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Iveta Kopankina

MANAGEMENT SCIENCE TEXTS AND THEIR TRANSLATIONS: PROBLEMS AND SOLUTIONS

Summary of the Doctoral Thesis



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Iveta Kopankina

Doctoral Student of the Study Programme "Linguistics and Literary Studies"

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Scientific supervisor
Dr. philol. AGNESE DUBOVA

Consultant
Dr. paed. ALĪDA ZIGMUNDE

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Professor Dr. philol. Linda Lauze
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Vilnius University, Lithuania

Professor Dr. philol. Ineta Balode
University of Latvia, Latvia

DECLARATION OF ACADEMIC INTEGRITY

I hereby declare that the Doctoral Thesis submitted for review to Riga Technical University Liepaja Academy for promotion to the scientific degree of Doctor of Science (PhD) is my own. I confirm that this Doctoral Thesis has not been submitted to any other university for promotion to a scientific degree.

Iveta Kopankina  (signature) Date:

……

The Doctoral Thesis has been written in English. It consists of an Introduction, five chapters, Conclusions, five figures, twenty-two tables, and four annexes; the total number of pages is 217, excluding annexes. Bibliography contains 69 sources, and the List of Literature contains 239 entries.

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Abstract

The present study, which examines the management science doctoral dissertation summaries and their translations into English and Latvian, focusing on their characteristic linguistic features, is a contrastive linguistics study based on the methods of contrastive analysis. During the study described in the present dissertation a theoretical review of the research in the field of the language of science, the research pertaining to the secondary text type of the dissertation summaries in management science, and related translation aspects and problems were carried out; macro-linguistic features and wording were examined, a methodology for analysis of the mentioned research texts was developed, and problems encountered in translating management science doctoral dissertation summary texts have been assessed and evaluated. Parallel corpora have been designed containing 120 dissertation summary texts and their translations published during the period from 2013 to 2023. Research on the macrostructure of dissertation summaries has demonstrated that the mentioned summaries have a specific structure with common elements. However, not all of these elements are present in every text. The wording of the summary titles and texts enabled the detection of lexis that might be misunderstood and thus cause translation problems, including the use of false friends by translators. The latter have been analysed separately using semantic analysis. The deictic, retrospective, and prospective phrases, along with their translations, have been researched. Special attention has been paid to the authorial stance and the traditions of expressing the authorial stance in English and Latvian.

The study results have been presented to the scientific community at nine international conferences and in eight publications.

Keywords: The language of science, doctoral dissertation summary texts, management science, macrostructure and microstructure of text, contrastive linguistics.

Introduction

The study described in the present dissertation has been inspired both by practical experience working with management science doctoral students and by publications of other researchers and has been conducted with the intention to facilitate the writing and translation of the dissertation summaries for doctoral students and translators, as well as to promote fundamental knowledge concerning the mentioned text type.

The doctoral students in the higher education establishments of Latvia have different backgrounds, representing a wide range of academic writing traditions in Latvia and abroad, and they do not always write and translate their dissertation summaries and defend their dissertations in their home institutions, whereas the mentioned academic writing traditions differ not only depending on their home country but also depending on their *alma mater* and faculty or department. This becomes particularly evident when researching the recommendations and requirements of Latvian universities and departments. The mentioned requirements differ in terms of micro- and macrostructure as well as the wording of management science dissertation summaries, and their English texts sometimes even contain the so-called "false friends of the translator".

According to Latvian legislation, in order to maintain the traditions of multilingualism in science and to promote Latvian science abroad, the dissertation summary has to be translated into English if the dissertation is written in Latvian and translated into Latvian if the dissertation is written in English, which presents an opportunity for contrastive research of the dissertation summary texts. For doctoral students, a dissertation is the gateway to the world of academic research. At the time of drafting their dissertations and dissertation summaries, students still need guidance and consultation on the various conventions existing in academia, especially since a dissertation summary may be decisive for their dissertation defence.

Lancaster (2016: 120) singles out the linguistic and extralinguistic aspects of academic discourse and the importance of the mentioned aspects in ensuring faithful translation.

The language of science fulfils a communicative function (Bühler, 1934; Jakobson, 1960; Reiss, 1983; Roelcke, 2024). Research has been devoted to reader–writer interaction, evaluation and stance (Biber et al., 1999), as well as hedging (Swales, 1990; Hyland, 1998; Salager-Meyer, 1994; Markkanen & Schröder, 1989).

The communicative approach views translation as a form of communicative activity shaped by context (Kade, 1968; Jalayeri, 2010). Biel (2018), however, focuses specifically on differences between genres in translation.

The notion of the language of science, together with the concept of academic text, has been defined in earlier studies (Aaronson, 1977; Rabinowitz & Vogel, 2009; Wilson, 2012; Halliday, 2004, 1987; Halliday & Martin, 1993; Ventola, 1992, 1994, 1996; Schmied, 2011; O'Halloran, 2005; Swales, 1990, 2004, 2011; Schäffner, 2019). Specific characteristics of the language of science texts are provided by Schmied (2011: 19) and Hyland (2006: 221). In this dissertation, management science doctoral dissertation summaries are approached as secondary texts. Their classification draws on multilevel models (Gläser, 1990, 1998; Göpferich, 1995; Weinreich, 2010; Schmied, 2014; Wright, 2012; Laiveniece, 2015; Pipere & Znotiņa, 2018; Znotiņa, 2017; Dubova, 2019).

From the viewpoint of professional communication and LSP (Hans & Hans, 2014; Wright, 2012), such texts typically display argumentative and persuasive features and are shaped by

cultural context (Kretzenbacher, 1998: 133). Hyland (2010, 2015c: 294) discusses these issues further in relation to academic writing.

The theory of functional styles originates in the study by Jakobson (1960). Rozenbergs (1995: 83–85), by contrast, focuses on the linguistic properties of scientific discourse. At the same time, communication models proposed by Bühler (1934), Jakobson (1960), and Roelcke (2024) suggest that stylistic classification alone does not account for all relevant factors.

Genre, communicative purpose, and function are treated in the works of Swales (1990) and Hyland (1996, 1998). The distinction between genre, register, and text type is discussed by Lee (2001: 37–40), Biel (2018: 152, 157), and Nord (1997: 53). Earlier research distinguishes macrostructure (Kintsch & Van Dijk, 1978; Van Dijk, 1980; Van Dijk & Kintsch, 1983) from microstructure (Kintsch & Van Dijk, 1978; Van Dijk & Kintsch, 1983). This line of research has also been developed in Latvian scholarship (Martinsone & Pipere, 2018; Laiveniece & Dubova, 2021; Dubova et al., 2020; Ansberga & Dubova, 2020; Egle & Tomase, 2020).

Galtung (1981, 1985) provides a cross-cultural classification of scientific writing traditions. Intercultural and diachronic aspects are further addressed in the works of Dubova et al. (2009) and Laiveniece & Dubova (2021: 85). The present study aims to improve the quality of scientific texts and their translations by examining macrostructural patterns, wording, and problematic phenomena, including false friends and unnecessary borrowings.

The macrostructure of dissertation summaries is examined with reference to Swales (1990), Swales and Feak (1994), Paltridge (2002) and Paltridge and Starfield (2007), Bunton (2002), Schmied (2014), and Kamler and Thomson (2014).

Microstructural aspects are analysed on the basis of works by De Beaugrande and Dressler (1981), Hyland and Tse (2005a, b), Hyland and Bondi (2006), Hyland (2009), Hyland and Jiang (2016), Laiveniece (2021), and Laiveniece & Dubova (2021).

Deixis in the texts of management science dissertation summaries is considered with reference to Peirce (1932), Langacker (2002), Bühler (1990), Malmkjær (2009), Cruse (2000), and Levinson (2008). Authorial stance, in turn, is discussed on the basis of works by Halliday and Hasan (1976), Bakhtin (1986), Hyland (2002a, 2005a, 2009, 2015c), Cruse (2000), Levinson (2008), Schmied (2014), Vassileva (1998, 2006, 2014), Laiveniece (2010), and Kalnbērziņa (2015).

Evaluative constructions are addressed in the work of Hyland and Bondi (2006), Hyland and Tse (2005a, b), and Halliday and Matthiessen (2004). Specialised lexis is discussed with reference to Crystal (2010), Malmkjær (2009), Skujiņa (2005), and Baltiņš (2007a, b).

False friend classifications are provided by Schatte (1990), Lipczuk (1991), Nida (1964), Catford (1965), Nerlich and Chamizo-Dominguez (2002), Munday (2009), and Hayward and Moulin (1984), as well as by Latvian researchers (Baldunčiks, 1989, 2005; Veisbergs, 1996, 1998; Žīgure, 2008). In this Thesis, the classification of false friends is proposed according to the classification developed by Schatte (1990) and Lipczuk (1991).

The **topicality of the study** presented in the dissertation can be described as follows.

The macro- and microstructure of management science dissertation summaries in English and Latvian defended in Latvia have not been examined in earlier research, and the results of the present study may be useful to both writers and translators.

The study addresses a research gap concerning structure, terminology, and specialised lexis in such summaries, including their rendering in English and Latvian. It also contributes to facilitating the writing and translation of research summaries by documenting their structural and

lexical features. Particular attention is given to false friends, problematic wording, deictic expressions, and evaluative *that*-constructions occurring in these texts.

The research question of the present dissertation has been formulated as follows:

What are the macrolinguistic and microlinguistic features of the management science doctoral dissertation summaries defended in Latvia in English and Latvian and their translations?

The aim of the present dissertation is to determine the specific features of the management science doctoral dissertation summaries at the level of macro- and microstructure in English and Latvian that can be applied in descriptive, as well as contrastive, research of the given text type, and to facilitate the writing and translation of the mentioned texts in English and Latvian by identifying the existing linguistic problems.

The research object of the dissertation is the language of management science in doctoral dissertation summaries in English and Latvian, while the **research subject** can be formulated as follows: macro- and microlinguistic features in management science doctoral dissertation summaries and their translations in English and Latvian.

The research objectives of the present study are to:

- conduct a theoretical study of the research in the field of the language of science, the research pertaining to the secondary text type of the dissertation summaries in management science, related translation aspects, and problems;
- develop criteria for the selection, creation, and processing of the corpus of doctoral dissertation summaries and select their macrolinguistic features and wording for contrastive analysis;
- elaborate a methodology for analysis of the mentioned research texts;
- compile the research corpora of management science dissertation summaries in English and Latvian;
- research the obtained corpora of defended doctoral dissertation summaries in management science in English and Latvian in order to determine their macrostructure;
- research the microstructure of defended doctoral dissertation summaries in management science in English and Latvian;
- study and evaluate the problems encountered in translating management science doctoral dissertation summary texts;
- develop conclusions regarding the features of the studied texts and the specifics of their translation.

According to the mentioned objectives, parallel corpora of management science doctoral dissertation summaries and their translations into English and Latvian have been compiled. The contrastive analysis of the management science doctoral dissertation summaries has been carried out with the help of *AntConc.* Based on a small initial pilot study (10 English texts and 10 Latvian texts) of the introductory parts of the respective texts in English and Latvian, the research categories and main perspectives have been singled out, followed by a full-fledged study of the texts of dissertation summaries. Contrastive analysis of the respective texts in English and Latvian within the compiled parallel corpora of management science doctoral dissertation summaries has been carried out to determine the significant differences in the use of deixis, evaluative constructions, and authorial stance in the mentioned texts.

