers were deemed wrong because Tino did not respect the limit of maximum 4 words given in the instruction. As specified by the coding of the planning macrocategories, we identified 22 instances. Following the order of appearance, Tino inspected the paper sheets (1), moved to reading the questions first (1) and reading the instruction (1), then he alternated the answering of the task in an unorderly

manner (5) to a series of statements declaring a procedure he was going to follow (11). Lastly, he revises some of the difficult points in the task (1) and then decides for the end of the task (1). Among the answers of Tino, we did not code the transcription of the answers on the answer sheet, because it was accomplished during the execution of the task and not at the end.

Thirdly, we examine the behaviour of Bernhard, who completed the reading and comprehension task with phrase matching. Bernhard took 14.58 minutes to complete the task with a result of 8 out of 8 correct answers. The total number of planning occurrences is 15 and they can be subdivided as follows: after reading the instruction first (2), he moved to inspect the paper sheets (2), and deciding to read the text first (1); solving the matching in an orderly manner (5), he also saved difficult points for the revision phase (2), and he kept answering the task, stopping from time to time, declaring the procedure he was going to follow(2); in the end, he transcribed the answers on the answer sheet (1), finally he decided when the task was completed (1).

Lastly, we have the performance of Florian, who managed to complete the reading and comprehension task with question-paragraph matching in 25.25 minutes, responding correctly to 6 out of 9 answers. The 23 planning strategies we identified are descripted as follows: at first, Florian inspected the paper sheets (1) and moved to reading the instruction first (2); after reading the title (1) he decides to read the questions first (1), interrupting the comprehension process with metacognitive declaration of the procedure he would have followed (8); He kept answering the task in an orderly manner (7), saving difficult point for revision phase (3). In the end, he revised some of the answers (1) and decided when the task was completed (1). As Tino did before, Florian also accomplished the transcription of the answers on the answer sheets while executing the task, therefore we decided not to code it as a planning strategy in this analysis.

The administration of four distinct reading and comprehension tasks to the four learners may seem to introduce a logical fallacy when comparing their performances. Ideally, the logical approach would involve evaluating each performance based on the same task, thereby observing how learners approach a shared reading and comprehension text. However, due to the constraints of the experimental conditions and the inherent similarities among the four reading and comprehension tasks, the analysis of performances from four randomly selected learners proved advantageous for our research objectives. Despite variations in Italian language proficiency, metacognitive levels

observed during thinking-aloud sessions (as documented by the experimenter during interviews), and diverse learning styles, the four learners exhibited a consistent sequence of approaches while addressing the task.

In general, each learner recognized that either examining the paper sheets or perusing the instructions constituted the initial steps necessary to address the task, irrespective of the sequence in which they executed these actions. An exception to this pattern was noted with Emily, who inadvertently overlooked both actions. She only inspected the paper sheets when she encountered them towards the conclusion of her performance. Lacking a clear understanding of the functions of certain pages, she proceeded to enter her name before deciding to conclude the task. Excerpts illustrating Emily's planning behaviour are presented in Table 9.

Table 9 - Emily's planning behaviour

Name	**Text excerpt**	**Participant comment**
Emily	Von der Lehrperson auszufüllen	**Modokit** # <unclear> was das Letzte war weil ich glaub+ das ist <sp> <ah> von der Lehrperson, ok, # ich habe nochmal jetzt überlegen müssen was mit Lehrperson gemeint ist
		Gesture and Mimic
		Actions # leafs through the paper sheets and turns to Ap#
Emily	NAME:	**Modokit** das heißt ich <ehm> <lp> # ich fülle jetzt meinen Name aus (talks fast)
		Gesture and Mimic
		Actions # writes her name on Ap#

The case of Emily is not surprising, given her relatively low metacognitive levels during the think-aloud experiment, as substantiated by the frequency of coding occurrences, which attested to the secondary consideration given to planning her performance.

The sequencing of these two strategies during the performance holds notable significance. Tino, for instance, employed the aforementioned strategies but commenced with inspecting the paper sheets before swiftly transitioning to the questions. Subsequently realizing the necessity to comprehend how to address the questions, he retraced his steps

to the instructions, resulting in a considerable expenditure of time. Tino's performance, in fact, stood out as one of the lengthiest among the four sessions, suggesting a lack of both time management and a systematic order in the planning process.

Conversely, both Bernhard and Florian judiciously implemented these two strategies. Bernhard initiated his approach by scrutinizing the instructions and then proceeded to inspect the paper sheets, systematically cross-referencing the information. Conversely, Florian opted for a swift review of the paper sheets before delving into the instructions. The fundamental objective of these strategies is to equip the learner with the ability to navigate the task's pages effectively. Opting to inspect the paper sheets first facilitates familiarity with the task's structure before embarking on its resolution. Conversely, commencing with reading instructions aids in identifying the task's distinct components while grasping the modality of its execution.

Another notable aspect evident in the four performances is the inclination to either commence with reading the text or the questions. In this context, there exists no definitive right or wrong decision; rather, the appropriateness of the choice often hinges on the nature of the task and the specific reading strategies employed while adopting this approach. However, it is apparent that the four learners exhibit a tendency to methodically address the task, occasionally deferring challenging questions for subsequent review. Within this framework, Emily does not appear to recognize the necessity for revisiting her initial answers, neither during the response process nor upon its culmination. Conversely, Tino, while engaging in the answering process, does not consistently adhere to a strict order. As illustrated in this example, Tino left the initial question unanswered and proceeded to address subsequent questions:

Table 10 - Tino's planning behaviour (part 1)

Name	**Text excerpt**	**Participant comment**
Tino	3 Quale azienda si trovava nel posto dove è stato aperto il primo Primark italiano?	**Modokit** wo ich § mir jetzt noch nicht ganz sicher bin, ob das zur dritten Frage passt §
		Gesture and Mimic § points to T1 with pencil§
		Actions
Tino	1 In quante nazioni d'Europa c'è già Primark?	**Modokit** aber ich habe # in dem Satzt <sp> gerade nochmal die Antwort auf die erste Frage gefunden #
		Gesture and Mimic

		Actions # indicates a sentence in the T1 #

Tino intermittently interrupts his answering process whenever he encounters pertinent information that he associates with previously stored information in his working memory. This proclivity is evident even at the initiation of the answering process, as observed when he begins responding from the seventh question and progresses to the eighth question. In instances where no discernible link to prior information persists, he elects to commence with the first question, occasionally employing jumps or continuing with questions for which the information can be readily recalled:

Table 11 - Tino's planning behaviour (part 2)

Name	**Text excerpt**	**Participant comment**
Tino	3 Quale azienda si trovava nel posto dove è stato aperto il primo Primark italiano? 4 Quanto sarà grande all'incirca il negozio Primark?	**Modokit** ok # <sp> jetzt muss ich noch mal auf <sp> (RApM) drei und vier eingehen #
		Gesture and Mimic
		Actions # turns to Qp#
Tino		**Modokit** <lp> (RQM) §weil ich die vor nähmlich nicht gefunden hab § und dadurch erstmal die / sie machen wollte die ich schon kannte
		Gesture and Mimic § points at Q with pencil§
		Actions

Bernhard adheres to the sequential order of the questions, yet when faced with uncertainties regarding a particular question, he defers it for the revision phase. The revision phase does not manifest at a specific juncture during the task resolution; however, Bernhard consistently formulates responses to the question at hand before revisiting preceding unanswered questions. His ability to retain pertinent information, which serves as a reminder for unresolved questions, enables him to maintain focus on the ongoing task before redirecting his attention to those questions requiring further consideration.

Table 12 - Bernhard's planning behaviour

Name	**Text excerpt**	**Participant comment**

Bernhard		**Modokit** # <sp># jetzt komme ich wieder § zu <unclear> wo ich vorher was frei gelassen habe §
		Gesture and Mimic § points at 4th paragraph §
		Actions # turns to T1p #
Bernhard	La possibilità di (4) ___ verso il luogo di lavoro o studio è assolutamente fattibile, oltre che risparmiosa. Basti pensare alle diverse formule di abbonamento mensili o annuali offerte dai mezzi pubblici, tram e metro.	**Modokit** und <ehm> § Nummer vier § muss # dann # auch was mit A-B-C zu tun haben
		Gesture and Mimic § points at number 4 with pencil in lH §
		Actions #turns to Qp and holds T1p in lH #

Florian concludes the task with a notable sense of confidence, notwithstanding which he reassesses the accuracy of certain answers when encountering pertinent information during the completion process:

Table 13 - Florian's planning behaviour (part 1)

Name	**Text excerpt**	**Participant comment**
Florian	4 In quale hotel… si può fare una pausa dalla vita di tutti i giorni?	**Modokit** ich sehe jetzt gerade das <lp> dies/# das B <lp> / ich seh' gerad dass es <ehm> bei vier # glaub ich eher B war's # was ich geschrieben hab es ist mir gerade im Satz aufgefallen (speaks fast)
		Gesture and Mimic
		Actions # turnss to Qp and holds the page in lH # # leaves through the paper sheets to reach Ap and holds the page in lH#

Before concluding the task, Florian recollects to review a previously provided answer that posed a challenge. Despite recognizing the opportunity for revision, he opts not to make changes, attributing this decision to potential fatigue at the task's culmination. This constitutes an instance where the degree of planning converges with that of engagement. Subsequently, in the ensuing excerpts, we will endeavor to address the following inquiry:

- Do learners respond to the task requirements, or do they give up when the task becomes too difficult?

The following performance excerpt (Table 14) will clarify the overlapping nature of the planning and engagement levels.

Table 14 - Florian's Engagement behaviour

Name	Text excerpt	Participant comment
Florian	9 In quale hotel… si può dormire tutto l'anno?	**Modokit** also bei dem+ <sp> /bei der Frage bin ich mir jetzt <sp> sehr unsicher da # <lp> #
		Gesture and Mimic
		Actions
Florian	3 In quale hotel… natura ed alloggio diventano quasi una cosa sola?	**Modokit** (noise) <unclear>so sicher denn vorher hab ich noch gesagt dass ich bei drei nicht so sicher war <sp> mit @ natura ed alloggio diventano quasi # una cosa sola@
		Gesture and Mimic
		Actions # turns to Ap and holds the page - then turns back to Qp #
Florian		**Modokit** <sp> # hab ich C genommen # <sp> # und <sp> das würde ich aber/ das würde # ich aber lassen #
		Gesture and Mimic
		Actions

The termination of the task and the subsequent decision to conclude it seem to be spontaneous processes for the four learners. Despite encountering challenges with certain questions and feeling tempted to discontinue, they persist with the task until its entirety. An illustrative case can be observed in Tino, who expresses his inclination to answer the question without further thought. The alternative he fears is the abandonment of the task:

Table 15 - Tino's Engagement behaviour

Name	Text excerpt	Participant comment
Tino	Il negozio avrà probabilmente una superficie di circa 7 mila metri quadri, per cui parliamo di uno store di grandi dimensioni che necessiterà di un numero di lavoratori sicuramente interessante.	**Modokit** § also denke ich § und deswegen § bevor <sp> ich diese Frage auslasse schreibe ich lieber diese Antwort hin
		Gesture and Mimic § moves rH to help explain § § holds the bottom of the page with lH ready to go to Ap§
		Actions

The rationale for persevering with the task may be attributed to the fact that all participants found themselves in an experimental context, where relinquishing the effort would have entailed a loss of face in the presence of both the experimenter and the teacher. Consequently, even in the discussion of planning strategies, it becomes imperative to consider certain Engagement-coded items from the think-aloud interview, such as the instance with Tino mentioned earlier. To gain a more comprehensive understanding of this aspect, we also take into account the retrospective interview comments provided by the four learners regarding the emotions they experienced during the task performance:

Table 16 - Sample Engagement comments

Name	**What did you feel while performing the reading and comprehension task?**
Emily	Also Ich fand es **ein bisschen schwierig meine Gedanken** erstmal <unclear> direkt **zu sagen**, jedoch, ansonsten hatte ich ein sehr ruhiges und gutes Gefühl und irgendwie war es auch die Wissbegier, die man dann halt empfunden hat, weil es **interessiert** ja dann schon, genau!
Tino	Zum ersten Mal **ein bisschen angespannt**, weil es eben immer beim Leserverstehen auch **diese Prüfungssituation** ist aber wie gesagt dadurch dass ich **die Sprache mag** und mit dem Text relativ gut zurechtgekommen bin, wars eigentlich **ein gutes Gefühl** und ich hatte keine Probleme
Bernhard	Ich war ziemlich **entspannt** hab' ich gemerkt und wenn ich mich **keine Antwort** gefunden habe, bin ich **auch entspannt** (unclear). Die Emotionen waren ziemlich normal also ich hab' **nichts schlimmes empfunden** bei dem Text.
Florian	Ich fand auf jeden Fall **ziemlich interessant** die verschiedenen Hotels oder halt Herbergen halt, dass sie vorgestellt würden weil ich von eigentlich noch / weil ich keine noch was schonmal was gehört hab. Obwohl anscheinend viele recht bekannte oder schön sein sollen. Und auf jeden Fall **was eher interessant war**, ich hab noch nicht was davon gehört auch mit diesem Hotel wo in jedem Zimmer ein Ipad gibt und die auch so high-tech sind, hab ich auf jeden Fall noch nicht was davon gehört und war eigentlich ja **aber interessant** und aber **auch verrückt** zum Beispiel, der Text und komisch.

The comments provided by the four learners distinctly convey a sense of interest and relaxation during the task performance, as evidenced by the bolded segments in the table. Despite Tino acknowledging feelings of anxiety akin to an exam situation, none of these emotions appear to have induced distress in the learners; on the contrary, they appear to have genuinely enjoyed the task.

In the coding of the planning phase, certain transcribed items have been categorized as "declaring of a procedure," denoting instances where the learner takes the time to articulate and explain their forthcoming actions in the task-solving process. This particular strategy is characteristic of the Think Aloud Protocol (TAP) and reflects the learner's comfort in openly expressing their thoughts. It also signifies a proclivity towards metacognitive reasoning while engaged in task execution. As observed by the experimenter, not all learners seemed equally at ease with verbally declaring their intentions during the task resolution. For instance, Emily exhibited a relative silence in this regard, rarely vocalizing her next moves, but continuing to solve the task without overt metacognitive articulation. Conversely, Tino demonstrated a notable comfort in verbally declaring his actions throughout the task-solving process, leading to the coding of 11 occurrences of such metacognitive thinking. Bernhard and Florian, on the other hand, employed this strategy only when deemed necessary.

It is imperative to clarify that being more metacognitive during task performance does not necessarily correlate with achieving superior results. Instead, it primarily indicates that the learner is conscientious of their actions while studying or is actively monitoring the resolution of the task with a certain degree of attention.

Reading Strategies

In this part of the analysis, we are going to address the third and the fourth research questions:

- Which reading strategies do learners use when they read a text or questions?
- Which reading strategies do learners use when they encounter difficulties while reading the text or the questions?

While the experimenter employed a coding scheme that encompasses a more extensive set of subcategories than those eventually coded, the coding process identified the presence of the following strategies: rows highlighted in grey were not recorded as occurrences and, consequently, were not coded.

Table 17 - MARSI strategies actually recorded during TAP

Marsi type of strategy	**Strategy**	**Coding descriptors/ definition**

Glob.	1. I have a purpose in mind when I read.	Reading purpose
Glob.	2. I think about what I know to help me understand what I read.	Previous knowledge
Glob.	3. I preview the text to see what it's about before reading it.	Reading preview
Glob.	4. I think about whether the content of the text fits my reading purpose	Content expectation verification
Glob.	5. I skim the text first by noting characteristics like length and organization	Length and structure skimming
Glob.	6. I decide what to read closely and what to ignore.	Select important information
Glob.	7. I use tables, figures, and pictures in text to increase my understanding.	Use of Co-textual aid
Glob.	8. I use context clues to help me better understand what I'm reading.	Use of context clues
Glob.	9. I use typographical aids like bold face and italics to identify key information	Use of typographical aid
Glob.	10. I critically analyze and evaluate the information presented in the text	Analysis and evaluation of info
Glob.	11. I check my understanding when I come across conflicting information.	Check understanding
Glob.	12. I try to guess what the material is about when I read.	Guessing about the content
Glob.	13. I check to see if my guesses about the text are right or wrong.	Verify guess about the text
Glob.	14. I scan the text to identify information I need	Scanning
Sup.	1. I take notes while reading to help me understand what I read.	Take notes
Sup.	2. When text becomes difficult, I read aloud to help me understand what I read.	Read aloud
Sup.	3. I summarize what I read to reflect on important information in the text.	Summary
Sup.	4. I discuss what I read with others to check my understanding	Discuss with others
Sup.	5. I underline or circle information in the text to help me remember	Underline or circle info
Sup.	6. I use reference materials such as dictionaries to help me understand what I read	Use of reference material
Sup.	7. I paraphrase (restate ideas in my own words) to better understand what I read.	Paraphrasing
Sup.	8. I go back and forth in the text to find relationships among questions and information within the text	B&F in the text

Sup.	9. I ask myself questions I like to have answered in the text.	Ask oneself questions
Sup.	10. I translate what I read to better understand its meaning	Translation
Prob.	1. I read slowly but carefully to be sure I understand what I'm reading.	Reading slowly
Prob.	2. I try to get back on track when I lose concentration	Get back on track
Prob.	3. I adjust my reading speed according to what I'm reading.	Adjust reading speed
Prob.	4. When text becomes difficult, I pay closer attention to what I'm reading.	Pay closer attention to reading
Prob.	5. I stop from time to time and think about what I'm reading	Stop from time to time to think
Prob.	6. I try to picture or visualize information to help remember what I read.	Picture info
Prob.	7. When text becomes difficult, I re-read to increase my understanding	Re-reading when difficult
Prob.	8. I try to guess the meaning of unknown words or phrases	Guess unknown words

As mentioned before in the description paragraph of the coding scheme, strategies *Sup. 4.* and *Sup. 6.* have been excluded from the coding process, because they were not strategies the learners could have been using during the performance of this task. Among the not-occurring strategies there are two particularly relevant, also because in this case we are sure these two strategies have not been used: *Sup. 1. Take notes* and *Sup. 5. Underline and circle info*. As analysed in the learners' awareness of the reading strategies questionnaire (Moment 1 of this analysis), these two strategies are among the least adopted by Austrian learners while performing the exam reading and comprehension task in Italian. These data align with those of the German learners of the Moment 2, revealing a more general tendency towards disregarding support reading strategy. Indeed, during the performance, none of the four learners adopted any of the two support-reading strategies mentioned above. This aspect is quite important because these two strategies might unburden learners' working memory from the cognitive load of information presented by the text during the task. With regards to strategies such as *Glob. 5., Sup. 7., Prob. 1.,2.,4.,6.,* the fact that they were not coded, does not necessarily mean they have not been adopted by the learners. This statement cannot be made, since one of the problems with TAP is that not all the thoughts of the interviewed person can be registered.

It is vital to consider that, even adopting such a protocol, stating that the sample did not use a certain strategy might contain a fallacy in principle.

One of the most revealing strategies adopted by the sample is surely the *Sup. 10. I translate what I read to better understand its meaning*. This strategy is particularly relevant because it has been deliberately added to the coding scheme, since the MARSI model was not devised for foreign-language learners. We noticed that this strategy has been used quite often in the cases of Bernhard and Florian, while Tino only used it a couple of times and Emily did not use it at all. In particular, Tino, Bernhard and Florian often adopted the translation strategy in combination with the *Sup. 3. I summarize what I read to reflect on important information in the text.* It seems that learners tend to adopt these strategies together either when they are insecure about answers they want to give, in this sense, they translate and summarise what they read in order to evaluate the correctness of an answer, as in the case of Tino and Bernhard (see table underneath) or they adopt them as a way to translate and summarise information in their L1 in order to hold the information longer in their minds while still reading the text, as in the case of Florian:

Table 18 - Example of summary and translation strategies

Name	**Text excerpt**	**Participant comment**
Tino	Primark, i cui negozi sono presenti in tutto il Regno Unito e in una città come Londra sono presi d'assalto ogni giorno soprattutto dai turisti, sta fra l'altro contribuendo ai buoni dati della ABF […]	**Modokit** @ poi @ # <sp> jetzt kann ich # hier hinsehen dass in <sp> London meistens Touristen # in diesem Land sind, was ich hier wieder als Antwort nehmen kann
		Gesture and Mimic
		Actions #keeps track with a pencil #
Bernhard	"Un'ulteriore alternativa (6) ___, considerando che in città come ad esempio Torino, esistono delle bellissime piste ciclabili e che in città come Ferrara è la normalità vedere persone, anche anziane, in bicicletta, pedalare tranquillamente per recarsi al mercato."	**Modokit** § und in Nummer Sechs es ist K # @e l'uso di bicicletta@ # § es passt sehr gut § weil § auch es geschrieben wird # dass es in Turin schöne Fahrradwege gibt (translates) anscheinend #
		Gesture and Mimic § points at number 6 with lH finger§ § rotates rH (to say "it's written there")§
		Actions # keeps track with rH thumb on answ K # #keeps track with rH finger #
Florian		**Modokit** also auf jeden Fall <sp> jetzt schon<sp> viel <sp> komplett anders als der Text

	"D. Camere che guardano al futuro, con un design geometrico, luci al led, docce a cascata e, udite udite, un Ipad in ogni camera! Wifi ovviamente gratuito. Gli amanti della tecnologia e chi non riesce a stare lontano da internet neanche un secondo, si sentiranno qui perfettamente a casa. Le strutture dell'iRooms si trovano in posizioni tattiche nel centro di Roma e sono quindi un ottimo punto di partenza per una visita della città."	davor es wird viel mehr <sp> auf / darauf geachtet das Moderne und nicht so viel auf die Umwelt § **Gesture and Mimic** § plays with rH thumb and nails§ **Actions**

Another important strategy which has been used by all the members of the sample is the *Glob. 2. I think about what I know to help me understand what I read.* As we know from the scientific literature (De Beni and Pazzaglia, 1995), sourcing from previous knowledge is vital for the correct understanding of a text, yet when this strategy occurs several times, this might be interpreted as a symptom of dysfunctional understanding, according to which the learner relies mainly on top-down inferences generated by personal experience rather than information provided by the text itself. This is the case of Emily who is more inclined to find similarities in her knowledge of the world rather than paying attention to the details reported in the text:

Table 19 - Example of previous knowledge strategies

Name	**Text excerpt**	**Participant comment**
Emily	I pappagalli sono animali molto intelligenti, ma anche complessi e sensibili e possono essere degli ottimi compagni. Però, soprattutto se sono di taglia medio-grande, non sono sempre adatti alla vita in casa. Come prima cosa bisogna sapere che l'età dei pappagalli arriva fino ai 60-80 anni e più. E vivere con loro è come avere un bambino di 3-4 anni che non cresce mai. Inoltre,	**Modokit** und dass sie nicht eben in/ <ehm> ein Leben nur im Haus führen sollen also dass dies nicht <unclear> gut ist deswegen eigentlich @muoversi in tutta la casa@ auch nicht dazu passt weil sie sollen ja nicht nur im Haus führen das Leben

	questi simpatici volatili, se tenuti in appartamento, non devono passare la vita chiusi in una gabbia. Hanno bisogno di poter volare liberi tra le mura domestiche, anche se è meglio non lasciarli mai incustoditi. 7. Per i pappagalli è importante A muoversi in tutta la casa. B mangiare cose sane. C avere una gabbia pulita. D poter respirare aria fresca.	**Gesture and Mimic** **Actions**

One of the most adopted strategies during the TAP is surely the Support Reading Strategy *8. I go back and forth in the text to find relationships among questions and information within the text.* This strategy would be adopted by the learners when encountering information in the text that could recall another piece of information in the question section, or vice versa. It was used either in a silent way as in the case of Emily (see table underneath) or loudly as in the case of Tino. In the performance of Bernhard, it can also be seen the piece of information that triggers the use of this kind of strategy, while Florian adopts it to clear out some doubts about what he has been reading and to refresh information in his short-term memory.

Table 20 - Example of back-and-forth movement strategies

Name	**Text excerpt**	**Participant comment**
Emily		**Modokit** # (RTM) (RQM) #
		Gesture and Mimic
		Actions # turns to Tp - Qp #
Tino	dopo aver lanciato i suoi negozi anche in altri nove Paesi europei. A confermarlo nei giorni scorsi è stata la Associated British Foods (ABF), proprietaria del marchio, e la notizia è stata rilanciata subito con grande enfasi dal «Daily Telegraph».	**Modokit** hier steht nähmlich # <sp> @ dopo aver lanciato i suoi negozi anche in altri nove Paesi europei@ # # <sp> # und die Frage war # @ In quante nazioni d'Europa c'è già Primark?@ # <unclear>
		Gesture and Mimic
		Actions #keeps track with pencil # #turns to Qp # #keeps track with pencil#

	1 In quante nazioni d'Europa c'è già Primark?	
Bernhard	2 = I. significa consumare molta meno acqua	**Modokit** # (RT1M) # #<ah># da weiß ich jetzt schon mal mit der Antwort # <unclear> §das ist Wasser sparen würde§ (translates) #
		Gesture and Mimic §points at Asw I and skims the Qs with both finger (rH) and pencil (lH)§
		Actions #keeps track with pencil in lH# #turns to Qp# #gets closer to paper sheets#
Florian		**Modokit** (RT2M) ok <lp> # schaue# ich nochmal auf die erste Seite (RT1M) ersten Text (speaks fast) § komme ich noch gar nicht daran versuche ich nochmal wieder da anfangen §
		Gesture and Mimic § runs lH in the hair §
		Actions #turns to T1p#

Furthermore, there are two additional strategies that appear to be distinctive to the reading and comprehension task, often employed in conjunction: "Select important information" and "Scanning." This strategy predominantly comes into play during the answer-oriented searching process required for learners to identify the correct information and fulfill the task requirements. In certain instances, learners extract words or segments of information from the question, utilizing them as references to locate the specific information within the text, exemplified by Emily, Tino, and Florian. Alternatively, the strategy is reversed, involving gaining a general understanding of the paragraph to identify specific information among the provided answers, as illustrated by Bernhard. The variance in the adoption of this strategy can be attributed to the nature of the task. In scenarios where there are multiple-choice questions to be answered, such as in the cases of Emily and Tino, commencing the search from the question (and potentially its options) to locate the specific information appears more apt. Conversely, when tasked with finding a sentence that best aligns with the paragraph, as in the case of Bernhard, initiating the search from the text and acquiring a comprehensive overview before identifying the most fitting answer becomes more beneficial.

Table 21 - Example of Select information and scanning strategies

Name	**Text excerpt**	**Participant comment**

Emily	7 Per i pappagalli è importante A muoversi in tutta la casa. B mangiare cose sane. C avere una gabbia pulita. D poter respirare aria fresca	**Modokit** § <lp> deswegen schaue ich noch mal in den anderen Abschnitten ob da etwas noch zu den <ehm> @Papagalli*@ genau/ Papagaien genau drin steht § **Gesture and Mimic** §moves rH to help explain§ **Actions**
Tino	6 In quale Paese Primark ha un altro nome? In particolare, le vendite nei negozi Primark (che in alcuni Paesi sono presenti con brand diversi, ad esempio in Irlanda il marchio è quello di Penneys) sono cresciute del 13%.	**Modokit** @ poi qui c'è scritto @ hier steht # @in particulare* le vendite dei negozi Primark che in alcuni Paesi sono presenti con brand diversi ad esempio <sp> in Irlanda il marchio è quello di Peneys*@ # **Gesture and Mimic** **Actions** # keeps track with a pencil #
Bernhard	Ore domestiche: ridurre gli sprechi energetici Tra i primi accorgimenti vi è quello di non vivere in case super riscaldate, andando quindi ad (3) ___, cosa fattibile e semplice se si ha un riscaldamento autonomo, più complesso se si ha un riscaldamento centralizzato.	**Modokit** Ich schau mir die Nummer §drei§ an §damit ich <ehm> damit ich so mach ein bisschen Auswahl befor ich es <unclear> (speaks fast) <ehm> handeln kann so dass ich schau was zu mir besser passt auf den Antworten§ **Gesture and Mimic** § points at number 3 on T1p § §moves Hs to help explain what he says§ **Actions**
Florian	2 In quale hotel… si mangia il primo pasto del giorno su un mobile speciale?	**Modokit** überfliege ich jetzt auch nochmal kurz <sp> ein bisschen die Texte wo irgendwas mit Essen sowie Frühstück oder Essen drin stand **Gesture and Mimic** **Actions**

Attention Focus

Among the occurrences coded under the macrocategory "Attention Focus," this analysis aimed to provide an answer to the following question:

- In what manner and at what junctures do learners concentrate their attention during the process of reading?

In the subsequent discussion, we will present instances that generally necessitated a directed focus of attention from the learner. Our observations indicate the employment of two distinct types of focusing by the learner. The first involves maintaining concentration on the task, typically accompanied by unique gestures specific to each learner. Emily, for instance, tends to adopt a silent and motionless demeanor, even though, like all candidates, she has a pencil at her disposal for any purpose. Bernhard, in contrast, utilizes the pencil to sustain concentration on the lines he reads, intermittently alternating it with his index finger. Tino employs the pencil for a similar purpose, especially when identifying noteworthy information in the text. Conversely, Florian sustains his attention on the text through vocalization and a repetitive drumming of his thumb against the tips of the other fingers of his right hand. The recurrent adoption of distinctive gestures to uphold heightened concentration, even during cognitive reasoning, is a prevalent pattern observed across all the learners. During moments requiring heightened concentration, Emily positions her torso closer to the text on the paper, maintaining a rigid stance. In contrast, Bernhard intertwines his fingers with the curls of his hair. Tino, while seated, consistently moves his knees, causing them to sway sideways.

The second form of focusing arises from instances where learners recognize a difficulty in the comprehension process. As elucidated in the theoretical chapters (refer to 4.2.1.1), this metacognitive focus aligns with what Kintsch (1998, also discussed by Lumbelli, 2009) terms "true inference." This form of inference manifests in the learner's ability to discern a coherence problem within the comprehension process. Unlike the typical automatic access to long-term memory, which usually resolves comprehension issues, this type of problem necessitates a repair process. Table 22 illustrates several potential difficulties encountered by learners:

Table 22 - Examples of identification of comprehension difficulty

Name	**Text excerpt**	**Participant comment**
Emily	Title: Animali domestici un po' diversi	**Modokit** § Also @domestici@ ist § mir nicht ganz klar was ich jetzt mit+ das/ hat immer auf <ehm> Tiere/ bieziehen soll
		Gesture and Mimic §Get closer to the paper sheets§
		Actions

Tino	6 In quale Paese Primark ha un altro nome? In particolare, le vendite nei negozi Primark (che in alcuni Paesi sono presenti con brand diversi, ad esempio in Irlanda il marchio è quello di Penneys) sono cresciute del 13%.	**Modokit** ok <sp> § da zu finde ich jetzt momentan nicht so schnell die Antwort # (RQM) § # # <lp> # #muss ich weiter suchen#
		Gesture and Mimic § holds with lH T1p ready to turn §
		Actions # gets closer to T# #turns to T1p# #gets closer to T#
Bernhard	Ore domestiche: ridurre gli sprechi energetici Tra i primi accorgimenti vi è quello di non vivere in case super riscaldate, andando quindi ad (3) ___, cosa fattibile e semplice se si ha un riscaldamento autonomo, più complesso se si ha un riscaldamento centralizzato.	**Modokit** # @vi è quello@ # ist immer sehr komisch für eine Satzstellung für mich <lp> § dort <sp> mal hier §
		Gesture and Mimic § points at sth in 4th pargraph §
		Actions # keeps track with pencil in lH #
Florian	2 In quale hotel… si mangia il primo pasto del giorno su un mobile speciale?	**Modokit** <ehm> § wo stand dies nochmal? §
		Gesture and Mimic § looks at T2p §
		Actions

In general, the comprehension challenges faced by learners often pertain to the accessibility of vocabulary, albeit not necessarily specific but certainly more advanced. An instance is evident with Emily, who encounters difficulty at the beginning of the comprehension process while reading the title, particularly with the word “domestic”, the meaning of which she is unfamiliar with. Alternatively, issues of accessibility can extend to linguistic expressions of a higher level of formality. Bernhard, for instance, encounters the expression “vi è quello” in his text, a linguistic chunk of a more elevated register than his B1 level proficiency. Conversely, Tino and Florian encounter a distinct challenge related to identifying the information required to solve the task. Their comments, as well as their actions and gestures, suggest a working memory overload. Indeed, at the same juncture, the working memory is engaged in recalling the source information (derived from the text or the questions), in seeking linguistic connections with this source (often linguistically altered), and in managing the performance time. From an emotional

standpoint, this allocation of resources not only induces fatigue and consequent disengagement but also triggers anxiety that can impede performance.

