RIGA TECHNICAL UNIVERSITY

Iveta Kopankina

# MANAGEMENT SCIENCE TEXTS AND THEIR TRANSLATIONS: PROBLEMS AND SOLUTIONS

Doctoral Thesis



RTU Press
Riga 2026

**Riga Technical University**
Liepaja Academy

**Iveta Kopankina**

Doctoral Student of the Study Programme "Language and Literature Studies"

# MANAGEMENT SCIENCE TEXTS AND THEIR TRANSLATIONS: PROBLEMS AND SOLUTIONS

**Doctoral Thesis**
**for the promotion to the degree of Doctor of Science (*Ph. D.*)**
**in Humanities and Arts, the sub-field: Linguistics and Literary Studies**

Scientific supervisor
Dr. philol. AGNESE DUBOVA

Consultant
Dr. paed. ALĪDA ZIGMUNDE

Riga 2026

Kopankina I. Management Science Texts and Their Translations: Problems and Solutions Doctoral Thesis. – Riga: RTU Press, 2026 – 234 p.

Published in accordance with the decision of the Promotion Council "RTU P-20" of 19 June 2026, Minutes Nr. 04030-9.19.2/6.






## Words of gratitude

I would like to express my sincere gratitude to Liepāja Academy of Riga Technical University (formerly the University of Liepāja) for its excellent doctoral studies program, and personally to Prof. Dr. philol. Ieva Ozola for her constant support and encouragement. Special thanks are extended to my research advisor, Dr. philol. Agnese Dubova, whose valuable advice and trust provided me with a constant stimulus to do more; without her, this dissertation would not have been possible. I would also like to express my gratitude to my RTU consultant Prof. Dr. paed. Alīda Zigmunde for her very useful consultations, Assoc. Prof. Dr. philol. Dzintra Lele-Rozentale and Prof. Dr. paed. Diāna Laiveniece for their support and excellent leadership of the doctoral study program.

**DOCTORAL THESIS PROPOSED TO RIGA TECHNICAL UNIVERSITY LIEPAJA ACADEMY FOR THE PROMOTION TO THE SCIENTIFIC DEGREE OF DOCTOR OF SCIENCE**

To be granted the scientific degree of Doctor of Science (PhD), the present Doctoral Thesis has been submitted for defence at the open meeting of the RTU Liepaja Academy Promotion Council "RTU P-20" on December 10, 2026 at 15.00 online: https://teams.microsoft.com/meet/3717554735599117?p=uQ7iqMLx5xGwF6E1MW.

OFFICIAL REVIEWERS

Professor Dr. philol. Linda Lauze
RTU Liepaja Academy, Latvia

Associate Professor Anna Ruskan, PhD
Vilnius University, Lithuania

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

**DECLARATION OF ACADEMIC INTEGRITY**

I, **Iveta Kopankina**, hereby declare that the Doctoral Thesis submitted for review to Riga Technical University Liepaja Academy for the 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, a Conclusion, five figures, 22 tables, and four annexes; the total number of pages is 217, excluding the annexes. The Bibliography contains 239 titles.

TABLE OF CONTENTS

Abstract ..... 7
Abstract in Latvian ..... 8
Introduction ..... 9
1 Texts pertaining to the language of science ..... 24
1.1 The communicative functions of the research texts and their translations ..... 26
1.2 Classification of the language of science texts into primary and secondary texts ..... 36
1.3 Classification of the language of science texts according to type, sector, style and genre ..... 40
1.4 Description of the texts and text selection criteria for the present study ..... 51
2 Methods of research on management science doctoral dissertation summaries and their translations ..... 62
2.1 Contrastive analysis and research of the corpora of doctoral dissertation summaries and their translations ..... 62
2.2 Description of the research methods used in the dissertation ..... 67
3. Macrostructure of the management science doctoral dissertation summaries ..... 78
3.1 Research on the macrostructure of secondary scientific texts and their individual elements ..... 78
3.2 Requirements of the regulatory documents for the macrostructure of doctoral dissertation summaries ..... 84
3.3 Sector-specific structural elements of dissertation summaries for social sciences ..... 86
3.4 Sector-specific macrostructure wording and elements for management science ..... 92
4. Microstructure of management science doctoral dissertation summaries ..... 104
4.1 Research on the microstructure of primary and secondary scientific texts and their individual elements ..... 104
4.2 The use of deixis in the management science doctoral dissertation summaries and their translations ..... 112
4.3 Authorial stance in management science dissertation summaries in English and Latvian ..... 127
4.3.1 The use of the first and the third person in Latvian and English ..... 128
4.3.2 The use of the evaluative *that* in expression of the authorial stance ..... 139
4.4 Specialised lexis and terms in the doctoral dissertation summaries ..... 153
5. Problems and undesirable translations detected in management science doctoral dissertation summaries ..... 167
5.1 False friends in management science doctoral dissertation summaries in English and Latvian ..... 167
5.2 Undesirable wording in management science doctoral dissertation summaries ..... 178