In the present study, within the wide taxonomy range of scientific communication texts,

the summaries of doctoral dissertations in management science have been examined in the context of the typology and genre of scientific communication texts, grouping the texts according to specific criteria, and taking into account both the linguistic and non-linguistic aspects.

The novelty of the present research can be described as follows: in the present study, the similarities and differences in the guidelines and normative documents mandating the writing and translation of doctoral dissertation summaries, in the summaries defended in social sciences and in management science, inter alia, in various programs and universities, have been singled out. The distinctive features of macro- and microstructure in management science dissertation summaries have been researched. The person deixis, spatial deixis, temporal deixis, social deixis, and discourse deixis categories have been explored.

The present study addresses aspects related to the structure, terminology and specialised lexis of dissertation summaries, as well as to rendering the mentioned texts in English and Latvian. At the same time, by describing the peculiarities of the structure and lexicon of these texts, the writing and translation of summaries is promoted. Special attention is paid to false friends, problematic wording, as well as evaluative that-constructions.

The limitations of the study are as follows. The present dissertation focuses on management science dissertation summaries for theses defended in the universities of Latvia during the period from 2013 to 2023, according to the respective academic writing traditions, i.e., belonging to the so-called Eastern European academic writing tradition and, more specifically those of academic writing in the universities of Latvia. The present dissertation does not explicitly address other formats of research texts, such as research articles. The research in the present dissertation does not deal with the aspects of teaching or learning academic writing from a methodological point of view. Instead, attention is paid to disclosing the communicative functions along with specific features and translation problems reflected in the dissertation summary texts. The present study does not examine the diachronic aspects concerning management dissertation summaries.

The scope of the study. Parallel corpora of 30 management science doctoral dissertation summaries originally written in Latvian in the sub-field of Business Administration and their 30 translations into English (SL – Latvian, TL – English) and 30 management science doctoral dissertation summaries originally written in English in the sub-field of Business Administration and their 30 translations into Latvian (SL – English, TL – Latvian) during the period from 2013 to 2023, 120 summary texts in total.

The summary texts from the University of Latvia (LU), Riga Technical University (RTU), BA School of Business and Finance, Turība University, RISEBA, and Latvia University of Life Sciences and Technologies were obtained for research in the present dissertation.

The theoretical and practical significance of the dissertation has been disclosed below: A theoretical review of the research in the field of the language of science has been provided; research pertaining to the secondary text type of the dissertation summaries in management science and the related translation aspects and problems has been carried out; macrolinguistic features and wording have been examined; a methodology for analysis of the studied research texts has been developed; problems encountered in translating management science doctoral dissertation summary texts have been assessed and evaluated. Parallel specialised corpora of dissertation summary texts and their translations have been designed. In the research on the macrostructure of the dissertation summaries, it has been detected that the summaries have a specific structure with common elements, even though not all of them are present in all texts. The wording of the summary

titles has allowed the detection of lexis that might be misunderstood and thus cause translation problems, including the use of false friends of a translator. The latter have been examined using semasiological analysis. The deictic, retrospective, and prospective phrases and their translations have been researched. Special attention has been paid to the authorial stance and the traditions of expressing the authorial stance in English and Latvian. In practice, the results of the study described in the present dissertation might be useful to the authors and translators in improving the linguistic quality of management science dissertation summary texts.

The results of the study on management science dissertation summaries described in the present dissertation might be useful for a wide range of researchers from the perspective of contrastive linguistics, translation science, and intercultural scientific communication. This type of research may also be applied to other disciplines. It might be recommended to the doctoral students and to the translators to pay special attention to the translation of the English wording pertaining to the doctoral dissertation summary texts, such as aim, goal, and purpose, because they all have a single Latvian equivalent, namely, mērķis, (whereas research objectives clarify the aim, purpose or goal of the research). The results of the present study indicate that false friends have been detected in the translations of the management science dissertation summary texts from English to Latvian. Therefore, it is recommended that translators consult the resources indicated in the present dissertation. It might be helpful to include a glossary of scientific terms in all summaries to clarify the precise definitions of all terms used in the dissertations and their summaries.

1. **Structure and content of the dissertation.** The present dissertation comprises 211 pages and the following sections: an introduction; five chapters, each with the main conclusions of the respective chapter; a section containing final conclusions, theses, and a comprehensive bibliography containing a list of references and sources; and four appendices.

The general state of research in the field of the language of science, as reflected in the texts of management science dissertation summaries as a text type, has been described in Chapter 1.

Chapter 2 examines the methods of researching the corpus of management science summaries and their translations, and describes the texts and their selection criteria for the present study.

The macrostructure of management science doctoral dissertation summaries has been analysed in Chapter 3, including the requirements of the regulatory documents for the macrostructure of doctoral dissertation summaries, as well as sector-specific structural elements and wording of the management science dissertation summaries.

Chapter 4 contains the study of the microstructure of management science doctoral dissertation summaries, the use of deixis, authorial stance, evaluative that-constructions, specialised lexis, and terms in the summaries and their translations.

Chapter 5 describes problems and undesirable translations, such as the use of false friends and undesirable wording, detected in management science doctoral dissertation summaries. The conclusions and further research perspectives section summarises the theoretical and practical proposals disclosed in the dissertation, based on the evidence provided by the collected linguistic material. Possible directions for future research are outlined.

The annexes list the most frequently used statistical terms in management science doctoral dissertation summaries in English and Latvian, as well as the detected false friends and a list of acronyms and abbreviations.

Approbation of research results

The results of the study have been presented to the scientific community at nine international conferences and in eight publications.

Conferences

1. Kopankina, I. Corpora-based Study of Management Science Dissertation Summary Texts in English and Latvian, 29th International Scientific Conference "The Word: Aspects of Research". Liepaja, November 28–29, 2024.
2. Kopankina, I. First- and third-person mentions of the author in management science dissertation summaries in English and Latvian, 27th International Scientific Conference "The Word: Aspects of Research". Liepaja, November 24–25, 2022.
3. Kopankina, I. The Author's Voice in Management Science Dissertation Summaries in English and Latvian. "NatAcLang2021", Special Issue published in cooperation with the 2nd Interdisciplinary Conference on National Languages in Academic Research and Higher Education, Tallinn, October 7–8, 2021.
4. A Contrastive Study of Management Science Theses Summary Texts in English and Latvian, CLARIN Annual Conference 2020 (Virtual Event), October 5–6, 2020.
5. Kopankina, I., Viļums, A. Deiktiskās, prospektīvās un retrospektīvās frāzes zinātnes valodā. The 25th International Scientific Conference "The Word: Aspects of Research". Liepaja, November 26–27, 2020.
6. Kopankina, I. Viltusdraugi vadībzinātnes promocijas darbu kopsavilkumos angļu un latviešu valodā [False Friends in Management Science Doctoral Dissertation Summaries in English and Latvian], 25th International Scientific Conference "The Word: Aspects of Research". Liepaja, November 28–29, 2019.
7. Kopankina, I. Macrostructure and Wording in the Texts of Doctoral Dissertation Summaries in Management Science, the 5th International Conference of Young Scientists *Via Scientiarium*, Ventspils, April 12, 2019.
8. Kopankina, I. Mērķa un uzdevumu valodiskie formulējumi vadībzinātnes jomas promocijas darbu kopsavilkumu tulkojumos [Wording used in goals and objectives in the translations of Management Science doctoral dissertation summaries], working section of the 77th International Scientific Conference of the University of Latvia "Language of Science", 77th International Scientific Conference of the University of Latvia, Riga, March 29, 2019.
9. Kopankina, I. Vadībzinātnes jomas zinātnisko tekstu ievaddaļu makrostruktūras un mikrostruktūras sākotnējās izpētes rezultāti. [Results of the Pilot Study of Macro- and Microstructures in the Introductory Parts of Scientific Texts in Management Science], 23rd International Scientific Conference "The Word: Aspects of Research". Liepaja, November 28–29, 2019.

Publications

1. Kopankina, I. (2026). Expression of Authorial Stance in Management Science Dissertation Summary Texts and their Translations in Latvian and English. *Sustainable Multilingualism,* Kaunas: Vytautas Magnus University Institute of Foreign Languages. (accepted for publication).

2. Kopankina, I. (2023). Macrostructure and Wording in the Texts of Doctoral Dissertation Summaries in Management Science. *Collection of articles of the 5th International Conference of Young Scientists Via Scientiarium.* Andrejs Gorbunovs, Valērijs Sergejevs, and Rafael Martin Calvo (eds.). Ventspils/Liepāja: Ventspils Augstskola/Liepājas Universitāte, 110–123.
3. Kopankina, I., Viļums, A. (2021). Deiktiskās, prospektīvās un retrospektīvās frāzes zinātnes valodā. [Deictic, Prospective and Retrospective Constructions in the Latvian Language of Science]. Gunta Smiltniece, Linda Lauze (eds.) *Vārds un tā pētīšanas aspekti,* 25 (I). Liepāja: LiepA, 63–71.
4. Egle, B., Kopankina, I., Tomase, K. (2021). Zinātniskais raksts un tā makrostruktūra. Sociālās zinātnes. [Research Article and its Macrostructure. Social Sciences.]. Agnese Dubova (ed.) *Zinātnes valoda: stils, teksts, konteksts. [The Language of Science: Text, Style, Context].* Rīga: Zinātne, 145–152.
5. Kopankina, I. (2020). A Contrastive Study of Management Science Theses Summary Texts in English and Latvian. *CLARIN 2020 Book of Abstracts.* Retrieved from https://www.clarin.eu/content/clarin2020-book-abstracts.
6. Kopankina, I. (2020). Viltusdraugi vadībzinātnes promocijas darbu kopsavilkumos angļu un latviešu valodā [False Friends in Management Science Doctoral Dissertation Summaries in English and Latvian]. Gunta Smiltniece, Linda Lauze (eds.) *Vārds un tā pētīšanas aspekti,* 24 (2). Liepāja: LiepA, 325–338.
7. Kopankina, I. (2020). Vadībzinātnes jomas zinātnisko tekstu ievaddaļu makrostruktūras un mikrostruktūras sākotnējās izpētes rezultāti. [Results of the Pilot Study of Macro- and Microstructures in the Introductory Parts of Scientific Texts in Management Science]. Gunta Smiltniece, Linda Lauze (eds.) *Vārds un tā pētīšanas aspekti,* 23 (1). Liepāja, LiepA, 60–69.
8. Kopankina, I. (2019). Mērķa un uzdevumu valodiskie formulējumi vadībzinātnes jomas promocijas darbu kopsavilkumu tulkojumos [Wording used in goals and objectives in the translations of Management Science doctoral dissertation summaries]. *Language of Science*, conference materials. Agnese Dubova (ed.). Liepāja: LiePA, 16–18. Retrieved from https://dom.lndb.lv/data/obj/800391.html.

Participation in research projects

Latvian Council of Science, Project "Intralingual Aspects of the Latvian Scientific Language", 2018–2020, Ventspils University of Applied Sciences, Liepaja University, Project code: Izp-2018/2-0131 (Latvian Academy of Science Certificate of Appreciation).

In the chapters below, the brief content of the present dissertation has been disclosed.

1 Texts pertaining to the language of science

The language of science is shaped by disciplinary traditions, institutional conventions, and communicative contexts. In Chapter 1, the principal theoretical foundations essential for the research of management science doctoral dissertation summaries as a specific text type have been singled out.

Halliday (2004: 49) defines the language of science as the form of discourse through which scientific activity is carried out. The language of science does not merely reflect conceptual structures but actively constructs them (Halliday 2004: 207), and therefore develops continuously within disciplinary and communicative practice.

