Doktori (Ph.D.) értekezés tézisei

MULTIMODAL LITERACY DEVELOPMENT IN ENGLISH STUDIES CONTEXTS

linguistic and pedagogical perspectives on

multimodal meaning-making and knowledge-building

in classrooms and museum exhibitions

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1 The research problem and the aims of the dissertation

We are surrounded by an abundance of semiotic resources, but often fail to use language to reflect on them critically. Our meaning-making practices have always relied on a variety of modes, including visual, audio, written and spoken texts as well as sensory experiences such as touch, smell and taste. In a way, understanding what multimodal literacy is and why its development is a must depends on our conscious reflection on how we use different resources in our communication. Put simply, we need to identify how different modes contribute to communication, learning and literacy development. According to social semiotic theory, *mode* refers to a set of socially and culturally shaped resources for making meaning, and it is understood as a channel of representation or communication for which previously no overarching name had been proposed (Kress & van Leeuwen, 2001). Some of the most evident modes include writing and image on the page, moving image and sound on the screen, and speech, gesture, gaze and posture in embodied interaction. All of which resources we have long used, but not usually treated in interaction by putting them under a multimodal lens. Language has a special role among semiotic modes: it is a complex semiotic system interlinked with human cognition and knowledge-building (e.g., Halliday, 1978). In recent SLA research, the Douglas Fir Group (2016) introduced two significant themes which build on the theories introduced above. Their second theme concerning the latest developments in transdisciplinary SLA studies states that "Language Learning Is Semiotic Learning" (p. 27). Moreover, theme number four further reinforces the idea of multimodality as one of the most relevant approaches in SLA, i.e., "Language Learning Is Multimodal, Embodied, and Mediated" (p. 29).

With these ideas in mind, we can observe that a variety of meaning-making resources have become easily accessible in our everyday and academic lives recently, after the centuries-long dominance of written text in education and communication. We might see this as a result of the accelerating development of digital media devices, which have become just as widespread and common as written text used to be. Our reliance on visual and audio resources on websites, social media, television and print media make it an urgent task for all of us, including teachers (and not only language teachers) to engage with and create multimodal texts, i.e., texts which combine more modes (e.g., visual or audio) apart from the written text. This complex and delicate combination of meaning-making resources surrounding us have resulted in the pressing need for advanced multimodal literacy skills and multimodal awareness for critically

literate humans. From this perspective, multimodal meaning-making includes the functional and critical understanding of the roles and potentials of images within a text (Poulsen, 2015). As Gunther Kress and Theo van Leeuwen (2001), the two main figures of social semiotic multimodal theory put it,

> in the age of digitisation, the different modes have technically become the same at some level of representation, and they can be operated by one multi-skilled person, using one interface, one mode of physical manipulation, so that he or she can ask, at every point: 'Shall I express this with sound or music?', 'Shall I say this visually or verbally?', and so on. (p. 2)

In the light of this, multimodal creation can be something as everyday as a multimedia message, a poster in the street or a presentation, and such a creative task demands knowledge of modes and offers choices in the meaning-making process. However, the skills needed to prepare and interpret such texts are often taken for granted and often remain invisible in pedagogical processes. The need for multimodal skills is especially relevant for second language teachers, who rely on a variety of materials in their daily teaching practice.

The aim of this thesis is to explore the possibilities of multimodal literacy development in an advanced second language higher education context with a focus on English Studies majors and English as a Foreign Language teacher trainees. By the time of their graduation, these students are expected to have extensive knowledge of the languages, literatures and cultures of the English-speaking world, and apart from being experts in communication, they are also considered to be critical and reflective thinkers with a deep understanding of the ways different meanings are made in a foreign language. Thus, being a critical and reflective thinker is another expectation from an English major or English language teacher, who, in the Hungarian context, also studies another discipline besides English.
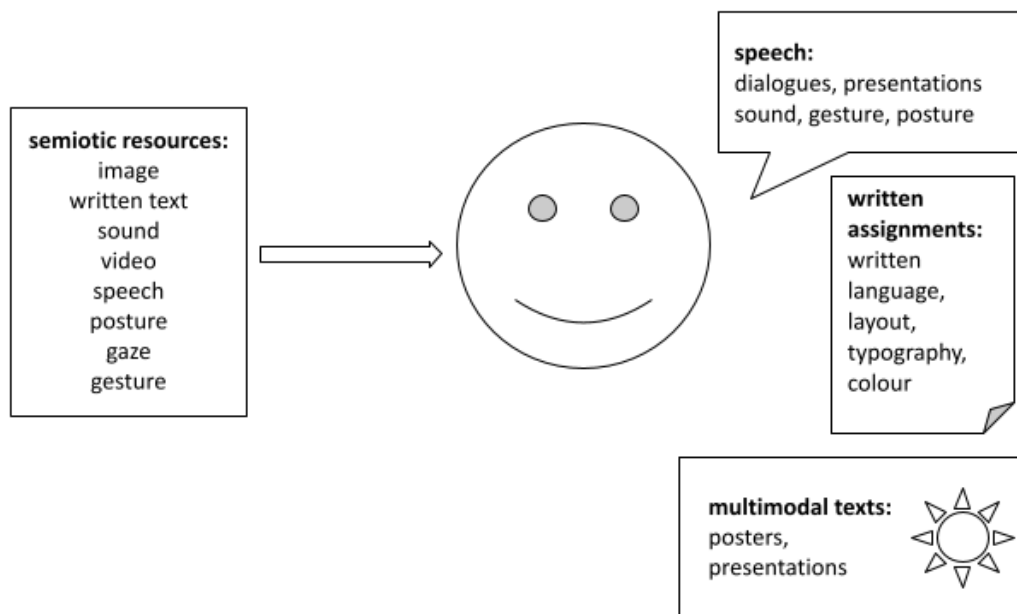
There are two important questions regarding multimodality in the context of second language development and research. First, we need to investigate how multimodality is approached in L2 learning. However, this question can be answered only if we study the role of language in multimodal communication and learning first. Until recently, this relationship between language and other semiotic modes has been mostly studied through the relationship between texts and images, resulting in the dominance of writing in academic and bureaucratic domains