Conclusions and further research perspectives ..... 192
Conclusions ..... 192
Further research perspectives ..... 194
Theses for defence ..... 196
Bibliography ..... 198
List of literature ..... 204
Annex I ..... 218
Statistics terms in management science PhD summaries (en< >lv) grouped according to the purpose of action ..... 218
Annex II ..... 221
Statistics terms in management science PhD summaries grouped according to frequency in the research corpora ..... 221
Annex III ..... 223
False friends of a translator according to the present study results ..... 223
Annex IV ..... 234
Abbreviations and acronyms ..... 234

## 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 exploration 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 the related translation aspects and problems were carried out; macrolinguistic features and wording were examined, methodology for analysis of the mentioned research texts was developed, 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. In research on the macrostructure of dissertation summaries, it has been observed that the mentioned summaries have a specific structure with common elements. However, not all of the mentioned elements are present in every text. The research of the wording of the summary section titles and texts enabled the detection of lexis that might be misunderstood and thus cause translation problems, including the use of false friends in translation practice. False friends of a translator 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 eight publications.



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

# Anotācija

Šajā darbā analizēti vadībzinātnes promocijas darbu kopsavilkumi un to tulkojumi angļu un latviešu valodā, īpašu uzmanību pievēršot tiem raksturīgajām lingvistiskajām iezīmēm. Darbs izstrādāts sastatāmās valodniecības jomā, izmantojot sastatāmās izpētes metodes. Promocijas darba izstrādes gaitā izpētītas teorētiskās atziņas par zinātnes valodu, apzināti pētījumi par vadībzinātnes promocijas darbu kopsavilkumiem kā sekundāru tekstu veidu, kā arī ar tiem saistītie tulkošanas aspekti un problēmas; analizētas tekstu makrolingvistiskās iezīmes un formulējumi, izstrādāta metodoloģija minēto tekstu izpētei, noteiktas un izvērtētas vadībzinātnes promocijas darbu kopsavilkumu tekstu tulkošanas problēmas. Izveidoti paralēlie korpusi, kas ietver laika posmā no 2013. līdz 2023. gadam publicētu 120 promocijas darbu kopsavilkumu tekstus un to tulkojumus. Pētot promocijas darbu kopsavilkumu makrostruktūru, konstatēts, ka minētajiem kopsavilkumiem ir specifiska struktūra ar kopīgiem elementiem. Tomēr ne visi minētie elementi ir sastopami katrā tekstā. Kopsavilkumu nodaļu nosaukumu un tekstu formulējumu izpēte ļāva identificēt leksiku, kas var tikt pārprasta un tādējādi radīt tulkošanas problēmas, tostarp tulkotāja viltusdraugu lietojumu tulkošanas praksē. Tulkotāja viltusdraugi analizēti atsevišķi, izmantojot semantisko analīzi. Izpētītas deiktiskās, retrospektīvās un prospektīvās frāzes, kā arī to tulkojumi. Īpaša uzmanība pievērsta autora pozicionējumam un tā izteikšanas tradīcijām angļu un latviešu valodā. Pētījuma rezultāti prezentēti zinātniskajai sabiedrībai deviņās starptautiskajās konferencēs un astoņās publikācijās.

**Atslēgvārdi:** zinātnes valoda, promocijas darbu kopsavilkumu teksti, vadībzinātne, teksta makrostruktūra un mikrostruktūra, sastatāmā valodniecība.

# 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 the micro- and the macrostructure of text, as well as the wording of management science dissertation summaries, and their English texts sometimes even contain the so-called "false friends of a translator". According to Latvian legislation, in order to maintain the traditions of multilingualism in science and to promote Latvian science abroad, the dissertation summaries have to be translated into English, provided that the dissertations are written in Latvian and translated into Latvian if the dissertations are 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.