The concept of the language of science is closely related to the notion of text. Scientific texts have been analysed from multiple perspectives. Wilson (2012: 346) emphasises that textuality is assigned through cultural and interpretative processes, while Halliday (1998: 24) notes that texts require interpretation in order to transform knowledge into structured meaning.

For the purposes of the present dissertation, the notions of language of science, scientific writing style and sector-specific language are distinguished. The language of science may be approached both as a domain of specialised communication and as a system characterised by specific communicative and structural features.

Research in the mentioned field encompasses academic writing, English for Specific Purposes (ESP) and English for Academic Purposes (EAP), ranging from systemic descriptions of scientific texts (Halliday, 1987; Halliday & Martin, 1993; Ventola, 1996) to disciplinary and genre-based analyses (O'Halloran, 2005; Swales, 1990, 2004, 2011).

Halliday and Martin (1993: 8) emphasise that scientific language reflects the constructive potential of language as a whole, and its study contributes both to disciplinary research and to general linguistic theory.

The responsibility of translators is to transfer accurately the meaning expressed in the original scientific texts. Károly (2024: 5) notes that translation of language of science texts requires linguistic, disciplinary and instrumental competences. In other words, translation in science extends beyond purely philological aspects and involves epistemic and disciplinary competence (Károly 2024: 15). Therefore, management science dissertation summaries and their translations are analysed within a broader communicative and disciplinary framework.

1.1 The communicative functions of the research texts and their translations

The transfer of meaning from the source text to the target text is not limited to linguistic equivalence, but is influenced by the communicative situation in which the text is used. Reiss (1983: 302) describes communicative translation as aiming at equivalence at the level of the whole text, taking into account syntactic, semantic and pragmatic aspects together with the situational and sociocultural context. In this sense, translation can be regarded as communication across linguistic and cultural boundaries (Schäffner, 2019: 28).

The communicative nature of scientific texts can be described using established models of language. Bühler's Organon model (1934/2011) treats language as a tool of communication and distinguishes three functions: representational, expressive and appellative. In dissertation summaries, these can be related to the presentation of research content, the expression of the author's position and the orientation towards the reader.

Jakobson (1960: 66–68) identifies six language functions: referential, emotive, conative, phatic, metalingual and poetic. In dissertation summaries, the researcher acts as the addresser, the academic community as the addressee, while the summary itself constitutes the message, organised according to disciplinary conventions. Roelcke (2024) describes specialised communication from the perspective of domain-specific language and its use in professional contexts.

Dissertation summaries thus fulfil several communicative functions. They present research objectives, methodology and results, reflect the author's stance through linguistic choices and aim to engage the reader. At the same time, they contribute to the dissemination of knowledge.

Scientific communication is shaped by conventions shared within discourse communities. Swales (1990) and Hyland (2008) note that the common traits of such communities are that they have common goals, they recognise established genres and share specialised lexis. The mentioned factors influence both how texts are produced and how they are interpreted. Dissertation summaries are created within these frameworks and are expected to conform to them.

From the perspective of translation, it is necessary to take into account genre conventions, audience expectations and disciplinary norms in both source and target languages. This also pertains to management science dissertation summaries intended for an international academic audience.

Research on academic writing also emphasises clarity, coherence and awareness of the reader, together with the use of linguistic devices such as hedging and evaluation (Biber et al., 1999, 1999; Hyland, 1998; Swales, 1990). These features contribute to the effective transmission of meaning and therefore require careful handling in translation. The translation of dissertation summaries can thus be regarded as a specialised communicative activity requiring both linguistic and extralinguistic competence, including knowledge of terminology, discourse conventions and the sociocultural context. The translator's task is to ensure that the communicative purpose of the original text is preserved in the target language.

1.2 Classification of the language of science texts into primary and secondary texts

Primary texts are original scientific works presenting new research findings, such as doctoral dissertations. Secondary texts summarise, review, or interpret primary texts. Weinreich (2010: 42–44) defines secondary texts as reproductions of primary texts in condensed form. Göpferich (1995: 132) characterises secondary texts as derived texts closely related to primary texts but capable of independent publication. Dissertation summaries fall into this category.

Gläser's multilevel classification (1990, 1998) distinguishes texts according to communicative symmetry, function, and textuality. Dissertations constitute specialist-to-specialist primary texts generating new knowledge. Dissertation summaries are derived texts providing concentrated representations of primary research.

Göpferich's typology of specialised texts identifies knowledge-summarising texts as a distinct category, corresponding to dissertation summaries. Wright (2012) emphasises the relevance of such classifications for translation practice.

Latvian researchers (Laiveniece, 2015; Pipere & Znotiņa, 2018) distinguish primary, secondary, and paratextual scientific texts. Within this framework, dissertation summaries are treated as autonomous secondary texts.

1.3 Classification of the language of science texts according to type, sector, style, and genre

In the present dissertation, the classification of text types, styles and genres in the language of science is approached through multilevel text models. In German linguistics, some researchers distinguish between *Texttyp* and *Textsorte*: *Texttyp* refers to theoretical groupings at a higher level of abstraction, whereas *Textsorte* is used mainly for classes of texts defined by communicative function (Heinemann & Heinemann, 2002: 143). Schmied (2011: 19), citing Hyland (2006: 221), characterises good academic writing as explicit, well-structured, intertextual, appropriately cautious and compliant with genre requirements. Schmied (2015: 1) also emphasises that the understanding of academic writing has shifted from a formal text-based approach to a functional one focusing on writers, readers and discourse communities.

Kretzenbacher (1998: 137) characterises language of science texts as argumentative and persuasive and points to their culture-specific nature. Bunton (2005: 207), in turn, notes that genre analysis in academic writing has focused much more on research articles than on theses and dissertations. Schmied's prototype approach to academic writing (2015) nevertheless places the PhD thesis among the core text types of academic writing, even though dissertation summaries are not always treated as separate documents in different academic traditions. It may therefore be concluded that texts pertaining to the language of science form a system that includes different text types, whose characteristics depend on field, communicative purpose and the conventions of the respective academic community.

In the present dissertation, management science dissertation summaries are analysed as texts belonging to professional communication. In a broader sense, professional communication refers to communicative practice in organised contexts, including business and science, and to the ways in which culture, technology and communication theories influence such practice (Hans & Hans 2014: 72). Halliday's Systemic Functional Linguistics model (1978: 2) is relevant here, since it highlights ideational, interpersonal and textual metafunctions as shaping successful professional communication. Management science dissertation summaries have to present complex research findings concisely and clearly for a readership that may include academics, practitioners and policymakers. In this respect, the study of such texts is also related to English for specific purposes (ESP) and English for academic purposes (EAP).

Wright (2012: 2) points out that, from the translation perspective, the evaluation of a scientific text requires attention to the language of the source and target texts, the subject field, terminology, register, text class factors, presentation and translation parameters. Wright (2012: 2) defines the subject field in coordination with its special language and notes that "language for special purposes" may be confusing because of its association with foreign-language pedagogy. Kretzenbacher (1998: 133), by contrast, argues that the language of science texts in general may be treated as texts of language for special purposes. Wright (2012: 1) also singles out the importance of attention to the use of terms in both source and target languages.

Management science is a broad interdisciplinary field related to decision-making and problem-solving within organisations, strongly linked to economics, engineering, management and business administration. To improve decision-making and organisational effectiveness, management science uses scientific principles, including mathematical models, algorithms and statistics (TH-e, 2023). In this respect, management science dissertation summaries are clearly sector-specific texts. Their analysis can also be related to English for specific purposes, which emerged as a response to the needs of students and researchers working in English in specialised

domains (Dudley-Evans & St John, 1998: 122). Hyland (2018a: 1) defines ESP as language research and instruction focusing on the communicative needs and practices of particular social groups. The findings of ESP are linked to the theory developed by Halliday, MacIntosh and Strevens (1964).

Reader-oriented research, which emphasises mediation between writers, institutions, cultures and conventions, has been discussed by Hyland (2010: 194) in relation to English for academic purposes. Hyland and Hamp-Lyons (2002: 2) define EAP as referring to language research and instruction focusing on the communicative needs and practices of particular groups in academic contexts. Schmied (2011: 2) similarly sees academic writing as an important part of academic language behaviour in a discourse community, especially where English functions as an international language or lingua franca. It can therefore be inferred that management science dissertation summaries pertain to EAP and to the language of science and to the sector-specific texts analysed in the present dissertation.

A further notion important for the present dissertation is that of functional style. Jakobson's model of language functions (1960) is relevant here, but scientific writing has also been characterised by other authors. Aaronson (1977: 2) stresses that the best scientific style is transparent and is marked by brevity, clarity and precision. Rabinowitz and Vogel (2009: vii) likewise emphasise precision, clarity and veracity, together with the social and educational character of scientific writing. The scientific functional style is therefore associated with clear structure, emotional neutrality and logical development. In Latvian linguistics, Rozenbergs (1995: 83–85) characterises the scientific functional style as a form of language used for the expression and structuring of specialised knowledge, marked by intellectual expression, emotionally neutral lexis, specialised terminology and internationalisms, while also warning against unnecessary loanwords where Latvian equivalents exist.

At the same time, style alone is not sufficient to explain the communicative nature of management science dissertation summaries. In this respect, the notion of genre is more precise. The term genre is defined in the OED$_{-e}$ (2023) as a kind or manner, while in the Anglo-Saxon tradition it often refers to the communicator's intent, as in narrative, procedural, expository, hortatory and descriptive genres (GLT$_{-e,}$ 2023). Swales (1990: 58) defines genre as a class of communicative events whose members share communicative purposes recognised by expert members of the parent discourse community. Bhatia (2014: 26–29) further characterises genres as recognisable, conventionalised communicative events shaped by social purposes, disciplinary cultures and discourse practices, while also stressing that genres may develop, mix and vary. Hyland's research (1996; 1998; 2015b: 32; 2008: 543) is also important here, as it documents the range of functions and grammatical constructs in scientific texts and highlights genre as a major concept for understanding how writers use language in recurring situations. Prior texts of the same kind influence both structure and linguistic choices.

The distinction between genre, register and text type has been discussed by several researchers. Lee (2001: 37–47) points out that the terms are not used consistently in linguistics and literary studies and argues that genre is preferably defined on the basis of external criteria such as audience, purpose and activity type, whereas text type is based on internal linguistic criteria. Lee also notes that genre and register are sometimes used interchangeably, although genre is more useful in corpus-based work because it refers to recognisable text categories associated with particular social purposes. Biel (2018: 152) similarly notes that genre evokes social context, whereas text types group texts at a higher level of abstraction. Reiss and Vermeer (1984: 156)

emphasise that text typologies help translators determine the appropriate hierarchy of equivalence levels, and Reiss (1989: 105), building on Bühler, distinguishes *Texttyp* according to communicative function and *Textsorte* according to both linguistic properties and convention. Nord (1997: 37–53) also discusses the relationship between text type and text variety, pointing out that translators need pragmatic guidance rather than conflicting theory and that the translation strategy should ensure correspondence to the text type in the target language community.