which marginalized the value of images. This situation has gone through a rapid change due to the emergence of digital technology and communication, and for over two decades now, different types of literacies, for example *multiliteracies*, *visual literacy* or *digital literacy* have been at the center of attention in educational, discourse-analytical and media practice (e.g., New London Group, 1996).

Another reason for the need to define different aspects of knowledge of multimodality is essentially connected to the demands of multimodal communication mentioned earlier. Students in general are often described as *digital natives* (Prensky, 2001), as the generation born after the 1990s has been brought up within the immediate reach of digital devices and multimedia communication. Apart from being Internet users, they have been surrounded with audio-visual texts all through their lives, having been born after the *pictorial turn* in arts and humanities (Mitchell, 1992). In this context, the ability to interpret multimodal texts is necessary for more abstract and critical thinking, and to help students surpass the status of image users in its everyday sense. For such reasons, defining the exact knowledge areas necessary to succeed in multimodal environments is an important requirement for curriculum designers and teachers. It is necessary to add here that there are differences between the multimodal knowledge areas artists, graphic designers, typographers, musicians, and dancers need, or the multimodal knowledge second language learners, teacher trainees, and teachers need to use for their own pedagogical purposes. In a second language class, language production and knowledge building happen in written, spoken and multimodal forms (e.g., essays, videos, graphic novels, comics, drawings, oral and poster presentations). However, students of English Studies and English as Foreign Language (EFL) teacher trainees make sense of multimodal semiotic modes mostly through verbal modes (written and spoken language) in order to express opinions, analyze them, select materials for study, create new materials, share knowledge about them, and use them for building arguments as shown in Figure 1. Their special status highlights the question raised above regarding the relationship between language and other semiotic modes as they need to develop both their language skills, communicative competence and multimodal literacy to succeed in their studies and professions.

Figure 1

Students' Multimodal Experience in Higher Education

semiotic resources:
image
written text
sound
video
speech
posture
gaze
gesture

speech:
dialogues, presentations
sound, gesture, posture

written
assignments:
written
language,
layout,
typography,
colour

multimodal texts:
posters,
presentations

More precisely, such students of English will become teachers, translators, cultural professionals, and in their work, they will be requested to analyze and critically evaluate multimodal texts. For example, teachers have to make decisions about book selection and create activities and lesson plans based on the combination of audio, visual and video resources. These students will encounter multimodal texts in their professional life, and they are already surrounded by such texts which shape their attitudes and often unnoticed beliefs. By having the disciplinary knowledge, language skills and analytical toolkit to critically view multimodal texts, they will be well-equipped to discuss them and build arguments reflecting on their multimodal experiences. As a teacher-researcher my main question concerns the type of literacy areas these students need to become better at meaning-making and reasoning, and ultimately, their profession.

In summary, this thesis focuses on the development of multimodal literacy in students who major in English Studies and teacher education in EFL at university. To achieve its aim, it draws on sociocultural theories of language learning and social semiotic multimodal theory in conversation with systemic functional theory of language and sociological perspectives of education. The enactment of these theories resulted in the creation of a course titled Making

Meaning with Visual Narratives. In its approach, this thesis takes a transdisciplinary approach (DFG, 2016; Duff, 2019) informed by multimodal social semiotics, systemic functional linguistics and sociocultural theories of meaning-making and language learning. It also introduces the multidimensional toolkit of Legitimation Code Theory from the field of educational sociology.

2 Structure of the thesis

This thesis is organized into two main parts, with the first part introducing the object and focus of the study and its theoretical foundations. The second part of the dissertation discusses the research methodology and gives four different perspectives on multimodal literacy development through four classroom studies.

Chapter 1 details the object of the study as multimodal literacy development in advanced second language education contexts and mapped the need for an overall multimodal approach to communication and learning which shifts our focus on other modes of communication alongside language. **Chapter 2** overviews the sociocultural theories of language education relevant for this thesis, namely the Vygotskian social theory of mind (1978), Halliday's (1978) conception of language as social semiotic, and sociocultural theory of second language development research (e.g., Lantolf, 2000). It also explores the core concepts of sociocultural theory and their relationship with language development, namely the semiotic mediation and the role of language in semiotic mediation, scaffolding and Zone of Proximal Development. It also introduces different types of knowledge informed by Vygotskian and systemic functional perspectives. **Chapter 3** details social semiotic multimodal theory and its assumptions about communication. It explores how systemic functional concepts of language influenced multimodal studies with a special focus on the role of contexts and metafunctions in discourse analysis. Two main concepts of multimodality (modal affordance and semiotic resource) are explained in detail, and an overview is given of the different approaches to visual grammar, intersemiotic relations and image-text taxonomies. These insights inform the reader about both the relationship between language and other semiotic modes and the educational possibilities they offer for syllabus and course design. **Chapter 4** discusses the construct of multimodal literacy by explaining why literacy has been a complex concept and how multimodal literacy can be defined and studied. An overview of the relationship between communicative