**The overview of the research topic** disclosed in the present dissertation can be presented as follows:

In ensuring high-quality research, the aspect of proficiency in writing dissertations, as well as their summaries, becomes increasingly important, especially in terms of the linguistic and extralinguistic aspects of academic discourse (Lancaster, 2016: 120). The language of science has a communicative

function as outlined by Bühler (1934), Jakobson (1960), Roelcke (2024), and Reiss (1983) to name just a few, which determines the methods that allow writers to adequately express their ideas and translators to attain equivalence of the translated academic texts, including management science dissertation summaries. Studies devoted to the communicative aspects of the language of science encompass reader-writer interaction, the expression of evaluation and opinions (Biber 1999), and the hedging expressions or hedges (Swales 1990; Hyland 1998; Salager- Meyer 1994; Markkanen, R. & Schröder, H. 1989).

The communicative approach to translation is represented by Kade, Jäger, and Neubert of the Leipzig School, who perceive translation as a specific communication activity (Kade 1968). Linguistic research is considered to constitute an important part of the process, but in a broader communicative context, also focusing on situational constraints (Jalayeri 2010). Biel (2018), in turn, singles out the main differences in the genres when translating texts.

In the dissertation, the definition of the language of science has been presented according to Aaronson (1977), Rabinowitz & Vogel (2009), Wilson (2012), and Halliday (2004), followed by definitions of the concept of text in academic writing (e.g., Halliday 1987; Halliday & Martin 1993; Ventola 1992, 1994, 1996; Schmied 2011), text analysis in specific fields (e.g., O'Halloran 2005 on the language of science in mathematics) and style analysis (e.g., Swales, 1990, 2004, 2011; Ventola 1997). The importance of socially situated, contextualised factors of the language in use has been analysed according to Schäffner (2019). The features of good academic writing have been singled out by Schmied (2011: 19), and Hyland (2006: 221).

Apart from the communicative function, management science dissertation summary texts can also be analysed as secondary texts. The classification of texts in the present dissertation has been derived, based on the multilevel models of Gläser (1990; 1998), Göpferich (1995), Weinreich (2010), Schmied (2015), and Wright (2012). The research described in the present dissertation concerning primary and secondary texts has also been based on the findings of Latvian scientists Laiveniece (2015a), Pipere and Znotiņa (2018), Znotiņa (2017), and Dubova (2019).

The next classification, according to which management science dissertation summary texts have been explored in the present dissertation, is that

of sector, style, genre, and type. First of all, the mentioned texts have been assigned to the domain of professional communication according to Hans & Hans (2014) and Wright (2012), who define the subject field of the text from the language of science text translation perspective as coordination with its special language, i.e. from the perspective of LSP. Kretzenbacher (1998: 133) argues that the language of science texts in general may be perceived as texts of the *language for specific purposes* or *special language.* Kretzenbacher (1998) characterises the language of science texts as argumentative and persuasive, and emphasises the culture-specific nature of these texts.

Hyland (2015c: 294) points out the role of language and culture in the comparison between the first and the second language writing in English: "Culture, seen as an historically transmitted and systematic network of meanings, is inextricably bound up with language and so influences writers' expectations about appropriacy, audience, ways of organising ideas and of structuring arguments". Hyland (2010) has also described academic writing from the perspective of EAP, emphasising the mediation between writers/institutions/cultures, as well as conventions.

Some of the basic notions used in the study of the language of science pertain to the theory of functional styles. The theory was elaborated by Jakobson (1960) by developing the model of language functions. The language of science in Latvia has been initially studied from the perspective of style. Rozenbergs (1995: 83–85) emphasises the predominantly monologic nature of scientific discourse, its emotionally neutral lexis, and specialised terminology.

However, in light of communication models designed by Buhler (1934), Jakobson (1960), and Roelcke (2024), it becomes clear that there are more factors to be taken into account than those pertaining to the functional styles.