By systematising the selected sources, several major research directions in the study of language of science texts can be distinguished, among them research on macrostructure and microstructure. Kintsch and Van Dijk (1978: 365), followed by Van Dijk and Kintsch (1983), distinguish between microstructure and macrostructure in text research. Van Dijk (2012: 600) emphasises the importance of macrostructure for identifying global discourse topics and for explaining genre properties such as titles, abstracts and conclusions. Latvian researchers have also applied this distinction. Martinsone and Pipere (2018: 77), Dubova, Egle and Proveja (2020: 33), Ansberga and Dubova (2020: 235), Egle and Tomase (2020: 281) have all used the macrostructure/microstructure distinction in language of science research. The macrostructure of research articles in the social sciences, including the structure of articles in economics and business, has been analysed by Egle, Kopankina and Tomase (2021: 145–151). Laiveniece and Dubova (2021: 85) note that the IMRaD structure has been detected in research articles and argue that further research is needed on the macrostructure of texts from other disciplines, including management science dissertation summaries, as well as on the microstructure of scientific texts. They also point to the need for specialised corpora organised by period, branch and text type in order to determine the specific features of the mentioned texts in different disciplines.

1.4 Description of the texts and text selection criteria for the present study

The texts analysed in the present study are summaries of management science doctoral dissertations written and defended in Latvia and their translations into English and Latvian. In the Latvian academic tradition, the dissertation summary constitutes a separate document linked to the dissertation and written in the scientific style. It typically comprises 35–70 pages and reflects the structural conventions of doctoral dissertations.

The drafting of dissertation summaries in Latvia is regulated by legislative documents. According to the Regulation "Procedures and Criteria for the Awarding of a Doctoral Degree" (Cabinet of Ministers, 2005, No. 1001), the summary must be written in Latvian, and a translation into a foreign language must also be provided. The Law on the State Language stipulates that documents necessary for the award of a scientific degree are to be submitted in the official language or in a foreign language with a summary in Latvian (VVL, 2000). These provisions ensure multilingual dissemination of research results and preservation of the Latvian language of science.

In practice, Latvian doctoral students draft their summaries in Latvian and translate them into English, while foreign doctoral students draft summaries in English and translate them into Latvian. Translation, therefore, plays a central role in research dissemination. Given that in some countries dissertation summaries are integrated into the dissertation or written in popular-science style and are significantly shorter, the Latvian model represents a distinct academic tradition in which the summary functions as an autonomous secondary scientific text.

Dissertation summaries were selected for analysis because, unlike full dissertations, they are available in both Latvian and English, allowing for contrastive analysis of originals and translations.

The material of the present study comprises electronically published management science dissertation summaries defended in Latvia between 2013 and 2023. Texts were retrieved from official university and promotional council websites. The Latvian-to-English corpus includes summaries defended at RISEBA, University "Turība", Latvia University of Life Sciences and Technologies, BA School of Business and Finance, and Riga Technical University. The English-to-Latvian corpus includes programs involving international doctoral students, including the University of Latvia doctoral programme in management science and joint international doctoral initiatives. In total, 120 dissertation summaries were analysed. Four subcorpora were compiled: original English texts ($n = 30$) and their Latvian translations ($n = 30$), original Latvian texts ($n = 30$) and their English translations ($n = 30$). The size of the corpora was determined by the number of available defended dissertations within the research period. The corpora were anonymised and uploaded to the CLARIN-LV repository. Corpus size was calculated in word tokens in order to ensure comparability across languages and subcorpora. The English subcorpora comprise a total of 837 499 word tokens (388 955 word tokens in the texts written in English, and 448 544 word tokens translated into English), while the Latvian subcorpora contain 669 251 word tokens (346 527 word tokens in the texts written in Latvian, and 322 724 word tokens translated into Latvian), yielding an overall corpus size of 1 506 750 word tokens. Although raw frequencies were used as a primary indicator, comparisons across subcorpora of unequal size were interpreted cautiously and complemented by normalised values where necessary.

The study is corpus-based. Initial structural and linguistic features were identified manually. Subsequently, frequency and distribution patterns were analysed using *AntConc*. Quantitative findings were interpreted qualitatively in relation to genre conventions and contrastive features of English and Latvian academic writing. The corpora are balanced in terms of the number of parallel text pairs and represent the majority of management science dissertation summaries defended in Latvia during the selected period. Consequently, they provide a reliable basis for the macrostructural, microstructural and translation analysis conducted in the present dissertation.

2 Methods of research on management science doctoral dissertation summaries and their translations

This chapter provides an overview of the methods used in the study and the course of the study.

2.1 Contrastive analysis and research of the corpora of doctoral dissertation summaries and their translations

Contrastive analysis can be defined as a subfield of linguistics, related to the comparison of two or more languages to determine both the similarities and the differences between them (Fisiak, 1981: 1). In classical contrastive research, the term contrastive analysis is used by linguists to denote the comparison of languages, namely the third step of comparison: description, juxtaposition, and comparison (Krzeszowski 1990: 11).

A significant aspect related to contrastive analysis, namely, the concept of genre analysis, is singled out by Malmkjær (2018: 5), provided that "genre is a text or discourse type which is recognised by its characteristic formal, stylistic features and by the functions of texts belonging to the genre. Genre analysis identifies these distinctive features, known as generic conventions, and the social, communicative, cultural, cognitive, and ideological factors behind the use of genres". Malmkjær remarks that translation-oriented genre analysis focuses on identifying differences in generic structures, conventions and expectations across languages and cultures (ibid.). Łucja Biel (2018: 151), in turn, points out that conventions differ not only across genres but also within the same genre across languages and cultures as they are shaped by distinct discourse. Genres may be linguistically realised differently across cultures, and hence generic conventions are culture-specific. Differences may concern not only cohesive devices, conjunctions, routine formulaic phrases, and referencing patterns but also higher genre analysis levels, namely, the conceptual organisation of content and functional stages known as moves (Biel, 2018: 156). Therefore, contrastive analysis of the researched texts is particularly important in determining the differences between the representations in English and Latvian in the parallel corpora of management science doctoral dissertation summaries.

As reported by Laiveniece (2021: 85), several contrastive studies of Latvian with German and English devoted to the texts in the language of science have been carried out. Lele-Rozentāle (2016) analysed intertextuality in German and Latvian in research articles. The accompanying texts of scientific articles and conference papers in German and Latvian have been investigated, i.e., attention has been paid to the differences in the structure of their titles and text in both languages (Dubova, Leitāne, Lele-Rozentāle, 2009: 83–100). The common and distinctive features of theses and conference materials in Latvian and German have also been analysed (Leitāne, 2009).

In this dissertation, first, the unilateral method has been applied, analysing the grammatical and lexical units of the above-mentioned texts and their macro- and microstructures in English and Latvian; then the bilateral method, performing semasiological analysis and clarifying the results of the interlingual comparison, has been used. The unilateral method reflects the meaning of the grammatical or lexical phenomena of language A through language B and lists these meanings in language B (de Avezedo do Campo, 1998: 42–43). First, analysis of language phenomena is carried out in one language, followed by contrasting between the two languages, which clarifies the results of the interlingual comparison (de Avezedo do Campo, 1998: 42–43). The linguistic study of the use of the passive voice, impersonality, and structural elements of the texts has been carried out

by performing the contrastive analysis of the researched texts in English and Latvian.

2.2 Description of the research methods used in the dissertation

In the present dissertation, a mixed-method research design combining qualitative and quantitative approaches has been employed. The distinction between qualitative and quantitative methods in linguistic research is indicated by Dörnyei (2007: 30–42). In the present study, quantitative analysis has been used to establish frequency distributions and recurrent patterns in the compiled corpora, while qualitative analysis has been applied to interpret macrostructural and microstructural features, authorial stance, deixis, evaluative constructions, and translation problems such as false friends.

The study integrates corpus linguistics and contrastive analysis within a mixed-method framework. Corpus tools were employed both during the pilot phase and in the main stage of quantitative analysis. *AntConc* software was selected due to its accessibility, intuitive interface, and functionality (Anthony, 2005: 7). It also enabled precise comparison of parallel text segments, which was particularly important in cases where different published versions of summaries and their translations existed. The use of corpus tools ensured systematic processing of authentic data and facilitated the identification of recurring lexico-grammatical patterns.

Corpus linguistics in the present dissertation is understood as a methodological framework that treats form and meaning as inseparable and analyses texts as contextualised linguistic units (Teubert, 2001: 128). It is particularly suitable for examining patterns located at the interface of syntax and lexicon, such as collocations, multi-word units and formulaic expressions, which are highly characteristic of academic discourse and are of particular relevance for translation. The present study adopts a corpus-based rather than corpus-driven approach (Tognini-Bonelli, 2001: 84–85), as the compiled corpora are used to test, refine and substantiate theoretically grounded assumptions concerning macrostructure, stance, terminology and translation strategies.

The corpora designed for the study are bidirectional parallel corpora consisting of original Latvian dissertation summaries and their English translations, as well as original English summaries and their Latvian translations. The material encompasses management science dissertation summaries defended between 2013 and 2023, and retrieved from official sources.

The design of the corpora corresponds to the typology of multilingual corpora described by Altenberg and Granger (2002: 8), particularly aligned translation corpora, where corresponding textual units in source and target texts are linked.

Prior to the main study, a pilot corpus consisting of twenty dissertation summaries was compiled in order to identify recurring macrostructural patterns and typical wording, especially in the introductory sections. Since the introduction establishes the research space and presents the rationale of the study (Swales, 1990: 141), it was considered methodologically justified to begin the analysis with this section. Following the pilot phase, the macrostructure of the summaries was analysed across the full dissertation texts and compared with the requirements expressed in normative documents and institutional guidelines, as well as with established structural models such as the C.A.R.S. model and IMRaD-type frameworks. This comparison made it possible to determine the degree of conformity to and deviation from expected academic conventions.

Terminological analysis was conducted through frequency lists, keyword analysis and concordance searches. Particular attention was paid to the frequency and distribution of management science terms, their translation equivalents, and the stability of terminology across corpora. Cases of false friends and competing variants were identified and analysed contrastively in

order to determine the adequacy of translation choices and their consistency.

Grammatical phenomena analysed in the dissertation include the use of passive constructions and impersonality in relation to authorial stance, modal verbs as markers of hedging and boosting, emphatic constructions, and tense usage across macrostructural sections. Hyland's (2005) model of stance markers served as the analytical framework for investigating hedges and boosters. The descriptive method was used to contextualise selected examples, which were subsequently verified across the corpora to determine their representativeness.

During the design phase of the research, existing corpora devoted to academic and scientific language were examined. However, none contained bilingual management science dissertation summaries in Latvian and English. Consequently, the compilation of a specialised, domain-specific parallel corpus was necessary in order to address the identified research gap.

In sum, the present dissertation is not limited to corpus-based research but combines contrastive linguistics, genre analysis and discourse analysis within a mixed-method research framework. Corpus tools serve as an empirical instrument for verifying and quantifying recurrent patterns detected through theoretical and qualitative analysis, rather than constituting the sole methodological foundation of the study. The research design integrates macrostructural analysis of management science dissertation summaries, microstructural linguistic examination, semasiological investigation of terminology and false friends, and contrastive evaluation of translation strategies. The compiled bidirectional parallel corpora function as an analytical resource that supports and substantiates theoretically grounded observations. Thus, the study may be characterised as contrastive and genre-oriented research with corpus-based empirical validation.

3 Macrostructure of the management science doctoral dissertation summaries

The macrostructure of a text is defined as a conventionalised compositional plan formed by its structural elements (Gläser, 1990: 55). In doctoral dissertation summaries, macrostructure reflects disciplinary conventions, institutional regulation, and communicative purpose. As secondary scientific texts, dissertation summaries condense and represent primary research. Although dissertation summaries reflect the organisation of the dissertations they present, the two texts are not structurally identical. The dissertation functions as a primary research document, whereas the summary fulfils an informative and representative function.