5.3 Learning objectives of the metacognitive reading training

The strategic decision to employ a triangulation of methods for identifying learners' needs proved to be a helpful choice, yielding a comprehensive understanding of the teaching environment conducive to the ideation of a metacognitive-motivational training. It is not only advantageous for the teacher to possess an intricate understanding of the task in all its dimensions but also crucial to comprehend how learners utilize the knowledge acquired about it. In addition to the structural attributes of the booklet and the level of textual complexity, the Expert Analysis facilitated a deductive identification of the cognitive demands intrinsic to the test. These cognitive demands played a pivotal role in delineating the lexical and discursive aspects targeted for examination in a training program designed to prepare learners for the reading comprehension test within the high-school-leaving examination.

From a lexical standpoint, learners are advised to hone their proficiency in recognizing synonyms and antonyms, linking hypernyms to hyponyms, and deciphering meaning-transparent idiomatic expressions (Casadei and Basile, 2019). Additionally, they should familiarize themselves with foreign (predominantly English) terms, thereby enhancing their plurilingual skills. On a strictly metalinguistic level, emphasis is placed on equipping learners with the ability to identify semantic groupings, including synonymy, antonymy etc., while concurrently discerning diverse lexical categories such as nouns, verbs, adjectives, adverbs, and others.

Concerning discursive aspects, a separate realm of didactic intervention, encompassing both cognitive and metacognitive dimensions, has been delineated. The Expert Analysis of the task and the Cognitive Task Analysis underscored a significant cognitive and metacognitive facet in task resolution: the capacity to plan and identify test-solving strategies. Establishing clear procedural steps for approaching each of the four tasks assists learners in their decision-making processes during resolution, encompassing tasks such as reading instructions, identifying main booklet components, choosing between reading the text or questions first, and determining appropriate reading strategies for each task.

In relation to reading strategies, findings from the utilization of MARSI and CTA converge in highlighting a certain neglect on the part of learners regarding support strategies. As emphasized throughout this discourse, these strategies play a pivotal role in alleviating cognitive load on working memory, allowing for the redirection of cognitive resources towards aspects beyond the storage of extensive textual information. The judicious use of techniques such as underlining, highlighting, circling, note-taking, and crafting short summaries serves to reduce the volume of textual information, facilitating quick retrieval by the learner. An additional critical point is the evaluative scrutiny of information identified as an answer. Proficiency in recognizing lexical trigger elements and reconstructing the accuracy of information derived from these elements is paramount. On a meta-strategic level, learners are encouraged to cultivate self-awareness, recognizing their own emotions. This skill proves essential for channeling anxieties or fears, as well as enthusiasm and interest, towards a task-solving and non-blocking attitude.

In conclusion, the preceding paragraph encapsulates the didactic objectives delineated for the forthcoming teaching intervention. The primary emphasis of this intervention will be on the training of Austrian learners of Italian who aspire to attain reading and comprehension proficiency for their high-school-leaving examination in the Italian language. The learners will devote their efforts to fostering lexical and metalinguistic competence, particularly in relation to the thematic content of Italian language curriculum within the AHS framework. Furthermore, their engagement will extend to the cultivation of cognitive and metacognitive, or more broadly meta-strategic, skills, as elucidated by Oxford (2018). This multifaceted approach aims to equip learners with a comprehensive strategic awareness, transcending mere reading strategies, and encompassing adeptness in task resolution and emotional comprehension.

Chapter 6: Methodology: Construction of the experimental setting

In the preceding chapter, the initial phase of the methodology employed in this study was expounded. The first segment of the adopted methodology pursued two principal objectives. Firstly, the CTA aimed to discern the cognitive-linguistic, metacognitive, and motivational requirements of learners studying Italian as a foreign language in German-speaking contexts. Secondly, the CTA provided an in-depth examination of the types of tests administered for the Austrian high-school-leaving exam in Italian, uncovering both textual attributes and cognitive, strategic, and procedural demands. This dual investigative focus facilitated the construction of a foundational knowledge base concerning the two primary categories of participants in the language classroom system: learners and teachers. Furthermore, this information contributed to formulating the teaching objectives of the metacognitive-motivational training intended for experimental purposes in this study. However, the utilization of the extensive data gathered during the CTA extended beyond the definition of learning objectives. The information obtained from the previous analysis procedure was in fact adopted for the definition of the experimental instruments that accompanied the implementation of the metacognitive-motivational training and which we will present within this chapter.

In this chapter, the results of the CTA were first and foremost used to clarify which research objectives to focus on, aiding the definition process of the research questions. Furthermore, they allowed the modification and the enrichment of the framework of experimental tools defined in the theoretical framing phase. Indeed, the CTA revealed a number of strategies, procedures and knowledge that we considered fundamental for the definition of the survey items. An additional use of the results of the CTA was then the research and adaptation of the textual materials for the experimental training, as well as the definition of the structure of the teaching intervention. In the course of this chapter, these topics will be presented in the order in which they were mentioned above and will offer a comprehensive overview of the decisions that accompanied the construction process of the experimental setting.

6.1 Definition of the research questions

As elucidated in section 3.3.1, this work is oriented towards departing from the conventional approach, which primarily involves a straightforward comparison between pre-test and post-test outcomes and the assessment of intra- and intergroup results (experimental vs. control group) for significance. This study, conversely, adopts the CDST perspective with the objective of ascertaining the detectability of changes within the system and identifying the factors instigating such alterations. The examination of the statistical significance of these factors in influencing system changes, however, assumes a diminished relevance, given that the primary objective within the realm of system study is no longer predictive accuracy. The paramount function of a CDS perspective lies in its explanatory capacity rather than predicting system dynamics. Consistent with this perspective, research questions are formulated in alignment with this explanatory focus. Within an oriented research design in CDST, research questions ought not to concentrate on pinpointing generalizable patterns by assessing intra- and intergroup averages. Instead, their objective should be to offer an account of experiences and dynamic processes that are observable across various levels of CDSs and within a defined time frame. Within the framework of this dissertation, the insights provided by studies on CDST have steered us towards defining a specific research scope. To be more precise, our emphasis is on conducting an inquiry situated at a pedagogical level characterised by strategic and meta-strategic teaching expertise, with a particular focus on the task of text comprehension employed during the testing phase in the Austrian Matura. It is crucial to highlight that the deliberate choice of this particular emphasis was made to contribute to the refinement of motivation studies pertaining to distinct processes in L2 learning. This decision aligns with the guidelines advocated in Ushioda's (2016) "Small Lens" approach.

As recommended by MacIntyre et al. (2021), the adoption of a CDST perspective necessitates a reconsideration of the formulation of research questions. The shift involves moving away from a focus on defining correlations, relationships, and predictability of factors impacting the stability of the system. Instead, research questions should capture the changes unfolding within the system, incorporating both quantitative and qualitative facets to comprehensively grasp the phenomenon. Embracing this perspective, specific domains of change have been discerned, warranting concentrated attention: metacognitive awareness, task performance, motivational-emotional aspects, and

documented alterations in the system. The ensuing section outlines the research questions upon which this study is poised to concentrate.

Performance:

1. Does a transformation in performance results on the Italian foreign language reading comprehension test occur from pre- to post-intervention?
2. Are there any observable differences between the experimental group and the control group?

Metacognitive awareness:

1. Does a shift occur in metacognitive declarative knowledge concerning the reading and comprehension of Italian texts as a foreign language from pre- to post-intervention teaching?
2. Are there discernible differences, if any, between the experimental group and the control group?

Motivation-Emotions:

1. Does a shift in learners' motivational linguistic self-identity occur towards Italian as a foreign language? Does a shift in learners' attitudes towards the reading comprehension task in Italian as a foreign language occur from pre- to post-intervention teaching?
2. Is there a transformation in learners' emotions concerning the reading comprehension test in Italian as a foreign language from pre- to post-intervention?
3. What discernible differences, if any, exist between the experimental group and the control group?

Alterations in the system:

1. What alterations manifest in the system during the transition from pre- to post-intervention teaching?
2. Do the Experimental Group (EG) and the Control Group experience the same changes?
3. Which constellation of factors mostly contribute to these alterations?

6.2 Questionnaire design

The phase dedicated to formulating research questions was succeeded by a corresponding stage involving the construction of survey materials. The fundamental objective was to create a reasonable number of questionnaires capable of sustaining learners' interest and engagement during the experimental phase, as advocated by Dörnyei and Taguchi (2009). The concerns raised by the authors (ibid.) regarding participant engagement also extended to the number and complexity of questions within each developed questionnaire. Indeed, an excessively high number of questions or questions necessitating excessively demanding responses posed the risk of yielding unreliable data. To address these issues and facilitate a streamlined compilation of the questionnaires, we availed ourselves of the online software Qualtrics, provided by the Experimental Laboratory of the LILEC Department at the University of Bologna.

Qualtrics represents an advanced online survey design software extensively employed across diverse sectors of the professional landscape for research works. It stands out as a tool characterized by its intuitive and user-friendly interface, empowering users to choose from various question and answer modes tailored to the specific requirements of the survey creator. Moreover, Qualtrics offers a valuable mechanism for assessing the test's readability and supplying feedback on potential enhancements to the entire questionnaire, thereby contributing to the heightened reliability of the designed instrument. Notably, Qualtrics accommodates different distribution modes, including link or QR-code-based dissemination, presenting a tangible facilitation for classroom distribution through learners' smartphones, thereby mitigating any apparent inefficiencies associated with time and paper resource utilization.

In consideration of the efficiency afforded by these distribution modes, a strategic decision was made to formulate three distinct questionnaires in German language (Hochdeutsch)[104], each serving a different purpose: the first being a learner profiling questionnaire, the second a pre-test questionnaire, and the third a post-test questionnaire. Ultimately, we will also present a Post-hoc interview that aims at capturing the opinions of some learners after the metacognitive-motivational training experience. In the following subsections, we will elucidate the methodologies and rationales underpinning

[104] The surveys were translated into German by the experimental team. The revision of the translation and clarity of the questions was then submitted to the scrutiny of two Austrian master learners at the University of Graz, who attended the Lehramt course for the teaching of Italian as a foreign language.

the development of the questionnaires, shedding light on the considerations that guided their creation and the strategic reasons for their administration to the learners.

6.2.1 Profiling of the sample

Concerning the questionnaire designed for the profiling of the learner sample, diverse information was systematically gathered. Subsequent to obtaining authorization for data collection, participants in the experimental group were instructed to generate a personalized code, adhering to specified guidelines provided within the questionnaire (refer to Appendix). This unique identification code served the dual purpose of anonymizing the collected data and establishing coherence in identifying the remaining data from each participant across various administered questionnaires. The demographic information compiled encompassed gender, age, native language(s), and the educational attainment of parents. Notably, our interest in the latter aspect was prompted by Rodríguez-Brown's (2011) findings on the influence of family socio-cultural context on the literacy levels of L1 readers, thus motivating an exploration of potential effects on the literacy of L2 learners. Additionally, the profiling questionnaire solicited details regarding the type of school attended (AHS or BHS), the last or penultimate school year, the languages known (German, Italian, Spanish, French, English, and Latin), and self-assessment of proficiency levels for each language[105]. Furthermore, participants were required to specify the duration of their study in Italian as a foreign language and disclose any instances of afternoon Italian tutoring or extracurricular hours during which the language was employed.

6.2.2 Pre-test questionnaire

The genesis of the pre-test questionnaire proved to be challenging yet pivotal in the subsequent formulation of the post-test questionnaire. Analogous to the profiling questionnaire, participants were required to grant authorization for data usage and provide their personal code established in the initial testing phase. The primary objective of the pre-test questionnaire was to amass a substantial volume of data, aiming to glean insights

[105] The expression "last or penultimate school year" was chosen for its characteristic neutrality with respect to the two types of school potentially involved in our survey. AHS learners typically complete their education with class eight as their final school year and class seven as their penultimate year. In contrast, BHS learners conclude their academic journey with class five, thus, the penultimate year learners attend class four.

into self-reported metacognitive awareness regarding the text comprehension test, readers' self-efficacy levels, motivation in studying Italian, and emotional states during the test performance. Additionally, a set of inquiries was included concerning task motivation, elucidating learners' perceptions throughout the examination. The subsequent paragraphs will expound upon each of the aforementioned aspects in a more detailed manner.

6.2.2.1 MARSI-R adaptation

During further scientific reading, it was realised that in 2018 Mokhtari et al. had produced a new, revised and scientifically validated version of the MARSI (2002) (see 4.5.1). The exploration of the MARSI-R (2018) model was timely, allowing its incorporation into the inquiries of this questionnaire. Analogous to the adjustments made during the coding phase of the TAPs, the MARSI-R version underwent modifications and augmentations with additional strategies considered essential for the learners' awareness. The CTA conducted in the preliminary phase, and specifically the outcomes of the TAPs, revealed certain strategies specific to the testing scenario faced by the learners. These encompassed strategies directly associated with reading as well as those more closely linked to task resolution. Consequently, our objective was to complement these strategies with those delineated by MARSI-R (2018). However, this process of integration gave rise to several methodological inquiries. Primarily, the incorporation of new elements into a scientifically validated instrument posed a potential threat to the aforementioned validity, thereby posing challenges to the reliability of the gathered data. Nonetheless, adopting a perspective of trade-offs, an integrated instrument promised a more tailored alignment with our experimental context. Secondly, the amalgamation of these new strategies risked transforming the MARSI-R from an inventory of general reading strategies to one focused on strategies specifically associated with the task of reading and comprehending the Italian text administered during the Austrian Baccalaureate test. The third challenge pertained to establishing criteria for the selection of strategies to be integrated into the MARSI-R. In this regard, a decision was made, for instance, to exclude strategies from the MARSI-R that were deemed unsuitable for the prevailing testing situation, while incorporating those that were more commonly observed and actually adopted by learners during the Think Aloud Protocol (TAP) observations. Finally, the ultimate critical aspect of modifying the MARSI-R involved adapting the newly introduced items to a structure

designed to evaluate three main macrocategories of strategies, namely General Reading Strategies (GRS), Problem-Solving Reading Strategies (PSRS), and Support Reading Strategies (SRS). In its revised version, the MARSI-R maintained balance by defining five items for each of these macrocategories[106]. From this perspective, our modifications aimed to maintain this balance, ensuring the preservation of the analytical capability of the instrument. Subsequently, we will delve into a detailed discussion of the specific modifications applied to the MARSI-R model.

In this research work, the MARSI-R model, proposed by the authors (Mokhtari et al., 2018), was formally employed for the selection of reading strategies provided with respect to the initial version of the MARSI (Mokhtari and Richards, 2002). Notably, the new version witnessed a reduction in the number of reading strategies from 30 to a total of 15, which was deemed essential for the adoption of a restricted number of items in the survey phase. Subsequently, we submitted these strategies scrutiny, since not all of them were deemed appropriate to the construction of our questionnaire on learners' metacognitive awareness. Strategies 1., 6., and 10. of the MARSI-R were omitted, and the rationale for this decision is expounded below. The first strategy, denoted as «*1. Having a purpose in mind when I read*», was excluded due to its perceived redundancy in the testing scenario, where the objective is neither entertainment nor information acquisition but rather successful completion of the comprehension test. Strategy 6, which is «*Discussing what I read with others to check my understanding*», was discarded as learners are precluded from engaging in discussions during the comprehension testing. Lastly, strategy 10, stating «*Using reference materials such as dictionaries to support my reading*», was expunged, as, akin to strategy 6, it contravened the regulations governing test administration. The elimination of these three strategies paved the way for their substitution with some of the strategies derived from the observational data of TAPs.

In total, around 9 strategies were integrated into the MARSI-R, encompassing aspects related to both task resolution and reading. A comprehensive overview of the 21 strategies employed to assess learners' metacognitive awareness of the text comprehension task is presented in Table 23.

[106] In MARSI (2002), a disproportion was evident among the three macro-categories of GRS, SRS, and PSRS. Specifically, GRSs comprised a considerably larger number of items if compared to SRSs, and SRSs, in turn, outnumbered PSRS items.

Table 23 - MARSI-R adaptation for the experimental questionnaire

SRS	**1. I go back and forth in the text to find relationships between questions and information in the text.**
SRS	2. I take notes while reading so that I can better understand what I am reading.
GRS	3. before I read a text, I get a first impression of the topic from the title.
SRS	4. If the text becomes difficult, I read aloud so that I can better understand what I have read.
GRS	5. I consider whether the content of the text matches the reading objective I have set myself.
PSRS	**6. I assess the accuracy of an answer and check it against information from the text.**
PSRS	7. I try to refocus when I am distracted while reading.
SRS	**8. I underline or circle information in the text so that I can memorise it better.**
PSRS	9. I adjust my reading speed according to what I am reading.
GRS	**10. I look at the structure of the exam booklet before I start reading.**
PSRS	11. I stop from time to time to think about what I am reading.
GRS	12. I use typographical aids such as bold or italics to pick out key information.
GRS	13. I critically analyse and evaluate the information I read.
PSRS	15. I guess the meaning of unknown words or expressions.
PSRS	**16. I translate what I read to better understand the meaning.**
SRS	**17. I scan the text quickly when I am looking for precise information.**
PSRS	**18 I try to visualise the information to help me remember what I have read.**
GRS	**19. I read the task instructions before carrying out the task.**
SRS	**20. I copy down the answers on the answer sheet when I have finished the task.**
SRS	**21. I summarise what I have read to reflect on important information in the text.**

As indicated in Table 23, the division of strategies into the macrocategories GRS, PSRS, and SRS was upheld, also maintaining a balanced distribution with seven strategies allocated to each macrocategory. The strategies, denoted in bold, signify the ones effectively incorporated into the MARSI-R (2018) during the adaptation of the inventory for the experimental questionnaire. Specifically, strategy 8 was elaborated for clarity, aiming to enhance its accessibility for learners. The adaptation process also addressed the issue of the accessibility of MARSI-R statements concerning learners' strategic knowledge. We contend that the formulations of MARSI-R items, while more concise, are rich in meaning. This meaning is not always grasped by those unfamiliar with and unaccustomed to the use of certain strategies, particularly in the case of a relatively young learner group. For this reason, we preferred to use the strategy formulation used in the previous version of MARSI (2002), while retaining the selection of strategies made in the new version (MARSI-R, 2018). The wording of the items in MARSI (2002) appears, in fact, more didactic, explanatory and less impersonal. These attributes contribute to

creating a closer connection with learners who may feel more engaged in detailing their comprehension experience. Another aspect scrutinized, in addition to the previously presented adaptation, pertained to the investigation of self-assessment regarding the level of reading proficiency in the Italian language. The inquiry outlined four proficiency levels for the question: excellent reader, expert reader, neither expert nor inexpert, and inexpert reader. In our assessment, this aspect would have augmented the understanding of the metacognitive knowledge the readers holds about themselves.

6.2.2.2 L2 Motivational Self System questionnaire

In the preceding paragraphs of this work (refer to Section 3.3.3), an elucidation of Dörnyei's L2MSS Theory (2005, 2009a) was provided, emphasizing its significance in our theoretical framework for delineating the dispositional motivational traits of the scrutinized sample. To gather information pertaining to the L2 Motivational Self-System (L2MSS), we employed a practical model disseminated by Dörnyei on his personal website, which had been shared before his untimely demise[107]. This model, utilized by Dörnyei and Chan (2013), validated that visions of future selves speaking different languages are language-specific and contribute to learners' motivation. Notably, Dörnyei and Chan's (2013) study focused on a comparison between English and Mandarin Chinese languages. Consequently, the section of the original questionnaire addressing L2MSS was modified to accommodate self-perceptions related to the learning of the Italian language. The L2MSS survey comprises 15 items formulated assertively, allowing each learner to assess their level of agreement on a 5-value Likert scale. A rating of 1 signifies absolute disagreement, while a rating of 5 indicates complete agreement with the examined item. The survey items are categorized based on a tripartite and balanced logic, with items corresponding to the L2 Ideal-self (IS) totalling 5, Ought-to-self (OS) comprising 5 items, and Actual-self (AS) incorporating 5 items. A comprehensive distribution of the items within the three L2MSS categories is presented in Table 24.

[107] The personal website of the esteemed scholar Zoltàn Dörnyei was taken offline in the days subsequent to his demise on June 10, 2022. Regrettably, due to these circumstances, it is no longer feasible to furnish the link to the scientific source that inspired our L2MSS questionnaire.

Table 24 - L2 Motivational Self System questionnaire

OS	1. I study Italian because close friends of mine think it is important.
AS	2. I am prepared to expend a lot of effort in learning Italian.
IS	3. When I think of the future, I can imagine myself using Italian in a variety of ways.
OS	4. I have to study Italian, because, otherwise, I think my parents will be disappointed with me.
AS	5. When I am in my language class, I volunteer answers as much as possible.
IS	6. I can imagine myself being a very competent speaker of Italian.
OS	7. People around me believe that I must study Italian to be an educated person.
AS	8. I would like to spend lots of time studying Italian.
IS	9. I can imagine myself writing e-mails in Italian fluently.
AS	10. I would like to concentrate on studying Italian more than any other topics.
OS	11. Studying Italian is important to me in order to gain the approval of my family.
IS	12. I can imagine myself participating in a debate in Italian.
OS	13. I consider learning Italian important because the people I respect think that I should do it.
AS	14. I would like to study Italian even if I were not required to do so.
IS	15. I often imagine myself speaking Italian as if I were a native speaker of Italian.

6.2.2.3 Emotions and Task Motivation

As expounded in paragraph 3.3.4, Dörnyei (2020b) delineates a secondary tier of components that, in conjunction with dispositional motivational traits, formulate the framework of learner motivation from a CDST perspective, namely characteristic motivational adaptations. This category of motivational components encompasses factors intricately connected to the specific learning context, including emotions, metacognitive appraisals, and task motivation. Our earlier discussion in paragraph 3.3.4.1 has already addressed the considerations regarding emotional components in this survey, encompassing the chosen emotions and the adopted modality of inquiry. Therefore, we shall refrain from revisiting this discussion, and readers are encouraged to refer to the aforementioned section for more details. In this context, we will instead elaborate on the construction of the survey concerning task motivation, which, as highlighted in paragraph 3.3.4.2, can be viewed as an amalgamation of metacognitive, motivational, and affective factors. For a comprehensive summary of all the components scrutinized in our task motivation survey, Table 25 will be instrumental:

Table 25 - Task motivation questionnaire

Task difficulty	1. How difficult do you find the reading comprehension task in Italian?
Task appropriateness	2. Do you think the result of the test appropriately reflects your language level?
Self-efficacy 1	3. Do you feel prepared for the reading comprehension task?

Self-efficacy 2	4. Do you feel that you can read and understand texts in Italian better than some of your classmates?
Task appreciation 1	5. How interesting do you find the reading comprehension task in Italian?
Strategy utility	6. How useful do you find the reading strategies that your Italian teacher teaches you in class?
Perceived relationship between strategies and language	7. Do you think that knowledge of reading comprehension strategies helps you to appreciate Italian more?
Task appreciation 2	8. Do you enjoy the reading comprehension task in Italian?
Self-efficacy 3	9. Do you feel that you have the right skills to complete the reading comprehension task in Italian?

For this segment of the pre-test survey, participants were required to assess each question on an 11-point Likert scale, where 0 indicated “not at all” and 10 indicated “very much so”. As delineated in Table 25, this section of the survey exhibits a less systematic structure compared to the preceding ones, rendering it more intricate for the subsequent analytical phase. The intricacy of this final section of the pre-test survey arises from the amalgamation of elements closely associated with task value and those pertaining to learners' expectations regarding their own performance. In the selection of questions, our objective was to concentrate on aspects that could comprehensively capture learners' perceptions on both metacognitive and emotional-motivational grounds.

6.2.3 Post-test questionnaires

As previously delineated (refer to Section 6.2.2), the groundwork invested in formulating the three sections of the pre-test survey and their corresponding survey items streamlined the development of the post-test surveys. In its construction, the post-test surveys adhered to the template of the pre-test survey, maintaining the tripartition and retaining the original selection of survey items. The sole section subject to minor modifications was the task-motivation section. This decision to keep the first two sections unaltered was deliberate, allowing for the tracking of alterations in learners' metacognitive awareness and their emotional-motivational involvement with the language and the task, aligning with the research questions (cf. 6.1.). Conversely, in the third section pertaining to task motivation, adjustments were implemented to prompt the surveyed learners to contemplate the potential shifts in their metacognitive and motivational sentiments following their respective training. To capture this information, the post-test was designed in two versions, one tailored for an Experimental Group (EG) and the other tailored for a

Control Group (CG). Table 26 provides a comparative overview of the task motivation section presented in the pre-test and the two versions proposed in the EG and CG post-tests.

Table 26 - Comparison of pre-test, post-test EG and post-test CG task motivation items

Pre-test Task Motivation	**Post-test Task Motivation EG**	**Post-test Task Motivation CG**
1. How difficult do you find the reading comprehension task in Italian?	**1. How difficult do you find the reading comprehension task in Italian after the training?**	**1. How difficult do you find the reading comprehension task in Italian after the training?**
2. Do you think the result of the test appropriately reflects your language level?	2. Do you think that the result of the test appropriately reflects your language level?	2. Do you think that the result of the test appropriately reflects your language level?
3. Do you feel prepared for the reading comprehension task?	**3. Do you feel prepared for the reading comprehension task after the training?**	**3. Do you feel prepared for the reading comprehension task after the training?**
4. Do you feel that you can read and understand texts in Italian better than some of your classmates?	4. Do you feel that you can read and understand texts in Italian better than some of your classmates?	4. Do you feel that you can read and understand texts in Italian better than some of your classmates?
5. How interesting do you find the reading comprehension task in Italian?	**5. How interesting do you find the reading comprehension task in Italian after the training?**	**5. How interesting do you find the reading comprehension task in Italian after the training?**
6. How useful do you find the reading strategies that your Italian teacher teaches you in class?	6. After the training, how useful do you find the reading strategies **that the training tutor taught you in class?**	6. After the training, how useful do you find the reading strategies that your Italian teacher taught you in class?
7. Do you think that the knowledge of reading comprehension strategies helps you to appreciate Italian more?	7. Do you think that the knowledge of reading comprehension strategies helps you to appreciate Italian more?	7. Do you think that the knowledge of reading comprehension strategies helps you to appreciate Italian more?
8. Do you enjoy the reading comprehension task in Italian?	8. Do you enjoy the reading comprehension task in Italian?	8. Do you enjoy the reading comprehension task in Italian?
9. Do you feel that you have the right skills to complete the reading comprehension task in Italian?	**9. After the training do you feel that you have the right skills to cope with the reading comprehension task in Italian?**	**9. After the training, do you feel that you have the right skills to cope with the reading comprehension task in Italian?**

As illustrated in Table 26, the deliberate decision to focus the learners' opinions on their perceptions "after the training" was intentional for both groups, namely the EG and the CG, for which the questionnaires were specifically devised. Despite the fact that, according to the plan, the EG would have undergone a metacognitive-motivational training session, in reality, the CG would have engaged in a training session too. While the EG would have received guidance from a tutor in developing strategies to enhance reading and task-solving practices, the CG would have pursued this training autonomously and independently. Independent self-training before the examination is a well-established practice, and it is highly advocated by BIFIE. Specifically, learners planning to undertake the written examination in a second foreign language are warmly raccomended to engage in self-directed preparation, utilizing the tests provided on the ministerial website for the Austrian Matura (refer to footnote 90). Consequently, the CG learners would have trained alone relying on their strategic knowledge from school and extracurricular experiences, whereas the EG would have performed and learned new strategies under the guidance and the teaching intervention of the experimental tutor. Returning to the task motivation questionnaire, it was imperative for the questionnaire to underscore these intervention differences and for them to be explored through two distinct surveys. Item 6 stands out as the sole element within the post-test task motivation section that serves as a distinctive factor between the two training methodologies, enabling the collection of data about the different perceptions between learners in the EG and in the CG.

6.2.4 Post-hoc interview

For the concluding segment of our survey instruments, the decision was made to construct a questionnaire comprising queries that could elucidate aspects of the experiment complementary to those already explored by the previous questionnaires. It is important to note that this questionnaire would be administered to only a select subset of the EG. The rationale behind conducting this post-hoc interview with a small focus group within the EG was to gain insights into their respective perceptions of the metacognitive-motivational training they had undergone. The formulated questions not only sought to discern the focus group's perspectives on the training but also to identify any challenges or issues related to the high-school-leaving exam and the process of learning Italian as a

foreign language in the classroom. Table 27 outlines the questions devised for this final phase of data collection.

Table 27 - Focus group final questionnaire

1. What was your first impression of the training? Did you find it useful or a waste of time?
2. Can you tell me at least two things you liked about the training and two things you didn't like?
3. In your opinion, is one hour of training enough or would you have liked more time? Why?
4. During the training I used a mixture of Italian and German. Was this useful or did it somehow confuse you?
5. Have you ever heard about the strategies I explained during the training? If yes, when? Have you ever used them before the training?
6. Did you use the strategies from the training again after the trial? At home, at school or in another subject?
7. Usually the Italian teachers ask you to practise at home with the materials from the SRDP ministry website, where there are the Matura tests from previous years. Have you ever used these for reading and text comprehension? And for the other Italian Matura tests?
8. Which part of the Italian exam is the most difficult for you? And what do you think of the reading test instead?
9. Is there a task in the reading test that you find more difficult than the others?
10. Do you think a strategy course is necessary to prepare for the Italian high-school-leaving exam?
11. Does your Italian teacher motivate you to learn Italian? How?
12. What other advice would you give your Italian teacher? What else could your Italian teacher do to motivate you?

As indicated in Table 27, inquiries from question 1. to question 5. primarily focused on the learners' reflections concerning the training experience. In contrast, questions 6. to 12. delved into the broader aspects of experiencing the Austrian high-school-leaving exam and its autonomous preparation, along with insights into motivation within their Italian language class.