In the present study, the notion of *genre* in academic and research settings in conjunction with the communicative purpose and communicative function has been analysed, as defined by Swales (1990) and Hyland (2008). Lee (2001: 37) problematizes the issue of the distinction between different classification categories such as *genre, register*, and *text type* and points out that *genre* can be defined based on **external** criteria such as intended audience, purpose, and activity type, that is, it refers to a conventional, culturally recognised grouping of texts based on properties other than lexical or grammatical (co- ) occurrence features, which are, instead, the **internal** (linguistic) criteria forming the basis of text type categories. Lee (2001: 40) points out that some scientists use the notions of *text type* and *genre*

interchangeably. The same idea is also supported by Biel (2018:152), who maintains that the two concepts are related; however, *genre* evokes the social context of use and associated concepts, while *text types* group texts at a higher level of abstraction. Nord (1997: 37) remarks that the relationship between text type and variety is intersecting rather than hierarchical and points out that translators need pragmatic guidance in this regard rather than conflicting theory; therefore, identifying the type and variety of the text is crucial for the final translation product. Nord (ibid.) summarises the required translation strategy as making the text correspond to the text type in the target language community.

Biel (2018: 157) remarks that for translation-oriented genre analysis, it might be useful to identify differences in generic structures, depending on conventions and expectations of the specific language, culture, and discourse community. Biel points out that even though the translator has limited options to modify the translated text according to the TL conventions, differences between the SL and TL conventions might exist, among others, in the use of cohesive devices, conjunctions, tolerance of repetitions, referencing patterns as regards the use of pronouns instead of full names, and personal forms of address.

By summarizing and systematizing the selected sources according to the aspects of research in the language of science discussed in them, several rather extensive theme groups represented by original research can be distinguished, such as studies on the macrostructure of a scientific text and its constituent elements (Kintsch & Van Dijk 1978; Van Dijk & Kintsch 1980; 1983); studies on the microstructure of a scientific text and its constituent elements (Kintsch & Van Dijk 1978; Van Dijk & Kintsch 1983).

The fundamental classification of styles in the language of science in terms of the academic tradition of writing into Teutonic, Gallic, and Nipponian Science is provided by Galtung (1981, 1985).

The classification of the language of science texts according to their macro- and microstructure has been described by several scientists in Latvia: Martinsone & Pipere (2018); Dubova & Laiveniece (2021); Dubova, Egle, & Proveja (2020); Ansberga & Dubova (2020); Egle & Tomase (2020).

Dubova, A., Leitāne, M., and Lele-Rozentāle, Dz. (2009: 36-40) have researched the language of science texts in the intercultural context, emphasizing that the mentioned texts should be analysed not only in respect to text production,

but also to text perception (2009: 37), Dubova and Laiveniece (2021: 85) highlight the need to determine the traditions of national science in diachronic research and to carry out synchronous contrastive studies in contrastive linguistics, translation science, and intercultural scientific communication.

The research presented in the dissertation has been conducted *inter alia* to improve the quality of the texts and their translations in the language of science by providing examples of the possible macrostructure and wording obtained during the present study, as well as an analysis of undesirable language phenomena, such as false friends of the translator and unnecessary borrowings.

In the present dissertation, a range of studies has been selected as **the theoretical framework** supporting the aspect discussed in each section. Further, the most relevant studies for each element of the present research are briefly described.

The macrostructure of management science dissertation summaries has been analysed, based on the fundamental research of Swales (1990), Swales & Feak (1994), Paltridge (2002; 2007), Bunton (2002), Schmied (2015), and Kamler and Thomson (2014). The summary microstructure in turn has been researched, based on the findings of De Beaugrand & Dressler (1981), Hyland & Tse (2005a, b), Hyland & Bondi (2006), Hyland (2009), Hyland & Jiang (2016), Laiveniece (2021), Laiveniece and Dubova (2021).

In the present dissertation, deixis in management science dissertation summaries has been researched, based on the findings of Peirce (1932), Langacker (2002), Bühler **(**1990), Malmkjær (2009), Cruse (2000), and Levinson (2008).

The authorial stance in the present study has been explored, based on the findings of Halliday and Hasan (1976), (Bakhtin, 1986), Hyland (2002a, 2005, 2009, 2015c), Cruse (2000), Levinson (2008), Schmied (2015), Vassileva (1998, 2006; 2014), Laiveniece (2010), and Kalnbērziņa (2015).

The evaluation of own findings of the authors, evaluation of previous studies, statement of research goals, and evaluation of the methods, models, or theories the authors had drawn on, i.e. the use of evaluative *that* construction in management science dissertation summaries has been provided, based on the research of Hyland and Bondi (2006), and Hyland and Tse (2005), Halliday and Matthiessen (2004).