3.1 Research on the macrostructure of secondary scientific texts and their individual elements

In the present dissertation, models such as IMRaD, AIMaC (AIMRaD), and C.A.R.S. were reviewed to establish a theoretically grounded analytical framework for the macrostructural analysis of management science dissertation summaries. Since the structure of a summary depends on the type of dissertation it represents, classifications of dissertation types were examined first.

Paltridge (2002: 130) distinguishes four principal models of doctoral thesis organisation: traditional simple, traditional complex, topic-based, and research-article compilation. Paltridge emphasises that thesis structures may vary across disciplines and contexts (2002: 134).

Within the corpus of management science doctoral dissertation summaries in Latvia, only one structural type was identified, corresponding to the traditional simple model based on IMRaD. No topic-based or article-compilation structures were found. All analysed summaries consistently contain an introduction, a presentation of materials and methods, results, discussion accompanied by proposals or suggestions, conclusions, and a literature review or bibliography. The recurrence and sequencing of these components indicate that macrostructural variation is negligible within the corpus.

Schmied's revised AIMaC model (2014: 32) is analytically relevant because it links macrostructural organisation with observable linguistic markers. The empirical findings of the present study indicate that the analysed dissertation summaries conform to an institutionally prescribed structure incorporating relevant AIMaC elements.

The move-based C.A.R.S. model further contributes to an understanding of academic text organisation. Originally developed for research article introductions, it identifies three principal moves: establishing a territory, establishing a niche, and occupying the niche (Swales, 1990: 141). Paltridge (2007: 83), drawing on Swales and Feak (1994: 175) and Bunton (2002: 67), outlines typical moves in thesis introductions. The introductory sections of the analysed dissertation summaries correspond closely to these move structures, particularly with regard to establishing research relevance, identifying a gap, and articulating research aims. The present findings indicate that the overall macrostructure of dissertation summaries is primarily determined by institutional regulation.

In conclusion, although theoretical models allow for structural diversity in doctoral dissertations, the corpus-based analysis demonstrates that the management science doctoral dissertation summaries examined in the present study exhibit a single, traditional IMRaD-based macrostructural format. This uniformity indicates a high degree of standardisation of

dissertation summaries within the Latvian academic context and provides a stable macrostructural foundation for the subsequent microstructural and contrastive analyses.

3.2 Requirements of the regulatory documents for the macrostructure of doctoral dissertation summaries

In Latvia, the possible types of dissertation structures are stipulated by Regulation of the Cabinet of Ministers No. 1001 "On the Procedure and Criteria for the Awarding (Promotion) of a Doctoral Degree" (LV, 210 (3368), 30 December 2005) (in force as of 31 December 2005), stipulating the following structure: dissertation (Article 3.1); a thematically unified set of academic publications. Publications shall be submitted to or accepted for publication in scientific periodicals that are peer-reviewed anonymously, are internationally available in scientific repositories, and are cited in internationally available databases (Article 3.2); monograph – a peer-reviewed scientific book devoted to one topic, internationally available in scientific information repositories, containing a bibliography and a summary in a foreign language (Article 3.3); regulations of higher education institutions and faculties (study programs) also determine the procedures for the writing and defence of doctoral dissertations, including the requirements for the structure of dissertations and dissertation summaries. Further, the guidelines of the higher education institutions, faculties, and departments that are represented by defended dissertation summaries included in the research corpora of the present study are analysed.

Based on the normative requirements, the following elements of the macrostructure have been identified in the summaries of doctoral theses: *abstract; table of contents; introduction, listing topicality and novelty of the research; objectives and tasks of the doctoral dissertation; hypothesis or theses for defence; brief description of the methods used in the dissertation; a brief theoretical justification of the research; main results; discussion and interpretation, limitations of the research; main conclusions and proposals; summary of scientific literature sources*; at the discretion of the doctoral student – *words of gratitude* to individuals and organisations that have contributed to the creation of the work.

3.3 Sector-specific structural elements of dissertation summaries for social sciences

In the present study, first a small pilot study of the macrostructure elements identified in the introductory parts of dissertation summaries and their translations was carried out. Sector-specific structural elements for social sciences according to the Frascati Manual (FOS, 2015) were compared with those prescribed in legislative and normative documents, including university and faculty guidelines regulating dissertation summaries across disciplines. The comparison demonstrates a substantial degree of structural correspondence between the ZIVS project findings and the requirements formulated in normative documents. Core macrostructural components, such as topicality, aim, tasks, research methods, object and subject of research, hypothesis, novelty, practical significance, and structure of the work are consistently represented in both types of sources. This confirms that the sector-specific structural elements identified by the ZIVS project are aligned with nationally regulated academic practice (Dubova & Proveja, 2018: 47).

At the same time, differences primarily at the level of lexical realisation rather than structural presence have been revealed as well. In English, normative documents frequently employ multiple synonymous formulations (e.g., *aim, purpose, objective, goal*), whereas

Latvian formulations display greater terminological consolidation (e.g., *mērķis; nolūks; uzdevumi*).

Furthermore, the sector-specific elements identified in the ZIVS project are compared to those detected in the present study. This comparison demonstrates an even closer correspondence. In addition to the elements already identified in the ZIVS project, the present study confirms the consistent presence of proposed scientific theses for defence, main research results, and approbation of research results. These elements are systematically realised in both English and Latvian management science doctoral dissertation summaries and their translations, and constitute stable macrostructure components.

Certain elements, such as *research limitations* and *research questions*, are present in both the ZIVS project framework and in the present corpus, although their explicit formulations vary. Notably, elements such as *empirical data* and *sources*, while clearly identifiable in the Latvian corpus, are not always explicitly labelled in English texts, which again reflects differences in terminological conventions rather than structural absence.

Overall, the comparative analysis demonstrates that the macrostructural organisation of management science doctoral dissertation summaries closely corresponds to sector-specific structural elements identified for social sciences and to nationally regulated academic guidelines. Variation occurs primarily at the level of lexical and terminological realisation.

This finding further reinforces the central conclusion of the macrostructural analysis: within the analysed corpus, dissertation summaries exhibit a single, institutionally standardised macrostructural format. The structural elements are stable and predictable, while linguistic variation operates within this fixed framework. Such standardisation provides a consistent structural foundation for subsequent contrastive microstructural analysis.

3.4 Sector-specific wording and elements for management science

To confirm the findings mentioned above, in the present study the sector-specific wording present in management science dissertation summaries has been researched.

The analysis first focused on summaries written in English and translated into Latvian. The obtained data demonstrate that research dissemination elements are systematically foregrounded: with one exception, publications and conference participation are singled out under separate headings, typically formulated as *approbation of research results/pētījuma rezultātu aprobācija*. Recommendations, proposals, and conclusions may appear either as a separate chapter or as a subchapter. *Reliability and validity* (*ticamība un derīgums*) are described in the English source texts but are not consistently singled out as independent titles. Finally, the summaries use explicitly summarising headings (e.g., *summary of chapter one/pirmās nodaļas kopsavilkums*), which reflects the secondary status of the summary genre and metatextual orientation toward the title structure of the dissertations.

The analysis confirms that all summaries contain introductory parts, although the macrostructural elements may either be listed within the introduction or distributed under headings such as *general review/general characteristics of the work/consecutive description of the work*. All analysed summaries contain an introduction, materials and methods, results, discussion with proposals, conclusions, and a literature review or bibliography. The recurrence and sequencing of these components indicate negligible macrostructural variation within the corpus.

Overall, the corpus evidence indicates a uniform macrostructure with minor deviations in wording. The structure does not fully coincide with Swales's IMRaD template because the

dissertation summary is a separate institutional document with a distinct communicative purpose, namely, to provide a structured overview of the dissertation rather than to reproduce the dissertation's full argumentative progression. Another observation concerns the placement of research *limitations*: while Schmied includes *limitations* within the conclusion stage of AIMaC (Schmied, 2015: 6), the Latvian academic tradition, as evidenced by the management science corpus, tends to present limitations in the introductory section of the summary.

Research confirms that summaries written in Latvian and their English translations largely preserve the same core macrostructural components as the EN–LV material, yet they show a somewhat broader range of ordering and labelling strategies. In particular, paratextual practices and institutional conventions influence the placement and naming of elements. False friends of a translator, in turn, have been identified even in institutional guidelines. In two cases (Turība University), the term *Synopsis* was used in the English translation for *kopsavilkums*, a choice that is potentially consequential for translation quality assessment and therefore is addressed further in the chapter on undesirable translations. In addition, acknowledgements function as an optional component but occur with high frequency: only one English summary lacked acknowledgements and used *Afterword* instead, while Latvian summaries included *acknowledgements* in 15 cases (approximately half of the texts), with one instance of *acknowledgement* occurring in the singular.

The findings of the study corpus suggest that a scientific glossary may be a useful optional component in management science dissertation summaries, given the sectoral breadth of the discipline and the potential for conceptual differences across cultures. A glossary was detected in four Latvian summaries and two English summaries. University-specific conventions were also identified: in summaries from the Latvia University of Life Sciences and Technologies (Faculty of Economics and Social Development), a short subchapter titled *information about research papers and scientific work* is placed above the introduction, whereas dissertations defended at Riga Technical University include a concise author biography and academic achievements on the back of the last cover page.

The corpus also makes it possible to identify more appropriate wording choices that may be recommended in practice. For example, the Latvian phrase *pētījuma loģika* provides a precise functional description of *research design* and occurs repeatedly in the Latvian source texts, whereas the loanword *dizains* may have broader semantic associations.

A further recurrent feature in management science doctoral dissertation summaries concerns the presentation of research models. Model descriptions are typically not isolated as independent chapters but integrated into subchapters with headings that combine model development, methodology, variables, hypotheses, data collection, and limitations of application.

Finally, the corpus confirms that more than one hypothesis is commonly stated in management science dissertation summaries. This practice is consistent with the logic of hypothesis testing, where null and alternative hypotheses are formulated and supported by subordinate hypotheses. In the Latvian texts, up to four sub-hypotheses were detected, while the English summaries contained up to eight sub-hypotheses. Hypotheses are typically presented as confirmed or rejected based on calculations, most frequently using the English wording *can be confirmed* and *cannot be confirmed*, and corresponding Latvian formulations such as *ir apstiprināta*, *tiek apstiprināta*, *tika apstiprināta*, *neapstiprinājās*, and *nevar apstiprināt*.

In summary, the results obtained in the present study provide a detailed overview of the macrostructure and wording used in management science dissertation summaries. The findings confirm that the macrostructure of management science doctoral dissertation summaries in the analysed corpora is institutionally stabilised and largely uniform, despite the theoretical plurality of dissertation models described in the literature. Although the IMRaD framework provides a useful reference point, the dissertation summary functions as a secondary academic document with a distinct communicative purpose and therefore incorporates additional sections such as *general information about the work*, structural overviews, and consecutive descriptions of the dissertation. The analysis confirms that theoretical positioning, research models, hypotheses, and empirical validation are consistently represented, while variation occurs primarily in the wording and labelling of macrostructural elements rather than in their presence.

4 Microstructure of management science doctoral dissertation summaries

Dissertation writers do not merely present findings but actively guide readers through the research process (Swales, 1990: 188). In this respect, microstructure plays a central role in shaping academic discourse.