competence and multimodal communicative competence is given in this chapter, explaining how the latter is related to multimodal literacy. **Chapter 5** introduces the sociological framework of Legitimation Code Theory, a multidimensional toolkit to study educational theory and practice. Among the many theoretical and methodological approaches of educational research, there is a pressing need for an overarching conceptual framework which helps researchers to examine educational practice explicitly and objectively, making it possible for other researchers to get a bird's-eye view of research and classroom practice and specific, detailed step-by-step information about how they were realized. **Chapter 6** builds on Chapters 3-5 and discusses different approaches to multimodal and language pedagogy which informed this research. First of all, I will give an overview of multimodal pedagogy research informed by social semiotic multimodality in the wider context of education and second language education. Then, the contributions of task-based language teaching and text-based syllabus design are explained in this research context. Since written language is the most valued and widespread form of knowledge-building and assessment in English Studies and teacher training courses, the research focuses on the role of writing instruction in multimodal pedagogy. This chapter details scaffolding writing pedagogies with a focus on genre-based pedagogy and its classroom model, the Teaching Learning Cycle, both informed by the systemic functional theory of language. Finally, the benefits of visual arts integration and museum learning are discussed.

After the theoretical foundations detailed above, the second part of the dissertation discusses the research methodology and four studies. **Chapter 7** details the research design as a qualitative, classroom-based research that takes a cyclical approach. Three courses on multimodal literacy development were taught to three different groups of English Studies students and English as a Foreign Language teacher trainees over the period including 2017 autumn, 2018 spring and 2018 autumn semesters. The four empirical studies give three different perspectives on multimodal literacy development as presented in Chapters 8-10. **Chapter 8** examines the most effective topics, tasks and texts for multimodal literacy development in a L2 context. It recommends a pedagogical approach and resources which can be adapted for different pedagogical purposes. **Chapter 9** explores the possibilities of museum exhibition visits as part of a course on multimodal literacy development. In this analysis, the study draws on the theoretical and analytical framework of the Specialization dimension of Legitimation Code Theory. **Chapter 10** focuses on the role of writing exhibition reviews in building knowledge and developing writing and reasoning skills in the students. The study

integrates SFL-informed genre-based pedagogy and the Semantics dimension of Legitimation Code Theory. The pedagogical model used for the organization of learning tasks is the Teaching Learning Cycle (Rothery, 1994). **Chapter 11** gives an account of the students' experiences and perspectives during the courses on multimodal literacy development and shares insights into how they see their own knowledge building and language development after this course. The final chapter, **Chapter 12**, firstly pulls together the key elements from the analysis of each study to give an integrated account of the different aspects of multimodal literacy development in classroom and museum exhibition contexts. It then summarizes the main pedagogical implications of the thesis and directions for future research.

Table 1

The Structure of the Doctoral Dissertation

THEORETICAL FOUNDATIONS

Chapter 1: Introduction
- How I became a teacher-researcher
- The research problem and the aims of the dissertation
- Structure of the thesis

Chapter 2: Sociocultural theory in language and literacy pedagogy
- Defining key concepts in the dissertation
- Discussing the role of language in semiotic mediation and its relationship with L2
- Different types of knowledge
- Systemic Functional Linguistics in the doctoral dissertation

Chapter 3: Social semiotic multimodality
- SFL concepts in multimodal studies
- Discussion of key concepts in multimodality: modal affordance and semiotic resource
- Reading and analyzing multimodal texts: text types, visual grammar and intersemiotic relations

Chapter 4: From literacy to multimodal literacy
- Defining the concepts of literacy and multimodal literacy
- Discussing communicative competence in relation to literacy
- Constrasting multimodal literacy with multimodal communicative competence

Chapter 5: Seeing knowledge in action: Legitimation Code Theory
- Overview of Legitimation Code Theory
- LCT Specialization and Semanitcs dimensions
- LCT and SFL in the research project

Chapter 6: Pedagogical approaches to multimodal literacy development
- Multimodal pedagogical practices
- Multimodal skills and L2
- Discussion of lesson, course and syllabus design: task-based and text-based approaches
- Scaffolding pedagogies: genre-based pedagogies and the Teaching Learning Cycle
- Visual arts integration
- Learning in museums: benefits and language development

EMPIRICAL STUDIES

Chapter 7: Research methodology and design
- Approaching innovation and change in the empirical studies
- Qualitative approach to the study of multimodal literacy development
- Case study approach to classroom research
- Research context, research aims and questions
- Participants
- Data collection and analysis
- Quality contol and ethical considerations
-

Chapter 8: Multimodal literacy development: Building a multimodal syllabus through topics, tasks, texts
- Research questions
- Research methods: Rsearch context, Participants, Data collection methods and instruments, Data analysis methods and procedures
- Findings and discussion
-

Chapter 9: Multimodal literacy development in the context of museum visits
- Research questions
- Research methods: Rsearch context, Participants, Data collection methods and instruments, Data analysis methods and procedures
- Findings and discussion
-

Chapter 10: The role of writing instruction in the multimodal classroom
- Research questions
- Research methods: Rsearch context, Participants, Data collection methods and instruments, Data analysis methods and procedures
- Findings and discussion
-

Chapter 11: The way they see it: Course evaluation through the students' perspectives
- Research questions
- Research methods: Rsearch context, Participants, Data collection methods and instruments, Data analysis methods and procedures
- Findings and discussion
-

Chapter 12: Conclusion
- Summary of major findings and theoretical contributions
- Pedagogical implications of the doctoral dissertation
- Limitations of the research and directions for future research
- Coda