Specialised lexis and terms in management science doctoral dissertation

summaries defended in Latvia have been investigated, based on the compiled research corpora and findings of Crystal (2010), Malmkjær (2009), Skujiņa (2005), and Baltiņš (2007a, b).

The false friend classifications provided by Nida (1964), Catford (1965), Chamizo–Dominges & Nerlich (2008), Munday (2009), and Hayward & Moulin (1984), as well as the theoretical and practical findings of Baldunčiks (1989, 2005), Veisbergs (1993, 1994, 1996, 1998), and Žīgure (2008) have been explored.

The **topicality of the study** presented in the dissertation can be described as follows: the macrostructure and microstructure of management science dissertation summaries for the dissertations defended in Latvia in English and Latvian have not been analysed in earlier publications, and the results of the present study might be helpful both to the writers and translators of dissertation summaries. The study described in the present dissertation has been conducted with the intention of decreasing the research gap concerning macro- and microstructure, terminology, specific and professional lexis in the summaries of management science dissertations, given that the mentioned aspects, and their translations into English and Latvian, have not been studied. Thus, it can be perceived as an attempt to facilitate the writing and translation of research summary texts as well as documenting the features of the mentioned texts in a wider sense, such as the structure and wording of research summary texts. Further important aspects that have been explored are the false friends of translators occurring in the management science dissertation summary texts and wording that might cause difficulties to translators, as well as the use of deictic, retrospective, and prospective phrases in the mentioned texts and evaluative *that* constructions.

**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 management science doctoral dissertation summaries on 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 objectives** of the present study are to:

1) conduct the 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;
2) 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;
3) elaborate methodology for analysis of the mentioned research texts,
4) compile the research corpora of management science dissertation summaries in English and Latvian;
5) research the obtained corpora of defended doctoral dissertation summaries in management science in English and Latvian in order to determine their macrostructure;
6) research the microstructure of defended doctoral dissertation summaries in management science in English and Latvian;
7) study and evaluate the problems encountered in translating management science doctoral dissertation summary texts;
8) develop conclusions regarding the features of the studied texts and the specifics of their translation.

**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 present study of the management science doctoral dissertation summaries and their translations into English and Latvian, and their characteristic linguistic features, is a study in contrastive linguistics based on the **methods** of contrastive analysis and corpus linguistics. A descriptive method, including empirical discourse content analysis, has been applied, examining Latvian regulatory documents mandating the writing and translation of doctoral dissertation summaries. In the research of the false friends of a translator, semantic analysis has been used.

According to the aim of the present dissertation and the respective tasks, the present study has been designed both as a quantitative and qualitative study. A comprehensive review of the research literature published in Latvia and abroad has been carried out concerning the communicative functions of the researched texts, their macrostructure and microstructure, as well as the applicable translation theories. The mentioned review allowed the author of the present dissertation to obtain the basis for the study presented in the dissertation, as well as to reflect on the diverse approaches to the researched theme in fundamental research.

As the next step, the university and faculty recommendations for writing dissertation summaries and the respective legislative documents have been explored.

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, clarifying the results of the interlingual comparison has been used.

The present study is corpus-based and envisages the use of parallel corpora. According to Borin (1999), parallel corpora are used in linguistics to compare texts with their translations. In the study of doctoral dissertation summaries, both parallel corpora and their processing tools have been used.

Therefore, parallel corpora of management science doctoral dissertation summaries and their translations into English and Latvian have been compiled. The contrastive analysis of 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 in 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.

Based on the theoretical study, as well as the created dissertation summary corpora, the analysis of the traditions of expressing authorial stance in Latvian academic writing, and specifically those detected in management science dissertation summary texts, has been carried out. It has been inferred that a marked difference exists in the perceptions of how the authorial presence should be expressed in different academic writing traditions, especially concerning the use of 1st person personal pronouns, the use of the Passive Voice, the use of constructions with and without the mention of the author in the 3rd person, the use of modal verbs in English and Latvian and the use of evaluative *that* constructions in English and Latvian.