4.1 Research on the microstructure of primary and secondary scientific texts and their individual elements

Microstructure is frequently discussed under the broader concept of metadiscourse, understood as the set of linguistic constructions through which authors signal textual organisation and guide reader interpretation (Breitkopf & Vassileva, 2007: 215). Swales and Feak (1994: 203) outline structural principles relevant to summaries; detailed microstructural analysis of dissertation summaries remains limited. The present study therefore systematises microstructural elements in management science dissertation summaries, drawing on genre theory and interactional models of academic writing.

A central analytical framework is Hyland's model of academic interaction. Hyland (2009: 74) defines stance as the writer's textual voice and engagement as the rhetorical recognition of readers as discourse participants. Academic texts are not purely informational but evaluative and interpersonal (Hyland & Tse, 2005: 39). Disciplinary variation is particularly relevant in this respect. Hyland and Bondi (2006: 29–32) distinguish between "hard" and "soft" disciplines, noting that soft disciplines, including social sciences, display more overt stance markers and self-mention than engineering and natural sciences. Management science, situated within the social sciences, therefore exhibits a higher frequency of evaluative and stance-related devices. Hyland and Jiang (2016: 268) observe that while natural sciences often minimise authorial presence to foreground objectivity, social sciences allow more explicit positioning and evaluative intervention.

One salient microstructural feature examined in the present study is the evaluative *that*-construction. Hyland and Tse (2005a: 40) describe it as a structure that thematises attitudinal meaning by embedding evaluation in a superordinate clause (e.g., *it is evident that…*). Hyland and Bondi (2006: 30) note its importance in expressing evaluation and disciplinary stance. In the corpora analysed in the present study, evaluative *that*-constructions occur in 100 % of the English texts, indicating their functional centrality in management science dissertation summaries.

Closely related to stance are hedges and boosters (Hyland 2009: 75). Hedges signal caution and limit commitment, whereas boosters express certainty and reinforce authorial conviction. In Latvian academic writing, modality has been analysed as the primary linguistic resource for expressing certainty and uncertainty (Laiveniece, 2021: 174–183). The present study examines how epistemic modality operates within evaluative constructions in both English and Latvian summaries and their translations.

In addition to stance-related features, microstructural organisation includes endophoric markers, i.e., references within the text guiding readers through retrospective and prospective relations (Taboada, 2004: 158). The present analysis focuses on such markers, including deixis, thematic transitions, references to examples, technical cross-references (e.g., to tables and

figures), and formulaic conclusion signals. The classification of these elements corresponds to the systematisation proposed by Laiveniece and Dubova (2021: 81–82), whose findings align with those obtained in the present corpora. Specifically, the microstructural elements examined in this chapter include deixis and endophoric markers, authorial stance and engagement, first- and third-person pronoun usage, evaluative *that*-constructions, passive voice constructions, epistemic modality (certainty–uncertainty), discipline-specific terminology, and translation-sensitive elements, including false friends (analysed in detail in Chapter 5).

Taken together, these elements constitute the microstructural framework through which management science dissertation summaries achieve cohesion, coherence, and disciplinary positioning. The following sections analyse these features in detail, comparing English and Latvian texts and their translations in order to identify systematic tendencies and contrastive patterns.

4.2 The use of deixis in the management science doctoral dissertation summaries and their translations

Deictic constructions, commonly referred to as deixis, play a central role in structuring scientific discourse by linking linguistic expressions to the context of utterance. Originally introduced by Peirce (1932) and further elaborated by Bühler (1990: 97–166), deixis concerns linguistic forms whose interpretation depends on the speech situation, including the speaker, the addressee, time, and space. Cruse (2000: 319–324) and Levinson (2008: 54–94) identify five principal types of deixis: person, spatial, temporal, social, and discourse deixis. While the publications of the above-mentioned authors primarily describe general language, the present study examines how these categories function within the specific context of management science doctoral dissertation summaries.

In scientific discourse, deixis does not refer to physical space but to an abstract communicative space shared by author and reader. Following Langacker (2002), this psychological space enables interaction between writer and audience through spatial and temporal anchoring. In dissertation summaries, deictic expressions facilitate textual navigation, clarify argumentative structure, and create cohesion by connecting propositions across the text. The corpus analysis demonstrates that spatial deixis is predominantly realised through demonstrative pronouns and deictic adverbs. In English-language summaries, the most frequent expressions constructing psychological proximity are *this research* ($n = 212$), *this dissertation* ($n = 181$), *this study* ($n = 113$), *this thesis* ($n = 95$), *this means* ($n = 67$), *in this context* ($n = 53$), *this work* ($n = 50$), and *this result* ($n = 22$). Comparable patterns occur in Latvian summaries, where *šis pētījums* ($n = 127$), *šī disertācija* ($n = 37$), *tas nozīmē* ($n = 33$), and *šajā gadījumā* ($n = 27$) dominate. Synonymy is limited, particularly in Latvian texts.

The distribution confirms a clear functional distinction: in Latvian academic discourse, demonstratives *šis* and *šī* typically refer to the author's own research, whereas *tas* and *tā* more frequently refer to external studies. In Latvian original texts, demonstratives *šis*/*šī*/*šāds* occur 885 times, rising to 1001 instances in translations from English. In contrast, *tas*/*tā*/*tāds* occur only 35 times in originals and 38 times in translations. The marked prevalence of proximal demonstratives reflects authorial positioning and signals ownership of research findings.

Discourse deixis is also prominent. The demonstrative *this* frequently refers to preceding discourse segments, reinforcing argumentation and emphasising conclusions. Connective

adverbs such as *furthermore* (n = 171 in English originals; n = 99 in translations), *moreover*, and *therefore* (n = 396 in English originals; n = 397 in translations) serve both cohesive and deictic functions by linking propositions and signalling logical progression. The Latvian equivalent *turklāt* corresponds to both *furthermore* and *moreover*, indicating functional overlap. The adverb *therefore*, translated as *tādēļ*, shows almost identical frequency in originals and translations, suggesting high structural stability.

The adverb hereby appears rarely (n = 13 in English originals). Its translation strategies include omission, paraphrasing (e.g., *šādi*), or substitution with *šeit*. The absence of a direct equivalent in Latvian explains its limited presence in translations to English.

The adverb *here* (*šeit*) also displays distinct functional categories. In English originals (n = 51), its use can be classified into three main functions: reference to the author's own research (n = 31), facilitation of interpretative guidance (n = 16), and reference to studies, facts, or technologies (n = 4). In Latvian originals, *šeit* occurs relatively infrequently (n = 16) and sometimes refers to Latvia as physical territory (n = 4). In most cases, however, it functions textually, marking methodological procedures or interpretative emphasis. The relatively limited use of *tur* (*there*) in Latvian texts (n = 13 in translations) suggests stylistic constraints and avoidance of constructions perceived as awkward.

The expletive *there (there is/there are*) occurs 485 times in Latvian-to-English translations. Although formally non-deictic, the construction retains residual spatial anchoring and contributes to textual structuring. Its frequent use reflects English syntactic preferences rather than functional equivalence in Latvian.

Temporal deixis, expressed through retrospective and prospective phrases, constitutes another key dimension. Retrospective markers such as *previously* and *previous* direct the reader to earlier analytical or descriptive actions. In English originals, phrases with *previous* (n = 161) significantly outnumber those with *previously* (n = 46), while in translations from Latvian the ratio is as follows: *previous* (n = 81), *previously* (n = 37). These forms typically accompany the past participles *analysed*, *calculated*, *observed* and *described*, *discussed*, *indicated*, reinforcing logical continuity.

Retrospective reference is also realised through constructions *as already mentioned*/*kā jau minēts*, which may occur without explicit adverbial markers. Prospective phrases with *below*, *further*/*turpmāk*, and *tālāk* signal forthcoming analytical or descriptive actions. These expressions predominantly introduce analytical processes (*analyse, calculate, view*) and textual progression (in the following section). The systematic use of such markers confirms their role in structuring micro-themes and guiding reader expectations.

Social deixis, in contrast, is marginal. The Latvian polite pronoun *jūs* appears only four times in two summaries, indicating limited direct audience address. In isolated instances, it reflects ethical positioning rather than dialogic interaction.

In general, deixis in management science doctoral dissertation summaries serves primarily textual and interactional functions rather than spatial reference.

4.3 Authorial stance in management science doctoral dissertation summaries in English and Latvian

It should be noted that in Latvian spoken scientific communication, such as in a report or presentation, a first-person reference to oneself is regarded as acceptable, whereas in the Latvian

tradition of academic writing, the audience would expect a more impersonal approach (Egle, Viļums, 2021: 187).

There is a marked difference in the perceptions of how the authorial presence should be expressed in different academic writing traditions. In some traditions of scientific writing, e.g., the Anglo-Saxon tradition, impersonality might be interpreted even as unwillingness to take responsibility (Bakhtin, 1986: 60–102).

4.3.1 The use of the first and the third person in Latvian and English

In the Latvian academic writing tradition, first-person authorial self-reference is generally discouraged. Laiveniece (2021: 187) remarks that impersonality is regarded as one of the generally accepted norms of good scientific writing in Latvian, which is interpreted as the willingness of the authors to achieve more objectivity.

In the original dissertation summary texts written in Latvian, the inclusive *mēs/we* has been detected relatively infrequently (n = 13). In contrast, the inclusive *we* has been used in 77% of the original summary texts written in English (n = 23 of 30). In the Latvian translations of the English original texts, the inclusive *we/mēs* has been retained in 47% of the texts (n = 14 of 30).

In the texts of management science dissertation summaries translated into Latvian, impersonality is also obtained by using participial constructions or by omitting the personal pronoun *we* and using the present simple in declarative statements instead.

In the dissertation summary texts, alongside personal pronouns, possessive determiners, such as *our,* also serve as markers of authorial stance. In the majority of cases, the self-mentions by the authors with *I/es*, *my*/*mans*, *mana,* etc., have been found in the summary chapters *Words of Gratitude, Acknowledgements* and *Afterword*.

The use of the possessive determiner *our* has been discovered relatively rarely in the summary texts: in English translations from Latvian (*n* = 13) and in texts originally written in English (*n* = 20).

Table 1

The references of the author to himself/herself in the first-person LV–ENG

Latvian	English
Lai sasniegtu pētījuma mērķi, **autore** izvirzīja pētījuma jautājumu…	To attain the aim of the study, **I** have asked the following research question…
…darba **autore** atklāj nepilnības pašreizējās zināšanās par mācību izvērtējumu uzņēmumos…	…**I** have identified a gap in current knowledge on training evaluation in enterprises…
…pētījumā **atklātie** mācību izvērtējuma kritēriji…	…evaluation criteria **I** have identified in my study…
Autore ieviesusi jaunus terminus…klasifikācijā…	**I** have also proposed new terms of classification of…
Pētījuma nobeigumā **autore** izveidojusi pirmo mācību izvērtējuma modeli…	Finally, **I** have developed a training evaluation model…
Par pētījuma tēmu un rezultātiem autore publicējusi 8 (astoņus) rakstus…	**I** have published 8 (eight) articles about the topic of the study and its results…
Darba **autore** iesaka… aktivitātes, kas veicamas… izvērtējumā…	**I** recommend activities describing…

Given the exceedingly small number of cases when the first-person references es/I, mans/my, and mani/me have been used in the analysed management science summary texts written in Latvian and English, as well as in their translations, it can be concluded that the use of these first-person references may be seen as exceptions rather than the rule.