3 Research stages and research questions of the doctoral dissertation

As Duff (2012) points out, case study research is not simply the most common form of qualitative inquiry, but it is also powerful and practical (p. 95). Its practicality can be understood by its simplicity, as it allows the researcher to focus on only one or a few classrooms in depth (Stake, 2010, p. 27). A typical feature of qualitative case studies is that they provide opportunities to study unfolding change over time (Duff, 2012, p. 95), and that way emerging themes can be observed. This characteristic of case study research results in the iterative and cyclical nature of such studies because new aspects of language learning can become salient during the research process and new procedures can be designed to address these emerging aspects (Duff, 2012, p. 96). Duff (2019), in line with the Douglas Fir Group (2016), proposes that L2 research needs to take a transdisciplinary approach, and cases should be understood by multiple, integrated perspectives.

Both emerging and transdisciplinary aspect of this approach had a powerful effect on the development of my own study. Initially, in the autumn term of 2017, I designed a classroom study to gain information about the students' multimodal literacy development and the most effective pedagogical approaches to guide them in this learning process. Although I had gained valuable insights into the various aspects of designing a course on multimodal literacy, there were more questions to be answered due to the emerging themes during Course 1, leading me to address these emerging issues in two consecutive courses, always adding on a different significant set of research questions to the whole investigation. This cyclical aspect made me realize the true strength of the qualitative case study approach as described by Duff (2012) above. The data collected during one course can hardly be sufficient to come to conclusions about the various aspects of pedagogical perspectives and the students' experiences in connection with a disciplinary area that is new to them. For this reason, I took the opportunity to continue my investigations for two more semesters. To provide a concise overview of this process, Table 1 presents how the focus and the emerging themes of each phase of the research influenced the next one.

Table 2

Overview of the Research Stages

Stage	Research focus	Emerging themes
Preliminary investigation before the classroom studies	Theoretical and empirical studies on multimodal literacy development Reflection on teaching and editorial experiences	The need for multimodal literacy development
Course 1 2017 autumn	Different aspects of multimodal literacy development	The challenges of theoretical texts The usefulness of the social semiotic multimodal approach The need for continuous feedback The need for classroom discussions The possibilities of exhibition visits
After Course 1	First reading and analysis of the collected data Redesigning the course for a slightly different group Selecting texts, images and tasks for Course 2 Selecting exhibitions for Course 2	
Course 2 2018 spring	Focus on language and multimodal literacy development tasks and classroom discussion of theoretical ideas Focus on presentations	The usefulness of the Teaching Learning Cycle The usefulness of exhibition visits The need for explicit writing instruction
After Course 2	First reading and analysis of collected data Comparison of data collected during Course 1 and Course 2 Redesigning the course for a group similar to the 2017 spring course participants Selecting texts, images and tasks for Course 3 Selecting exhibitions for Course 3 Designing writing tasks for exhibition visits	
Course 3 2018 autumn	Focus on language, writing, multimodal literacy development Focus on presentations (multimodal analysis and second language pedagogy)	The benefits of social semiotic multimodal approach The usefulness of explicit writing instruction The most useful images, texts, multimodal texts, reading assignments The integration of exhibition visits The integration of the various elements in a Teaching Learning Cycle Implications for future course design

The empirical studies were conducted at the Department of Applied Linguistics (DEAL), School of English and American Studies, Eötvös Loránd University in Budapest. This Institute has one of the largest numbers of students with about 400 students joining the program each year. The student population is diverse, and it comprises students from Budapest and every other region of Hungary as well as international students. There are different programs students can choose from: BA in English (as a major), BA in English (as a minor), MA in English and the 6-year "OTAK" Unified Teacher Training Program (M.Ed. degree). The Institute also offers PhD level programs.

The main research questions detailed in Table 2 are concerned with the enactment of the theoretical considerations such as social semiotic multimodality, the Teaching Learning Cycle and genre-based pedagogy and Legitimation Code Theory at the different stages of the research. Apart from these curricular and pedagogical interests, the research is also concerned with the students' perspectives and experiences during the courses, which inform the final research implications. However, the research does not aim to test any hypothesis or theory or propose correlations, nor does it claim to measure the students' multimodal literacy development in a quantifiable manner. It looks at how the pedagogical approaches together with a multimodal social semiotic approach contribute to the students' multimodal literacy development, multimodal awareness and L2 development, and what tasks, texts and shared experiences are the most valuable in this shared learning process.

Table 2

The Research Questions

Focus	Research questions	Stage of research	Discussion of findings
Knowledge areas, tasks, texts	**RQ 1.1** What specialized knowledge areas within social semiotic multimodality contribute to the students' multimodal literacy development? **RQ 1.2** What kind of tasks support the students' multimodal literacy development? **RQ 1.3** What kind of multimodal texts support the students' multimodal literacy development?	All three stages	Study 1
Exhibition visits	**RQ 2.1** How can the students' experiences in museums be characterized before and after the class visits? (What do they value in these visits?) **RQ 2.2** What kind of tasks and processes contribute to the students' multimodal learning in the museum? **RQ 2.3** In what ways do exhibition visits support the students' multimodal literacy development?	Stages 2 and 3	Study 2
Explicit writing instruction: review writing	**RQ 3.1** How does the review writing task contribute to multimodal knowledge-building during the course? **RQ 3.2** What knowledge practices are present in the students' reviews? **RQ 3.3** How can genre-based pedagogy contribute to the students' learning?	Stage 3	Study 3
Students' perspectives	**RQ 4.1** What are the students' expectations of the courses? (What inspired them to choose the course? What do they expect to learn here?) **RQ 4.2** What difficulties do the students perceive in relation to the course? **RQ 4.3** Which aspects of the course do the students enjoy the most? **RQ 4.4** In what ways has the course proved useful for the students?	All three stages	Study 4