6.3 Metacognitive-Motivational training design

The preliminary study phase, detailed in the preceding chapter, emerged as a crucial foundation for the subsequent formulation of metacognitive-motivational training. In paragraph 5.3, the comprehensive work undertaken through the CTA delineated the learning objectives imperative for guiding the implementation of training aimed at

fostering learners' competence in comprehension. This section aims to respond to a pivotal question that has been integral to our research journey: how can the pedagogy of text comprehension be effectively imparted?

Within this context, a comprehensive exposition will be provided, unravelling the entire generative process of the experimental training, spanning the exploration and curation of teaching materials, their development, and the necessary adaptations for the testing environment. Subsequently, the planning process of the teaching intervention will be described, shedding light on the rationale governing structural decisions, objectives, and pedagogical approaches that characterize the crafting process of the experimental training program.

6.2.1 Standardised tests as training material

The development of experimental surveys was succeeded by a subsequent task, involving the selection of instructional materials for the implementation phase of metacognitive-motivational testing. Our fundamental approach in crafting materials for experimental training aligns with the perspectives espoused by Gorsuch and Griffee (2018).

Specifically, Gorsuch and Griffee (2018) posit that the knowledge gap separating a learner from successful test performance can be bridged through the utilization of the test as a learning tool. Regardless of their diligence in studies, learners may experience a decline in performance due to test anxiety, given that their future careers often hinge on test results. The authors propose that adopting tests as learning material could enhance learners' memory-retrieval mechanisms, alleviate test anxiety, and elevate their expectations regarding performance. Moreover, Gorsuch and Griffee (2018) highlight that this knowledge gap not only affects learners but also teachers, who are frequently not fully cognizant of the skills required by these tests. Teachers administer these tests as mandated by institutional policies, often disregarding actual classroom teaching practices and their own competences. According to the authors (ibid.), employing tests as learning materials could assist teachers in providing more relevant feedback on learners' performance when integrated into their teaching practices.

Our approach to the experimental training aimed to converge the three components of the metaphorical triangle – the task, the teachers, and the learners. In our perspective, effective experimental training should have reestablished interactions and exchanges

among these three elements within the foreign language classroom system. In section 5.2.1, where we discuss the features of the Italian text comprehension task, we formulated guidelines to assist teachers in comprehending the task's peculiarities. These guidelines encompassed aspects such as page layout, task types, cognitive-linguistic demands, themes within the texts, word count, readability level, and the overall textual complexity of the analyzed corpus. Subsequently, we will elaborate on the efforts undertaken to align with the viewpoint of Gorsuch and Griffee (2018) and develop teaching materials based on each of the aforementioned characteristics.

6.2.1.1 Training text adapation

The overarching aim of the textual research was to identify teaching materials and textual content suitable for learners of Italian at the B1 level. As per our plan, the intended total number of texts to be collected for supporting the training activities was 16[108]. Regrettably, within the realm of Italian didactics, there is currently a dearth of text corpora that could assist teachers in selecting appropriate study materials for a specific language level[109]. Therefore, the Expert Analysis conducted earlier (see 5.2.1) proved highly informative and served as a foundational reference for establishing specific criteria in the selection of textual material.

The initial selection of texts commenced by amalgamating two sets of criteria: the thematic preferences outlined in the BIFIE guides (see 5.1.1.1.6) and the linguistic complexity of the text. It is acknowledged that not all texts provide detailed information on linguistic level of complexity. Nonetheless, as an initial approach, we opted to begin with a language teaching magazine specialized in Italian as a FL, namely *Adesso*, that could help us in this direction[110]. In this magazine, no language level is explicitly indicated according to the CEFR. However, using broad parameters, the publisher categorizes texts into three levels of difficulty: easy, medium, and difficult. For the initial

[108] This number, initially set at 16 texts as part of the preliminary planning for the experimental training, will be significantly reduced due to reasons that will be elucidated later in the text.
[109] Indeed, the responsibility for selecting texts for language learning is frequently entrusted to the expertise of the Italian as a Foreign Language (FL Italian) teacher. In his discourse on the selection of Italian texts tailored to a designated language level, Ventouris (2018) advocates for the establishment of a corpus comprising texts from various FL Italian language certifications. This corpus would facilitate a comparative analysis, allowing for the identification of common criteria and characteristics in the selection of texts.
[110] *Adesso* is a periodical crafted by Zeit Sprachen, an eminent publication within the domain of language magazines. Currently, it is published under the Zeitverlag brand, the same publishing house responsible for producing the newspaper *Die Zeit*.

selection from the most recent monthly issues of the year 2022, we opted for 10 texts labelled with medium difficulty that align with the subject pool of the BIFIE for the Austrian Maturaprüfung. With regard to the second selection process, primarily guided by the thematic criterion, we aimed to identify 10 digital texts from various online sources, including online magazines, blogs, and online newspapers (refer to the Websites section)[111].

In the subsequent stages, the total number of texts was reduced from 20 to 16, with the objective of developing four distinct sets of tests, each corresponding to one of the four comprehension tasks in the Austrian high-school-leaving exam. The process of narrowing down the number of texts involved the incorporation of new criteria, including word count and readability level based on the parameters of the IM. Each selected text was targeted to have an average length of approximately 480 words, with a minimum set at around 440 words and a maximum at around 590 words. Concerning the Gulpease Index, the average was maintained between 60 and 80 GI value points. However, as previously indicated in the Expert Analysis (refer to Table 4), exceptions with a range of up to 52 GI value points were deemed acceptable. Preference was given to texts requiring minimal adaptation changes.

Regarding modifications for text adaptation, a distinction was drawn between alterations related to textual complexity and those related to aligning the text with the task requirements[112]. In the first case, modifications were implemented to simplify the texts, focusing on linguistic and discursive aspects outlined in the Expert Analysis (refer to 5.1.1.7). Additionally, changes in textual complexity involved reductions in text length, impacting textual coherence and cohesion. Conversely, in the second case, adaptation changes related predominantly to the lexical and discursive aspects, as well as the page layout of the task. Modifications at the lexical and discursive levels were made following the model of the official examination booklets, aiming to generate cognitive-linguistic requirements identified in the earlier Expert Analysis section (refer to 5.1.1.2.1). Regarding layout, the examination booklets served as a template for crafting task

[111] The decision to rely on online sources was taken after studying the sources of the texts in the official examination booklets of the Austrian Maturaprüfung. A significant number of these texts were adapted by the test-design committee from various online platforms, including blogs, magazines, and internet articles.
[112] In this context, a detailed analysis of the numerous modifications applied to each text will not be presented, given the complexity and absence of systematic patterns in the interventions performed. Nevertheless, a summary of the general types of interventions leading to the modification and adaptation of the chosen corpus of texts as educational materials will be provided.

instructions, selecting and positioning images, structuring questions for the four task types, and developing the corresponding answer sheets. In Table 28, a compilation of the 16 texts created for the occasion is presented, accompanied by their respective quantitative attributes, specifically the word count and GI value points.

Table 28 - Training reading comprehension testing materials

Text	**Title**	**Word count**	**GI value points**
T1.1	A casa come al… bar	450	61
T1.2	Come imparano i robot? Copiando!	434	62
T1.3	Spesa elettronica a 102 anni	453	65
T1.4	Uno sport senza età	474	68
T2.1	Blanco	454	59
T2.2	Gabry Ponte, dj dal sangue Blue	488	65
T2.3	Italiani al volante	524	61
T2.4	Takoua, una fumettista sotto il velo	510	65
T3.1	I gatti più social del mondo	482	65
T3.2	La vera storia del babà	539	69
T3.3	Primo giorno a Berlino	502	69
T3.4	Un sorso d'estate	470	67
T4.1	Mantenersi in forma con poco sforzo	495	59
T4.2	Raffinati con outfit low-cost	582	65
T4.3	Sei posti meravigliosi d'Italia	561	61
T4.4	Sei scuole speciali nel mondo	567	60

In Table 28, the designation "T1" is assigned to texts adapted for the reading comprehension task featuring multiple-choice questions, whereas "T2" designates tasks requiring a short-answer response. "T3" is used to identify texts designed for phrase matching, and, lastly, "T4" is the code assigned to texts intended for question-paragraph matching.

6.2.2 Planning of the teaching intervention

The development of a structured teaching intervention plan was deemed essential, given that the experimental phase would involve two distinct groups of learners: the EG and the

CG. According to the outlined plan, both groups would undergo a form of training, driven by two primary objectives. Firstly, to ensure a degree of balance in the experiences of the EG and CG during the experimental phase. Secondly, to enable a comparative analysis between the traditional, autonomous training approach prescribed by the Austrian BIFIE and the experimental training designed to cultivate a more conscious autonomy among learners.

The theoretical underpinning for this intervention plan aligns with the OIT within the framework of SDT (see 1.1.2.3). Essentially, this study seeks to juxtapose two learning philosophies. On the one hand, the "learning by doing" approach, where learners acquire expertise through a fully inductive process by working repetitively and autonomously on a task. On the other hand, the "constructive learning" approach, which involves learners being guided by an experienced teacher to progressively develop greater metacognitive awareness and autonomy in performing the task.

To accomplish this, we organized the planning into two segments: one pertaining to traditional training and the other to experimental training. Concerning traditional training, it was determined that the participants would allocate a total of four hours for training, equating to one hour for each of the four training sessions. The decision for one hour per session was determined based on the BIFIE's guidelines regarding the duration of the Italian text comprehension examination in the Austrian high-school-leaving exam. During this examination, learners are tasked with reading and comprehending four texts in Italian, each accompanied by a distinct comprehension task (refer to 5.1.1.2; 5.1.1.3; 5.1.1.4; 5.1.1.5), with an average duration of approximately 20 minutes per task. In the case of traditional training, participants would devote the same duration to completing four reading comprehension tasks, designed for this purpose following the model of the Austrian Maturaprüfung (refer to 6.2.1). Each session would specifically focus on one of the four task types present in this test, maintaining a consistent average time of 20 minutes per text. With regard to the experimental training, instead, the allocated time extends to a total of 8 hours, with 2 hours assigned to each of the 4 experimental sessions. Specifically, the time distribution was planned as follows: 80 minutes dedicated to the experimental training session and 40 minutes designated for autonomous training. The fundamental idea was to adopt two custom-designed texts as teaching material for the metacognitive-motivational training part, while the remaining 40 minutes would be reserved for the learner’s autonomous training on the remaining two texts scheduled for the session (20

minutes per text). Table 29 provides a concise overview of the proposed schedule for each of the two training sessions in this experiment.

Table 29 - First training schedule proposals

Experimental Training	**Duration**	**Traditional Training**	**Duration**	**Texts**
Metacognitive teaching session on a text comprehension model with multiple choice answers and exercise unit on the same model.	2 hours (80 min. + 40 min.)	Exercise unit on 4 text comprehension models with multiple-choice answers.	1 hour	T1.1 T1.2 T1.3 T1.4
Metacognitive teaching session on a text comprehension model with short answers and exercise unit on the same model.	2 hours (80 min. + 40 min.)	Exercise unit on 4 text comprehension models with short answers.	1 hour	T2.1 T2.2 T2.3 T2.4
Metacognitive teaching session on a text comprehension model with phrase matching answers and exercise unit on the same model.	2 hours (80 min. + 40 min.)	Exercise unit on 4 text comprehension models with phrase matching answers.	1 hour	T3.1 T3.2 T3.3 T3.4
Metacognitive teaching session on a text comprehension model with question-paragraph matching answers and exercise unit on the same model.	2 hours (80 min. + 40 min.)	Exercise unit on 4 text comprehension models with question-paragraph matching answers.	1 hour	T4.1 T4.2 T4.3 T4.4

The structure of the experimental training, as outlined in Table 29, is intentionally schematic and repetitive, aiming to establish a series of behavioral patterns. When repeated, these patterns become instrumental in shaping new cognitive habits for the learner. However, these habits cannot be understood as a mere implementation of a procedure; rather, they presume the development of strategies supported by a set of conditional knowledge (Jacobs and Paris, 1987), elucidating the rationale behind their adoption. In this context, the teacher would guide the learners through a process termed Structured Inquiry (Zion and Mendelovici, 2012) to explore the strategies involved in

each comprehension task (refer to 2.3.2). Moreover, employing a subdivision of the learning objectives and a test-teach-test approach (Kozulin and Garb, 2002), the teacher would lead the learner systematically toward complete metacognitive awareness regarding the 4 different tasks. Ultimately, another teaching objective was to progressively shift the agency of the resolution process more towards the learners, facilitating the transition from hetero-regulated to self-regulated learning. In the latter phase, the teacher's role would evolve from mentor to a provider of feedback on the learners' performance.

6.2.2.1 Teaching intervention structure

The transition from the planning phase to the implementation phase of the experiment inevitably encounters the contingencies of the experimental reality under investigation, and regrettably, this was also the case in this study. Subsequent to the identification of the experimental sample, the training planning, outlined in the preceding section, underwent a significant reduction in research objectives and the experimental timeframe, as stipulated by the host institution[113]. Notably, this reduction in research objectives was a direct consequence of a decrease in the hours allocated by the educational institution where our experiment took place. Originally, the requested time for the experimental training alone, at the contacted educational institutions, were 8 hours for the EG and 4 hours for the CG[114]. However, the institution's constraints resulted in a maximum of 2 hours for EG training and 1 hour for CG training. As previously mentioned, this drastic reduction necessitated substantial modifications to the research objectives, as the initially planned structure aimed at the gradual transition from hetero-regulation to self-regulation of the learning process. In this regard, the structure implicitly mirrored the theoretical perspective that underpinned the entire experiment. Additionally, from a teaching standpoint, these restrictions had a more pragmatic impact, narrowing the focus of the training from four types of reading comprehension tasks to just one, leading to necessary teaching choices and exclusions.

In an effort to align with the institution's constraints and to collaboratively support its objectives, informal consultations were conducted with teachers, seeking their insights

[113] The dynamics involved in this reduction will be addressed in more detail in the section on the limitations of the study conducted for this dissertation.
[114] Questo conteggio esclude i tempi di somministrazione delle surveys e le fasi di pre-test e post-test.

into the Italian reading comprehension task that posed the greatest difficulty for learners. The teachers unanimously pointed to the question-paragraph matching task. Accordingly, the development of our experimental training was directed towards this task, outlining teaching objectives that encompassed both metacognition and motivation. Table 30 provides a summary of the objectives specifically addressed through the experimental training for the reading comprehension task involving question-paragraph matching.

Table 30 - Metacognitive-motivational training structure

Metacognition	**Motivation**
	Relaxation techniques - focus on the relationship among body, emotions and self-efficacy beliefs
Task instruction focus	Total Physical Response and playful activity
Prior knowledge activation on image and title	Peer clustering through discussion
Understanding of elaborative inference	Multimodal input and evocative reflection
Understanding working memory loading	Experiential activity on Miller's law (1956)
Short-summary and taking-notes strategies	
Circling keyword information strategy	
Answer-trigger search and answer-checking strategies	
Metalinguistic reflection on semantic relations among lexemes	
Summary of the training through planning strategy display	
	Reflection on self-efficacy and emotions

Table 30 delineates a series of subtasks targeted for comprehensive exploration and enhancement through the experimental training. The arrangement of the Table 30 adopts a chronological structure, resembling a timeline, where subtasks within the same column progress in temporal succession from top to bottom. Concurrently, subtasks positioned in the same row undergo parallel development. The overarching methodology guiding the in-depth examination of each subtask adheres to the SI approach. Within this framework, the teacher introduces activities designed to prompt reflective thinking on the part of the learner, facilitating the inductive generation of hypotheses pertaining to the observed phenomenon. This first approach is integrated within a sequence of activities that follows the Test-Teach-Test model (Kozulin and Garb, 2002). In the initial phase, the teacher guides the learner's reflection through a SI, generating questions and observations. Then, in the following phase, the teacher clarifies ambiguous aspects that arise from

metacognitive-motivational contemplation, interconnecting them with the reading comprehension task (teach phase). Subsequently, before progressing to the next subtask, the learners engage in a verification process, assessing the acquired knowledge through a practice test conducted directly on the teaching materials prepared for this purpose (refer to 6.2.1) (test phase). This cyclical approach aims to foster a systematic and reflective learning process, promoting an iterative development of metacognitive awareness and motivation throughout the training sessions.

Moreover, the division presented in Table 30 serves to illustrate the two main areas of emphasis within the training intervention, namely metacognition and motivation. The metacognitive dimension, delineated by the various subtasks in the column, has been thoroughly explored in prior chapters. It encompasses cognitive-linguistic components, task-related and reading-related metacognitive aspects, each designated for enhancement through the experimental training. The objectives outlined in the first column of Table 30 clarify the selection of metacognitive teaching goals, adjusted in response to the previously addressed reduction in experimental timing and objectives. Conversely, the motivational dimension pursues a two-fold objective. Firstly, motivation is regarded as an engagement tool, making the lesson inherently motivating by employing didactic approaches, techniques, and topics that captivate learners' interest and involve them in the discovery of their cognitive and metacognitive processes. Secondly, motivation is conceived more broadly, encompassing personal growth goals. This entails reflections on metacognitive estimates and the interplay between these estimations and learners' emotional states. In this context, the motivational focus extends to meta-strategic aspects, involving metacognitive estimations and emotions, which influence learners' motivational attitudes towards the task and, more broadly, towards the subject of study. The comprehensive approach to motivation in the training intervention addresses both the immediate engagement in the learning process and the broader cultivation of learners' metacognitive and emotional well-being.

Chapter 7: The Experiment

While the preceding chapter delved into delineating the planning intricacies of the experimental phase, the present chapter embarks upon a narrative of the experiment's tangible implementation. Our exposition commences with an elucidation of the experimental sample, delineated through the adoption of diverse criteria aimed at defining a highly specific target population. Additionally, we shall expound upon the bureaucratic requisites entailed in the experiment and the challenges encountered in identifying collaborating institutions for this project. Subsequently, we shall furnish a succinct overview of the identified sample, endeavouring to furnish all requisite information essential for profiling the participating learners. Proceeding further, this chapter shall elaborate upon the procedural intricacies entailed in the collection of experimental data, encompassing the subdivision of the sample, task selection, and delineation of experimental timelines. Concluding our exposition, we shall revisit certain theoretical underpinnings that informed the selection of analytical methodologies to be applied to the sample, followed by a presentation of said methodologies in the ensuing section devoted to data treatment.

7.1 The sample

7.1.1 Constraints on the field of inquiry

The process of identifying a suitable sample for the experimental pathway outlined above entailed considerable effort. Initially, it was determined that two categories of schools would be targeted: Berufsbildende Höhere Schule (BHS), vocational high-schools, and Allgemeinbildende Höhere Schule (AHS), general high-schools. However, subsequent deliberation led to the decision to confine the study to the latter. This decision was prompted by the recognition that the topics covered in the BHS's test texts diverges significantly from that of the AHS, accompanied by variations in task modalities for assessing comprehension. Thus, engaging with the BHS would have necessitated the introduction of a secondary CTA, thereby extending the experimental duration unduly. Furthermore, this strategic choice was motivated by the objective of minimizing the number of variables subject to analysis. Accordingly, efforts were directed towards

confining the experimental framework exclusively to the AHS, with particular emphasis on groups of learners nearing matriculation. This refinement was also informed by the consideration that engaging in experimental testing would require learners to be proficient enough to undertake a B1 level comprehension test in Italian as a FL. Incorporating learners of a younger age bracket, possessing less advanced linguistic competencies, would inevitably impact both performance outcomes and employed strategies. Consequently, subsequent to the identification of the target audience, namely, learners of Italian as a foreign language in their final year at an AHS institution, endeavors were undertaken to ascertain the sample of Austrian schools willing to participate voluntarily.

7.1.2 The bureaucratic infrastructure behind the identification of the sample

In order to initiate the process of collecting experimental data within Austrian schools, adherence to a comprehensive bureaucratic protocol is requisite. Primarily, engagement with the Bildungsdirektion of the relevant Austrian jurisdiction is imperative. The Bildungsdirektion serves as the ministerial entity overseeing educational administration at a regional level, and in this context, pertained to the Steiermark region. Subsequently, upon solicitation by the Bildungsdirektion Steiermark, the experimental team was tasked with formulating a document in German delineating the project's specifics, methodologies for data acquisition, and a preliminary questionnaire inclusive of all requisite learner information. Moreover, to bolster the proposal's persuasiveness, strategic emphasis was placed on delineating the prospective objectives and advantages to bring to the eighth-grade learner groups within AHS in the region. The endorsement of the data collection endeavor by the Bildungsdirektion Steiermark transpired over an approximate duration of two weeks. The decision to focus the data collection efforts within this particular region stemmed from the pre-existing affiliations between the University of Bologna, to which the research project pertains, and the University of Graz, facilitated by the collaborative agreements of the Erasmus+ program. Hence, this decision ensured not only financial backing for the experimental phase but also facilitated networking efforts crucial for establishing connections with local schools through the university apparatus in Graz. Moreover, in accordance with our projections, Graz, as the second-largest city in Austria, was anticipated to offer a broader catchment area of schools compared to other cities in the country.

7.1.3 The challenges in identifying the sample

Following the attainment of authorization (Genehmigung) from the Bildungsdirektion Steiermark, concerted efforts were directed towards establishing contacts with educational institutions. Initially, comprehensive outreach was conducted across all AHSs within the designated region, with particular emphasis on those situated in Graz and adjacent urban towns. From the array of AHSs identified, preference was accorded to those offering Italian as a Wahlpflichtfach, denoting a compulsory elective subject, alongside English as a second FL. This selective criterion served to narrow down the pool of potential schools to nine AHS institutions. Subsequently, within each identified school, educators entrusted with teaching Italian as a secondary discipline were identified. Approximately 50 such instructors were contacted in total, constituting a pivotal step in the outreach process[115]. Consequently, individualized emails were dispatched to each educator, alongside their respective headmasters, containing the authorization documentation (Genehmigung), a concise delineation of the meta-strategic intervention's objectives, and its potential benefits. Additionally, a comprehensive exposition of the intervention's execution modalities was provided. This exposition encompassed details regarding the anticipated duration of the entire experimental intervention, the delineation of experimental and control groups, and the respective trial procedures. Furthermore, leveraging the networking resources facilitated by the University of Graz, an opportunity arose to participate in the region's ItalienischlehrerInnentag (Italian teachers' day). During this event, attended by approximately 70 Italian educators spanning various school levels and grades, the project's objectives, benefits, and spatial-temporal structure were presented in detail. Notwithstanding the extensive efforts invested in disseminating the project, expressions of interest were scarce. Merely one of the contacted schools evinced a desire to delve further into the project's intricacies, demonstrating sincere interest in the ongoing research endeavor. However, this institution encountered formidable obstacles in resource allocation and the practical realization of the experimental requisites[116].

Considering the challenges encountered in data collection within the designated region, recourse was made to personal connections of colleagues engaged in Italian instruction

[115] In Austria, educators typically possess specialization in a minimum of two teaching subjects. Consequently, it is common for an individual instructing Italian to also hold expertise in areas such as mathematics, geography, art, English language, or other subjects encompassed within the school curriculum.

[116] We intend to elaborate further on the challenges encountered by Austrian educators in accommodating experimental initiatives in the subsequent section dedicated to the limitations of this study (refer to Section 8.2).

within the AHS of the Eastern Tyrol region[117]. While the project was met with considerable enthusiasm by colleagues, accompanied by a willingness to engage in collaborative endeavours, the operational constraints imposed by the educational institution necessitated significant and unavoidable modifications to the original proposal. Foremost among these adjustments was the limitation imposed on available time by the school, which was reduced from the initial requisition of 12 hours to a mere 4 hours. This reduction in temporal allocation precipitated a consequential shift in the investigatory objectives of the experiment, transitioning from a training regimen designed to encompass four distinct task types to one confined to a single comprehension task. These sudden and pronounced alterations inevitably induced a revision of the project's framework and recalibration of expectations regarding the anticipated effects of the training regimen. Nonetheless, these adjustments were imperative to facilitate the acquisition of experimental data essential for the present research, thereby averting the prospect of leaving critical hypotheses untested.

7.1.4 The participants

As mentioned in the previous paragraph, the sample was drawn from the Eastern Tyrol region, specifically from the Bundes-Oberstufenrealgymnasium located in the city of Lienz. Similar to all AHS institutions, Italian serves as an elective secondary foreign language option following English. Notably, in these schools alternatives to Italian include French, Spanish, and in border areas, Slovenian. Given its elective nature, it is not guaranteed that all learners within a AHS opt for Italian; rather, classes are often divided based on learners' selection of the secondary FL. Furthermore, a distinctive feature of the Austrian Matura system is the learners' autonomy to choose which of the two FLs to pursue for their Matura certification. Additionally, learners have the option to elect whether to undertake the high-school-leaving examination in the chosen language through either a written (Schriftliche Prüfung) or oral (Mündliche Prüfung) format. Considering the multifaceted nature of these variables, the inevitable consequence in sample identification was a limited pool of Italian learners willing to participate in the meta-strategic training proposed by this project. In particular, this training primarily

[117] The Eastern Tyrol region presents a uniquely distinctive experimental setting, distinct from the Steiermark region, owing to its direct border adjacency with Italy. Notably, the city chosen as the experimentation site lies merely an hour's distance from the nearest Italian municipality and serves as a prominent tourist destination for numerous Italian winter sports enthusiasts.

targets specific skills pertinent to the written examination, further contributing to the small size of the group willing to engage in the intervention.

The initial group of volunteers who opted to participate in the training of this project amounted to 23 learners. However, as is typical in most experimentations, several individuals were subsequently excluded due to absences during one or more testing or training sessions. Consequently, the total number of participating learners was reduced to 17, comprising 14 girls and 3 boys, corresponding to a gender distribution of 88.2% and 11.8%, respectively. The average age of the participants is 17 years, with 58.8% falling within the 17-year-old category and the remaining 41.2% being 18 years old. All learners included in the sample are native speakers of German, specifically in the Austrian-Tyrolean dialect variant. They are currently in the final year of attendance at the AHS institution and have undergone Italian language instruction for a minimum of 4 years. Specifically, 61.1% have studied Italian for 6 years or more, 27.8% for 4 years, and 11.1% for 3 years. Furthermore, these learners have opted to undertake the written examination for the Matura certification in Italian as their chosen FL. Nearly all participants self-assessed their proficiency in Italian as being at a medium level (88.9%), with a small proportion reporting a low level of proficiency (11.1%). In terms of proficiency in other languages within the school curriculum, the data indicates a medium to high level of competence in English (55.6% high level, 44.4% medium level), whereas proficiency levels in Spanish and Latin are comparatively lower, with the majority reporting medium to low levels of competence or no knowledge at all. Specifically, for Spanish, 5.9% reported a medium level of competence, 17.6% reported a low level, and 76.5% reported no knowledge. Similarly, for Latin, 5.9% reported a medium level of competence, 5.9% reported a low level, and 88.2% reported no knowledge. Notably, none of the participants reported any proficiency in French. From a motivational standpoint, the primary factors driving the learners in our sample to pursue the study of the Italian language can be delineated as follows: familial ties or connections in Italian territory, the geographical proximity of Italy to their own region, perceived utility of Italian for future professional careers, and establishment of personal relationships with Italian speakers. Notably, among the top five reasons cited by participants, a prevalent motivator is the intrinsic enjoyment derived from engaging with the Italian language.

In addition to delving into the linguistic backgrounds and motivational factors of the learners, we deemed it imperative to explore their prior experience with reading

comprehension tasks. A substantial majority, comprising 82% of the participants, reported previous exposure to such tasks, while the remaining 18% indicated no prior experience. Among those with experience in reading comprehension, all had engaged with tasks in both English and Italian, with 79% also undertaking tasks in German and 28% in Spanish. This information suggests that reading comprehension tasks constitute a pervasive aspect across various languages of instruction, encompassing both native and foreign languages.

7.2. Elicitation Procedure

7.2.1 Sample subdivision and task choice

The experimental protocol necessitated the categorization of participants into two principal groups: an Experimental Group (EG) comprising 11 individuals (8 females and 3 males); and a Control Group (CG) comprising 6 individuals (all females). The division into experimental and control groups was imperative to effectively compare two distinct experimental modalities. Specifically, the control group adhered to a conventional training regimen, entailing autonomous and independent practice on text comprehension tests aligned with the designated task, as stipulated by the ministerial directives for the Austrian high-school-leaving examination. Conversely, for the experimental group, preparatory self-study sessions were complemented by a meta-strategic training regimen aimed at guiding learners through the intricacies pertinent to the designated task. The selection of one among the four available tasks, namely multiple choice, short answers (limited to a maximum of 4 words), phrase matching, and question-paragraph matching, was a deliberate process. Following the establishment of the allotted experimentation timeframe, deliberations ensued with the educators of the two classes comprising the sample population. Consensus was reached among the educators that the question-paragraph matching task posed the most serious challenge to the learners' text comprehension abilities. This selection presented a notable opportunity, as it resonated harmoniously with the research focal points of the experimental team. Indeed, while one of the primary aims of this investigation was to address and bolster learners' challenges, it was equally imperative for the experimental team to address the meta-strategic deficiencies highlighted by the preliminary study conducted by the CTA. Specifically, the utilization of question-paragraph matching offered a chance to address pivotal reading

support strategies. This task not only would have facilitated the discernment of crucial information within the questions, akin to the multiple-choice task, but also would have facilitated the implementation of strategies for notetaking, summary, and retention of information within the working memory.

7.2.2 Temporal scanning of the experimental phase

The allocation of the aforementioned sample yielded divergent temporal schedules for the experimental and control groups, respectively. For the EG, the duration amounted to approximately 3 hours and 10 minutes, with an additional 50 minutes allocated for a small focus group. Conversely, the CG underwent a session lasting approximately 2 hours and 10 minutes. The general trial unfolded across two sessions separated by a one-week interval.

During the initial session, both EG and CG participants engaged in an initial experimental phase spanning 55 minutes within a uniform working environment. Within this timeframe, the initial 10 minutes were designated for administering the sample profiling survey (refer to Sample Profile in the Appendix section), while the remaining duration was dedicated firstly to the reading-comprehension pre-test, followed by the metacognition-motivation pre-test survey. The decision to administer the reading-comprehension pre-test prior to the metacognition-motivation survey was intended to facilitate respondents' reflection on strategies employed, emotional responses, and task motivation. This arrangement anticipated a more favourable participant disposition immediately following the completion of the reading comprehension pre-test.

The reading comprehension pre-test segment endured approximately 15 minutes, aligning with the average duration of one of the four readings stipulated within the comprehensive reading and text comprehension task envisaged for the high-school-leaving examination. For the pre-test, it was determined that one of the standardized texts from the 29th of September 2022 examination booklet, to which the learners had not yet been exposed, would be utilized. The primary objective of this pre-test was to assess the comparability of the two experimental groups based on the average percentage of their initial scores. Subsequently, the remaining 30 minutes were allocated for respondents to address inquiries pertaining to the metacognitive strategies employed, as well as questions concerning the affective-motivational dimensions influencing task performance.

In the subsequent experimental phase, the EG and CG were segregated into distinct experimental settings. The CG participants were assigned to a teacher who oversaw their autonomous and independent work. Specifically, the CG learners were tasked with completing two of the training texts devised for the experimental phase pertinent to the question-paragraph matching task (refer to Training texts number 1 and number 2 in the Appendix section). Meanwhile, the EG underwent an experimental training session lasting approximately 1 hour and 15 minutes, guided by the instructional materials outlined in the Experimental Training Support slides (refer to the Appendix section), aligned with the predefined learning objectives delineated in Table 30.