The two sections of the management science dissertation summaries in which passive voice has been encountered with significant frequency are *Materials and Methods* and *Results and Discussion*. The passive voice is also frequently used when referring to tables, figures, and graphs.

The present study made it possible to obtain an overview of the use of the first-person/third-person perspective, the passive voice, impersonal constructions with the lexeme author(s) and impersonal constructions with passive voice in management science doctoral dissertation summaries in English and Latvian, which might serve as a reference for doctoral students and translators.

4.3.2 The use of the evaluative *that* in the expression of the authorial stance

The description of stance in management science dissertation summaries would not be complete without examining the use of evaluative *that*-constructions, particularly in relation to epistemic modality.

The authorial stance framework in the present dissertation is based on Hyland and Bondi (2006) and Hyland and Tse (2005). Hyland and Tse (2005: 39) note that evaluative *that*-constructions have been relatively overlooked as interpersonal features; however, they allow writers to thematise attitudinal meaning by embedding a complement clause within a superordinate clause.

Matrix clause [evaluation] + that-clause [evaluated entity]

In their study of 240 research article abstracts, Hyland and Tse found that evaluative *that*-constructions occur approximately once every five sentences and constitute an important means of providing authorial comment and evaluation. Evaluative *that* therefore enables writers to manage discourse and signal stance clearly (Hyland and Tse, 2005a: 39).

Typical matrix clauses contain verbs and expressions such as *is important*, *indicates*, *shows*, *confirms*, while the subordinate clause specifies the evaluated proposition.

In the management science dissertation summaries analysed in the present study, evaluative *that*-constructions are used for evaluation of the authors' own findings, evaluation of previous research, and evaluation of methods, models, or theories.

In summaries translated from Latvian into English, the mentioned construction has been used in 1271 cases, while in summaries originally written in English, 1311 instances of use have been found. In Latvian, these constructions are realised through the subordinating conjunction *ka, the* verb *var,* and passive constructions.

In the context of the mentioned constructions, epistemic modality and modal verbs have been analysed. Modal verbs can function as hedges and boosters.

Strong certainty is expressed by *must, shall, need to,* and *cannot,* while tentative stance may be expressed by the following modal verbs: *can, could, may, might, should*, and *would*, as well as the linking verb *seem.* In the summaries in Latvian, the following constructions have been found: *var*

+ *infinitive* + *ka…; varētu* + *infinitive* + *ka…;* debitive constructions (*jā-* forms);

impersonal predicates (*ir acīmredzams, ka…*), such as: *it might be assumed that…/varētu pieņemt, ka…, it must be admitted that… /ir jāatzīst, ka…; it would be necessary…/būtu nepieciešams …; it seems obvious that… /ir acīmredzams, ka…*

It has been established that, in several cases, Latvian translations express stronger epistemic commitment than the original English summary texts.

Given the findings of the present study, evaluative *that*-constructions can be perceived as one of the most central mechanisms for expressing authorial stance in management science dissertation summaries in both English and Latvian. They allow writers to express evaluation, report findings, signal certainty or tentativeness, maintain impersonality, and structure conclusions. Here the translator's responsibility is crucial: the epistemic strength of the original must be preserved. Strengthening or weakening stance through modal shifts may alter the authorial positioning intended in the source text.

4.4 Specialised lexis and terms in the doctoral dissertation summaries

Given the thematic breadth of management science dissertations – from art to AI, from family enterprises to transport industries, and from gender equality to hospitality – translation practice frequently requires coordination of the proposed terms with domain experts, the relevant faculty, and the doctoral student. In such contexts, terminological choice cannot be reduced to dictionary equivalence alone, because the same lexical item may be embedded in different conceptual systems, institutional traditions, and discourse conventions.

What unifies the examined summaries across themes is the systematic presence of statistical terminology. The present dissertation therefore treats terms related to models, regressions, tests, tables, graphs, correlations, and weights as a shared terminological layer of management science discourse. This aligns with the understanding that management science develops and applies models and concepts to illuminate managerial issues and solve managerial problems, using mathematical, computational, visual or descriptive representations (LUM-e, 2023).

In functional terms, the specialised lexis and terminology of management science doctoral dissertation summaries can be grouped into three broad categories. First, the texts contain statistical terminology, including terms of descriptive statistics (e.g., *mean/vidējā vērtība; median/mediāna; mode/moda; standard deviation/standartnovirze*), hypothesis testing and inference (e.g., *hypothesis testing/hipotēžu pārbaude; p-value/p-vērtība; t-test/t-tests; chi-square test/hī kvadrāta tests; confidence interval/ticamības intervāls*), regression and correlation (e.g., *regression/regresija; linear regression/lineārā regresija; multiple regression/daudzfaktoru regresija; correlation/korelācija*; *Pearson correlation/Pīrsona korelācija*), time series and forecasting (e.g., *time series/laika rindas; seasonal adjustment/sezonālā izlīdzināšana; forecasting/prognozēšana*), sampling and survey methodology (e.g., *sample/izlase; population/kopa; survey/aptauja; questionnaire/anketa; response rate/atbilžu biežums*), and model validation (e.g*., model fit/modeļa atbilstība; goodness of fit/atbilstības pakāpe; model validation/modeļa validācija*). Second, the summaries contain sector-specific terms, where translation requires particular sensitivity to context and the conceptual traditions of the respective discourse communities. Third, the mentioned texts contain general management-science terminology (organisational and business terms, financial management, HR management, strategic management, innovation and entrepreneurship, risk and crisis management, digital and technological management, leadership and governance).

Because dissertation themes are highly varied, a direct comparison of overall terminological density across the corpus is not methodologically meaningful; instead, the most frequent management-science terms (based on the AntConc Wordlist) have been identified and documented.

The creation of missing terms becomes particularly topical in contexts involving culturally specific vocabulary and rapidly evolving technological domains. In such cases, translators should first verify whether a Latvian equivalent already exists in specialised dictionaries and term bases. Some loanwords are already becoming obsolete. For instance, the borrowing *menedžments* is rare in the dissertation summaries, yet occurs in two Latvian texts: once in the phrase *vispārējais kvalitātes menedžments* despite the availability of *vadība* and *pārvaldība*, and once as a citation from the term resource Termini.gov.lv (version published in 2021, still current). This suggests that certain borrowings may persist in administrative and popular-science texts even if academic usage tends to prefer native equivalents.

Speaking of the mentioned webpage, it lists *jauninājums, jaunievedums, jaunrade,* and *novitāte* as translations for the English word *innovation*. Of the mentioned native equivalents, only *jauninājums* has been detected in two summaries written in Latvian in the research corpora; the Latvian term *jaunrade* has not been detected at all. In the majority of cases, the borrowed term *inovācija* has been used. Here, the two terms in Latvian, *novitāte/novelty* and *inovācija, jauninājums/innovation,* have to be analysed separately. While *novelty/novitāte* in the MS dissertation summaries is part of the dissertation macrostructure, usually listed in the introduction of both dissertations and their summary texts, *inovācija, jauninājums/innovation* is a management science term.

Another example of the above-mentioned differences in the use of terms concerns the adjective *organisational*. In English it forms numerous collocations, such as *organisational culture*. In the Latvian corpus, the mentioned term is predominantly translated as *organizāciju/organizācijas*. Termini.gov.lv offers *organizatorisks* in certain administrative collocations, such as *organisational arrangement*, yet the corpus shows limited academic uptake: *organizatorisks atbalsts* and *organizatorisks modelis* have been encountered only once each. Given this infrequency, the corpus evidence supports the preference for *organizāciju/organizācijas* in management science dissertation summaries.

A further term-specific pattern can be observed in translations of *performance* (e.g., organisational performance). Termini.gov.lv proposes *sniegums* and, in some contexts, *veikums*. In the researched Latvian summaries, *sniegums* occurs widely in collocations such as *mārketinga sniegums, uzņēmējdarbības sniegums, korporatīvais sniegums,* and *inovāciju sniegums*. By comparison, *veikums* is attested only once in the Latvian originals and is absent from the Latvian translations, whereas *sniegums* occurs 45 times in the Latvian originals and 95 times in the translations into Latvian.

Finally, rapid technological development often generates terminological gaps and asymmetries, increasing the need for translation even where Latvian equivalents are not yet stabilised. The corpus contains cases where IT borrowings remain untranslated (e.g., *Scrum, Kanban*), and cases of partial adaptation (e.g., *agile methodologies* rendered as *agile darba metodes*). Termini.gov.lv provides Latvian proposals for some *agile* collocations (e.g., *spējā testēšana*), yet the adjective *spējš* does not fit all contexts in which *agile* is used. Such examples illustrate the practical constraints of terminological standardisation and the need for context-sensitive selection.

As demonstrated in Chapter 4, the microstructure of management science dissertation summaries in English and Latvian is shaped by systematic choices concerning authorial stance, deixis, evaluative constructions, and specialised terminology, all of which directly affect both reader perception and translation strategies. The findings reveal a strong preference for impersonal expression in Latvian academic writing, with first-person pronouns used only exceptionally and largely confined to paratextual sections, while nominal phrases containing *author(s)* constitute the dominant strategy of self-reference in both languages. The passive voice and impersonal constructions function as key mechanisms for foregrounding research procedures and results, particularly in sections describing methods, processes, and visual data. Deictic elements – especially demonstratives such as *this/šis* and structured retrospective and prospective markers – play an essential role in organising discourse and guiding interpretation, whereas social deixis is virtually absent. Evaluative *that*-constructions with impersonal *it*, frequently combined with modal verbs expressing varying degrees of certainty, emerge as a central device for articulating epistemic stance while maintaining objectivity. Finally, the analysis of specialised lexis confirms the predominance of statistical terminology, highlights the dynamic development of management science terminology in Latvian, and underscores the importance of corpus validation and terminological standardisation for translation practice. Taken together, these results provide a coherent account of the linguistic mechanisms underlying microstructural organisation in management science dissertation summary texts.

5 Problems and undesirable translations detected in management science doctoral dissertation summaries

5.1 False friends in management science doctoral dissertation summaries in English and Latvian

The present section outlines the results of the contrastive analysis of semantic false friends detected in management science doctoral dissertation summaries in English and Latvian, including original texts, translations, and institutional guidelines.

Although false friends have been widely examined in contrastive linguistics and translation studies (Koessler & Derocquigny, 1928; Nerlich & Chamizo-Domínguez, 2002; Chamizo-Domínguez, 2008), research focusing specifically on English–Latvian false friends in the language of science remains limited (Baldunčiks, 1989, 2005; Veisbergs, 1996, 1998; Žīgure, 2008). In translation theory, the concept of equivalence (Catford, 1965; Nida, 1964; Newmark, 1988, 2007) provides the broader framework for evaluating semantic accuracy in academic discourse.

In Latvian scholarship, Veisbergs (1996, 1998) defines false friends as formally similar lexeme pairs with divergent meanings, often etymologically related, while Baldunčiks (2005) distinguishes between full and partial false friends. Building on these approaches, the present study adopts the classification of interlingual semantic relationships proposed by Schatte (1990) and Lipczuk (1991). This model enables systematic comparison of semantic structures and identification of real and potential false friends.

Based on the Schatte–Lipczuk model, the following types of semantic relationships were identified in the analysed corpus.

1. Privativity (Ger. *Privativität*). Privativity occurs when lexemes share certain sememes, but one language exhibits additional semantic components. This type reflects partial overlap combined with semantic extension or narrowing.

2. Inclusion (Ger. *Inklusion*). Inclusion is present when the meaning of one lexeme is semantically broader and encompasses the meaning of its counterpart in the other language.