4 Conclusion and pedagogical implications

Having established the need for multimodal literacy development in English studies contexts in Chapter 1, the thesis examined the ways it can be developed with a focus on L2 learning. In order to understand the task ahead, the first part of the thesis discussed the main constructs seen as the building blocks of the theoretical foundation of the research. In Chapter 2, this included the discussion of sociocultural theory in language learning contexts with a special focus on the social turn in SLA research. The theoretical and pedagogical frameworks of Vygotskian and Hallidayan sociocultural and semiotic understandings of language and its role in meaning-making and thinking skills were introduced with a special focus on semiotic mediation. Within pedagogical research, the concept of mediation is closely connected with the notions of scaffolding and the Zone of Proximal Development, and they provide the main approach to the pedagogical realization of semiotic mediation. Following the Vygotskian understanding of everyday and scientific knowledge, SFL perspectives on commonsense and 'uncommonsense' or everday and educational knowledge were introduced, which established on the significance of explicit knowledge-building within the multimodal L2 classroom.

To demonstrate what this multimodal classroom needs to focus on, Chapter 3 presented social semiotic multimodality. It showed the relationship between social semiotic multimodality and SFL theories of language and semiosis from a Hallidayan perspective (1978). In this view, language is one semiotic system among others, but it is also the most powerful mediational tool available to humans. The major theoretical and methodological underpinnings highlight the concepts of meaning potential, affordance and choice within meaning-making. The SFL understanding of the relevance of contexts (of culture and of situation) and the metafunctions (ideational, interpersonal and textual) were discussed and their adaptation in multimodal discourse analysis. The contextual and metafunctional view on language and other semiotic systems proved to be not simply a theoretical approach, but also a pedagogical and analytical one for classroom practice. This chapter also presented a variety of multimodal texts and intersemiotic perspectives on the visual and verbal modes under investigation in the research. The image-text relations discussed have become effective ways of analyzing multimodal texts and presenting them during classroom discussions.

Making a links between multimodal literacy and L2 development research was an essential step in this research. For this reason, Chapter 4 dissected the constructs of literacy, multimodal literacy and contrasted them with the constructs of communicative competence and its multimodal interpretation, multimodal communicative competence. In this thesis, the working construct remained multimodal literacy as it resonates well with sociocultural research, and it is also the more widely used concept.

One of the major contributions of this research in terms of innovation is the introduction of LCT (e.g., Maton, 2013, 2014), a multidimensional toolkit that examines the nature of different types of knowledge in real-life contexts. LCT provided both analytical and pedagogical tools to understand the characteristics of different types of knowledge practices (ways of knowing) in educational contexts. The dimensions of Specialization and Semantics were enacted with their analytical tools and translation devices to make research practices truly transparent and adaptable. Links between LCT and SFL were established to provide further bridges between the theoretical frameworks.

Finally, Chapter 6 overviewed the different aspects of multimodal pedagogy in L2 contexts. It established the main areas that became the pedagogical building blocks of the course development and lesson planning. These main areas included task-based pedagogical approaches (Long, 2016; Rose and Martin, 2012), and text-based syllabus design (Feez, 1998). Apart from these principles, the whole research relied strongly on scaffolding pedagogies, and most importantly SLF-informed genre-based pedagogy (Rose and Martin, 2012) and its pedagogical model, the Teaching Learning Cycle (Rothery, 1994). The TLC became the primary guiding principle in my course design and lesson planning, and its various adaptations were presented in Chapters 8 and 10. Chapter 7 presented the qualitative research methodology of the thesis and its case study approach to conducting the research studies. Four studies were presented in Chapters 8-11, focusing on different aspects of multimodal literacy development. To implement my research idea, I designed three consecutive courses for English majors and English teacher education students at the Department of Applied Linguistics at Eötvös Lóránd Univesity at ELTE. The courses were taught in the autumn term of 2017 and the spring and autumn terms of 2018.

From a theoretical perspective, the first contribution of this thesis is to sociocultural theories of language, namely the role of mediational tools in meaning-making. Revisiting Halliday's

(1978) view on language among other semiotic systems, precisely that "language is one of the semiotic systems that constitute a culture; one that is distinctive in that it also serves as an encoding system for many (though not all) of the others" (p. 2), this thesis examined the specific role of L2 in the development of the students' multimodal literacy skills. Driven by both Hallidayan social semiotics and multimodal social semiotics, my main concern was to understand the relationship between different semiotic systems in learning contexts and to propose that learning about multimodal systems is equally important to learning about L2 in higher education English studies and TEFL teacher education contexts. Although the main focus on studies in the researched contexts is on language, I considered the significance of building knowledge about visual semiotic resources in the overall objective of L2 development. Based on my findings, this thesis found in resonance with Halliday (1978) that language (and L2 in this case) does indeed serve as an encoding system for others. However, this principle needs to be expanded by the idea proposed by the multimodal approach in that multimodal creation and meaning-making includes choice at the modal level as explained by Kress and van Leeuwen (2001) and van Leeuwen (2004). In this regard, building up the students' meaning potential (Halliday, 1978; van Leeuwen, 2004) involves learning about the affordances of different semiotic systems.