The meta-strategic training protocol was implemented exclusively utilizing Training Text number 1, while Training Text number 2 served as supplementary self-study material, allowing learners to apply strategies and knowledge acquired during the training session. This strategic approach aimed to foster immediate application of learned strategies, albeit recognizing that thorough consolidation would necessitate additional time and practice, as originally envisioned. Subsequently, one week later, the sample group reconvened in a unified experimental setting for post-experimental data collection. This phase, unlike the pre-test phase, was of shorter duration, as it omitted the administration of a profiling survey. In alignment with the procedural sequence established during the pre-test phase, participants undertook the comprehension post-test followed by the metacognition-motivation post-test survey during the post-test session. The text comprehension post-test was drawn from the standardized texts featured in the 26th September 2018 examination booklet, a selection intended to ensure parity between the two groups based on their comprehension performance. Subsequently, participants completed post-test surveys on metacognition and motivation, with slight variations between the EG and CG surveys, as detailed in section 6.2.3.

Approximately one month following the pre-test, immediately subsequent to the final LS Italian class task (Schularbeit), a select random subset of EG participants (comprising 2 girls and 2 boys) was invited to partake in a focus group session. The purpose of this session was to elicit participants' reflections on the meta-strategic training they had undergone. This decision aimed to enrich the dataset by integrating qualitative insights alongside quantitative data through the utilization of Integrative Motivational Experiential Narratives. The four participants were individually interviewed for approximately 50 minutes each, during which they shared their perspectives on the

experimental experience, articulated their learning requirements pertaining to the matriculation examination task, and provided insights into their Italian classroom experiences.

Table 31, presented below, offers a succinct overview of the chronological framework delineating the experimental phase.

Table 31 - Temporal scanning of the experimental phase

EG Total Amount of Time:		4 h	**CG Total Amount of Time:**		2 h 10 min.
Time:	**Experimental moment:**		**Time:**	**Experimental moment:**	
55 min.	Pre-Test: - 10 min. Profiling Survey - 15 min. Reading Comprehension Pre-Test - 30 min. Metacognition-Motivation Survey		55 min.	Pre-Test: - 10 min. Profiling Survey - 15 min. Reading Comprehension Pre-Test - 30 min. Metacognition-Motivation Survey	
1h 30 min.	- 1h 15 Meta-Strategic Training - 15 min. Self-Study Training		30 min.	Self-Study Training	
45 min.	Post-Test: - 15 min. Reading Comprehension Post-Test - 30 min. Metacognition-Motivation Survey		45 min.	Post-Test: -15 min. Reading Comprehension Post-Test - 30 min. Metacognition-Motivation Survey	
50 min.	Post-Hoc Interview (random sample of 4 people)				

7.3. Data Treatment

7.3.1 Premises of the analysis study

Prior to elucidating the treatment undergone by the gathered data, it is fundamental to proffer a series of preliminary observations regarding the undertaken treatment, taking into consideration the underlying assumptions and challenges inherent in the data collection process. The analysis and manipulation of the data necessitated methodologies congruent with the theoretical framework of the CDST, the experimental framework, the research inquiries, and the sample size. As previously mentioned, it bears reiteration herein that the principal objective of these analyses primarily pertains to providing descriptive insights into the transformations undergone by the class structure subsequent

to the implementation of meta-strategic training conducted within the classroom environment with the experimental group. It is imperative to underscore that the intent of this investigation does not extend to the generalization of findings to a broader populace, and this is attributed to two main reasons. Firstly, the study is particularly contextualized, not only within the geographical confines of its execution (Austria), but also in terms of its research aims, thematic focus, and its exclusive concentration on the nuanced examination of teaching methodologies and learning paradigms exclusively pertaining to the domain of reading and text comprehension in Italian as FL (cf. Ushioda, 2016, Small Lens Approach). Secondly, a salient reason pertains to the limited corpus of collected data, which does not attain a level of scientific significance commensurate with the strict quantitative analytical standards requisite for comprehensive scrutiny.

As delineated in some scholarly works (Hilpert & Marchand, 2018; MacIntyre et al., 2021), the CDST framework endeavours to apprehend alterations within a system, the variables engendering it, the emergence of potential novel configurations, and the interrelations among the constituent elements of a loosely structured system. Specifically, the concept of a loosely structured system elucidates that the quantity of components contributing to a particular system outcome is neither predetermined nor immutable. Rather, the impact exerted by a given number of components, their respective functions, and the interconnections forged among them evolve over time (Hilpert & Marchand, 2018). Pertaining to temporal considerations, MacIntyre et al. (2021) caution against the adoption of pre- and post-test experimental designs, contending that such methodologies may fail to afford the requisite data granularity to adequately explicate the dynamics and intricacies of the system under scrutiny. Nevertheless, given the nascent nature of this perspective in the FL teaching field, it is pertinent to note the absence of a definitive methodology delineating the structuring of an experimental design tailored to elucidate the effects of a bespoke educational intervention. Moreover, the dearth of analogous studies within the scholarly discourse precludes the identification of a paradigmatic model against which the present methodological selection could be juxtaposed or contested. It is our contention that the data collected for this experimental inquiry align with the criteria delineated by MacIntyre et al. (2021) concerning the requisite attributes for analysis within a CDST framework, namely density, longitudinality, and individuality. Within our dataset, density manifests through the examination of various metacognitive, emotional, motivational, and performance-related facets, alongside the differentiation between experimental and control conditions within the sample.

Longitudinality can be considered in the comparative analysis between two temporal junctures (pre and post) considering the experimental context, albeit modest, yet emblematic of discernible alterations. Conversely, individuality is underscored through the scrutiny of specific case studies within the sample, exemplified by the solicitation of feedback from a select group of learners, thereby encapsulating their experiential insights at the culmination of the experimental procedure.

7.3.2 The analysis

Given the premises set out above, both quantitative and qualitative methodologies were employed to scrutinize the data through the theoretical lens of CDS. Specifically, the quantitative instruments served a pivotal function in discerning statistically significant alterations within the Italian FL class system immediately subsequent to the experimental intervention. With due consideration to this objective, all variables assessed in the pre-test questionnaire were juxtaposed with their corresponding post-test measurements via the application of a t-test, a statistical tool adept at discerning whether the disparity between two group means is significant or merely attributable to random fluctuations in the collected data (Winter, 2019; Field et al., 2012). Notably, the significance of a t-test comparison is gauged by the p-value, which signifies the level of confidence with which the null hypothesis can be upheld or refuted. Conventionally, significance is attributed to comparisons yielding p-values below 0.05 (at a 95% confidence level) or below 0.01 (at a 99% confidence level). Generally, the selection between these two threshold values hinges upon the magnitude of the sample size under scrutiny. Hence, given the relatively modest group of participants in this experiment, outcomes featuring a p-value < 0.01 are deemed considerably more robust than those with a p-value < 0.05.

Consequently, paired t-tests were executed to examine the pre- and post-test differentials for each of the metacognitive, affective, and motivational dimensions across the surveys. A succinct overview of the self-reported variables subjected to comparison is outlined below:

- Metacognitive knowledge and adoption of 21 planning and reading strategies utilizing the adapted MARSI questionnaire (Mokhtari et al., 2018).
- One self-assessment variable pertaining to reading proficiency in Italian as FL.
- Fifteen variables concerning motivational linguistic self-perception on Italian as FL: encompassing Ideal (Future) Self, Actual Self, and Ought-to Self.

- Three affective dimensions regarding these pairs of emotions: optimism-pessimism, relaxedness-anxiety, and interest-boredom.
- Nine variables gauging task-related motivation: comprising three facets of task impressions, four facets of Self-efficacy, and two facets of Strategy value.

Following the completion of due comparisons among the aforementioned variables, those exhibiting alterations will be regarded as influential factors within the Italian class system. Subsequently, an investigation into the potential catalysts for these changes within this framework will ensue. The theoretical premise exposed above posits the existence of a multifaceted array of variables (Larsen-Freeman & Cameron, 2008) contributing to systemic shifts, each endowed with distinct significance subject to individual contexts. To delineate this array of variables, we will employ a statistical instrument commonly referred to as Multi Factor Analysis (MFA), delineated in the works of Bécue-Bertaut and Pagès (2008). This analytical instrument facilitates the aggregation of disparate variables into clusters of principal components, thereby elucidating common associative patterns among these constructs. These discerned patterns delineate distinct dimensions, which, at a statistical level, furnish insights into the interrelationships and correlations inherent within the set of variables under scrutiny. The principal components adopted for analysis encompass the following, albeit comprising sub-variables within each component:

- The Marsi metacognitive mean levels;
- The emotions: the three sets of emotions (listed above);
- The motivational orientation of the linguistic self-perception (listed above);
- The self-evaluation levels;
- The task impressions;
- The self-efficacy levels;
- The strategy utility perception.

As previously delineated, the scrutiny of these components is poised to unveil several dimensions instrumental in elucidating the data distribution. These dimensions, endowed with explanatory value, will underscore the primary variables wielding the greatest influence over the fluctuations within the classroom system. Moreover, leveraging the MFA will afford a nuanced examination of each subgroup comprising the sample. Specifically, this analytical tool will prove valuable in delineating internal clusters within each subgroup and dissecting the variables exerting maximal impact on these clusters, spanning both the pre-test and post-test phases.

Chapter 8: Results

As delineated in the preceding section concerning data treatment (refer to Section 7.3), the forthcoming exposition within this chapter pertains to quantitative data, pivotal for discerning notable transformations within the foreign language classroom environment. The initial segment of our presentation shall adhere to a structured format, commencing with performance metrics, subsequently transitioning to metacognitive and meta-strategic data pertaining to reading and comprehension. Sequentially, our discourse shall extend to delineate fluctuations observed in affective and motivational dimensions, culminating in an examination of learners' perceived variations in task motivation levels concerning the Italian reading and comprehension test of the Austrian high-school-leaving examination.

This structured approach supports a comprehensive analysis of multifaceted aspects influencing the efficacy of pedagogical methodologies within the foreign language domain. By sequentially addressing performance, metacognitive dimensions, affective states, and motivational dynamics, we aim to provide a nuanced understanding of the main changes that characterise the class system of the experimental sample across the pre-test and post-test.

In the subsequent segment of the analysis, we shall elucidate the outcomes pertaining to the Multifactorial Analysis (MFA), delineating the principal dimensions which are pivotal in elucidating the interrelationships among the diverse sets of variables encapsulated within our dataset. Additionally, we shall undertake a comprehensive exploration of the dimensions wielding substantial explanatory potency, aiming to discern their constituent elements, ascertain the quantitative contribution of each variable, and ascertain the extent of correlation with the elucidatory dimension. Conclusively, predicated upon the identified dimensions, we shall expound upon the diverse data clusters, delineating their composition in terms of influential variables, individual characteristics and variations over time.

8.1 Variations in the performance of the learners

It appears prudent to commence our inquiry with an examination of the most palpable and empirical facet of the investigation, namely the outcomes derived from the reading comprehension and text comprehension assessments, specifically addressing the question-paragraph matching task. The underlying research inquiry was predicated upon discerning potential substantial alterations in learners' outcomes through a comparative evaluation of pre- and post-test results, thereby elucidating changes at an intragroup level. Furthermore, a secondary tier of analysis pertained to the intergroup context, wherein it was imperative to ascertain disparities in performance between the EG and the CG.

8.1.1 Intragroup performance comparisons

Table 32 presents the mean, median, mode, and standard deviation values. Notably, alongside the pre-test and post-test data, values from an intermediate-test are also included. It is pertinent to highlight that the intermediate-test referenced herein served as a preparatory exercise undertaken independently by both the EG and the CG prior to the post-test assessment. However, it is imperative to underscore the divergent preparatory contexts preceding the intermediate-test: while the CG engaged in self-directed study for their preparation, the EG underwent a meta-strategic training session facilitated by the experimenter.

Table 32 - Performance mean data

Experimental Group					
Pre-Test		**Intermediate-Test**		**Post-Test**	
mean	0.727	**mean**	0.75	**mean**	0.939
median	0.714	**median**	0.75	**median**	1
mode	0.857	**mode**	0.75	**mode**	1
sd	0.174	**sd**	0.096	**sd**	0.112
Control Group					
Pre-Test		**Intermediate-Test**		**Post-Test**	
mean	0.714	**mean**	0.604	**mean**	0.888
median	0.714	**median**	0.625	**median**	1
mode	0.714	**mode**	0.625	**mode**	1
sd	0.09	**sd**	0.094	**sd**	0.172

The data analysis reveals that at the intragroup level, the EG exhibits a standard deviation of 0.174 for the pre-test results, suggesting a notable degree of variability in the data, accounting for 24% of the total observations (11). Subsequent to the intermediate-test, administered immediately following the training phase, it becomes evident that the EG's performance levels exhibit minimal average fluctuations, with a concurrent decrease in standard deviation, indicating enhanced data stability (12%). Notably, upon completion of the post-test, conducted one week subsequent to the training phase, discernible improvement in average performance is observed, accompanied by a relatively consistent standard deviation level (12%), notwithstanding the limited sample size of 11 observations in the EG.

Regarding the CG, the pre-test data demonstrate an average performance hovering around 70% correct responses, with a relatively stable standard deviation (13%) compared to the EG. Following self-study training, their average performance diminishes to approximately 60.4%, indicating a decline from the pre-test levels, alongside a notable increase in result variability (16%). Conversely, in the post-test phase, the CG's average performance elevates to roughly 88% correct responses, albeit accompanied by a heightened degree of data deviation, reaching approximately 19%.

Upon conducting comparative analyses at an intra-group level between the pre-test and the intermediate-test, as well as between the pre-test and the post-test, distinct trends emerge. Specifically, contrasting the pre-test with the intermediate-test results for the EG, the t-test reveals a non-significant change ($t(10) = -0.37783$; p-value = 0.7106). Conversely, a significant discrepancy emerges between the pre-test and post-test performances ($t = -3.9453$; p-value = 0.002751) within the experimental sample, underscoring a statistically reliable transformation with a confidence level exceeding 99%. In contrast, the CG did not exhibit any discernible variation in results, evidenced by both the comparison between pre-test and intermediate-test ($t = 2.0677$; p-value = 0.06558), and the comparison between pre-test and post-test ($t = -2.2$; p-value = 0.06092). Particularly the t-values reported above illuminate distinct trends within the CG's performance dynamics. Notably, the average CG results during the comparison between pre-test and intermediate-test are lower than those of the former, as well as the subsequent comparison with pre-test results in the post-test phase yields lower outcomes indicative of a deterioration of the performance over time.

8.1.2 Intergroup performance comparisons

With regard to the comparisons made at an intergroup level, i.e. comparing the results of the EG performance with those of the CG, the following is noted. In the comparison between the pre-tests, it appears that the two groups are indeed comparable, as there are no significant differences (t = -0.20217; p-value = 0.8425) between the percentages of correct answers. In the comparisons developed between the results of the intermediate-tests, on the other hand, the data show a certain significance (t = -3.0225; p-value = 0.01199), which is, however, to be regarded with some caution, given the amount of observations under analysis. Finally, the comparison made on the post-tests performed by the EG and CG reveals that the two groups do not show a significant difference in the results (t = 0.64739; p-value = 0.537).

8.2 Variations in the metacognitive awareness level of the learners

The second set of research questions addressed in this study pertained to the potential impact of metacognitive training, as opposed to self-study training, on the enhancement of learners' metacognitive awareness levels. To investigate this, we employed an instrument adapted from the Metacognitive Awareness of Reading Strategies Inventory-Revised (MARSI-R) developed by Mokhtari et al. (2018), tailored to align with the metacognitive objectives delineated in the preliminary study outlined in Chapter 5.

Initially, our analysis focused on identifying qualitative shifts occurring at the intragroup level. Qualitative changes were construed as self-reported alterations by learners during questionnaire completion, elucidating the extent to which they employed specific strategies, gauged on a scale ranging from 1 to 5 within the MARSI adaptation. Here, a score of 1 denoted a lack of knowledge and utilization of a strategy, whereas a score of 5 signified proficient understanding and habitual application of a strategy. The MARSI adaptation utilized in both the pre-test and post-test comprised 21 items, each corresponding to distinct metacognitive strategies. For each of the two groups, EG and CG, we studied the average score of the strategies involved and, based on these scores, we defined a ranking of the most and least used strategies for both the pre-test and post-test. The objective was to identify the self-reported changes by the learners, in the use of the investigated strategies, trying to identify the specific strategies that were changed by the meta-strategic intervention.

8.2.1 Adopted strategies Experimental Group

Table 33 - Adopted Strategies EG Pre-Test

PRETEST SRMES - Self-reported most employed strategy					
type of strategy	Marsi 6	Marsi 7	Marsi 16	Marsi 3	Marsi 1
mean value	4.818	4.727	4.273	4.182	4.091
ranking	1	2	3	4	5
PRETEST SLMES - Self-reported least employed strategy					
type of strategy	Marsi 2	Marsi 12	Marsi 21	Marsi 10	Marsi 5
mean value	2.091	2.182	2.182	2.364	2.455
ranking	1	2	3	4	5

Table 33 offers a comprehensive examination of the average scores pertaining to the EG's utilization of strategies during the pre-test phase, delineating a ranking comprising the top 5 most frequently employed strategies alongside the bottom 5 least familiar strategies. The analysis underscores that learners predominantly utilize strategies such as searching and verifying the correctness of answers within the text (Marsi 6), as well as the capacity to refocus attention in instances of distraction (Marsi 7). Moreover, a noteworthy supportive strategy entails translating the text into one's native language (Marsi 16), while on a broader scale, learners exhibit a propensity to employ the text's title as a cue for predicting its thematic content (Marsi 3). Lastly, a pivotal supportive strategy involves fluidly navigating between the text and accompanying questions to discern interrelations between queries and textual information (Marsi 1).

Conversely, strategies characterized by lower utilization include the practice of note-taking (Marsi 2), the identification of typographic textual cues such as bold or italics that highlight key textual elements (Marsi 12), and employing summarization techniques as a means of condensing information for reflective engagement with textual content (Marsi 21). Additionally, strategies associated with planning, such as assessing the structure and format of the examination booklet (Marsi 10), as well as strategies entailing reflection upon reading style vis-à-vis intended objectives (Marsi 5), demonstrate comparatively limited implementation among learners.

Table 34 - Adopted Strategies EG Post-Test

POSTTEST SRMES - Self-reported most employed strategy

type of strategy	Marsi 7	Marsi 8	Marsi 6	Marsi 20	Marsi 16
mean value	4.818	4.818	4.636	4.545	4.364
ranking	1	2	3	4	5
POSTTEST SRMES - Self-reported least employed strategy					
type of strategy	Marsi 4	Marsi 5	Marsi 12	Marsi 10	Marsi 18
mean value	2.455	2.636	3.091	3.182	3.273
ranking	1	2	3	4	5

Utilizing the aforementioned criteria, Table 34 furnishes an updated ranking of strategies acknowledged and potentially adopted by the Experimental Group (EG) during the post-test phase. Notably, strategies such as Marsi 7, Marsi 6, and Marsi 16, encompassing concentration maintenance, answer verification, and translation as a supportive strategy in the comprehension process, respectively, retain prominence. However, Marsi 3 and 1 are supplanted by Marsi 8, which pertains to circling and underlining information to facilitate subsequent reference, alongside Marsi 20, which advocates for transcription of answers onto designated paper sheets.

In terms of the EG's SRLES during the post-test, Marsi 5, Marsi 10, and Marsi 12, addressing aspects such as alignment between textual content and reading objectives, examination booklet structure observation preceding comprehension tasks, and typographic element utilization for identifying key information within the text, respectively, persist among the top 5 least known and employed strategies. Furthermore, Marsi 4 and Marsi 18, involving reading aloud during instances of ambiguity and visualization techniques for enhanced comprehension, are similarly identified as strategies characterized by limited familiarity and usage.

8.2.2 Adopted strategies Control Group

Table 35 - Adopted Strategies CG Pre-Test

PRETEST SRMES - Self-reported most employed strategy					
type of strategy	Marsi 6	Marsi 1	Marsi 7	Marsi 20	Marsi 8
mean value	4.833	4.667	4.667	4.667	4.500
ranking	1	2	3	4	5
PRETEST SLMES - Self-reported least employed strategy					
type of strategy	Marsi 4	Marsi 12	Marsi 5	Marsi 21	Marsi 10
mean value	1.667	1.667	1.833	2.167	2.667

ranking	1	2	3	4	5

Table 35 presents the SRMES and SRLES data pertaining to the CG during the pre-test phase. Notably, the first five most prevalent strategies utilized by the CG closely resemble those of the EG, particularly evident in the case of Marsi 6, 7, and 1. These overlapping strategies encompass the validation of answer accuracy, efforts to refocus attention when distracted, and the iterative transition between textual information and accompanying questions, respectively. What sets the CG apart from the EG is the heightened utilization of Marsi 20 and Marsi 8, which respectively encompass answer transcription onto designated sheets and the application of supportive strategies such as circling and underlining to enhance subsequent information retrieval.

Conversely, concerning the SRLMES, the majority of lesser-known and less utilized strategies within the CG align with those of the EG, with the exception of Marsi 4, denoting the practice of rereading passages aloud to bolster comprehension focus. This contrasts with the EG's adoption of Marsi 2, which entails note-taking to expedite the comprehension process.

Table 36 - Adopted Strategies CG Post-Test

POSTTEST SRMES - Self-Reported Most Employed Strategies						
type of strategy	Marsi 1	Marsi 7	Marsi 6	Marsi 14	Marsi 17	(Marsi 20)
mean value	4.833	4.667	4.5	4.5	4.5	4.5
ranking	1	2	3	4	5	5 (bis)[118]
POSTTEST SRLES - Self-Reported Least Employed Strategies						
type of strategy	Marsi 12	Marsi 4	Marsi 21	Marsi 2	Marsi 5	
mean value	1.667	1.833	1.833	2.667	2.833	
ranking	1	2	3	4	5	

During the post-test phase, both the experimental and control groups demonstrate similarities in their knowledge and utilization of specific strategies, such as Marsi 7, 6, and 20. Notably, these strategies, recurrent throughout our analysis, align with those reported by the CG during the pre-test phase. Additionally, Marsi 1, involving continuous transition between textual information and questions within the text, emerges as a newly

[118] La strategia Marsi 20 è stata riportata per la media che risulta la stessa delle strategie Marsi 14 e Marsi 17, escludere una dalle tre avrebbe significato non considerarne il valore assunto in questa fase sperimentale.

acknowledged strategy among both groups. Furthermore, the CG reports utilization of Marsi 14 and Marsi 17, encompassing text rereading for comprehension enhancement and strategic scanning for specific information, respectively, as comparatively more familiar strategies in the post-test phase.

Conversely, the majority of lesser-known strategies employed during the post-test by the CG mirror those identified during the pre-test, with the exception of Marsi 10, supplanted by Marsi 2, referring to note-taking to facilitate comprehension. Comparatively, several lesser-known and less utilized strategies are shared between the CG and the EG, including Marsi 12, 4, and 5, addressing typographic element utilization for information discernment, reading aloud for enhanced comprehension, and aligning content with designated reading objectives, respectively.

8.2.3 Significant changes in strategy adoption at an intragroup level of analysis

An additional aspect of interest within this investigation on metacognitive awareness pertained to discerning potential significant alterations in the utilization of strategies under scrutiny, as encapsulated within the MARSI adaptation. To this end, we conducted a comparative analysis of the awareness and utilization of all strategies encompassed within the battery across the pre-test and post-test phases. It was deemed pertinent to delineate below all strategies exhibiting significant mean disparities between the two experimental phases. Specifically, we opted to consider not only those strategies demonstrating highly reliable significance (with p-value < 0.01), but also those achieving significance at a confidence level of 95%. This deliberation was undertaken despite the sample size limitations, acknowledging the salience of perceptible shifts in learners' perspectives.

Table 37 - Significant changes in strategy adoption for EG

Marsi 2	**Ich mache mir während des Lesens Notizen, damit ich das Gelesene besser verstehe.**
Marsi 8	**Ich unterstreiche oder umkreise Informationen im Text, damit ich sie mir besser merken kann.**
Marsi 9	Ich messe meine Lesegeschwindigkeit je nach dem, was ich gerade lese.
Marsi 12	Ich verwende typografische Hilfsmittel wie Fett- oder Kursivdruck, um wichtige Informationen hervorzuheben.
Marsi 19	Ich lese die Aufgabeanweisungen, bevor ich die Aufgabe ausführe.
Marsi 20	Ich schreibe die Antworten auf dem Antwortblatt ab, wenn ich mit der Aufgabe fertig bin.
Marsi 21	**Ich fasse zusammen, was ich gelesen habe, um über wichtige Informationen im Text nachzudenken.**

Table 37 presents strategies eliciting a noteworthy shift in learners' perceptions, delineating those strategies in boldface type with a confidence level below 99%, and those in standard type signifying significance at a 95% confidence level. Among the strategies yielding a p-value < 0.01, notable findings include the efficacy of note-taking to facilitate text comprehension, the utility of circling and underlining textual information for subsequent noticeability, and the effectiveness of summarization as a means of reflecting on pertinent textual information.

Conversely, strategies evincing significant score alterations with a p-value < 0.05 encompass Marsi 9, 12, 19, and 20. These strategies respectively pertain to modulating reading speed in accordance with textual content, identifying salient information through typographic elements such as italics and bold type, and perusing task instructions prior to task execution. Additionally, the strategy of transcribing correct answers onto the answer sheet prior to task delivery emerges as equally noteworthy.

In contrast, concerning the CG, the sole strategy demonstrating a notable score variation between the pre-test and post-test comparisons is Marsi 10. The significance of this strategy, determined to lie within a p-value < 0.05, primarily revolves around the practice of scrutinizing and attaining awareness of the structure and layout of the examination booklet.

8.2.4 Intragroup metacognitive awareness level comparisons

In addition to examining the variations in the familiarity and utilization of strategies, this study also endeavors to discern potential alterations in learners' metacognitive proficiency levels. The employed metacognitive survey instrument, an adaptation of the MARSI-R (Mokhtari et al., 2018), presents an advantageous avenue for such analysis. The MARSI delineates three tiers of metacognitive awareness, as self-assessed through scores: high for mean values exceeding 3.5, medium for mean values falling between 2.4 and 3.5, and low for mean values below 2.4. Importantly, these levels encompass not only reading strategies but also planning and monitoring strategies germane to the task under investigation.

Table 38 - Marsi mean values of EG and CG in Pre-Test and Post-Test

Marsi Means	
EG	**CG**
PRETEST	

mean	3.307	**mean**	3.381
median	3.476	**median**	3.357
mode	2.286	**mode**	3.286
sd	0.728	**sd**	0.223
POSTTEST			
mean	3.805	**mean**	3.540
median	3.952	**median**	3.548
mode	3.952	**mode**	3.619
sd	0.613	**sd**	0.495

As depicted in Table 38, during the pre-test phase, the EG exhibits an average metacognitive awareness level of 3.381, indicative of a medium level, with a moderate data dispersion of 0.728. Conversely, the CG records a similar mean of 3.381 during the pre-test, also denoting a medium level, albeit with notably smaller data dispersion of 0.223. Subsequently, in the post-test phase, the EG demonstrates a mean shift to 3.805, transitioning from a medium to a high level of metacognitive awareness. Notably, a marginal decrease in standard deviation (0.613) within the EG signals convergence among participants' metacognitive averages. Similarly, the CG also experiences an elevation in level from medium to high, albeit with a mean just surpassing the instrument's threshold at 3.540, accompanied by a slight increase in data dispersion to 0.495.

In intragroup comparisons, it was imperative to ascertain the significance of changes from pre-test to post-test for both the EG and CG. Indeed, the t-test conducted on the EG reveals a noteworthy level of significance in group mean scores ($t = -3.2695$; p-value = 0.008438), at a 99% confidence level. Conversely, the CG fails to register any significant alterations ($t = -1.3948$; p-value = 0.2219) in levels of metacognitive awareness.

8.2.5 Intergroup metacognitive awareness level comparisons

In the context of intergroup comparisons, our inquiry revolved around discerning whether the levels of metacognitive awareness among learners in the EG could be deemed comparable to those of the CG. Employing the t-test, our findings indicate that the two groups are indeed comparable, with no significant disparities discernible in levels of metacognitive awareness. Notably, despite the Control Group registering a marginally higher mean compared to the Experimental Group, alongside a relatively diminished data dispersion, these differences do not yield statistical significance. Upon scrutinizing the post-test averages, we observe that mean values within the Experimental Group (3.805)

exhibit a slight elevation in comparison to those of the Control Group (3.540). Nevertheless, when juxtaposing the two sets of averages, the disparity is deemed insubstantial ($t = -0.96975$; p-value = 0.3506). Additionally, we highlight a trend wherein standard deviation values tend to diminish within the Experimental Group while increasing within the Control Group. This trend suggests that in the transition from pre-test to post-test, the variability of data increased within the Control Group but decreased within the Experimental Group.

8.3 Variations in the affective-motivational components of the learner's linguistic identity

In the section pertaining to variations in the scores of affective-motivational components, it is imperative to delineate the diverse facets considered in the comparative analyses. Specifically, three primary components were scrutinized: emotions, linguistic self-perception in Italian as a FL, and task motivation. Among the conducted comparisons, only a few aspects yielded notable variations in findings between the pre-test and post-test phases.

As previously noted, the affective component encompasses three sets of emotions, each representing a continuum between two potentially antithetical emotions (cf. paragraph 3.3.4, drawing from the perspective of Posner et al., 2005). These sets encompass the continuums between optimism and pessimism, relaxedness and anxiety, and interest and boredom, respectively. Across all three sets, the conducted comparisons exhibited minimal variability in data, whether concerning intragroup comparisons between pre-test and post-test or intergroup comparisons between the EG and the CG. This observation suggests that, from an emotional standpoint, there was no significant fluctuation in learners' emotional perceptions regarding their performance on the reading comprehension test.

The additional component scrutinized to detect noteworthy shifts within the Italian classroom system encompassed the motivational dimension pertinent to the perception of the linguistic self. The analytical framework employed emanates from the investigation conducted by Dörnyei and Chan (2013), delineating an examination of three facets of the linguistic self: the Actual Linguistic Self, the Ought-to Linguistic Self, and the Ideal Linguistic Self. In the context of this study, the questionnaire comprising 15 inquiries was

tailored to address the domain of Italian as a FL. T-tests administered on the questionnaire, both at the intragroup and intergroup levels of analysis, yielded results devoid of significant fluctuations. Such findings suggest a static configuration within the system concerning linguistic self-motivation throughout the experimental duration.

The final motivational component under scrutiny in these analyses pertains to Task Motivation. Elucidated comprehensively in section 6.2.2.3, task motivation represents a multifaceted construct, comprising aspects meticulously selected to align with the present experimental context. The constituent elements encapsulated within task motivation encompass task difficulty, task appreciation, self-efficacy, task appropriateness (also construed as an aspect intimately intertwined with self-efficacy), strategy utility, and the perceived correlation between metacognitive knowledge and language proficiency.