3. Equipollence (Ger. *Äquipollenz*). Equipollence denotes partial semantic overlap, where both lexemes share common sememes but each also possesses meanings absent in the other.

4. Contrasting (Ger. *Kontrarität*). Contrasting occurs when lexemes share certain semantic elements but differ due to oppositional or divergent connotations.

5. Exclusion (Ger. *Exklusion*). Exclusion is observed when formally similar lexemes do not share semantic components. This category represents the highest risk for translation distortion.

The analysis demonstrates that in the corpus privativity and equipollence predominate, reflecting the extensive use of international terminology in management science discourse. These relationships typically involve partial semantic overlap combined with language-specific conceptualisation.

In contrast, cases of exclusion and contrasting, although less frequent, produce more significant translation problems and may lead to terminological inaccuracy or conceptual misinterpretation. Such cases were identified not only in dissertation summaries translated from Latvian into English, but also in institutional recommendations, indicating systemic rather than isolated issues. The presence of false friends in normative documents contributes to the reproduction of semantically inaccurate equivalents in doctoral dissertation summaries.

5.2 Undesirable wording in management science doctoral dissertation summaries

To ensure the credibility and international visibility of management science research, doctoral dissertation summaries are expected to conform to established linguistic norms and genre conventions in both English and Latvian. Corpus analysis shows that the analysed summaries and their translations generally comply with these requirements; however, recurrent translation- and language-quality-related shortcomings have been identified.

The identified deviations affect both general English language and specialised language of science proficiency. At the grammatical level, the most frequently observed problems relate to non-standard article use, inaccurate noun phrase formation, inappropriate possessive constructions used to express agency, misuse of passive constructions, non-canonical word order, agreement errors, and inconsistent tense use in research reporting. Errors relating to number agreement and countability are likewise recurrent; the use of the plural form *researches* has also been detected. Several deviations appear to stem from the literal transfer of Latvian rhetorical structuring into English. Lexical-level deviations were also identified, most notably in the misuse of formally similar lexical items and inappropriate substitution of word classes, resulting in semantically unsuitable constructions. In a limited number of cases, comprehension of the translated text required reading of the original text, which indicates substantial disruption of communicative effectiveness.

Another significant finding concerns the representation of authorial presence. Although Latvian academic discourse has traditionally favoured impersonal constructions, the corpora reveal extensive use of the nominal self-reference strategy *author/autors(e)* in both original texts and translations. Frequency comparison shows that this construction is employed considerably more often than the first-person pronoun *I*. Although grammatically acceptable, excessive use of third-person authorial reference may diminish stylistic naturalness and clarity. The findings indicate that alternative impersonal constructions are available and may, in many cases, constitute a more stylistically appropriate means of preserving academic objectivity and coherence.

Institutional recommendations and university guidelines were likewise found to contribute to terminological and genre-related inconsistencies. Non-standard English renderings of dissertation-related terminology, inconsistent naming of summary components, and inappropriate genre labels increase the risk of reproducing semantically inaccurate or stylistically unsuitable forms. Finally, the corpus reveals omissions of content and discrepancies in paragraph sequencing between source and target texts.

The corpus analysis also shows that uncritical borrowing of English terminology into Latvian may result in semantic distortion where formally similar lexemes diverge conceptually. Non-standard institutional terminology and problematic title translations further contribute to genre inconsistency. In addition, omissions and paragraph misalignment between source and target texts have been identified as well.

Error distribution across the corpus is uneven: while most summaries contain only isolated inaccuracies, a small number of translated texts account for the majority of detected errors.

Conclusions and further research perspectives

Conclusions

1. The contrastive analysis of management science doctoral dissertation summaries defended in Latvia from 2013 to 2023 establishes specific macro- and microstructural features of this text type in English and Latvian and identifies recurrent linguistic problems relevant to their writing and translation.
2. Management science dissertation summaries are secondary texts closely related to dissertations as primary texts; however, the two text types have different communicative purposes: dissertations present the content of the research, the research methods used, and the results, whereas dissertation summaries aim to inform the audience about the dissertation.
3. In the contrastive analysis of management science dissertation summaries and their translations, the consecutive application of unilateral and bilateral methods enables the identification of grammatical and lexical differences as well as macrostructural and microstructural features in English and Latvian.
4. When studying scientific language texts in Latvia, along with content analysis, linguistic text analysis, and other descriptive methods, a corpus-based approach has been used. In the present dissertation, a corpus-based approach has been employed to substantiate the findings from the researched texts and provide statistics.
5. The present study uses parallel corpora to compare the original dissertation summary texts to their translations. Four corpora have been created, each containing 30 summaries of management science dissertations and comprising original texts written in Latvian and their translations into English, as well as original texts in English and their translations into Latvian. In total, they include 120 texts. With the help of *AntConc* software tools, analysis of the microstructure and macrostructure of the researched texts has been carried out.
6. The macrostructure of the analysed management science dissertation summaries is relatively uniform and complies with regulatory requirements, with minor differences in the wording of individual macrostructural elements. The macrostructure does not fully correspond to the Swales IMRaD model, while J. Schmied's AIMaC model is also applicable to the analysis of management science dissertation summaries.
7. During the present study, it has been observed that certain information in the management science dissertation summaries is singled out under separate headings, such as *Suggestions, Suggestions and recommendations* and *Conclusions*, whereas other information, such as 'data', 'sources', 'empirical research base used' is not singled out in the same way, even though they are described in the text. The introductory part, in turn, may be worded not only as *Introduction*, but also as *General review* or even *General description of the work*. The optional section *Words of gratitude* is missing only in one of the dissertation summaries examined. Whereas some dissertations contain a glossary of terms used in the specific field, it might be helpful to include such a glossary in all summaries to clarify what specifically is meant by terms used in the dissertations and their summaries.
8. Deictic phrases describing space and prospective and retrospective phrases describing time in the language of science texts are important elements of text formation, which are used in the introductory, main, and concluding parts of management science doctoral dissertation summaries

and facilitate the perception of the mentioned texts. Deictic indications in the MS summary texts may refer to a study, a fact, or the author. Pronouns in these functions are used more frequently than adverbs. In turn, the use of demonstrative pronouns *this/these* is more common than pronouns *that/those*. Retrospective phrases in the researched texts are used to describe research previously performed or described. Prospective phrases in the examined texts are used to describe the research to be carried out or described further in the text. The mentioned phrases are commonly used in constructions with adverbs *above* and *below/hereinafter*.

9. The study provides an overview of the use of the first-person/third-person perspective, the passive voice, and impersonal constructions in management science doctoral dissertation summaries in English and Latvian, which may serve as a reference for doctoral students and translators. The findings indicate that nominal phrases containing author(s) dominate authorial expression, first-person pronouns are rare in Latvian summaries, while impersonal constructions are widely used.

10. In the present study, constructions with evaluative *that* have been examined. It has been determined that the mentioned constructions are frequently used in management science summary texts. The use of modal verbs has been analysed, and it can be concluded that in management science dissertation texts, modal verbs might be used in the function of either hedges or boosters, and that in the translation process, particular attention should be paid to retaining the original meaning expressed by the author.

11. For writing and translation of the mentioned text type, attention should also be paid to the terminology, such as the so-called "false friends of the translator". Semantic analysis of the "false friends of the translator" that could cause difficulties in the translation process, identified in the researched texts, has been conducted. During the research of lexis in the dissertation summaries, differences in semantic structures and corresponding semantic attitudes of the word pairs forming false friends have been investigated.

Further research perspectives

1. It might be helpful to continue the research related to the macrostructure and wording of its elements in management science dissertation summaries. Further research might also focus on comparing the respective texts to management science dissertation summaries written in other Baltic States, and require a specialised corpus of scientific texts from different periods.

2. It might be helpful to carry out a diachronic study of the influence of other languages on how the dissertation summaries in Latvian have been written and translated in management science. This would require digitalisation of the respective texts written in the earlier periods of the development of the language of science. Given that at present student mobility to Latvia is mainly represented by students from India, Uzbekistan, China, Ukraine, and Germany, whereas the majority of the students, especially from India and China, have not yet reached the stage of becoming PhD candidates or defending their dissertations, it might be possible that more contrastive studies of English and Latvian dissertation summary texts might be needed, given that academic writing traditions might differ in different parts of the world.

3. The microstructure of management science dissertation summaries might be further researched to determine whether the elements of microstructure, such as the impersonality of the expression of the authorial stance, ways of quoting and paraphrasing, references to research conducted by others, etc., are generalizable, i.e., applicable to the entire Latvian language of

science, including other disciplines, or specific, probably even differing, depending on such factors as the time and place where the research described in management science summaries has been carried out.

4. Subsequent studies could include research on metaphor and nominalisation, given that metaphor has not been researched in the present study and nominalisation has been researched only with respect to how the objectives of research have been formulated.

5. Stance and engagement markers, such as modal verbs, evidential particles, adverbials, and impersonal constructions, could be researched further, paying special attention to how the meaning of the original text has been preserved in translations.

Theses for defence

1. The present dissertation demonstrates that doctoral dissertation summaries in management science and their translations into English and Latvian can be systematically analysed through contrastive linguistics using both unilateral and bilateral approaches. The corpus-based methodology, supported by the author's parallel corpora and *AntConc* software, enabled a statistically grounded comparison of micro- and macrostructural linguistic features across four corpora comprising 120 dissertation summary texts.
2. The study demonstrates that the macrostructure of management science dissertation summaries follows a predominantly uniform and conventionalised organisation aligned with regulatory requirements. While dissertation summaries reflect the structure of full dissertations, their organisation serves a distinct communicative purpose. Variations occur mainly in headings and terminology.
3. The dissertation establishes that translation in management science dissertation summaries involves recurrent challenges in EN–LV and LV–EN language combinations, including false friends, loanword interference, and variation in grammatical and lexical choices. The findings confirm cross-linguistic differences in the expression of authorial stance. Latvian dissertation summaries favour impersonal and objective constructions, whereas English summaries show greater use of first-person forms. First-person self-references in the analysed texts occur primarily in paratext sections. Nominal phrases containing *author/autors(e)* are frequent in both languages, and passive constructions function as a strategy of objectivity. Deictic expressions contribute to textual cohesion and structural guidance in both languages.
4. The results of the present study show that lexical-semantic mismatches constitute a recurrent and identifiable translation issue in management science dissertation summaries. Semantic analysis identified sources of interference and translation difficulties. While most translations show high quality, specific recurring issues include article usage, possessive constructions, and number agreement. The misuse of the term *synopsis* for dissertation summaries illustrates terminological inconsistency in academic translation.

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Iveta Kopankina is a linguist and practising translator with over 40 years of professional experience. Her work spans both the academic sphere and professional translation, with a particular focus on the language of scientific texts and the challenges associated with their translation.

Her research is dedicated to the linguistic analysis of summaries of doctoral theses in management science and their translations into Latvian and English. The study examines the macro- and microstructure of these texts, the use of terminology, and the linguistic devices used to express the author's stance – all of which influence the quality of scientific communication and the accuracy of the translation.

Iveta Kopankina has been a lecturer at several higher education institutions in Latvia and a translator for European Union and Latvian state institutions and for international projects. Her professional experience encompasses simultaneous and consecutive interpreting at international conferences and the translation of specialised texts, notably in medicine and healthcare, economics, politics, management science, and education.

The author's academic and professional background provides both the theoretical foundation and the practical significance for this research, particularly regarding the quality of scientific communication and the accuracy of translation.