This thesis also reveals that this relationship between language and other semiotic systems results in conceptual development, which based on the first findings, but demanding further research, might result in transfer between languages (e.g., L1 and L2 or L3) in students. In this regard, the research approached language development inseparable from knowledge building, confirming the Hallidayan view on language-based theory of learning (1993). What I also found is that although students' knowledge of multimodal semiotic systems has many implicit sources fed by their experiences and previous studies, learning about them in the classroom needs to be made explicit for clarity. The nature of such disciplinary knowledge was approached through the Vygotskian view on scientific knowledge. In line with SCT theories of L2 learning, I found that the co-construction of reflected upon knowledge and social interaction make L2 learning an intentional process students can control given the right tasks and resources. The thesis found that although language is indeed the most powerful mediational tool in our hands, its focus needs to be well-directed at different semiotic systems in physical and digital environments.

The first research study presented in Chapter 8 focused on multimodal literacy development in the classroom. It found the most effective tasks, text types and topics which needed to be addressed explicitly with English studies and English language teacher education students. The pedagogical implications of the study are detailed in Section 12.2. Its theoretical findings point out that the expansion of explicit knowledge about semiotic systems has a wide-ranging effect on language use and multimodal awareness both in classroom and everyday contexts. Although it is often repeated that students at our times are digital natives (Prensky, 2001), my findings confirm that knowledge about multimodal resources needs to be built explicitly in order to reach a fuller meaning potential in academic and everyday situations. In this regard, based on my findings, knowledge of intersemiotic relation largely contribute to multimodal awareness.

The second study presented in Chapter 9 dealt with the impact of exhibition visits on the students' multimodal literacy development. These extramural activities offer opportunities for L2 and multimodal development and reveal the source of knowledge in museum experiences. Based on the Specialization dimension of LCT, this study focused on the nature of knowledge in connection with museum visits and the role language has in shaping these experiences. It found that initially, students mostly relied on their social experiences in their reflection on museum visits. Later during the course, they reflected on the importance of enacting specific disciplinary knowledge practices and how these changed their experiences. Learning about multimodality grew the students' meaning potential in these contexts. By having explicit knowledge of the affordances of meaning-making resources apart from language, the students were better equipped to from critical opinions and interpretations of museum experiences. This way, the language and multimodal systems have a reciprocal relationship in terms of development. The more students learn about multimodal resources through L2, the more meanings these will provide for further L2 development in spoken dialogues and written assignments.

The third study in Chapter 10 specifically addressed the role of writing in the context of exhibition visits and its contribution to disciplinary knowledge building. Through the development of writing skills, the students gained opportunities reflect on different types of knowledge. The different types of knowledge practices in action during an exhibition visit were accessed and described through the Semantics dimension of LCT. Museum exhibitions were approached as large multimodal texts, and this regard they provided ample opportunities to reflect on the role of multimodal resources in them. The study found that multimodal

experiences are manifold, and they are often unexpressed explicitly. By giving a structure and opportunity through writing to reflect on experiences in academic contexts for academic audiences, multimodal theories are enacted and come to life through language.

The final study in Chapter 11 focused on the students' own voices and reports on their experiences during the course on multimodal literacy development. The overall implication of the study is that conceptual development about multimodality in L2 has a positive impact in the students' thinking in both L2 and L1. Multimodal knowledge contributes to multimodal awareness and the students' critical reasoning skills which are present in their opinions, analyses, interpretations both in speaking and writing. Apart from semiotic mediation, the thesis reveals the role of metasemiotic mediation, foregrounding the specific disciplinary knowledge (Coffin and Donohue, 2014). The ways in which these changes occurred are discussed under Section 12.2 in terms of the pedagogical implications of this thesis.

This thesis was motivated by pedagogical objectives with multimodal and linguistic investigations also in mind. Such thinking is based on Halliday's notion of appliable linguistics, that it, it does not strictly separate applied linguistic research from linguistic investigations. Each study focused on a different aspect of multimodal pedagogy. In line with the characteristics of case study research, the studies inspired each other in a consequential manner, revealing major issues to be addressed to gain a more complete picture of the potentials of multimodal pedagogy. As a grand aim, the research intended to have a positive impact on the students' multimodal awareness in general while perfecting their advanced academic L2 skills. One of the major theoretical findings with powerful pedagogical implications concerns the inseparable relationship between content knowledge and language as also discussed in connection with the SFL concepts of context and metafunctions in Section 3.2.

Informed by the theoretical findings regarding the relationship between language and other semiotic systems, from pedagogical perspectives, the thesis also established the reciprocal relationship between L2 and multimodal literacy development. Based on the students' oral and written production and self-assessment, their language use, vocabulary, spoken and written skills developed during the course. The fact that they were able to reflect upon such development indicates the effectiveness of explicit pedagogy that makes expectations and disciplinary knowledge transparent and accessible while providing ample opportunities to reflect upon and creatively enact new theoretical and analytical concepts.

Chapter 8 discussed the most relevant tasks, text types and topics that contributed to the students' multimodal literacy development. These topics included multimodal discourse analysis, visual grammar and image-text relations, teaching-related topics and learning about a variety of multimodal texts. These texts included paintings, picture book illustrations, newspapers, websites, posters, video materials, podcasts, film and comics adaptations of classic literature, and social media websites. A major revelation of the first course was that exhibitions as multimodal texts (Ravelli, 2006) were among the most effective and favored learning activities.