Table 39 - Significant variations in task motivation for the EG

Intragroup variations	**p-value**	**Intergroup variations**	**p-value**
Self-efficacy 1	t = -2.9942; p-value = 0.01348 ($p < 0.05$)	Self-efficacy 1	t = -2.1914; p-value = 0.04471 ($p < 0.05$)
Task appreciation 1	**t = -5.754;** **p-value = 0.0001842** **(p-value < 0.01)**		
Strategy utility	**t = -5.754;** **p-value = 0.0001842** **($p < 0.01$)**	Strategy utility	t = -2.6209; p-value = 0.0419 ($p < 0.05$)
Task appreciation 2	**t = -4.1133;** **p-value = 0.0021** **($p < 0.01$)**		
Self-efficacy 2	t = -2.863; p-value = 0.01687 ($p < 0.05$)		

		Self-efficacy peers	t = -2.1914; p-value = 0.04471 ($p < 0.05$)

Table 39 delineates all comparisons deemed significant for the experimental group, with exclusive focus on these data, as the corresponding CG data exhibit non-significance. Furthermore, the table accentuates in bold those data deemed robust, as they furnish comparisons at the 99% confidence level. Notably, all values reported demonstrate significance both at the intragroup level, encompassing comparisons between pre-test and post-test, and at the intergroup level. It is remarkable to note that data presented at the intergroup level mainly denote significant comparisons between the EG and CG in relation to the post-test. In pre-test comparisons, the absence of significant disparities between the two groups, renders them entirely comparable.

8.4 Multi-Factor Analysis

For the Multifactor Analysis, we utilized the FactoMineR package (Kassambara & Mundt, 2020) within the R statistical analysis software. The ensuing results discussed in this section primarily pertain to the experimental group (EG). The decision to exclusively present the findings of the EG stems from the observation that the most substantial alterations identified in the preliminary stages of the analysis predominantly involve the EG. This is not to imply an absence of changes within the control group (CG) context; rather, it underscores that, given the analytical instruments employed, notable alterations in the aspects of the system under investigation were not discerned within this study's scope. The forthcoming data analysis will juxtapose the transformations observed in the

variable constellations from pre-test to post-test, thus contributing to the understanding of the recorded changes' significance.

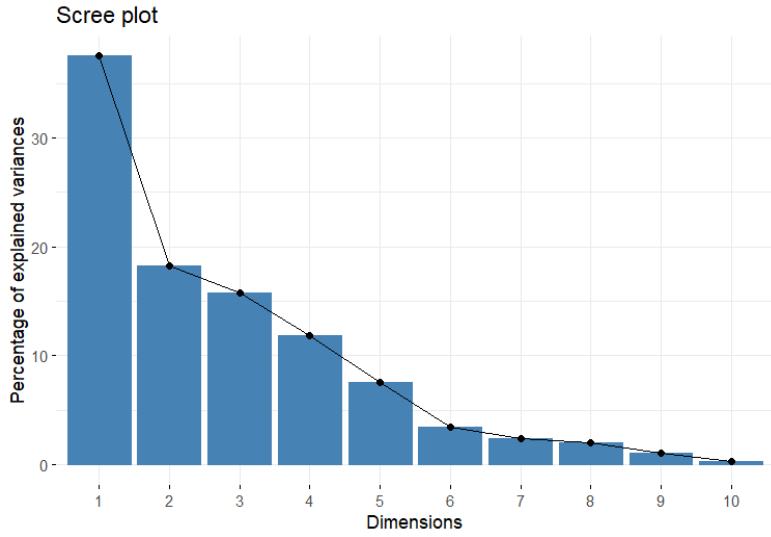

Figure 20 - Pre-Test Dimensions EG

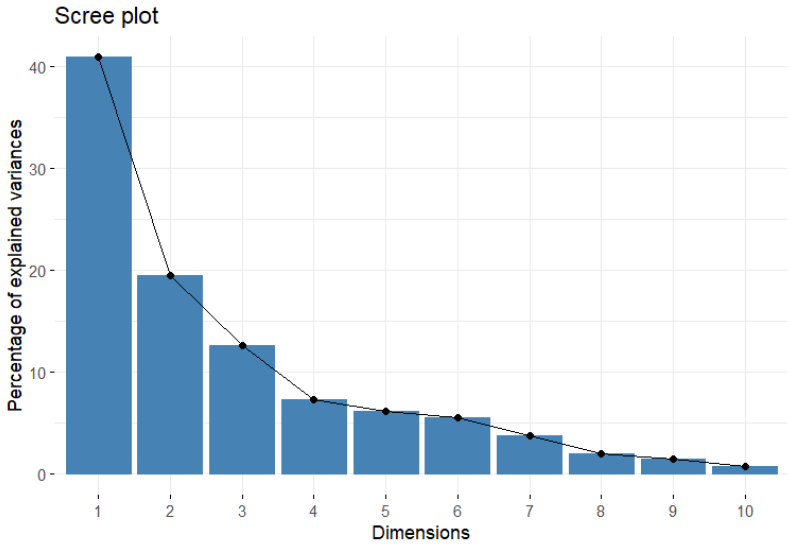

Figure 21 - Post-Test Dimensions EG

Table 40 - Pre and Post Dimensions of the EG

Pre-Test Dimensions			**Post-Test Dimensions**		
Dimension	**Cumulative percentage**	**Variance percentage**	**Dimension**	**Cumulative percentage**	**Variance percentage**
Dim. 1	37.51%	37.51 %	Dim. 1	40.94 %	40.94 %
Dim. 2	18.24%	55.76 %	Dim. 2	19.51 %	60.46 %
Dim. 3	15.73 %	71.49 %	Dim. 3	12.65 %	73.11 %
Dim. 4	11.88 %	83.37 %	Dim. 4	7.25 %	80.37 %

Dim. 5	7.5 %	90.87 %	Dim. 5	5.48 %	86.52 %

Firstly, let us contemplate the dimensions delineated by the MFA across both the pre-test (Figure 20) and post-test (Figure 21) phases. Primarily, the graphs depicted in Figures 20 and 21 elucidate ten dimensions, albeit Table 40 exclusively presents the explanatory values of the initial five dimensions. As delineated in Table 40, the first two dimensions of the pre-test encapsulate an explanatory power of 55.75% of the dataset. Conversely, in the post-test scenario, the explanatory potency of the initial two dimensions escalates to 60.45% of the dataset. Specifically, during the post-test, the paramount contribution emanates from dimension 1, accounting for 40.94% of the dataset's variance, while dimension 2 elucidates an additional 19.51% of the dataset's variance.

Table 41 - Pre and Post Variable Group Contributions

Variable Group Contributions – Pre-Test					
Dimensions	**Dim. 1**	**Dim. 2**	**Dim. 3**	**Dim. 4**	**Dim. 5**
Emotions	15.61 %	12.52 %	1.07 %	14.93 %	7.99 %
Marsi means	14.12 %	4.20 %	15.88 %	1.35 %	7. 19 %
Language Orientation	16.14 %	8.35 %	8.47 %	1.76 %	42.60 %
Self-evaluation	1.59 %	37.85 %	24.50 %	49.84 %	13.29 %
Task impressions	21.84 %	9.06 %	23.84 %	6.91 %	14.17 %
Self-efficacy	7.66 %	14.43 %	23.95 %	17.06 %	10.80 %
Strategy Value	23.02 %	13.55 %	2.28 %	8.12 %	3.94 %
Variable Group Contributions – Post-Test					
Dimensions	**Dim. 1**	**Dim. 2**	**Dim. 3**	**Dim. 4**	**Dim. 5**
Emotions	17.14 %	2.83 %	6.72 %	16.20 %	11.94 %
Marsi means	11.91%	14.82 %	6.11 %	1.55 %	10.26 %
Language Orientation	21.02 %	1.61 %	22.21 %	6.82 %	14.50 %
Self-evaluation	11.19 %	37.02 %	39.94 %	9.17 %	15.37 %
Task impressions	17.98 %	5.90 %	10.69 %	53.19 %	36.58 %
Self-efficacy	17.07 %	8.11 %	2.93 %	12.81 %	9.89 %
Strategy Value	3.68 %	29.69 %	11.39 %	0.24 %	1.46 %

Table 41 facilitates the discernment of the primary groups of variables, or principal components, that exert the most pronounced influence on each dimension, in both pre-test and post-test. Within the pre-test context, dimension 1 is chiefly shaped by variables

encompassing strategy value, task impressions, language orientation, and emotions[119]. Conversely, in the post-test phase, the explanatory power of dimension 1 is distributed across varied groups of variables, including language orientation, task impressions, emotions, and self-efficacy. Turning to dimension 2 of the pre-test, the foremost groups of variables contributing to the data's explanatory power are self-evaluation and self-efficacy. In contrast, dimension 2 of the post-test is predominantly influenced by variables pertaining to self-evaluation, strategy value, and Marsi means.

Delving deeper into the composition of variable groups for the initial two dimensions, we proceeded to identify the contribution of the most salient variables across both pre- and post-test phases. Figure 22 visually illustrates which variables significantly contributed to the delineation of dimension 1[120].

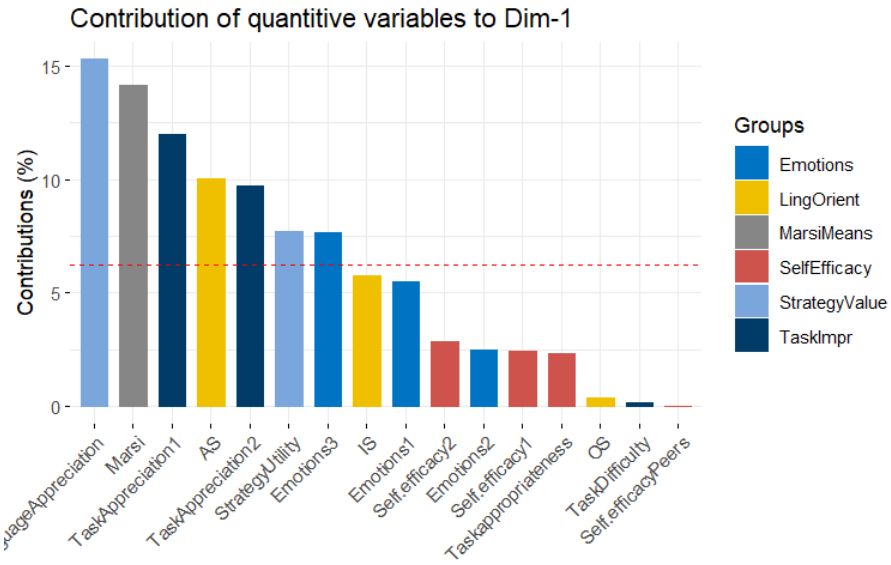

Figure 22 - Pre-Test Variable Contribution to Dimension 1

Regarding dimension 1, in the pre-test phase, significant variables include those pertaining to strategy-related-to-language appreciation (15.12%), the metacognitive level of Marsi means (14.34%), task appreciation related to interest (11.94%), actual perception

[119] The selection of variable groups was guided by the significance indications provided by the statistical tool, alongside being characterised by a moderate to high level of correlation with the respective dimension, determining the primary components of the dimension itself. This approach ensures that the chosen variable groups are not only statistically meaningful but also substantively relevant to the dimensions under consideration.

[120] The contributions of variables deemed significant are those surpassing the threshold delineated by the red dotted line in Figure 22 and analogous figures with comparable parameters.

of linguistic self (10.02%), task appreciation related to enjoyment (9.83%), perceived utility of the strategy (7.93%), and the set of emotions interest-boredom (7.68%).

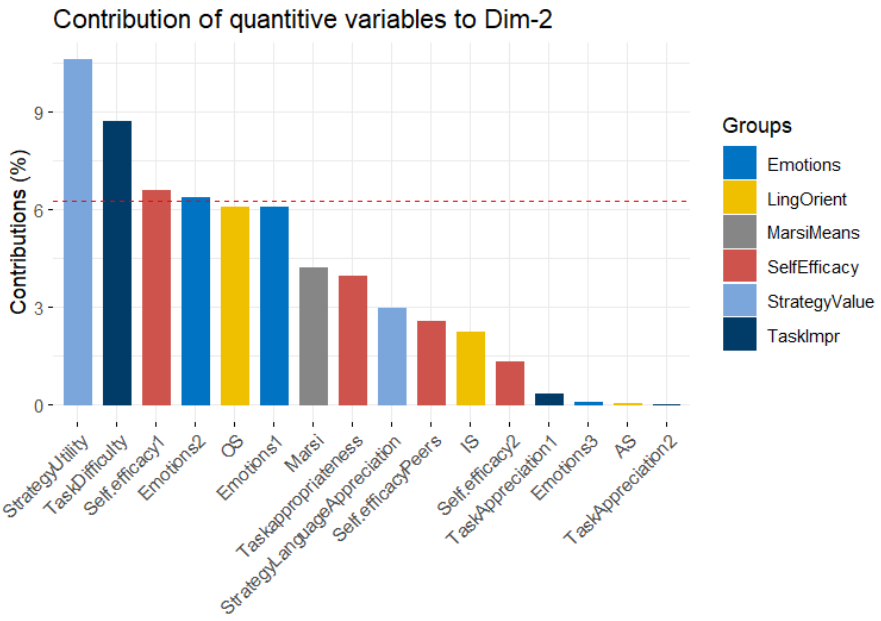

Figure 23 - Pre-Test Variable Contribution to Dimension 2

In contrast, pre-test dimension 2 exhibits a more restrained array of contributing variables, as depicted in Figure 23. These variables encompass strategy utility perception (10.62%),

task difficulty (9.53%), perception of self-efficacy (5.85%), and the contribution of the secondary set of emotions relaxedness-anxiety (6.36%).

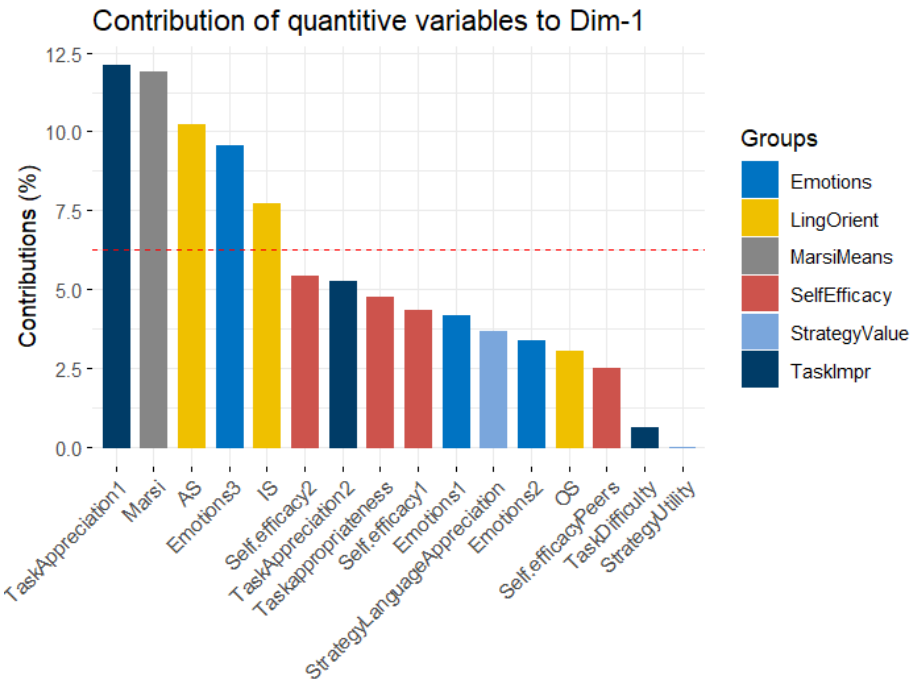

Figure 24 - Post-Test Variable Contribution to Dimension 1

In the post-test phase, notable alterations are discernible in the constellation of variables influencing the dataset. Figure 24 delineates the variables exerting significant contributions to the explanatory power of dimension 1, including task appreciation related to interest (12.09%), the metacognitive level expressed by the Marsi means (11.91%), actual linguistic self-perception (10.23%), the set of emotions interest-boredom (9.35%), and ideal linguistic self-perception (6.74%). A comparative analysis between dimension 1 of the pre-test and post-test reveals a general reduction in the involvement of variables, although the average contribution of variables from both phases remains consistent. Certain variables that held substantial relevance in the pre-test, such as strategy-related-to-language appreciation and strategy utility perception, witness a decline in significance in the post-test. Conversely, the contribution value of task appreciation related to interest and the set of emotions interest-boredom amplifies, while the contribution percentage of the metacognitive level expressed by the Marsi means diminishes, and the contribution of actual linguistic self-perception remains static. Particularly noteworthy is the

emergence of ideal linguistic self-perception in the post-test, albeit with a relatively modest contribution percentage (6.74%).

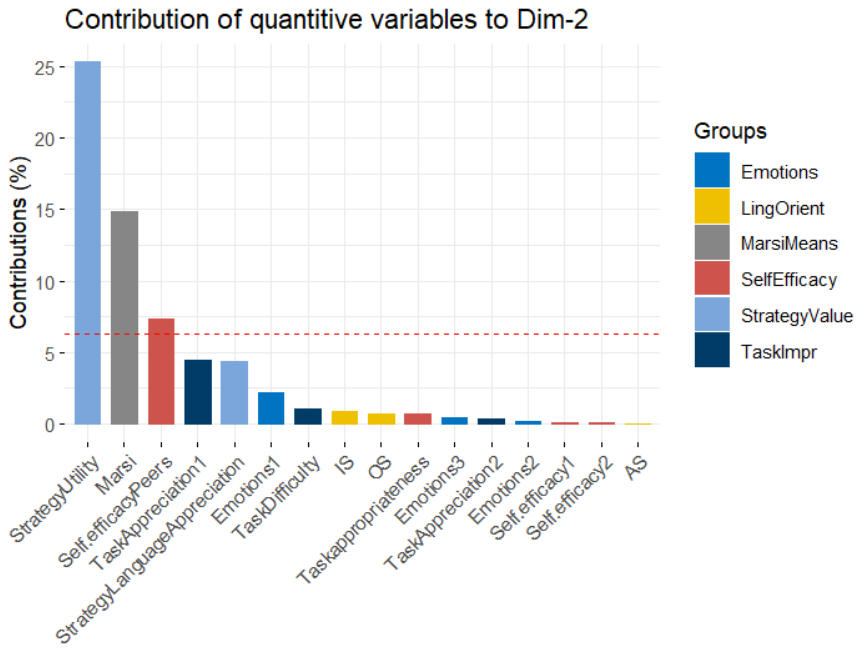

Figure 25 - Post-Test Variable Contribution to Dimension 2

Lastly, we elucidate the contributions of select variables that exert substantial influence on the explanatory power of dimension 2. Specifically, the variables of interest include strategy utility perception (25.31%), the metacognitive level of Marsi means (14.82%), and the perception of one's own self-efficacy relative to one's peers (7.30%). Transitioning from the pre-test to the post-test phase, there is a reduction in the number of variables contributing to dimension 2, declining from 4 to 3. However, the average contributory value of each variable experiences an augmentation, doubling in the post-test in comparison to the pre-test. Particularly noteworthy in the post-test phase is the sustained relevance of strategy utility perception, which doubles its percentage contribution within dimension 2, while variables such as task difficulty, self-efficacy, and the secondary set of emotions (relaxedness-anxiety) exhibit diminished significance. Furthermore, in the post-test phase, the contributions of the metacognitive level of the Marsi means and the perception of self-efficacy relative to classmates emerge as additional influential factors within dimension 2.

As delineated earlier, the Multifactor Analysis (MFA) facilitates the identification of explanatory dimensions within the dataset, thereby enabling the formation of clusters of

individuals based on the considered dimensions. Leveraging dimensions 1 and 2, which collectively explicate 55.75% of the pre-test data distribution and 60.45% of the post-test data distribution, three distinct clusters of learners were delineated. These clusters are visually depicted in Figures 26 (pertaining to the pre-test) and 27 (pertaining to the post-test).

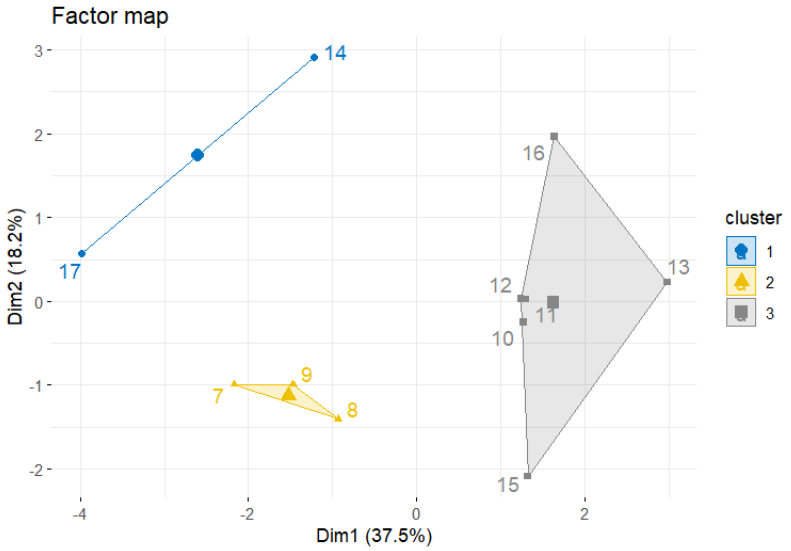

Figure 26 - Cluster formation Pre-Test

The clusters observed in the pre-test phase (see Figure 26) comprise 2 learners assigned to Cluster 1 (C1p), 3 learners allocated to Cluster 2 (C2p), and 6 learners grouped within Cluster 3 (C3p).

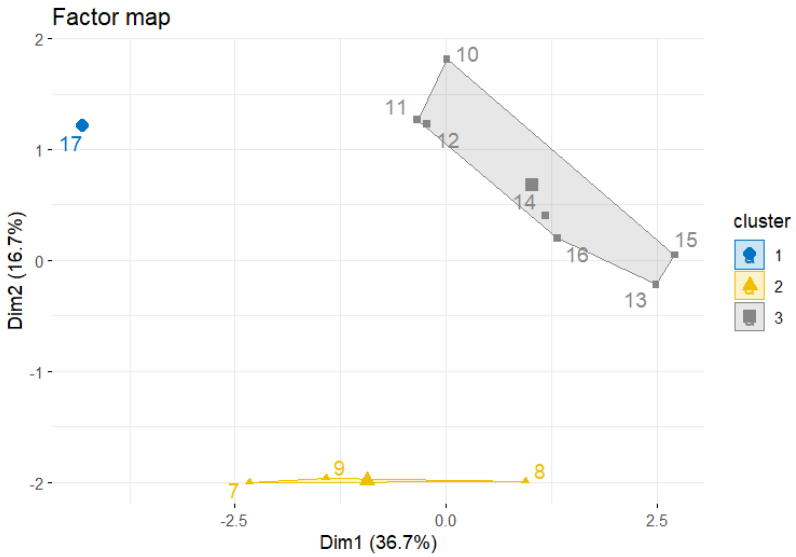

Figure 27 - Cluster Formation Post-test

In contrast, the post-test clusters (see Figure 27) exhibit a distinct composition, with one learner assigned to Cluster 1 (C1P), three learners allocated to Cluster 2 (C2P), and seven learners grouped within Cluster 3 (C3P). Upon comparing Figure 26 and Figure 27, it becomes apparent that while the individuals within the clusters demonstrate minimal variance during the transition from pre-test to post-test, the data itself displays differing variability. Specifically, in C1p, the cluster diminishes from two components to one in C1P, whereas the constituent individuals of C2p remain consistent between the pre-test and post-test phases. However, upon juxtaposing C2P with the pre-test, a convergence in data alignment is observed for dimension 2, albeit accompanied by a greater dispersion in data concerning dimension 1. Conversely, in C3p, the transition from pre-test to post-test not only entails the addition of one learner but also manifests a reduction in variability within C3P. Subsequently, the ensuing section will delineate the detailed characteristics of learners constituting the various clusters, employing the average values of the variables comprising each cluster as a reference point.

Table 42 - Cluster details - Pre-Test

Cluster 1 – 2 learners – No specified dimension			
Variable	**Mean in category**	**Overall mean**	**p-value**
Emotion set 1	1.13	- 0.36	0.011
Emotion set 2	0.69	- 0.35	0.014
Emotion set 3	1.56	-0.12	0.021
Task appropriateness	1.31	0.28	0.037
Strategy-language appreciation	- 1.26	0.32	0.012
Cluster 2 – 3 learners – No specified dimension			
Variable	**Mean in category**	**Overall mean**	**p-value**
Task difficulty	- 1.42	- 0.07	0.024
Strategy utility	-1.03	0.09	0.023
Marsi means	-1.70	- 0.08	0.007
Cluster 3 – 6 learners – Dimension 1			
Variable	**Mean in category**	**Overall mean**	**p-value**
Strategy-language appreciation	1.11	0.32	0.004
Marsi means	0.84	- 0.08	0.006
Task appreciation (related to amusement)	0.79	0.06	0.017
Task appreciation (related to interest)	0.92	0.24	0.019
Actual Linguistic Self	0.59	- 0.10	0.021
Strategy utility	0.67	0.10	0.037
Emotion set 3	- 0.78	- 0.12	0.038
Emotion set 1	- 0.90	- 0.37	0.034

Table 42 provides a comprehensive dataset enabling a partial characterization of the individuals constituting the three clusters identified in the pre-test phase. It is noteworthy that, for each of the identified clusters, careful consideration was given to discerning the most influential dimension among those under scrutiny. Remarkably, only C3p appears to be notably influenced by the variables comprising dimension 1, while the first two clusters present challenges in aligning them with a specific explanatory dimension. C1p encompasses two learners exhibiting emotional tendencies characterized by a blend of pessimism and relaxation upon engaging with the Italian reading comprehension test. Moreover, they exhibit a moderate sense of boredom towards the task, coupled with a belief that the task outcomes adequately reflect their linguistic competency level. Notably, they harbour the conviction that familiarity with strategies related to reading

comprehension does not necessarily guarantee a heightened appreciation of the language of study.

On the contrary, C2p represents a group of three learners distinguished by their perception of low task difficulty. Additionally, this cluster is characterized by a relatively medium-low metacognitive level, as assessed by the Marsi inventory. Moreover, its members are persuaded that the reading strategies imparted by the instructor in class offer limited utility in addressing the task at hand.

Lastly, C3p represents the largest cluster comprising six individuals, characterized by a conviction that acquiring novel strategies pertinent to reading comprehension can enhance their appreciation of the Italian language study. These learners demonstrate an average level of metacognition and evince a moderate level of task appreciation, finding it notably engaging and enjoyable. Moreover, C3p members exhibit an average perception of their actual linguistic self-perception and endorse the reading strategies disseminated by the instructor in class as highly beneficial. Broadly, C3p is distinguished by emotional inclinations predominantly towards optimism and interest.

Table 43 - Cluster details - Post-Test

Cluster 1 – 1 learner – Dimension 1			
Variable	**Mean in category**	**Overall mean**	**p-value**
Emotion set 3	2.32	0.03	0.024
Self-efficacy (2)	- 1.30	0.35	0.039
Ideal Linguistic Self	- 2.45	-0.06	0.029
Task appreciation (related to amusement)	- 1.41	0.28	0.027
Actual Linguistic Self	- 2.55	- 0.07	0.015
Cluster 2 – 3 learners – Dimension 2			
Variable	**Mean in category**	**Overall mean**	**p-value**
Marsi means	- 0.05	0.16	0.037
Strategy utility	-0.04	0.47	0.010
Cluster 3 – 7 learners – Dimension 1			
Variable	**Mean in category**	**Overall mean**	**p-value**
Marsi means	0.79	0.16	0.009
Task appreciation (related to interest)	0.82	0.34	0.013
Actual Linguistic Self	0.44	- 0.06	0.039
Self-efficacy (2)	0.74	0.35	0.042

Emotion set 3	- 0.49	0.03	0.028

Table 43 delineates the dataset depicting the altered clusters following the immediate experimental intervention. As previously indicated, the second data collection reveals a shift in the configuration of influential variables governing each of the three clusters. C1P emerges as the primary cluster identified by the MFA, comprising solely one learner, whose perceptions align with the dimension 1 as significant explanatory dimension of the data. The learner within C1P exhibits a proclivity towards boredom emotions concerning text comprehension tasks. Additionally, they harbour a moderate perception of self-efficacy, juxtaposed with a negative appraisal of both their ideal linguistic self and actual linguistic proficiency. In general, this learner demonstrates minimal appreciation for the task, deeming it devoid of entertainment value.

Conversely, C2P comprises the identical trio of learners observed in the pre-test phase; however, in this subsequent assessment, they exhibit significant alignment with the principal variables characterizing dimension 2. These learners are characterized by an average metacognitive level, as indicated by the Marsi means, alongside a heightened perception of the utility levels of strategies acquired during the meta-strategic training.

As previously highlighted, the MFA indicates that C3P integrates a novel constituent into its group during the post-test phase, accompanied by a general reduction in data variability across its components. Following the meta-strategic intervention, learners within this cluster report elevated average levels of metacognition, alongside heightened perceptions of self-efficacy. Although the task appreciation level fails to elicit considerable interest among the learners, they express a heightened emotional engagement, veering towards interest rather than boredom. Additionally, there is an enhancement in the perception of their actual linguistic proficiency within C3P, attaining medium to high levels.

Chapter 9: Discussion

This experimental study was initiated with the aim of investigating the ramifications stemming from the integration of meta-strategic training on the enhancement of reading and comprehension proficiencies within an Italian as a FL instructional context, situated in East Tyrol, Austria. Within this chapter, an endeavour is made to encapsulate the outcomes derived from the data through the theoretical lens of Complex Dynamic Systems Theory (CDST), elucidated by scholars such as Larsen-Freeman and Cameron (2008), MacIntyre et al. (2021), and Hilpert & Marchand (2018). As alluded earlier, the research objectives underpinning a CDST framework primarily revolve around discerning shifts within a system, identifying the variables instigating such changes, delineating emergent configurations, and unravelling the interplay among the constituent elements of a loosely structured system. It is pertinent to underscore that, to the best of our knowledge, no prior studies within the domain of experimental foreign language teaching have employed this approach. As expounded by MacIntyre et al. (2021), this dearth can be attributed to the relative obscurity surrounding CDST, characterized by a lack of well-defined guidelines but underscored by distinct objectives aimed at discovering the evolving configurations of complex systems over time. As reiterated throughout this dissertation, CDST does not harbour predictive aims concerning the data, but rather elucidates explanatory objectives pertaining to the fluctuations manifesting within the system under scrutiny.

Having reasserted the foundational tenets of this inquiry, we now proceed to delineate the alterations discerned within the instructional framework under investigation. The ensuing results will be synthesized in accordance with the sequential presentation of the research questions. Consequently, we shall initially expound upon the variations delineated in performance, succeeded by an elucidation of the alterations detected at the metacognitive level, and subsequently, an exposition of the shifts documented at the motivational stratum. Lastly, we shall explicate the modifications which, at the systemic level, facilitated the restructuring of the empirical data, considering the insights articulated by the focus group participants of the experimental group.