In line with sociocultural theories of language learning (e.g., Lantolf, 2000), the courses focused on developing spoken skills through collaborative dialogues (e.g., Wells, 2007) during each lesson. The thesis revealed that the combination of monologic modelling of text analysis with regular dialogues worked well at making students feel comfortable in discovering new approaches to multimodal texts. Listening to each other's opinions and the teacher's guidance and feedback together provided a safe and empowering learning environment for the students. The students started to notice and analyze their own learning and their immediate environments form a multimodal perspective, and they also paid attention to the multimodal resources available in classroom teaching. The key to this positive outcome can be found in the reliance on authentic multimodal resources and explicit, knowledge-powered dialogues about multimodal analysis.
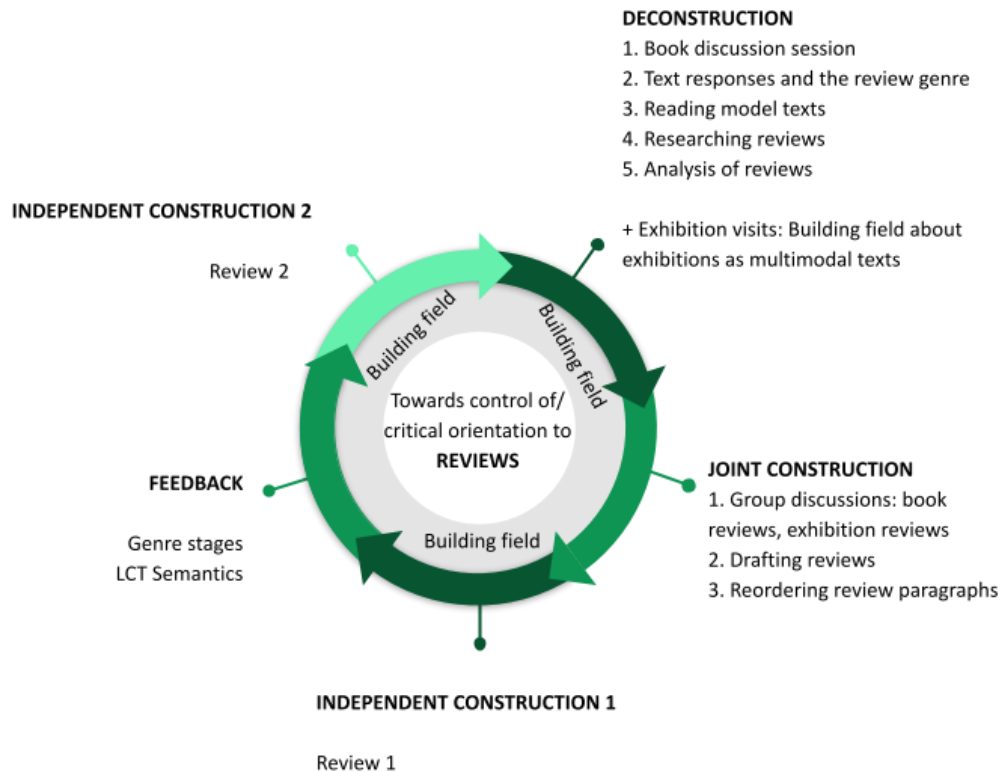
The adaptation of the Teaching Learning Cycle (Rothery, 1994) accompanied the three courses with a growing significance by Course 3 based on the positive outcomes of its introduction at earlier courses. The TLC pedagogical model presents each learning cycle as an ongoing process of building field towards the critical orientation to a given genre. The understanding of genre is based on the SFL-informed genre-based approach according to which "a genre is a staged, goal-oriented, purposeful activity in which speakers engage as members of our culture" (Martin & Rose, 2008, p. 6). However, in my modification, the TLC was adapted on the micro level of lesson planning and it was used to work with descriptions, reviews, book presentations and multimodal texts.

The three main stages of a TLC are Deconstruction/Modelling of texts, Joint Construction and Independent Construction. This model was adapted for the micro level of learning about

descriptions at lesson level as well as the macro level of course design with a focus on multimodal texts. Based on my findings, TLC model combined with genre-based pedagogy support students' writing development in an empowering way as presented in Figure 2.

Figure 2

The Teaching Learning Cycle Adapted for Review Writing during the Course

The thesis integrated the analytical and teaching tools of LCT to gain new perspectives about what constitutes academic knowledge and how knowledge practices can become accessible. By relying on LCT, I stepped out of the usual approaches to analyzing students' texts. This decision made making links with other disciplinary areas easier, revealing connections between language studies and other areas. LCT gave invaluable insights into the nature of knowledge practices through its two dimensions, Specialization and Semantics. The research relied on LCT for both data analysis and providing more explicit scaffolding for students' writing and reasoning.

In the study presented in Chapter 9, the Specialization concepts of epistemic relations (ER) and social relations (SR) revealed how students experienced exhibition visits before and after the

course, and it showed that learning about multimodality contributes to changes in the students' views on these events. Cultivating and training their multimodal gaze opened up several layers of meanings during the exhibitions. These findings indicate the relying on the students' personal and social experiences is beneficial as a basis for academic investigations. Learning how to use and reflect on such experiences contributes to a more critical orientation towards non-academic or extracurricular events. A translation device enacting the specialization concepts of ER and SR was developed to analyze the students' responses towards museum visits. The findings indicate that knowledge about knowledge practices gives teachers guidance about the students' dispositions, attitudes, ways of knowing which can result in effective pedagogical practice which works in harmony with the students' needs.

The Semantics dimension of LCT informed the study presented in Chapter 10. The concept of semantic gravity was introduced to help students organize their ideas and see semantic shifts between their experiences and disciplinary knowledge. Semantic gravity contributed to this process as a teaching, assessment and analytical tool, giving insights into the knowledge practices enacted in exhibition review writing in terms of their relative context-dependency. LCT Semantics was found to be a practical assessment and pedagogical tool in classroom contexts, which also informs data analysis and curriculum design.

One of the most entertaining and engaging emergent themes during Course 1 was the success and impact of an exhibition visit. For this reason, two exhibition visits became the core of the second half of each course after the first term of teaching the *Making Meaning with Visual Narratives.* The integration of exhibition visits proved to be an essential part of course design, with implications for pedagogical practice in L2 and other disciplinary contexts. As discussed in Chapter 9, during exhibition visits students explicitly access new information about the arts and other disciplines, and they have the possibility to enact the multimodal theories discussed in the classroom. These visits create opportunities for the recontextualization of new content knowledge as well as reading a variety of multimodal texts, taking part in dialogues and writing texts such as reviews in L2. Students also learn that art and culture are valuable and investing time in visiting such places is an important pedagogical and personal responsibility. Doing such explorations in English gives them opportunities to share ideas, form opinions and enact theoretical and analytical approaches in real contexts.

5 Limitations of the research and directions for future research

Reflecting on the limitations of this research reveals the researcher's methodological awareness and gives directions for further investigations. Although most of the limitations of each research can be overwritten by clear principles and guidelines based on the chosen research methodology, some limitations might occur during the executions of the research. In what follows, I will reflect on these.

Firstly, the three courses included in this thesis had different participants in terms of academic year and orientation. This fact was seen as a positive factor as different voices, attitudes and experiences were part of the research. At the same time, learning more about how the different backgrounds and academic levels influence the students' multimodal literacy development might reveal deeper and more complex information about the potential of the course. Related to this, the separation of pre-service teachers from English studies majors would have been beneficial. Such a change did happen after the doctoral research, when I had the chance to separate the two groups and hold for teacher and non-teacher education groups in the same academic term. The focus points of the courses became clearer and more organized for the students.

Secondly, due to the nature of qualitative data analysis and the amount of data collected, it was inevitable that only one researcher carries out the data analysis. This might become a concern especially in Study 4, where the student's perspectives were under scrutiny. One solution to this issue would have been the inclusion of two or more researchers in the coding of the data from the beginning. Another answer to such concerns of validity includes the creation of a translation device as presented in Chapter 9 and Chapter 10 to provide a clear overview of the connections between data analysis and interpretation.

Thirdly, the inclusion of recorded and transcribed data of classroom dialogues would have given a more complex and detailed picture of the students' performance and development. This way, a truly multimodal research study could have been carried out. However, the directions the research took and the reliance on written texts and the students' feedback in data analysis directed the analytical focus towards written resources.

Finally, the researcher's background knowledge might influence the potential reliability of the research. However, each teacher-researcher comes with a unique knowledge base and background to teaching. While not all that was carried out here can be repeated by any other teacher, the methodology and theoretical/analytical perspectives are easily adaptable and can work in other disciplinary contexts.

As mentioned above, one characteristic of case study research is that it often produces emerging issues to be addressed by further research. I see the roots of the directions for future research in these emerging issues as well as the limitations of the studies discussed earlier. This thesis invites further research in multimodal pedagogy, the potential of museum visits, and the integration of genre-based pedagogy and Legitimation Code Theory.

In terms of multimodal pedagogy, it raises the question of integrating a variety of modes such as audio, moving images, gesture and pose in the course materials and tasks. After an introductory course into multimodality, further, more specialized courses need to be developed which deal with different aspects of multimodal research. Related to the limitation of combining two different groups in the courses, the course materials need to be revised and examined in terms of specific requirements for pre-service teachers and English majors whose main concern is not language teaching.

This thesis had no intention of measuring the students' multimodal literacy through pre- and post-course tests. However, expanding the qualitative approach of the research and including specific tests to gain a deeper understanding of the students' multimodal literacy skills would have important implications for the areas needed to be developed in students. The written texts and presentations prepared by the students together with their own self-reflection and my observations provided plenty of information about the changes in their multimodal awareness. However, having objective tests would be even more informative and provide more research validity. Such tests need to be developed for higher education students. It would be also important to include a wide range of modes in these tests. Eventually, another course, focusing on semiotic resources such as sound, gesture, posture and touch is necessary to gain a better understanding of multimodal literacy skills in these students.

As mentioned in Chapter 10, review writing is not the typical genre for higher education students. Although it had its benefits in the context of this course, but different genres could be

included in the course programme and analyzed. In connection to this direction, the question is raised what impact the integration of genre-based pedagogy would have on the students' overall writing production.

As with every qualitative research involving several participants over a longer period of time, it would be important to conduct follow-up interviews with some students to gain insights into how they operationalize the course materials in their teaching and other professional practice.

In terms of Legitimation Code Theory in the research, the thesis raises the question whether knowledge about knowledge practices informed by LCT research can be integrated at a higher level of course design, also at the departmental level. The LCT Specialization research carried out in Chapter 9, the investigation could be further expanded to include university teachers from different departments of the School of English and American Studies. Since they are the ones who mostly influence the pre-service teachers' educational experience and give a framework to their future pedagogical practices, their thinking about exhibition visits would be revealing to explore. The impact of two other extremes can be studied: online art gallery visits on platforms such as the Google Arts & Culture website or field trips to cultural environments for example visiting the target country of the students' language studies, which is a popular activity for secondary schools. From a theoretical perspective, as indicated above, these initial findings regarding the nature of the students' knowledge practices can be further analyzed to understand the deeper structure of the gazes demonstrated by the students.

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