9.1 Performance

The findings pertaining to the performance outcomes of the two delineated groups, namely the EG and CG constituting our sample, reveal discernible shifts, predominantly observed within the EG. Intriguingly, at an intragroup level, the EG manifests a significant enhancement in performance from the pre-test to the post-test phase, albeit this improvement is less conspicuous in the intermediate-test phase. Conversely, the CG, reliant upon self-study training, exhibits no marked alteration in performance across either the intermediate-test or the post-test assessments. Pertaining to intergroup comparisons, while no significant disparities are evident at the onset of the pre-test, the intermediate-test phase immediately after the training delineates a discernible performance disparity, with the EG exhibiting a significantly superior performance compared to the CG. However, in the post-test phase, there are no discernible intergroup differences in performance. Therefore, these intergroup contrasts fail to unveil any overt effects on EG performance when juxtaposed with the performance of the CG, echoing the observations posited in the study by Dignath et al. (2008). Various factors, such as the complexity level intrinsic to the post-test task, could underpin these findings. Moreover, it is imperative to acknowledge that, notwithstanding its articulation, the process of standardizing a text may not invariably adhere to objective standards, particularly for languages with relatively lower prevalence in learning settings, as is the case of Italian. Additionally, another plausible explanation could lie in the possibility that learners in the EG did not receive comprehensive meta-strategic training. It is noteworthy to mention here that, due to unforeseen circumstances, the meta-strategic trajectory devised for EG learners underwent alterations before the implementation, inevitably leading to a reduction in the intended learning outcomes and a modification in the learning potential. This rationale contradicts the perspectives advocated by Oxford (2018), Ryan and Deci (2017), and Zimmermann (2008), who espouse the notion of a continuous and progressively autonomous utilization of learning strategies, thereby facilitating the evolution of self-monitoring processes into automatism. An intriguing observation, however, is the disparate trends observed in the standard deviation scores of the two groups. Notably, the EG evinces a progressive improvement in the coherence of the data across the three assessments, whereas the CG exhibits a corresponding escalation in data variance, indicative of an alignment effect on the performance of EG learners facilitated

by the training. Alignment of performance is an aspect that, although not supported by quantitative data here, is reported by one of the focus group statements: «*unsere Frau Professor hat darauf gesagt, dass wir bei dem Leggere extrem gut abgeschnitten haben. Eigentlich fast die gesamte Klasse. Ich glaube es ist keiner negativ in diesen Abschnitten und deswegen war sie ziemlich zufrieden mit uns*». The class teacher administered a comprehensive Italian test to the learners in the experimental group, inclusive of a reading comprehension segment. This evaluation affirmed that the learners successfully completed the reading comprehension task with minimal difficulty and achieved commendable results.

9.2 Metacognitive-awareness

The second facet under scrutiny within this dissertation pertains to the examination of shifts in learners' metacognitive perceptions within the sample. Initially, our inquiry aimed to delineate the metacognitive strategies most and least utilized by learners during the process of tackling the text comprehension task. Insights gleaned from the Marsi inventory, tailored for the purposes of this study, revealed disparities in the transition from the pre-test to the post-test phase and in the dichotomy between the experimental and control groups.

During the pre-test phase, both groups reported the employment of strategies aimed at enhancing concentration, monitoring responses provided, and maintaining a fluid transition between textual passages and accompanying questions. However, the EG asserted a greater familiarity with and adept utilization of strategies involving translation of incomprehensible content and the employment of brainstorming techniques to ascertain requisite prereading knowledge. Conversely, the control group exhibited a divergence in their heightened reliance on supportive strategies such as annotating and underlining pivotal textual elements or questions, alongside planning strategies in reporting responses on answer sheets. Upon scrutinizing the disparities between the two groups, it becomes apparent that the CG exhibits a degree of awareness regarding certain support strategies that the EG is only poised to acquire subsequent to the meta-strategic training. However, as evidenced by the Marsi average values derived during the pre-test phase, the levels of metacognitive awareness between the two groups do not exhibit significant variance.

Conversely, when considering the least-utilized strategies during the pre-test, both the EG and CG showcase striking similarities. Notably, both groups demonstrate a paucity in the utilization of certain support strategies, such as synthesizing pertinent information or employing typographic distinctions to underscore critical content. Moreover, several planning strategies, including assessing the structure and format of the examination booklet, alongside monitoring strategies concerning alignment with reading objectives, are conspicuously overlooked by both groups. The EG is characterized by a relatively minimal emphasis on a crucial support strategy such as note-taking, whereas the CG indicates limited utilization of the reading aloud strategy, a circumstance deemed normative given the testing context in which the task is undertaken.

Subsequent to the meta-strategic training, discernible alterations emerge in learners' perceptions of metacognitive awareness, with a more pronounced shift observed in the EG compared to the CG. While the CG reports continued reliance on previously familiar and employed strategies, notably including the dynamic interplay between text and questions, concentration enhancement, and answer correctness monitoring, the EG accords significance to newly introduced strategies addressed during the training sessions. For instance, the EG emphasizes increased utilization of supportive techniques such as circling and underlining pertinent information, as well as adopting planning strategies such as transferring answers onto the answer sheet, while maintaining a prevailing strategic inclination towards translating complex passages. Notably, the least employed strategies demonstrate consistency across both groups, albeit with the EG incorporating the information visualization strategy, while the note-taking strategy experiences diminished usage within the CG.

These findings, while predominantly quantitative in nature, have facilitated the discernment of qualitative nuances in the developmental trajectories of the two participant groups, revealing a notable shift in awareness and utilization of strategies within the EG. This assertion finds validation through intragroup comparisons conducted on the mean scores of cognitive awareness among EG learners. In contrast to the Marsi mean scores recorded in the pre-test phase, the EG demonstrates a marked enhancement in metacognitive awareness in the post-test phase, a trend not mirrored in the CG. However, this discrepancy does not manifest as a substantial alteration when juxtaposed with the CG's metacognitive awareness averages. Numerous factors may underlie this disparity,

several of which have been expounded upon in Section 9.1, particularly in relation to performance metrics. While the attained results reflect the deliberate narrowing of research objectives and experimental durations, it is imperative to acknowledge the influential role of sample size in determining the statistical significance of findings. Given the salience of data yielded by intra-group comparisons within the EG, we further scrutinized which strategies engendered a perceptible shift in learners' perceived metacognitive awareness during the transition from pre- to post-test phases. Among the three most influential strategies identified, we enumerate the note-taking strategy, the practice of circling and underlining relevant information within the text, and the utilization of summarization as a mnemonic tool to enhance retention of pertinent information within working memory. The significance of these strategies is underscored by their centrality within the metacognitive training curriculum. Equally noteworthy strategies contributing to the metacognitive awareness of EG learners encompassed emphasis on reading speed and typographical nuances, scrutiny of task instructions, and the transference of responses onto answer sheets for correction. Regrettably, to the best of our knowledge, extant scholarly literature does not furnish studies delineating qualitative variations in learners' strategy adoption. Nonetheless, we seek to augment our assertions with insights gleaned from the reflections shared by participants within the focus group discussions. Indeed, the focus group interview unveiled unequivocal positive sentiments towards meta-strategic training, to the extent that an analysis of the interview transcript highlighted the recurrence of words like “finde”, “tipps”, “nützlich”, “gut”, “italienisch”, which emerge as the most frequent words within the transcript. Moreover, given the duration of the experimental timeframe experienced by the EG, the expressions pertaining to the transference of meta-strategic knowledge to analogous tasks were unforeseen for this research team. To exemplify, one of the statements addressing this topic is provided below: «*Ja, ich verwende es auch bei jeder Hausübung, wenn es ein Leggere ist, und auch in Englisch, verwende ich es auch, wirklich sehr nützlich*». Additionally, another facet elucidated during the focus group discussions, which bolsters the efficacy of the designed meta-strategic intervention, is an excerpt emphasizing the significance of meta-strategic instruction. Within this excerpt, the learner delineates how the instructed strategies were intermittently referenced by the instructors, yet were seldom explored in depth with regards to practical implementation: « *ich finde auch, man weißt welche Vereinfach…oder welche Methoden man verwenden kann, aber ich persönlich hab sie nie verwendet bis ich, bis du gekommen bist und uns gezeigt hast wie es wirkt,*

wie sie wirklich nützlich sind».In a subsequent excerpt, learners not only express their appreciation for the intervention but also articulate their ability to discern that the inductive methodology employed by the experimenter prompted them to engage in profound reflection concerning their own meta-strategic methodologies: «*Ich habe es gut gefunden dass wir jetzt zuerst, als wir angefangen haben, dass wir ein Reading machen und dann, später haben wir von dir die Tipps bekommen. Und dann ist es leichter gegangen*»;

9.3 Motivation and Emotions

The third facet under scrutiny within the classroom system pertains to the affective-motivational dimension concerning our sample group. Prior to presenting our findings, it is imperative to revisit the theoretical framework that underpinned our selection of variables comprising this third dimension. Within the theoretical discourse, we delved into Dörnyei's (2020b) three-tier motivational framework. Aligned with this framework, we regarded the orientations postulated by Gardner (1985) and Dörnyei's (2005, 2009a) L2 Motivational Self-System as constituting dispositional motivational trait, i.e. those motivational facets characterized by relative stability over time. Conversely, we considered emotions and task motivation as emblematic of characteristic motivational adaptations, given their propensity to fluctuate in response to experimental contexts. Finally, we employed the focus group report as a means of assimilating integrative motivational experiential narratives into our analysis.

As delineated by Dörnyei (2020b) and Dörnyei and Ushioda (2021) across various instances, components identified as dispositional motivational traits are predisposed to exhibit minimal change, particularly when assessed over brief temporal intervals. This assertion is further underscored when considering the motivational orientations of the experimental cohort, wherein learners approached the study of Italian as a foreign language with a multifaceted array of motivations, all intricately intertwined with the territorial context of East Tyrol. Notably, these motivations stem from familial ties across the border, the geographical proximity of Italy to the Austrian frontier, vivid labour exchanges, and the opportunity for frequent interactions with native Italian speakers. Moreover, throughout the transition from pre- to post-test phases, no discernible

alterations were discerned in the learners' perceptions of their linguistic selves, thus affirming the stability of their personal vision as speakers of Italian.

From the point of view of characteristic motivational adaptations, the findings reveal temporal variations. In contrast to the assertions of Dewaele (2022) and MacIntyre and Vincze (2017), who advocate for the prevalence of frequent and substantive fluctuations in emotions, our study did not yield any significant changes in the sets of emotions under scrutiny. It is pertinent to clarify that while changes were indeed observed, they did not attain statistical significance. Subsequently, in the forthcoming discussion of the MFA results, we will elucidate the significant role played by emotions in delineating new configurations of variables within the classroom system under examination.

Within the realm of characteristic motivational adaptations, discernible alterations were identified at the level of task motivation, which we have elucidated as a particularly intricate motivational component (Dörnyei, 2019). Certain facets of task motivation emerge as particularly noteworthy at an intra-group analysis level, primarily within the EG. Within the EG, a discernible shift in the appreciation of the comprehension task is observed during the transition from pre- to post-test phases, wherein the task assumes a heightened level of interest and enjoyment in the perception of learners. Additionally, subsequent to the meta-strategic training, there is a notable alteration in the perceived utility of strategies as facilitators in task resolution. Moreover, within the context of the experimental sample size, self-efficacy emerges as a factor of significance albeit to a lesser extent. Zimmerman and Moylan (2009) and Zimmerman et al. (2017) underscore the salience of this motivational component as one of the primary determinants influencing learners' beliefs during metacognitive interventions. Furthermore, in intergroup comparisons, the levels of self-efficacy, strategy utility perception, and peer self-efficacy exhibit significance in the comparisons between the EG and the CG. This outcome suggests that the experimental intervention instilled a heightened sense of confidence in the abilities and resources of learners within the experimental group: «*wir haben zwar schon ein paar Tipps gehört, aber eben nie richtig angewendet, und auch wir haben es nie gezeigt bekommen, wie es wirklich funktioniert, und, deswegen eigentlich ich habe vorher meine Leggere nie so gemacht, und jetzt eben schon, und es ist eben leichter, finde ich*».

9.4 System alteration and new variable constellations

One of the central questions driving this study pertains to the potential detection of significant alterations capable of precipitating a transition from a phase of stability to one characterized by instability and change, albeit transient, within the classroom system. This question prompted an investigation into whether such changes could be instigated by subjecting the sample to two distinct training conditions: one experimental and the other serving as a control. The former aimed to guide learners in acquiring various strategies conducive to comprehending Italian as a FL text, while the latter adhered to independent training methods as prescribed by the ministerial guidelines for the Austrian Matura. In light of these considerations, the findings unveiled significant changes, albeit constrained primarily to the intra-group dynamics of the EG. Conversely, the CG exhibited no significant alterations, or at least none pertinent to the scope of this investigation, leading to its exclusion from the MFA. According to CDST perspective, the changes observed within the EG serve as indicative manifestations of a substantial shift in the system's dynamics. Such alterations, the theory posits, cannot be attributed to isolated factors but rather arise from a constellation of factors that collectively contribute to elucidating the observed changes.

The MFA outcomes underscore the significance of the first two dimensions, elucidating approximately 55% and 60% of the variance within the pre- and post-test datasets, respectively. Notably, these dimensions are each influenced by distinct factors, and their diversity undergoes amplification and alteration during the transition from the initial experimental phase of the pre-test to the post-test phase. Influencing these dimensions, a tripartite clustering – comprising C1p, C2p, C3p in the pre-test, and C1P, C2P, C3P in the post-test – was delineated to explicate the sample data. An immediate observation reveals that in the pre-test dataset, the first two clusters, C1p and C2p, elude explication by any of the explanatory dimensions, whereas C3p can be effectively expounded by dimension 1. In contrast, the post-test data exhibit greater cohesion, with dimension 1 assuming significance for C1P and C3P, and dimension 2 for C2P. This outcome suggests that the meta-strategic intervention administered to the EG engendered a more consolidated and coherent dataset. Notably, this phenomenon is particularly pronounced within C3P, where learners exhibit closer and more tightly clustered averages.

The identification of these clusters provides a valuable lens through which to scrutinize the learners' dispositions concerning the task and the recently concluded experimental situation. In the pre-test phase, the inaugural C1p cluster emerges as characterized by a blend of pessimism, boredom, and a degree of relaxation. Notably, participants perceive the reading comprehension task as relatively manageable within the assessment, as discerned from select remarks gleaned from the focus group discussions: «*Ich finde auch, dass das Lesen in vergleich einfach ist und mit den Tipps die du uns gegeben hast, ist es noch einfacher geworden*»; «*Ich habe die SRDP-Seite eigentlich nur für Language in Use, also grammatik…grammatikalische Sachen, und nicht für Leggere oder Texte*». In the post-test phase, the C1P cluster contracts to comprise an only learner who exhibits persistent sentiments of boredom, a moderate perception of self-efficacy, and a negative outlook on both their actual and ideal linguistic selves. Moreover, a marked lack of enthusiasm towards the task persists, as it is perceived as lacking in enjoyment. Similarly, the C2p in the pre-test phase perceives the task's difficulty level as relatively low and deems the strategies imparted by the teacher as minimally beneficial. This observation aligns with the group's characteristic levels of metacognitive awareness, which range from low to moderate. However, in the post-test phase, the perception within the C2P cluster – comprised of the same learners of C2p – regarding the efficacy of the received strategies undergoes a noteworthy shift towards higher levels. Concurrently, there is an elevation in the level of awareness, settling around a moderate value. These findings suggest that the training initiative elicited positive changes compared to the pre-test phase and the learners' perceptions. This sentiment is further corroborated by the narratives furnished by participants during the focus group discussions, wherein they affirm the necessity of a strategic course in preparation for the maturity test: «*Ehm, ja, ich finde schon in unserem Fall, weil wir nicht wie Englisch und seit der Volkschule Italienisch lernen, sondern die Meisten haben erst in dieser Schule angefangen Italienisch zu lernen, deshalb finde ich sehr nützlich so ein Kurs durchzuführen*». Finally, with regards to the third cohort, C3p, it comprises learners who, since the pre-test phase, exhibit optimism and keen interest towards the task at hand. They harbor a favorable perception of the strategies as facilitative tools for enhancing their proficiency in Italian and find those dispensed by the instructor beneficial. Additionally, they demonstrate an average perception of their actual linguistic competence and moderate levels of metacognitive awareness. In the post-test phase, the revised configuration of variables and scores unveils a C3P group, now inclusive of a new participant, characterized by heightened levels of

metacognitive awareness and a medium-to-high perception of their actual linguistic self. This observation is particularly intriguing, as we have regarded L2MSS as a dispositional motivational trait, i.e. a motivational aspect deemed resistant to change. However, in this instance, the elevation in self-efficacy levels, coupled with a positive attitude towards the learning task, may precipitate alterations in the perception of one's actual linguistic proficiency.

9.5 Limitations of the study

This dissertation encompasses various aspects that render it a contentious piece, filled with limitations. This paragraph aims to delineate the acknowledged limitations, while endeavoring to structure the ensuing points. Initially, we will address the level of novelty inherent in the present study, evaluating its contribution within the established parameters of the state of art. Subsequently, we will delve into the specificity of this study concerning the territorial context. Following this, we will scrutinize the constraints imposed by temporal considerations within the study's framework. Lastly, we will identify limitations pertaining solely to the methodological aspects of this work.

Primarily, it is imperative to acknowledge that the investigative objectives of this paper do not signify a particularly groundbreaking endeavor within the domain of foreign language instruction. Studies focused on topics such as metacognition and motivation (Oxford, 1994; 2017; 2018; Zimmermann, 2000; 2002; 2008; Wenden, 1998a; 1998b; etc.) are not novel within the realm of language education. Similarly, investigations conducted in the sphere of reading and comprehension proficiency of written text may not necessarily introduce pioneering insights (De Beni, 1989; De Beni and Pazzaglia, 1993; 1995; De Beni et al., 2014; particularly within the domain of Italian studies). Nonetheless, this dissertation stands as one of the scant studies undertaken on a less delimited segment of meta-strategy, adept at encompassing metacognitive strategies pertaining to planning, reading, and monitoring of reading and comprehension tasks. Moreover, this work offers several reflective observations concerning the motivational-affective domain, with an endeavour to elucidate the robust interrelationship it shares with metacognitive components. Furthermore, this study stands as one of the few effort to examine Italian language instruction within a foreign context, a focus often overshadowed by the considerable attention devoted to research on Italian L2 acquisition and the

influence of linguistic practices on emerging communities of Italian speakers (see Diadori et al., 2015). Lastly, the investigation into strategic and meta-strategic facets associated with text comprehension in a foreign language, along with their incorporation as explicit learning objectives in the foreign language classroom, can also be regarded as relatively novel pursuits.

Another noteworthy aspect that may be perceived as a limitation of this dissertation is its narrow contextualization within a specific geographical region where Italian is studied (and potentially spoken) as a foreign language: Austria. More precisely, this study delves into data from a highly specific Austrian region, namely East Tyrol, which, owing to its geographical location, may exhibit distinct linguistic-cultural phenomena. From this perspective, one might argue that a broader and more diverse geographic scope would be necessary to better substantiate and elucidate the transformations occurring within the Italian class system on Austrian soil. However, while this may initially appear as a limitation, the decision to concentrate this study on a tightly defined geographical area and on specific aspects of language acquisition could potentially yield a more precise and detailed experimental panorama. Indeed, from the outset of this effort, it was recognized that one of the guiding approaches underlying this study was the perspective advocated by Ushioda (2016), commonly referred to as the "Small Lens" approach. The selection of this approach was predicated on its efficacy in discerning metacognitive-motivational dynamics within a delineated classroom setting, thereby facilitating an understanding of the potential catalysts for any environmental shifts. This nuanced examination affords educators the opportunity to implement more precisely targeted pedagogical interventions customized to the specific needs of the class under scrutiny. Consequently, the contextual specificity of East Tyrol, coupled with the emphasis on the task of text comprehension within the Italian as a FL classroom, offered enhanced insights into the experimental milieu within which this investigation was conducted.

The research context serves as a pivotal foundation upon which to delineate the limitations inherent in a study. While the spatial dimension of the context often garners primary attention, we posit that the temporal dimension holds significant import in this instance. For this study, it is imperative to scrutinize the temporal context of the experiment setting, as it can be analysed both as a distinct historical time for Austrian schools and as an organizational timeframe for the experiment itself. Adherence to the original experimental design would have inevitably precipitated substantial encroachment

upon the curricular objectives of the schools, given their involvement in many extracurricular initiatives demanding a considerable allocation of time. Numerous factors underpin these challenges. Firstly, Austrian schools are already extensively engaged in diverse extracurricular activities, which detract from instructional hours. Moreover, even as an extracurricular proposition, this project would have presented challenges in terms of accommodation, considering the substantial personal commitments interfering upon the learners' private lives. Furthermore, the educational landscape of Austrian schools, and presumably that of schools in numerous other regions worldwide, appears to have encountered a significant setback in light of the Covid-19 pandemic. School routines have notably decelerated due to the substantial disruptions stemming from the challenges of remote learning. Viewed through this lens, the acceptance of an experimental project such as this by many schools, despite its potential utility, would have necessitated further deceleration of the pace of curricular instruction. From an experimental standpoint, however, the rescheduling of the investigation timeline entailed inevitable compromises, both in terms of the research objectives (as outlined in Chapter 6) and in the efficacy of the intervention administered to learners in the experimental group. Given that this study pertains to learners' strategic behaviours regarding text comprehension, it is imperative to acknowledge that the acquisition of a strategy necessitates practice. Such practice serves not as an end in itself but signifies a transition from externally regulated to self-regulated processes for the learner. Consequently, the acquisition of new strategies entails the consolidation of novel habits, which, alongside continual practice, necessitate time to supplant old strategic modalities (Van Dijk and Kintsch, 1983; Oxford, 2018). Regrettably, the constraints imposed by school availability precluded the completion of this process, constituting undoubtedly one of the foremost limitations of this dissertation.

From a methodological perspective, there are several aspects that warrant acknowledgment as limitations of this study. Focusing specifically on the second methodological segment and thus excluding the preliminary exploration of learners' needs and instructional objectives, several challenges have emerged. Primarily, the scope of data collection and experimental implementation is constrained within a relatively narrow experimental framework, as previously mentioned. Additionally, the availability of data is limited, owing to obstacles encountered during the phase of sample identification (refer to paragraph 7.1). This predicament undoubtedly presented hurdles in the quantitative analysis of data, which, it should be noted, only represents a fraction of the observed outcomes. Nonetheless, it is crucial to underscore that the objectives of

this study were inherently geared towards an explanatory rather than predictive analysis of results, as advocated by Larsen-Freeman and Cameron (2008), seminal figures in the application of Complex Dynamic Systems Theory (CDST) within the linguistic domain. Furthermore, the adoption of the CDST perspective, while illuminating, also posed certain limitations, as both the experimental design and the chosen methods of analysis epitomize an entirely exploratory approach to the investigation within the field of experimental foreign language teaching.

Acknowledging the constraints inherent in an unconventional methodology devoid of established scientific precedent, this section invites acknowledgment of the endeavor to embrace an entirely novel perspective still undergoing delineation, to which this study may have contributed, albeit to varying degrees of efficacy.

Conclusions

This doctoral dissertation can be regarded as an attempt aimed at building connections between governmental interventions in learners' language education, classroom teaching, and the world of research. As highlighted by Gorsuch and Griffee (2018), educators often grapple with the challenge of harmonizing classroom activities with the demands of second language testing, given the latter's focus on specific skills necessitating a more comprehensive and tailored instructional approach. In this context, the present study presented an opportunity to align certain pedagogical practices pertaining to text comprehension with the language proficiencies requisite in today's contemporary society, as delineated by standardized testing frameworks. While acknowledging that this research does not introduce any groundbreaking innovations in the domain of foreign language instruction or within the theoretical constructs of metacognition and motivation, it nevertheless represents a study that we consider essential. Indeed, this research affords an opportunity to examine the transformative potential of meta-strategic interventions within the foreign language classroom system and to contemplate the potential ramifications it may engender on learners' metacognitive and motivational perceptions. The findings presented herein are inherently bound to a highly specific context, characterized by attributes that render it incomparable to any other educational or territorial setting. Consequently, we posit the necessity for each unique context to devise educational initiatives and interventions tailored to the exigencies and peculiarities of the intervention context under consideration.

In the case study examining Austrian learners in East Tyrol, several favourable outcomes emerged. The data revealed a notable and relatively uniform enhancement in both performance and metacognitive awareness among participants in the experimental group. However, these improvements did not uniformly extend to the motivational disposition of all learners. While some learners persisted in maintaining a pessimistic attitude towards both the task and their self-perception as Italian speakers, others exhibited a rather positive outlook from the outset of the intervention, which further burgeoned over time alongside the accruing positive transformations, ultimately influencing their perception of their Actual Linguistic Self (Dörnyei, 2005; 2009a).

As elucidated, factors such as heightened self-efficacy and increased interest in the task and its objectives exert a beneficial influence on the Actual Linguistic Self. However, it is imperative to recognize that these contributions may exhibit variance within different linguistic and territorial contexts. Consequently, we refrain from extrapolating our findings to every foreign language learner population, but rather regard them as indicative of potential effects engendered by meta-strategic instruction.

While certain limitations of this study have been acknowledged in section 9.5, we posit several recommendations for future research endeavors in this domain. Primarily, we advocate for the expansion and refinement of studies akin to ours, not only in terms of participant numbers but also concerning research objectives, available resources, and refinement of the methodology within the CDST. Specifically, within the framework of the Austrian high-school-leaving examination, as articulated by participants in our focus group discussions, it becomes apparent that additional language skills may necessitate meta-strategic support. While interventions targeting reading-related metacognitive competencies are pertinent, efforts should also be directed towards enhancing writing skills, as well as exploring novel lexico-grammatical testing methodologies. Moreover, it would be very interesting to delve into strategies pertaining to listening comprehension and supplementary speaking proficiencies for the effective delivery of both structured and unstructured oral discourses.

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Acronyms adopted within this dissertation

AHS = Allgemeinbildende Höhere Schulen

BHS = Berufsbildende Höhere Schulen

BIFIE = Bundesinstitut für Bildungsforschung, Innovation und Entwicklung des österreichischen Schulwesens (Austrian Federal Institute for Education Research, Innovation, and Development)

C1P = Cluster 1 post-test

C1p = Cluster 1 pre-test

C2P = Cluster 2 post-test

C2p = Cluster 2 pre-test

C3P = Cluster 3 post-test

C3p = Cluster 3 pre-test

CDS = Complex Dynamic System

CDST = Complex Dynamic System Theory

CG = Control Group

C-I = Construction-Integration model

DA = Dynamic Assessment

EG = Experimental Group

FL = Foreign Language

FLC = Foreign Language Class

GRS = Global Reading Strategy

IS = The Ideal L2 Self

L1 = native language

L2 = second language (acquired or learned after acquiring the native language)

LLE = The Language Learning Experience (LLE).

MARSI = Metacognitive Awareness Reading Strategy Inventory

MARSI-R = Metacognitive Awareness Reading Strategy Inventory Revised

MFA = Multi Factor Analysis

OIT = Organismic Integration Theory

OS = The Ought-to L2 Self

PLOC = Perceived Locus Of Casualty

PSRS = Problem-Solving Reading Strategy

RSF = Reading Systems Framework

SI = Structured Inquiry

SRLRES = Self-Reported Least Recognised and Employed Strategies

SRMRES = Self-Reported Most Recognised and Employed Strategies

SRS = Support Reading Strategy

SVR = Simple View of Reading

Appendix

Sample Profile

Genehmigung

Lesen und Verstehen auf Italienisch
Beschreibung der Forschungsziele

Dieser Fragebogen zielt darauf ab, die Lese- und Textverstehensgewohnheiten von Lernenden des Italienischen als Fremdsprache zu ermitteln. Daher ist die Universität Bologna daran interessiert, Ihre Erfahrungen und Meinungen als Lernende dieser Sprache zu erfahren.

Denken Sie daran, dass dies kein Test ist, es gibt keine richtigen oder falschen Antworten, aber es ist wichtig, dass Sie so ehrlich und authentisch wie möglich antworten. Die verschiedenen Personen, die an diesem Projekt arbeiten, werden Ihnen für Ihre Ehrlichkeit und Ihr Engagement unendlich dankbar sein.

Der Inhalt dieses Fragebogens ist absolut vertraulich und die Angaben zur Identität der befragten Person werden in keiner Weise veröffentlicht.
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Wenn Sie weitere Informationen über dieses Forschungsprojekt erhalten möchten, wenden Sie sich bitte per Mail an folgende Adresse: gioacchino.amato2@unibo.it

Stimmen Sie zu, an dieser Umfrage teilzunehmen?

Die erhobenen Daten werden ausschließlich für Forschungszwecke genutzt.
Wenn Sie „Nein“ auswählen, werden Sie ans Ende des Fragebogens weitergeleitet.

- ○ Ja
- ○ Nein

Persönliche Daten

Vorname

Nachname

Erstellen Sie Ihren persönlichen Code:

1. Erster Buchstabe des/der Vornamen(s) (z. B. Maria = M; Maria Rita = MR)
2. Anfangsbuchstabe des/der Nachnamen(s) (z. B. Marcuzzi = M; Annunziata Rega = AR)
3. Nummer Ihrer Wohnadresse (z. B. Via delle Camelie, 113 = 113)
4. Anfangsbuchstabe Ihrer Lieblingsfarbe (z. B. Grün = G)

Beispiel: Valerio De Luca, Via Garibaldi 16, Gelb VDL16G

Welches Geschlecht haben Sie?

- ○ Männlich
- ○ Weiblich
- ○ Divers

Wie alt sind Sie?

Muttersprache/n:

- ○ Deutsch
- ○ _____ Deutsch und andere
- ○ _____ Andere

Bildungsabschluss der Eltern

- ☐ _____ Elternteil 1
- ☐ _____ Elternteil 2

Schulform:

- ○ AHS (Allgemeinbildende Höhere Schule)
- ○ BHS (Berufsbildende Höhere Schule)

Schuljahr:

- ○ vorletztes Schuljahr
- ○ letztes Schuljahr

Wählen Sie die Sprachen aus, die Sie beherrschen, und geben Sie dann das Niveau der Kenntnisse für jede dieser Sprachen an.

Wenn Sie keine andere Sprache kennen, schreiben Sie "none" und wählen Sie "Keine Kenntnisse"

Deutsch	
Italienisch	
Spanisch	
Franzosisch	
Englisch	
Latein	
Andere Sprache	

Wie lange lernen Sie schon Italienisch?

- ○ 1 Jahr
- ○ 2 Jahre
- ○ 3 Jahre
- ○ 4 Jahre
- ○ 5 Jahre
- ○ 6 Jahre oder mehr

Bekommen Sie Nachhilfe in Italienisch?

- ○ Nein
- ○ Ja

Sprechen Sie außerhalb der Schule Italienisch?

- ○ Ja
- ○ Nein

Wenn ja, wie viele Stunden pro Woche?

Wählen Sie die ersten **fünf** Gründe, warum Sie Italienisch lernen, aus und ordnen Sie sie nach ihrer Wichtigkeit, wobei der **erste** Grund **der wichtigste** und der **fünfte** Grund der **am wenigsten wichtige** ist.

Ich lerne Italienisch, weil ...

weil ich in der Schule keine andere Wahl hatte.

weil ich den Klang der Sprache mag.

weil ich es für meine zukünftige Arbeit nützlich finde.

weil Italien ein Land ist, das ich besuchen möchte.

weil ich die anderen Sprachen meiner Wahl nicht mag.

weil ich Verwandte habe, die Italienisch sprechen.

weil ich Italienisch mag.

weil Italien meinem Land sehr nahe ist.

weil ich Italiener(innen) zu verschiedenen Zeiten des Jahres treffe.

weil ich bereits über einige Sprachkenntnisse verfügt habe.

weil ich mich sehr mit Italienerinnen oder Italienern identifiziere.

weil ich gerne mit Italienerinnnen oder Italienern kommunizieren möchte.

weil ich Fremdsprachen im Allgemeinen mag.

weil ich italienischen Profilen in sozialen Netzwerken folge.

weil Italienisch sehr leicht zu lernen ist

weil ... [ ]

Haben Sie bereits Erfahrungen mit der Aufgabe zum Leseverständnis gemacht?

- ○ Nein
- ○ Ja

Wenn ja, in welchen Sprachen?

- [ ] Deutsch
- [ ] Englisch
- [ ] Spanisch
- [ ] Französisch
- [ ] Italienisch

Pre-test survey

Genehmigung

Lesen und Verstehen auf Italienisch
Beschreibung der Forschungsziele

Dieser Fragebogen zielt darauf ab, die Lese- und Textverstehensgewohnheiten von Lernenden des Italienischen als Fremdsprache zu ermitteln. Daher ist die Universität Bologna daran interessiert, Ihre Erfahrungen und Meinungen als Lernende dieser Sprache zu erfahren.

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Der Inhalt dieses Fragebogens ist absolut vertraulich und die Angaben zur Identität der befragten Person werden in keiner Weise veröffentlicht.
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Wenn Sie „Nein“ auswählen, werden Sie ans Ende des Fragebogens weitergeleitet.

- ○ Ja
- ○ Nein

Block 4

Bitte geben Sie Ihren persönlichen Code ein:

MARSI-R (2018) (Metacognitive Reading Strategy Inventory - Revised)

Die in diesem Inventar aufgeführten Aussagen beschreiben 20 Strategien oder Handlungen, die Leser beim Lesen von akademischen oder wissenschaftlichen Texten wie Büchern, Artikeln, Geschichten usw. anwenden.

Anweisungen:

Schritt 1: Lesen Sie jede der Aussagen und geben Sie an, ob Sie sie kennen und/oder sie beim Lesen verwenden.

Schritt 2: Verwenden Sie die folgende Skala, um zu zeigen, inwieweit Sie die Strategie kennen und/oder anwenden:

1. Ich habe **noch nie** von dieser Strategie **gehört**.
2. Ich habe von dieser Strategie **gehört, aber ich weiß nicht, was sie bedeutet.**
3. Ich habe von dieser Strategie **gehört**, und ich glaube **ich weiß, was sie bedeutet.**
4. Ich kenne diese Strategie und **kann erklären, wie und wann sie anzuwenden ist**.
5. Ich kenne diese Strategie sehr gut und **wende sie oft beim Lesen an.**

Schritt 3: Nachdem Sie jede Aussage gelesen haben, wählen Sie in den Feldern nach jeder Aussage eine Zahl von 1 bis 5 aus, um anzugeben, inwieweit Sie die Strategie kennen und/oder anwenden.

Während der Aufgabe zum Leseverstehen in Italienisch...

	1	2	3	4	5
1. Ich gehe im Text hin und her, um Beziehungen zwischen Fragen und Informationen im Text zu finden.	○	○	○	○	○
2. Ich mache mir während des Lesens Notizen, damit ich das Gelesene besser verstehe.	○	○	○	○	○

	1	2	3	4	5
3. Bevor ich einen Text lese, verschaffe ich mir anhand des Titels einen ersten Eindruck über das Thema.	○	○	○	○	○
4. Wenn der Text schwierig wird, lese ich laut, damit ich das Gelesene besser verstehe.	○	○	○	○	○
5. Ich überlege, ob der Inhalt des Textes zu dem Leseziel passt, das ich mir gesetzt habe.	○	○	○	○	○
6. Ich bewerte die Richtigkeit einer Antwort und überprüfe sie anhand von Informationen aus dem Text.	○	○	○	○	○
7. Ich versuche, mich wieder zu konzentrieren, wenn ich beim Lesen abgelenkt bin.	○	○	○	○	○
8. Ich unterstreiche oder umkreise Informationen im Text, damit ich sie mir besser merken kann.	○	○	○	○	○
9. Ich messe meine Lesegeschwindigkeit je nach dem, was ich gerade lese.	○	○	○	○	○
10. Ich schaue mir die Struktur des Prüfungsheftes an, bevor ich anfange zu lesen.	○	○	○	○	○
11. Von Zeit zu Zeit halte ich inne, um darüber nachzudenken, was ich lese.	○	○	○	○	○
12. Ich verwende typografische Hilfsmittel wie Fett- oder Kursivdruck, um wichtige Informationen hervorzuheben.	○	○	○	○	○
13. Ich analysiere und bewerte die Informationen, die ich lese, kritisch.	○	○	○	○	○
14. Ich lese immer wieder, um das Gelesene besser zu verstehen.	○	○	○	○	○
15. Ich stelle Hypothesen über die Bedeutung von unbekannten Wörtern oder Ausdrücken auf.	○	○	○	○	○
16. Ich übersetze, was ich lese, um die Bedeutung besser zu verstehen.	○	○	○	○	○
17. Ich überfliege den Text schnell, wenn ich nach genauen Informationen suche.	○	○	○	○	○
18. Ich versuche, mir die Informationen bildlich vorzustellen, um mir das Gelesene besser zu merken.	○	○	○	○	○
19. Ich lese die Aufgabeanweisungen, bevor ich die Aufgabe ausführe.	○	○	○	○	○
20. Ich schreibe die Antworten auf dem Antwortblatt ab, wenn ich mit der Aufgabe fertig bin.	○	○	○	○	○
21. Ich fasse zusammen, was ich gelesen habe, um über wichtige Informationen im Text nachzudenken.	○	○	○	○	○

Was die italienische Sprache betrifft, betrachte ich mich selbst als:

- ○ Ein ausgezeichneter Leser - Eine ausgezeichnete Leserin
- ○ Ein erfahrener Leser - Eine erfahrene Leserin

- ○ Ein weder erfahrener noch unerfahrener Leser - Eine weder erfahrene noch unerfahrene Leserin
- ○ Ein unerfahrener Leser - Eine erfahrene Leserin

Motivation

In diesem Teil geht es darum, Ihre persönliche Meinung über die Sprache, die Sie lernen, herauszufinden.
Auch wenn einige Aussagen ähnlich erscheinen mögen, treffen einige auf Sie leichter zu als andere.
Wir möchten, dass Sie sich auf die Details konzentrieren.

Wir bitten Sie, diese Aussagen anhand dieser Skala zu bewerten:

1 - Stimme überhaupt nicht zu
2 - Stimme nicht zu
3 - Stimme weder zu noch lehne ab
4 - Stimme zu
5 - Stimme voll und ganz zu

Wie sehr stimmen Sie den folgenden Aussagen zu?

	1	2	3	4	5
1. Ich lerne Italienisch, weil meine engen Freunde es für wichtig halten.	○	○	○	○	○
2. Ich bin bereit, viel Arbeit in das Erlernen der italienischen Sprache zu investieren.	○	○	○	○	○
3. Wenn ich an die Zukunft denke, stelle ich mir vor, dass ich die italienische Sprache auf unterschiedliche Weise verwenden werde.	○	○	○	○	○
4. Ich muss Italienisch lernen, weil ich glaube, dass meine Eltern sonst enttäuscht von mir sein würden.	○	○	○	○	○
5. In meinem Italienischkurs melde ich mich sehr oft freiwillig, um zu antworten.	○	○	○	○	○
6. Ich kann mir vorstellen, dass ich gut Italienisch spreche.	○	○	○	○	○
7. Die Leute um mich herum denken, dass ich Italienisch lernen muss, um ein gebildeter Mensch zu sein.	○	○	○	○	○
8. Ich würde gerne viel Zeit damit verbringen, Italienisch zu lernen.	○	○	○	○	○
9. Ich kann mir vorstellen, dass ich fließend E-Mails auf Italienisch schreiben kann.	○	○	○	○	○

	1	2	3	4	5
10. Ich möchte mich vor allem auf das Fach Italienisch konzentrieren.	○	○	○	○	○
11. Italienisch zu lernen ist für mich wichtig, um die Unterstützung meiner Familie zu gewinnen.	○	○	○	○	○
12. Ich kann mir vorstellen, mich an einer Diskussion auf Italienisch zu beteiligen.	○	○	○	○	○
13. Ich erwäge, Italienisch zu lernen, weil die Leute, die ich respektiere, das für richtig halten.	○	○	○	○	○
14. Ich würde gerne Italienisch lernen, auch wenn mich niemand darum gebeten hat.	○	○	○	○	○
15. Ich stelle mir oft vor, dass ich Italienisch wie ein Muttersprachler spreche.	○	○	○	○	○

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Optimismus — Pessimismus

0 10 20 30 40 50 60 70 80 90 100

Warum?

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Angst — Gelassenheit

0 1 2 3 4 5 6 7 8 9 10

Warum?

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Interesse — Langweile

0 1 2 3 4 5 6 7 8 9 10

Warum?

Beantworten Sie die folgenden Fragen auf einer Skala **von 0 bis 10**.
Auf dieser Skala bedeutet **0 "überhaupt nicht"** und **10 "sehr viel"**.

	überhaupt nicht 0	1	2	3	4	5	6	7	8	9	sehr viel 10	
1. Wie schwierig finden Sie die Aufgabe zum Leseverstehen in Italienisch?												☐
2. Glauben Sie, dass das Ergebnis des Tests Ihrem Sprachniveau angemessen entspricht?												☐
3. Fühlen Sie sich auf die Aufgabe zum Leseverstehen vorbereitet?												☐
4. Haben Sie das Gefühl, dass Sie besser als einige Ihrer Klassenkameraden Texte auf Italienisch lesen und verstehen können?												☐
5. Wie interessant finden Sie die Leseverstehensaufgabe in Italienisch?												☐
6. Wie nützlich finden Sie die Lesestrategien, die Ihnen Ihr/Ihre ItalienischlehrerIn im Unterricht vermittelt?												☐
7. Glauben Sie, dass die Kenntnisse über Leseverstehenstrategien Ihnen helfen, Italienisch mehr zu schätzen?												☐
8. Haben Sie Spaß an der Leserverstehensaufgabe in Italienisch?												☐

	überhaupt nicht										sehr viel
	0	1	2	3	4	5	6	7	8	9	10
9. Haben Sie das Gefühl, dass Sie über die richtigen Fähigkeiten verfügen, um die Leseverstehensaufgabe in Italienisch zu bewältigen?											

Powered by Qualtrics

Post-test survey EG

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- ○ Ja
- ○ Nein

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	1	2	3	4	5
1. Ich gehe im Text hin und her, um Beziehungen zwischen Fragen und Informationen im Text zu finden.	○	○	○	○	○
2. Ich mache mir während des Lesens Notizen, damit ich das Gelesene besser verstehe.	○	○	○	○	○

	1	2	3	4	5
3. Bevor ich einen Text lese, verschaffe ich mir anhand des Titels einen ersten Eindruck über das Thema.	○	○	○	○	○
4. Wenn der Text schwierig wird, lese ich laut, damit ich das Gelesene besser verstehe.	○	○	○	○	○
5. Ich überlege, ob der Inhalt des Textes zu dem Leseziel passt, das ich mir gesetzt habe.	○	○	○	○	○
6. Ich bewerte die Richtigkeit einer Antwort und überprüfe sie anhand von Informationen aus dem Text.	○	○	○	○	○
7. Ich versuche, mich wieder zu konzentrieren, wenn ich beim Lesen abgelenkt bin.	○	○	○	○	○
8. Ich unterstreiche oder umkreise Informationen im Text, damit ich sie mir besser merken kann.	○	○	○	○	○
9. Ich messe meine Lesegeschwindigkeit je nach dem, was ich gerade lese.	○	○	○	○	○
10. Ich schaue mir die Struktur des Prüfungsheftes an, bevor ich anfange zu lesen.	○	○	○	○	○
11. Von Zeit zu Zeit halte ich inne, um darüber nachzudenken, was ich lese.	○	○	○	○	○
12. Ich verwende typografische Hilfsmittel wie Fett- oder Kursivdruck, um wichtige Informationen hervorzuheben.	○	○	○	○	○
13. Ich analysiere und bewerte die Informationen, die ich lese, kritisch.	○	○	○	○	○
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15. Ich stelle Hypothesen über die Bedeutung von unbekannten Wörtern oder Ausdrücken auf.	○	○	○	○	○
16. Ich übersetze, was ich lese, um die Bedeutung besser zu verstehen.	○	○	○	○	○
17. Ich überfliege den Text schnell, wenn ich nach genauen Informationen suche.	○	○	○	○	○
18. Ich versuche, mir die Informationen bildlich vorzustellen, um mir das Gelesene besser zu merken.	○	○	○	○	○
19. Ich lese die Aufgabeanweisungen, bevor ich die Aufgabe ausführe.	○	○	○	○	○
20. Ich schreibe die Antworten auf dem Antwortblatt ab, wenn ich mit der Aufgabe fertig bin.	○	○	○	○	○
21. Ich fasse zusammen, was ich gelesen habe, um über wichtige Informationen im Text nachzudenken.	○	○	○	○	○

Was die italienische Sprache betrifft, betrachte ich mich selbst als:

○ Ein ausgezeichneter Leser - Eine ausgezeichnete Leserin

○ Ein erfahrener Leser - Eine erfahrene Leserin

- ○ Ein weder erfahrener noch unerfahrener Leser - Eine weder erfahrene noch unerfahrene Leserin
- ○ Ein unerfahrener Leser - Eine erfahrene Leserin

Motivation

In diesem Teil geht es darum, Ihre persönliche Meinung über die Sprache, die Sie lernen, herauszufinden.
Auch wenn einige Aussagen ähnlich erscheinen mögen, treffen einige auf Sie leichter zu als andere.
Wir möchten, dass Sie sich auf die Details konzentrieren.

Wir bitten Sie, diese Aussagen anhand dieser Skala zu bewerten:

1 - Stimme überhaupt nicht zu
2 - Stimme nicht zu
3 - Stimme weder zu noch lehne ab
4 - Stimme zu
5 - Stimme voll und ganz zu

Wie sehr stimmen Sie den folgenden Aussagen zu?

	1	2	3	4	5
1. Ich lerne Italienisch, weil meine engen Freunde es für wichtig halten.	○	○	○	○	○
2. Ich bin bereit, viel Arbeit in das Erlernen der italienischen Sprache zu investieren.	○	○	○	○	○
3. Wenn ich an die Zukunft denke, stelle ich mir vor, dass ich die italienische Sprache auf unterschiedliche Weise verwenden werde.	○	○	○	○	○
4. Ich muss Italienisch lernen, weil ich glaube, dass meine Eltern sonst enttäuscht von mir sein würden.	○	○	○	○	○
5. In meinem Italienischkurs melde ich mich sehr oft freiwillig, um zu antworten.	○	○	○	○	○
6. Ich kann mir vorstellen, dass ich gut Italienisch spreche.	○	○	○	○	○
7. Die Leute um mich herum denken, dass ich Italienisch lernen muss, um ein gebildeter Mensch zu sein.	○	○	○	○	○
8. Ich würde gerne viel Zeit damit verbringen, Italienisch zu lernen.	○	○	○	○	○
9. Ich kann mir vorstellen, dass ich fließend E-Mails auf Italienisch schreiben kann.	○	○	○	○	○

	1	2	3	4	5
10. Ich möchte mich vor allem auf das Fach Italienisch konzentrieren.	○	○	○	○	○
11. Italienisch zu lernen ist für mich wichtig, um die Unterstützung meiner Familie zu gewinnen.	○	○	○	○	○
12. Ich kann mir vorstellen, mich an einer Diskussion auf Italienisch zu beteiligen.	○	○	○	○	○
13. Ich erwäge, Italienisch zu lernen, weil die Leute, die ich respektiere, das für richtig halten.	○	○	○	○	○
14. Ich würde gerne Italienisch lernen, auch wenn mich niemand darum gebeten hat.	○	○	○	○	○
15. Ich stelle mir oft vor, dass ich Italienisch wie ein Muttersprachler spreche.	○	○	○	○	○

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Optimismus Pessimismus

0 10 20 30 40 50 60 70 80 90 100

Warum?

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Angst Gelassenheit

0 1 2 3 4 5 6 7 8 9 10

Warum?

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Interesse Langweile

0 1 2 3 4 5 6 7 8 9 10

Warum?

Beantworten Sie die folgenden Fragen auf einer Skala **von 0 bis 10**.
Auf dieser Skala bedeutet **0 "überhaupt nicht"** und **10 "sehr viel"**.

	überhaupt nicht 0	1	2	3	4	5	6	7	8	9	sehr viel 10	
1. Wie schwierig finden Sie nach dem Training die Aufgabe zum Leseverstehen in Italienisch?												☐
2. Glauben Sie, dass das Ergebnis des Tests Ihrem Sprachniveau angemessen entspricht?												☐
3. Fühlen Sie sich nach dem Training auf die Aufgabe zum Leseverstehen vorbereitet?												☐
4. Haben Sie das Gefühl, dass Sie besser als einige Ihrer Klassenkameraden Texte auf Italienisch lesen und verstehen können?												☐
5. Wie interessant finden Sie nach dem Training die Leseverstehensaufgabe in Italienisch?												☐
6. Wie nützlich finden Sie nach dem Training die Lesestrategien, die Ihnen der Trainingstutor im Unterricht vermittelt hat?												☐
7. Glauben Sie, dass die Kenntnisse über Leseverstehenstrategien Ihnen helfen, Italienisch mehr zu schätzen?												☐
8. Haben Sie Spaß an der Leserverstehensaufgabe in Italienisch?												☐

	überhaupt nicht										sehr viel
	0	1	2	3	4	5	6	7	8	9	10
9. Haben Sie nach dem Training das Gefühl , dass Sie über die richtigen Fähigkeiten verfügen, um die Leseverstehensaufgabe in Italienisch zu bewältigen?											

Powered by Qualtrics

Post-test survey CG

Genehmigung

Lesen und Verstehen auf Italienisch
Beschreibung der Forschungsziele

Dieser Fragebogen zielt darauf ab, die Lese- und Textverstehensgewohnheiten von Lernenden des Italienischen als Fremdsprache zu ermitteln. Daher ist die Universität Bologna daran interessiert, Ihre Erfahrungen und Meinungen als Lernende dieser Sprache zu erfahren.

Denken Sie daran, dass dies kein Test ist, es gibt keine richtigen oder falschen Antworten, aber es ist wichtig, dass Sie so ehrlich und authentisch wie möglich antworten. Die verschiedenen Personen, die an diesem Projekt arbeiten, werden Ihnen für Ihre Ehrlichkeit und Ihr Engagement unendlich dankbar sein.

Der Inhalt dieses Fragebogens ist absolut vertraulich und die Angaben zur Identität der befragten Person werden in keiner Weise veröffentlicht.
Wir danken Ihnen für Ihre Mitarbeit an dieser Studie.

Wenn Sie weitere Informationen über dieses Forschungsprojekt erhalten möchten, wenden Sie sich bitte per Mail an folgende Adresse: gioacchino.amato2@unibo.it

Stimmen Sie zu, an dieser Umfrage teilzunehmen?

Die erhobenen Daten werden ausschließlich für Forschungszwecke genutzt.
Wenn Sie „Nein“ auswählen, werden Sie ans Ende des Fragebogens weitergeleitet.

- ○ Ja
- ○ Nein

Block 4

Bitte geben Sie Ihren persönlichen Code ein:

MARSI-R (2018) (Metacognitive Reading Strategy Inventory - Revised)

Die in diesem Inventar aufgeführten Aussagen beschreiben 20 Strategien oder Handlungen, die Leser beim Lesen von akademischen oder wissenschaftlichen Texten wie Büchern, Artikeln, Geschichten usw. anwenden.

Anweisungen:

Schritt 1: Lesen Sie jede der Aussagen und geben Sie an, ob Sie sie kennen und/oder sie beim Lesen verwenden.

Schritt 2: Verwenden Sie die folgende Skala, um zu zeigen, inwieweit Sie die Strategie kennen und/oder anwenden:

1. Ich habe **noch nie** von dieser Strategie **gehört**.
2. Ich habe von dieser Strategie **gehört, aber ich weiß nicht, was sie bedeutet.**
3. Ich habe von dieser Strategie **gehört**, und ich glaube **ich weiß, was sie bedeutet.**
4. Ich kenne diese Strategie und **kann erklären, wie und wann sie anzuwenden ist**.
5. Ich kenne diese Strategie sehr gut und **wende sie oft beim Lesen an.**

Schritt 3: Nachdem Sie jede Aussage gelesen haben, wählen Sie in den Feldern nach jeder Aussage eine Zahl von 1 bis 5 aus, um anzugeben, inwieweit Sie die Strategie kennen und/oder anwenden.

Während der Aufgabe zum Leseverstehen in Italienisch...

	1	2	3	4	5
1. Ich gehe im Text hin und her, um Beziehungen zwischen Fragen und Informationen im Text zu finden.	○	○	○	○	○
2. Ich mache mir während des Lesens Notizen, damit ich das Gelesene besser verstehe.	○	○	○	○	○

	1	2	3	4	5
3. Bevor ich einen Text lese, verschaffe ich mir anhand des Titels einen ersten Eindruck über das Thema.	○	○	○	○	○
4. Wenn der Text schwierig wird, lese ich laut, damit ich das Gelesene besser verstehe.	○	○	○	○	○
5. Ich überlege, ob der Inhalt des Textes zu dem Leseziel passt, das ich mir gesetzt habe.	○	○	○	○	○
6. Ich bewerte die Richtigkeit einer Antwort und überprüfe sie anhand von Informationen aus dem Text.	○	○	○	○	○
7. Ich versuche, mich wieder zu konzentrieren, wenn ich beim Lesen abgelenkt bin.	○	○	○	○	○
8. Ich unterstreiche oder umkreise Informationen im Text, damit ich sie mir besser merken kann.	○	○	○	○	○
9. Ich messe meine Lesegeschwindigkeit je nach dem, was ich gerade lese.	○	○	○	○	○
10. Ich schaue mir die Struktur des Prüfungsheftes an, bevor ich anfange zu lesen.	○	○	○	○	○
11. Von Zeit zu Zeit halte ich inne, um darüber nachzudenken, was ich lese.	○	○	○	○	○
12. Ich verwende typografische Hilfsmittel wie Fett- oder Kursivdruck, um wichtige Informationen hervorzuheben.	○	○	○	○	○
13. Ich analysiere und bewerte die Informationen, die ich lese, kritisch.	○	○	○	○	○
14. Ich lese immer wieder, um das Gelesene besser zu verstehen.	○	○	○	○	○
15. Ich stelle Hypothesen über die Bedeutung von unbekannten Wörtern oder Ausdrücken auf.	○	○	○	○	○
16. Ich übersetze, was ich lese, um die Bedeutung besser zu verstehen.	○	○	○	○	○
17. Ich überfliege den Text schnell, wenn ich nach genauen Informationen suche.	○	○	○	○	○
18. Ich versuche, mir die Informationen bildlich vorzustellen, um mir das Gelesene besser zu merken.	○	○	○	○	○
19. Ich lese die Aufgabeanweisungen, bevor ich die Aufgabe ausführe.	○	○	○	○	○
20. Ich schreibe die Antworten auf dem Antwortblatt ab, wenn ich mit der Aufgabe fertig bin.	○	○	○	○	○
21. Ich fasse zusammen, was ich gelesen habe, um über wichtige Informationen im Text nachzudenken.	○	○	○	○	○

Was die italienische Sprache betrifft, betrachte ich mich selbst als:

○ Ein ausgezeichneter Leser - Eine ausgezeichnete Leserin

○ Ein erfahrener Leser - Eine erfahrene Leserin

- ○ Ein weder erfahrener noch unerfahrener Leser - Eine weder erfahrene noch unerfahrene Leserin
- ○ Ein unerfahrener Leser - Eine erfahrene Leserin

Motivation

In diesem Teil geht es darum, Ihre persönliche Meinung über die Sprache, die Sie lernen, herauszufinden.
Auch wenn einige Aussagen ähnlich erscheinen mögen, treffen einige auf Sie leichter zu als andere.
Wir möchten, dass Sie sich auf die Details konzentrieren.

Wir bitten Sie, diese Aussagen anhand dieser Skala zu bewerten:

1 - Stimme überhaupt nicht zu
2 - Stimme nicht zu
3 - Stimme weder zu noch lehne ab
4 - Stimme zu
5 - Stimme voll und ganz zu

Wie sehr stimmen Sie den folgenden Aussagen zu?

	1	2	3	4	5
1. Ich lerne Italienisch, weil meine engen Freunde es für wichtig halten.	○	○	○	○	○
2. Ich bin bereit, viel Arbeit in das Erlernen der italienischen Sprache zu investieren.	○	○	○	○	○
3. Wenn ich an die Zukunft denke, stelle ich mir vor, dass ich die italienische Sprache auf unterschiedliche Weise verwenden werde.	○	○	○	○	○
4. Ich muss Italienisch lernen, weil ich glaube, dass meine Eltern sonst enttäuscht von mir sein würden.	○	○	○	○	○
5. In meinem Italienischkurs melde ich mich sehr oft freiwillig, um zu antworten.	○	○	○	○	○
6. Ich kann mir vorstellen, dass ich gut Italienisch spreche.	○	○	○	○	○
7. Die Leute um mich herum denken, dass ich Italienisch lernen muss, um ein gebildeter Mensch zu sein.	○	○	○	○	○
8. Ich würde gerne viel Zeit damit verbringen, Italienisch zu lernen.	○	○	○	○	○
9. Ich kann mir vorstellen, dass ich fließend E-Mails auf Italienisch schreiben kann.	○	○	○	○	○

	1	2	3	4	5
10. Ich möchte mich vor allem auf das Fach Italienisch konzentrieren.	○	○	○	○	○
11. Italienisch zu lernen ist für mich wichtig, um die Unterstützung meiner Familie zu gewinnen.	○	○	○	○	○
12. Ich kann mir vorstellen, mich an einer Diskussion auf Italienisch zu beteiligen.	○	○	○	○	○
13. Ich erwäge, Italienisch zu lernen, weil die Leute, die ich respektiere, das für richtig halten.	○	○	○	○	○
14. Ich würde gerne Italienisch lernen, auch wenn mich niemand darum gebeten hat.	○	○	○	○	○
15. Ich stelle mir oft vor, dass ich Italienisch wie ein Muttersprachler spreche.	○	○	○	○	○

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Optimismus Pessimismus

0 10 20 30 40 50 60 70 80 90 100

Warum?

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Angst Gelassenheit

0 1 2 3 4 5 6 7 8 9 10

Warum?

Welche Gefühle haben Sie gerade bei der Aufgabe zum Leseverstehen auf Italienisch empfunden? Und warum?
Bewegen Sie den Cursor auf die Stimmung, die Sie während des Tests begleitet hat:

Interesse Langweile

0 1 2 3 4 5 6 7 8 9 10

Warum?

Beantworten Sie die folgenden Fragen auf einer Skala **von 0 bis 10**.
Auf dieser Skala bedeutet **0 "überhaupt nicht"** und **10 "sehr viel"**.

	überhaupt nicht 0	1	2	3	4	5	6	7	8	9	sehr viel 10	
1. Wie schwierig finden Sie nach dem Training die Aufgabe zum Leseverstehen in Italienisch?												☐
2. Glauben Sie, dass das Ergebnis des Tests Ihrem Sprachniveau angemessen entspricht?												☐
3. Fühlen Sie sich nach dem Training auf die Aufgabe zum Leseverstehen vorbereitet?												☐
4. Haben Sie das Gefühl, dass Sie besser als einige Ihrer Klassenkameraden Texte auf Italienisch lesen und verstehen können?												☐
5. Wie interessant finden Sie nach dem Training die Leseverstehensaufgabe in Italienisch?												☐
6. Wie nützlich finden Sie nach dem Training die Lesestrategien, die Ihnen Ihr/Ihre ItalienischlehrerIn im Unterricht vermittelt hat?												☐
7. Glauben Sie, dass die Kenntnisse über Leseverstehenstrategien Ihnen helfen, Italienisch mehr zu schätzen?												☐
8. Haben Sie Spaß an der Leserverstehensaufgabe in Italienisch?												☐

	überhaupt nicht										sehr viel
	0	1	2	3	4	5	6	7	8	9	10
9. Haben Sie nach dem Training das Gefühl , dass Sie über die richtigen Fähigkeiten verfügen, um die Leseverstehensaufgabe in Italienisch zu bewältigen?											

Post-hoc interview for the Focus Group

Dankesagung

Zuerst möchte ich mich persönlich bei Ihnen für die Teilnahme an der Studie bedanken, Ihr Beitrag war sehr hilfreich für mich und meine Forschungsarbeit und vielleicht auch für zukünftige Generationen österreichischer SchülerInnen, die Italienisch an einer AHS lernen werden, also nochmals vielen Dank.

Genehmigung für Videoaufnahmen

Für dieses Interview müsste ich das Gespräch und Ihre Gesichter aufzeichnen. Die Daten werden anonymisiert und nur zu Forschungszwecken verwendet, ich hoffe, es gibt keine Probleme damit. Sind Sie alle damit einverstanden, die Videoaufnahme zu starten?

Beginnen wir also mit dem Interview. Seien Sie bitte ehrlich, Sie müssen niemandem gefallen, dies ist ein geschützter Raum, in dem Sie alle Ihre Meinungen mitteilen können. Ihre Ehrlichkeit wird der Forschung auf jeden Fall helfen.

Frage

1. Was war Ihr erster Eindruck von dem Training? Fanden Sie es nützlich oder eine Zeitverschwendung?
2. Können Sie mir mindestens zwei Dinge nennen, die Ihnen an dem Training gefallen haben, und zwei, die Ihnen nicht gefallen haben?
3. Ist eine Stunde Training Ihrer Meinung nach ausreichend oder hätten Sie sich mehr Zeit gewünscht? Warum?
4. Während der Ausbildung habe ich eine Mischung aus Italienisch und Deutsch verwendet.

   War das nützlich oder hat es Sie irgendwie verwirrt?

5. Hatten Sie schon von den Strategien gehört, die ich während des Trainings erklärt habe?

   Wenn ja, wann? Hatten Sie sie bevor dem Training angewendet?

6. Haben Sie die Strategien aus dem Training nach dem Versuch erneut angewendet? Zu Hause, in der Schule oder in einem anderen Fach?
7. Normalerweise bitten die Italienischlehrer Sie, zu Hause mit den Materialien von der SRDPMinisteriumswebsite zu üben, wo es die Maturatests der vergangenen Jahre gibt. Haben Sie diese jemals für das Lesen und das Textverständnis verwendet? Und für die anderen italienischen Maturitätsprüfungen?

8. Welcher Teil der italienischen Prüfung ist für Sie am schwierigsten? Und wie finden Sie stattdessen den Lesetest?
9. Gibt es eine Aufgabe im Lesetest, die für Sie schwieriger ist als die anderen?
10. Glauben Sie, dass ein Strategiekurs notwendig ist, um sich auf die italienische Abiturprüfung vorzubereiten?
11. Motiviert Sie Ihr Italienischlehrerin, Italienisch zu lernen? Wie?
12. Welchen Rat würden Sie Ihrem Italienischlehrerin noch geben? Was könnte Ihr Italienischlehrerin noch tun, um Sie zu motivieren?

Dankesagung

Wir sind fertig mit dem Interview und danken Ihnen nochmals für Ihre Eindrücke und Meinungen. Ich wünsche Ihnen viel Erfolg bei Ihrer Maturaprüfung.

Pre-test

4 7 P.

Leggete i testi su come alcune persone ricordano il loro primo lavoro. Scegliete il testo corretto (A-F) per ogni domanda (1-7). Si possono usare i testi più volte. Scrivete le risposte nelle caselle previste sul foglio delle risposte. La prima risposta (0) c'è già e serve come esempio.

Che cosa ho fatto il primo giorno di lavoro

A

Francesco

Il "primo" giorno di lavoro non pagato a 16 anni è stato in un negozio di computer di Villafranca di Verona. Ho stampato etichette e osservato con ammirazione i programmatori giocare a una roba chiamata Dungeons & Dragons in pausa pranzo. Andava tantissimo. Mi fece un certo effetto notare che questi ragazzi amavano così tanto il videogioco da ascoltare per puro sfi zio tutte le sue tracce audio e vocali in un mangianastri. Che forti! Io invece avevo solo l'ansia di correre al telefono pubblico per chiamare la mia fi danzatina dell'epoca. Ahahah. […]

B

Paola

Mi hanno dato dei testi da scrivere a macchina (macchina manuale!).

Ero molto emozionata ed agitata. Continuavo a sbagliare ed in breve ho riempito il cestino di fogli di carta intestata. Temendo che mi riprendessero per lo spreco di carta, mi sono infi lata in borsetta i fogli da me usati, per smaltirli senza che nessuno mi vedesse.

Alla fi ne sono riuscita a scrivere il testo senza errori e l'ho portato al direttore per la fi rma. Ha detto che era scritto molto bene. Mi sono sentita immensamente felice.

C

Reika

Il primo giorno del mio primo lavoro (baby sitter), ero tesissima. Mi lasciarono una bimba di 2 mesi e un bimbo di 2 anni che ovviamente piangeva perché voleva la mamma.

È stata dura, ho cercato di fare del mio meglio, ma ero giovanissima anch'io e ci sono voluti diversi giorni per farmi accettare.

Dopo tanti anni loro si ricordano ancora di me e un paio di anni fa mi hanno mandato delle bellissime foto ricordo.

D

Domenico

A 17 anni ho lavorato un'estate intera in un'edicola che si trova nel centro di Napoli. Facevo mezza giornata, dal lunedì al sabato, dalle 8 di mattina fi no alle 2 del pomeriggio (anche se alla fine 1 ora per andare, quindi mi svegliavo alle 6.30, poi il tempo di ritorno a casa, sempre 1 ora, quindi la mia giornata "lavorativa" iniziava alle 6.30 e fi niva alle 15).

70€ alla settimana. Niente di che, assolutamente. Però mi ha "dato" tanto.

Pensavo "che sarà mai gestire un'edicola per mezza giornata". È bastato un giorno per farmi cambiare idea.

E

Riccardo

Bè, per il tipo di società con cui lavoro il primo giorno è stato di studio in pratica.

Avevo iniziato lo stage nella mia società che si occupa principalmente di *IP protection*, quindi un settore B2B non propriamente intuitivo.

Ovviamente sono stato presentato a tutti, siamo andati a pranzo assieme e ho passato il tempo a studiare il settore, il business plan, i prodotti, i clienti e a parlare con gli altri colleghi.

F

Marco

Ottobre ‘98. Con una laurea in Geologia in tasca busso alla porta di uno studio geologico e sostengo il colloquio. Vengo “assunto” come Co.co.co[121] e il giorno dopo inizio subito a lavorare. Mi presento puntuale al portone dello studio ma non arriva nessuno. In ritardo, arrivano il fi glio del capo e i suoi collaboratori. Partiamo col fuoristrada e con le attrezzature per i SEV (sondaggi elettrici verticali), destinazione campagne sterminate attorno a Finale Emilia. Quel giorno sono stato fuori di casa più di 12 ore.

Non ci ho messo molto a capire che il mondo del lavoro non era “esattamente” come l’immaginavo…

Quale persona dice che…

ha cominciato a lavorare poco dopo l’intervista?	0
ha guadagnato poco, ma l’esperienza è stata importante?	1
si è informata dettagliatamente sul lavoro dell’azienda?	2
era contenta dopo un commento positivo del capo?	3
era l’unica ad essere in orario?	4
ha guardato i colleghi mentre si divertivano molto?	5
nel posto del suo primo lavoro pensano ancora a lei?	6
è stata introdotta ai suoi colleghi?	7

[121] COLLABORATORI COORDINATI E CONTINUATIVI: un mix tra lavoratori autonomi e dipendenti.

NAME:

ANTWORTBLATT

3 Il ristorante che non c'è

0	1	2	3
C	☐	☐	☐
4	5	6	7
☐	☐	☐	☐
8	9		
☐	☐		

Von der Lehrperson auszufüllen

richtig	falsch	richtig	falsch	richtig	falsch	richtig	falsch
		1 ☐	☐	2 ☐	☐	3 ☐	☐
4 ☐	☐	5 ☐	☐	6 ☐	☐	7 ☐	☐
8 ☐	☐	9 ☐	☐				

___ / 9 P.

4 Che cosa ho fatto il primo giorno di lavoro

0	1	2	3
F	☐	☐	☐
4	5	6	7
☐	☐	☐	☐

Von der Lehrperson auszufüllen

richtig	falsch	richtig	falsch	richtig	falsch	richtig	falsch
		1 ☐	☐	2 ☐	☐	3 ☐	☐
4 ☐	☐	5 ☐	☐	6 ☐	☐	7 ☐	☐

___ / 7 P.

Post-test

1 6 P.

Leggete i testi su diversi sport curiosi. Scegliete i testi corretti (A-F) per ogni domanda (1-6). Si possono usare i testi più volte. Scrivete le risposte nelle caselle previste sul foglio delle risposte. La prima risposta (0) c'è già e serve come esempio.

Gli sport più strani del mondo

Abbiamo già parlato delle competizioni più strane del mondo, ma lo sapevate che esistono sport con regolamenti, squadre e tornei a dir poco fuori dall'ordinario?! Non stiamo parlando di singole manifestazioni, ma di campionati veri e propri che coinvolgono tifosi e giocatori nelle cornici più assurde, fantasiose e surreali che si possano immaginare. Ecco allora una carrellata dei sette sport più stravaganti del mondo:

A

La **LINGERIE FOOTBALL LEAGUE** è un campionato di football americano femminile. Il regolamento è simile a quello del football maschile, ma la caratteristica di questo campionato è che le giocatrici, oltre a protezioni per testa, spalle, gomiti e ginocchia, giocano in lingerie.

B

L' **HOCKEY SU MONOCICLO** è decisamente fuori del comune. Le squadre sono in continuo aumento e si gioca con regole simili a quelle dell'hockey su ghiaccio. Tra i giocatori però non deve esserci contatto fisico e al posto del disco si utilizza una pallina da tennis. Esiste anche la variante di BASKET SU MONOCICLO. Le regole fondamentali sono praticamente uguali a quelle del basket ed esiste persino una squadra italiana che compete in questo sport. Solo per veri equilibristi.

C

Lo **SLAMBALL** forse è un po' più conosciuto. Il regolamento è lo stesso del basket ma al posto di un classico campo in parquet, vi sono 4 tappeti elastici posti sotto ad ogni canestro. Non è possibile restare nella zona dei tappeti elastici per più di tre secondi ma per il resto le regole sono le stesse del basket.

D

Il **RUGBY SUBACQUEO**, invece, somiglia ben poco al rugby. Si gioca in piscina ad una profondità che può variare tra i 3 e i 5 metri. Le squadre sono composte da 12 giocatori (6 in acqua e 6 in panchina) e si possono effettuare cambi continui. I giocatori sono dotati di pinne e i tempi durano tra i 12 e i 15 minuti ciascuno. Il pallone è riempito con una soluzione di acqua e sale affinché non galleggi, le azioni di gioco infatti non sono valide se la palla esce dall' acqua.

E

Il **FISTBALL** si trova a metà tra il tennis e la pallavolo. Diversamente dalla pallavolo, però, si può recuperare la palla anche dopo che la stessa ha effettuato un rimbalzo in campo, ma dovrà essere toccata al massimo tre volte con un pugno o con le braccia.

F

Lo **JORKYBALL**, invece unisce alcune caratteristiche del calcetto e dello squash. Si gioca in un ambiente completamente chiuso e si affrontano due squadre composte da due elementi ciascuna. Il pavimento può essere in erba sintetica o linoleum, mentre il pallone è di feltro. Vietato toccare la palla con le mani, pena un rigore per la squadra avversaria.

Quale testo dice che …

si giocano due sport diversi sullo stesso mezzo di trasporto?	0
una determinata parte del corpo non può essere a contatto con la palla?	1
le donne sono vestite in modo diverso dagli uomini?	2
si deve colpire la palla solo un certo numero di volte?	3
la palla è piena di un liquido?	4
gli atleti non devono toccarsi?	5
è permesso rimanere in un'area speciale solo per poco?	6

NAME:

ANTWORTBLATT

Gli sport più strani del mondo

0 [B] 1 [ ] 2 [ ] 3 [ ]
4 [ ] 5 [ ] 6 [ ]

Von der Lehrperson auszufüllen

richtig	falsch	richtig	falsch	richtig	falsch	richtig	falsch
		1		2		3	
4		5		6			

1

___ / 6 P.

Come comportarsi in treno

0 [C] 1 [ ] 2 [ ] 3 [ ]
4 [ ] 5 [ ] 6 [ ] 7 [ ]

Von der Lehrperson auszufüllen

richtig	falsch	richtig	falsch	richtig	falsch	richtig	falsch
		1		2		3	
4		5		6		7	

2

___ / 7 P.

Training text number 1

Leggete i testi su alcune scuole particolari. Scegliete il testo corretto (A-F) per ogni domanda (1-8). Si possono usare i testi più volte. Scrivete le risposte nelle caselle previste sul foglio delle risposte. La prima risposta (0) c'è già e serve come esempio.

Sei scuole speciali nel mondo

A. La scuola nel mondo reale

Il modello del Big Picture Learning ha il grande obiettivo di abbattere il muro tra istruzione e mondo del lavoro. Fin da piccoli, i ragazzi imparano che le loro passioni sono la cosa più importante. Gli learneri seguono insegnanti specializzati nei campi che hanno scelto e imparano le basi del lavoro che desiderano svolgere da grandi. Alla fine del percorso educativo gli learneri partecipano ad un tirocinio che li aiuta, nella maggioranza dei casi, a creare una vera e propria start-up.

B. La scuola della parità.

Il sistema innovativo della scuola Egalia si fonda sulla parità totale tra gli learneri senza distinzione di genere. Non esiste "maschio" o "femmina" in questa scuola, e ogni bambino è chiamato per nome. Egalia Pre-School è una scuola innovativa che vuole eliminare tutte le tipologie di discriminazione, di classe sociale, di età, di religione, di disabilità e orientamento sessuale. In questo modo, i bambini imparano a giudicarsi solo sulla base delle loro azioni, e non degli stereotipi.

C. La scuola della Silicon Valley

La Altschool, nasce a San Francisco nel 2013 e accoglie bambini e ragazzi dai 4 ai 14 anni. Gli learneri imparano con forme altamente tecnologiche ad essere attenti ai cambiamenti del mondo e a sentirsi al passo con il futuro che verrà.

Flessibilità e apprendimento socio-emozionale sono le parole d'ordine della AltSchool. I bimbi, usano sin da subito le tecnologie digitali, inclusi programmi di informatica e di grafica tridimensionale. La scuola della Silicon Valley ha aperto succursali anche a Brooklyn, New York, e Palo Alto in California.

D. La scuola che insegna il pericolo

La Brightworks School nasce nel 2011 con Gever Tulley e si basa su un unico e semplice concetto: i ragazzi possono fare quello che vogliono. O meglio tutto ciò che per i genitori è considerato molto pericoloso. Cosa? Beh, giocare con il fuoco, utilizzare elettrodomestici da soli, e chi più ne ha più ne metta. "Invitiamo gli learneri ad essere co-autori della loro educazione e formazione, il che vuol dire che i ragazzi devono imparare a cavarsela da soli, sviluppando le loro personali abilità fin da piccoli" spiega Justine Macauley, coordinatrice dell'istituto. La logica è chiara: il mondo, là fuori, è duro e pieno di pericoli. Meglio saperlo prima.

E. La scuola della creatività

La Blue School di New York è la scuola che fonde compassione e creatività. Nasce nel 2006 e si trova nel business district della Grande Mela. I suo learneri sono giovanissimi e hanno tra i due e gli otto anni. I bambini imparano a creare modelli per stampanti 3D, ma anche nuove tecniche per il riciclo. I piccoli learneri entrano a contatto con i problemi reali del Paese. In sostanza, niente libri ma tanto tempo per creare e imparare a conoscere gli altri con un sistema di apprendimento innovativo e dinamico che muta rapidamente con le esigenze del mondo.

F. Non è mai troppo tardi per imparare

La Samaschool di San Francisco non è una comune scuola serale per adulti. Il focus è sulle professioni del futuro: SEO, web manager, etc. Gli learneri imparano ad essere imprenditori con nuove competenze digitali. Si può scegliere tra il corso frontale di 10 settimane, della durata di 80 ore, e il corso online, della durata di 20 o 30 ore. I metodi di apprendimento del corso garantiscono ai nuovi lavoratori un aumento di salario medio del 27%.

In quale scuola …

si fa lezione molto tardi nella giornata?	0	
gli learneri apprendono a disegnare in tre dimensioni?	1	2
si può scegliere se studiare in presenza o a distanza?	3	
si connettono gli interessi dello learnere con la sua futura professione?	4	
ci sono solo learneri molto piccoli?	5	
si è rispettosi delle diversità di tutti?	6	
si impara con cose difficili e rischiose?	7	
ci sono diverse sedi in tutta la Nazione?	8	

Antwortblatt

0	1	2	3
F	☐	☐	☐

4	5	6	7
☐	☐	☐	☐

8
☐

Adattamento dell'articolo di Gabriella Rocco: https://startupitalia.eu/39647-20151211-scuole-piu-innovative-mondo

Training text number 2

Leggete i testi su alcuni luoghi italiani meravigliosi. Scegliete il testo corretto (A-F) per ogni domanda (1-8). Si possono usare i testi più volte. Scrivete le risposte nelle caselle previste sul foglio delle risposte. La prima risposta (0) c'è già e serve come esempio.

Sei posti meravigliosi d'Italia

A. Arcipelago della Maddalena

In Sardegna troviamo uno dei mari più belli al mondo. L'Arcipelago della Maddalena è un autentico paradiso terrestre. L'arcipelago si trova nella parte più a Nord della regione ed è costituito da un totale di 62 isole, ma solo due di esse sono abitate: Caprera e La

Maddalena. Le baie più belle di queste isole sono raggiungibili solamente in barca. Tutte le spiagge sono di sabbia fine e bianchissima, mentre l'acqua è straordinariamente limpida e trasparente. Un angolo dei Caraibi nel pieno del Mediterraneo!

B. Riserva dello Zingaro

Se siete alla ricerca di natura incontaminata, la Riserva dello Zingaro è sicuramente il luogo che fa per voi. Questo angolo di paradiso si trova nella porzione nord-occidentale della Sicilia. Potrete raggiungere questo paradiso solamente a piedi, in quanto l'accesso alla riserva è vietato ai mezzi a motore. I sentieri che potrete percorrere al suo interno sono numerosi e regalano scenari indimenticabili su tutta la costa. Camminando in mezzo a un ecosistema unico al mondo, potrete ammirare o raggiungere spiagge da sogno, come la Tonnarella dell'Uzzo o Cala Capreria. Il tutto circondati da verdi scogliere a picco sul mare.

C. Parco dell'Etna

Rimaniamo sempre nella magica Sicilia, per scoprire una delle più belle meraviglie naturali italiane. A nord della città di Catania sorge lo splendido Parco del vulcano Etna. Infatti, questo luogo, dichiarato Patrimonio UNESCO, presenta un ecosistema unico nel suo genere. Ai piedi del vulcano, troverete una grandissima varietà di piante, alcune crescono solo in quest'area come, ad esempio, le coltivazioni di pistacchio. Poi potrete ammirare panorami mozzafiato dagli spettacolari Crateri Silvestri, da cui è possibile vedere la costa del Mar Ionio, le Isole Eolie e la Calabria.

D. Terme di Saturnia

Ed eccoci in Toscana, in una delle maggiori attrazioni naturalistiche in Italia. Nel pieno della Maremma di Grosseto, sorgono le meravigliose Terme di Saturnia. Questo luogo è uno spettacolo unico nel suo genere, con le Cascate del Mulino che creano delle terrazze naturali dove fare il bagno, come in una piscina. L'acqua che sgorga dalle sorgenti naturali raggiunge una temperatura di 37,5°C. Perciò, fare bagni rilassanti nelle acque di Saturnia è un'esperienza da fare almeno una volta nella vita!

E. Lago di Braies

Questo lago è una delle più belle meraviglie naturali italiane, un gioiello delle nostre Alpi! Facilmente raggiungibile, è adatto ad ogni tipo di esigenza. Il Lago di Braies si presenta con le sue acque trasparenti che riflettono lo splendore delle Dolomiti. Lungo le sue rive è possibile effettuare piacevoli passeggiate, dormire nelle caratteristiche capanne sul lago ed effettuare magnifiche escursioni in barca a remi. Il luogo perfetto per fuggire dalla frenesia della città!

F. Cascata delle Marmore

La Cascata delle Marmore è considerata la più bella d'Italia, e non a caso, è anche la più visitata del nostro Paese. Se cercate un luogo dove immergervi nel verde, lo troverete a pochi chilometri da Terni. La cascata è composta da tre salti, per un totale di 165 metri d'altezza! Numerose sono le postazioni da cui godersi questo spettacolo. Alla sua base c'è il Belvedere Inferiore, dalla quale potrete ammirare gli incredibili salti della cascata. Mentre invece dal Belvedere Superiore, vi

stupirete dinanzi alla grande quantità d'acqua di queste cascate. Infine, se vi guardate attorno, vi sarà chiaro il motivo per cui la regione Umbria è chiamata "il polmone verde d'Italia".

In quale posto…

si può trovare una montagna che sputa fuoco?	0	
le auto non possono circolare?	1	
si può fare un bagno caldo all'aperto?	2	
le spiagge più particolari si possono visitare solo per via mare?	3	
si può pernottare vicino ad uno specchio d'acqua?	4	
ci si trova in un'area naturale protetta?	5	
sembra di essere in una famosa località straniera?	6	
si può ammirare una ricca vegetazione?	7	8

Antwortblatt

0	1	2	3
C			

4	5	6	7

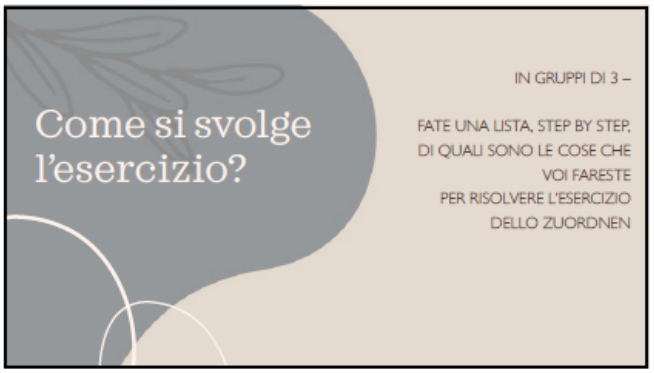
8

Adattato dall'articolo di Federico Genre in https://www.archetravel.com/blog/meraviglie-naturali-italiane-da-visitare/

Experimental training support slides


Task di lettura e comprensione
Abbinamento Domanda-Paragrafo
Übung - Zuordnen

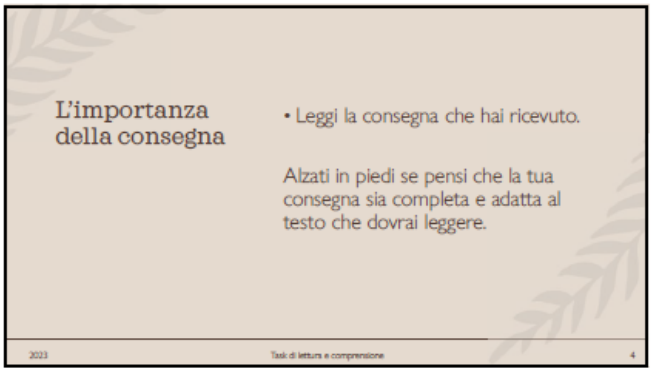
1


Come si svolge l'esercizio?
IN GRUPPI DI 3 –
FATE UNA LISTA, STEP BY STEP, DI QUALI SONO LE COSE CHE VOI FARESTE PER RISOLVERE L'ESERCIZIO DELLO ZUORDNEN

2


agenda
LA CONSEGNA 3
LE PRECONOSCENZE 4
INFERENZE 6
GLI APPUNTI 10
PAROLE CHIAVE & TRIGGER 14

3


L'importanza della consegna
• Leggi la consegna che hai ricevuto.
Alzati in piedi se pensi che la tua consegna sia completa e adatta al testo che dovrai leggere.
2023
Task di lettura e comprensione
4

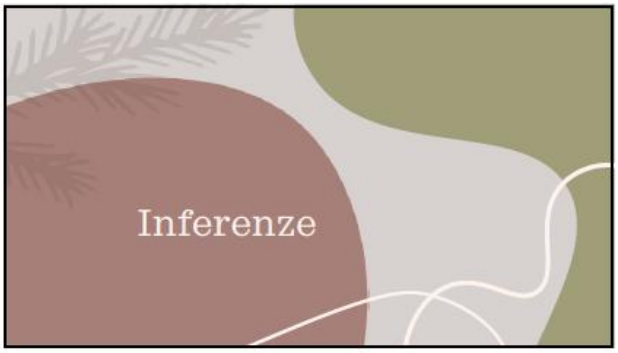
4


Attivazione preconoscenze
Cosa ti fa venire in mente questa foto?
Fai una lista di almeno 5 idee.
2023
Task di lettura e comprensione
5

5


Attivazione preconoscenze
Cosa ti fa venire in mente questo titolo?
Fai una lista di almeno 5 idee.
Sei scuole speciali nel mondo
2023
Task di lettura e comprensione
6

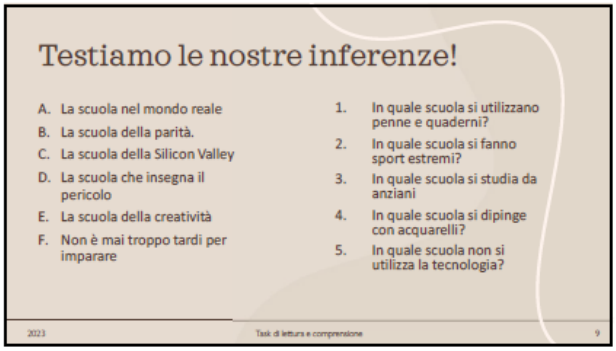
6


Inferenze

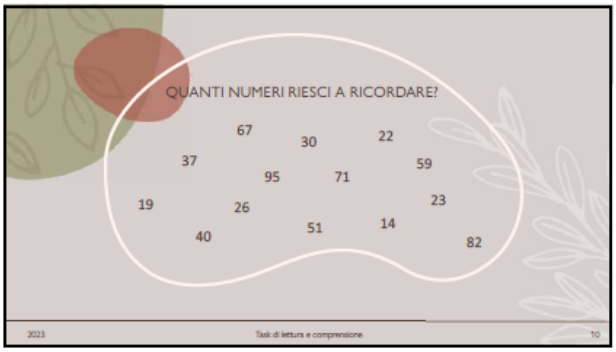
7


Cosa hai visto in questo video?
2023
Task di lettura e comprensione
8

8


Testiamo le nostre inferenze!
A. La scuola nel mondo reale
B. La scuola della parità.
C. La scuola della Silicon Valley
D. La scuola che insegna il pericolo
E. La scuola della creatività
F. Non è mai troppo tardi per imparare
1. In quale scuola si utilizzano penne e quaderni?
2. In quale scuola si fanno sport estremi?
3. In quale scuola si studia da anziani
4. In quale scuola si dipinge con acquarelli?
5. In quale scuola non si utilizza la tecnologia?
2023
Task di lettura e comprensione
9

9


QUANTI NUMERI RIESCI A RICORDARE?
67
30
22
37
59
95
71
19
26
23
40
51
14
82
2023
Task di lettura e comprensione
10

10


Leggi il testo e scrivi degli appunti
Scrivi 4 informazioni che per te sono rilevanti nel testo
A. La scuola nel mondo reale
Il modello del Big Picture Learning ha il grande obiettivo di abbattere il muro tra istruzione e mondo del lavoro. Fin da piccoli, i ragazzi imparano che le loro passioni sono la cosa più importante. Gli studenti seguono insegnanti specializzati nei campi che hanno scelto e imparano le basi del lavoro che desiderano svolgere da grandi. Alla fine del percorso educativo gli studenti partecipano ad un tirocinio che li aiuta, nella maggioranza dei casi, a creare una vera e propria start-up.
2023
Task di lettura e comprensione
11

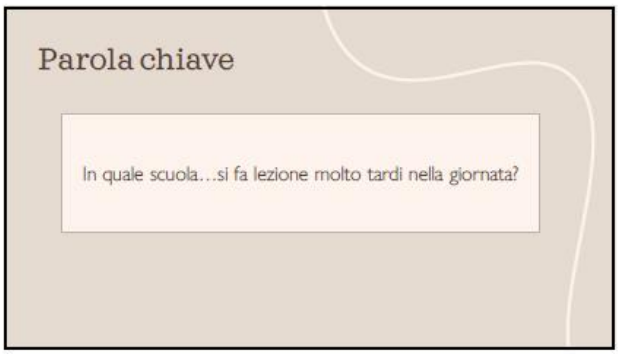
11


Leggi il testo e scrivi degli appunti
Scrivi 4 informazioni che per te sono rilevanti nel testo
1. Scuola e lavoro insieme
2. Importanti passioni
3. Imparano basi del lavoro
4. Tirocinio e Start-up
A. La scuola nel mondo reale
Il modello del Big Picture Learning ha il grande obiettivo di abbattere il muro tra istruzione e mondo del lavoro. Fin da piccoli, i ragazzi imparano che le loro passioni sono la cosa più importante. Gli studenti seguono insegnanti specializzati nei campi che hanno scelto e imparano le basi del lavoro che desiderano svolgere da grandi. Alla fine del percorso educativo gli studenti partecipano ad un tirocinio che li aiuta, nella maggioranza dei casi, a creare una vera e propria start-up.
2023
Task di lettura e comprensione
12

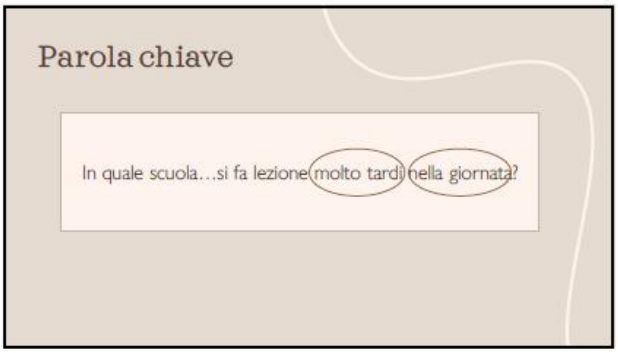
12


ADESSO PROVA TU
Scrivi 4 informazioni importanti per ogni paragrafo.
2023
Task di lettura e comprensione
13

13


Parola chiave
In quale scuola…si fa lezione molto tardi nella giornata?

14


Parola chiave
In quale scuola…si fa lezione molto tardi nella giornata?

15


Adesso prova tu
Leggi le domande del testo e cerchia le parole chiave che secondo te sono importanti!
Denken Sie daran: Der Teufel steckt im Detail
2023
Task di lettura e comprensione
16

16


Dov'è il Trigger?
In quale scuola…si fa lezione molto tardi nella giornata?
F. Non è mai troppo tardi per imparare
La Samaschool di San Francisco non è una comune scuola serale per adulti. Il focus è sulle professioni del futuro: SEO, web manager, etc. Gli studenti imparano ad essere imprenditori con nuove competenze digitali. Si può scegliere tra il corso frontale di 10 settimane, della durata di 80 ore, e il corso online, della durata di 20 o 30 ore. I metodi di apprendimento del corso garantiscono ai nuovi lavoratori un aumento di salario medio del 27%.
2023
Task di lettura e comprensione
17

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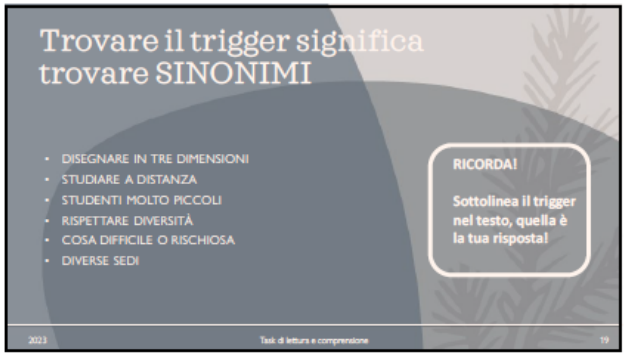
Dov'è il Trigger?
In quale scuola…si fa lezione molto tardi nella giornata?
F. Non è mai troppo tardi per imparare
La Samaschool di San Francisco non è una comune scuola serale per adulti. Il focus è sulle professioni del futuro: SEO, web manager, etc. Gli studenti imparano ad essere imprenditori con nuove competenze digitali. Si può scegliere tra il corso frontale di 10 settimane, della durata di 80 ore, e il corso online, della durata di 20 o 30 ore. I metodi di apprendimento del corso garantiscono ai nuovi lavoratori un aumento di salario medio del 27%.
2023
Task di lettura e comprensione
18

18


Trovare il trigger significa trovare SINONIMI
DISEGNARE IN TRE DIMENSIONI
STUDIARE A DISTANZA
STUDENTI MOLTO PICCOLI
RISPETTARE DIVERSITÀ
COSA DIFFICILE O RISCHIOSA
DIVERSE SEDI
RICORDA!
Sottolinea il trigger nel testo, quella è la tua risposta!
2023
Task di lettura e comprensione
19

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PIANIFICAZIONE
LEGGERE LA AUFGABENSTELLUNG
Ricorda dov'è l'Antwortblatt
USA LA TUA IMMAGINAZIONE
Deine Vorkenntnisse
PRENDI APPUNTI
Per ogni paragrafo, aiuta la memoria!
CERCHIA LE PAROLE CHIAVE
Per ogni domanda!
TROVA IL TRIGGER!
Trova sinonimi alle parole chiave e sottolinea il trigger nel testo

20


MA SOPRATTUTTO
Rispondi alle domande sull'Antwortblatt!
2023
Task di lettura e comprensione
21

21