One of the essential themes investigated in the present dissertation concerning the translation of management science dissertation summaries is the problem of false friends of a translator, as false friends appear not only in the texts of the compiled research corpora but also in the English texts of university and faculty recommendations, where the mentioned dissertations have been defended. Based on the classifications proposed by Schatte (1990) and Lipczuk (1991), the interlingual types of false friend semantic relationships in English and Latvian have been examined.

**The limitations of the study** are as follows: the present dissertation focuses on management science dissertation summaries for the 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. Presently, the composition of foreign students in Latvia is changing. 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 following universities: LU, 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:

1. During the study described in the present dissertation a theoretical exploration 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 the related translation aspects and problems has been carried out; macrolinguistic features and wording have been examined, 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 analysed separately applying semantic 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.

2. 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 macrostructure of the doctoral dissertation summaries, 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), as well as to the category of false friends in the language of science as researched in the present dissertation.
3. 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 scientific glossary or glossary of terms in all summaries to clarify the precise definitions of all terms used in the dissertations and their summaries.

**Structure and content of the dissertation: t**he present dissertation comprises 217 pages and the following sections: an introduction, five chapters, each with the main conclusion of the respective chapter, a section containing the final conclusions, theses, 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 One.

Chapter Two examines the methods of researching the corpus of management science doctoral dissertation 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 Three, 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 Four 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 Five 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 I and II list statistical terms in Management Science PhD summaries according to the purpose of action, and the most frequent statistical terms used in management science dissertation summaries in English and Latvian. False friends found in the research corpora are listed in Annex III, abbreviations and acronyms used in the present dissertation are listed in Annex IV.

**Approbation of research results:**

The results of the study have been presented to the scientific community in 9 international conferences and 8 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. [Deictic, Prospective and Retrospective Constructions in the Latvian Language of Science]. 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", conference proceedings of the 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. (submitted).
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, 145–151.

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 "Intra-lingual 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).

# 1 Texts pertaining to the language of science

The language of science is a complex phenomenon. It is even considered that multiple languages of science exist, depending on the traditions and conventions in different contexts in which the language of science is used. In the chapter below, the key theories and concepts for understanding and researching management science dissertation texts have been disclosed.

Halliday (2004: 49) defines the language of science in the following way: "By the language of science I mean the various forms of discourse in which the activities of 'doing science' are carried out - but seen as a systemic resource for creating meaning, not as a collection of instances of text". Halliday (2004: 207) emphasizes that "the language of science is, by its nature, a language in which theories are constructed; its special features are exactly those which make theoretical discourse possible. But this clearly means that the language is not passively reflecting some pre-existing conceptual structure; on the contrary, it is actively engaged in bringing such structures into being. They are, in fact, structures of language". Thus, it can be inferred that the language of science not only develops but also enriches language as a whole; it is not a rigid system of rules and conventions, but rather a system constantly enriched by new contributions.

The concept of the language of science is closely related to the concept of text. Since the transition of scholarly writing from Latin to English, texts have been defined in many ways. Halliday (1998: 24) emphasises that, in order to be understood, a text has to be "unpacked", i.e. experience and knowledge have to be transformed into meaning. Wilson (2012: 346) remarks that "text does not inhere in any given object; rather, textuality is assigned to such an object by the reader and by wider cultural processes which constitute the very possibility of reading. The explicit or implicit designation 'text', then, is not a neutral description of written and printed materials, but on the contrary is a particular way of positioning them".

To focus on the research subject, the concepts of the language of science, the scientific writing style, and sector-specific language have been defined first. The language of science may be perceived both from the point of view of the language domains (i.e., horizontally) and in terms of the specific traits

characterising the language of science as a language of communication (i.e., vertically).

The literature review revealed significant information pertaining to the language of science, academic writing, English for Specific Purposes (ESP) and English for Academic Purposes (EAP).

The language of science has been studied rather extensively. Linguistic research on the language of science covers the spectrum from the description of scientific texts (e.g., Halliday 1987; Halliday & Martin 1993; Ventola 1996) to text analysis in specific fields (e.g., O'Halloran 2005 on the language of science in mathematics) and style analysis (e.g., Swales, 1990, 2004, 2011; Ventola 1997).

Halliday and Martin (1993: 5–8) argue that scientific language foregrounds the constructive potential of language as a whole, since language actively construes rather than merely reflects experience. Building on this view, the study of the language of science, including research texts, is essential not only for understanding the constructive potential of language but also for the study of language in general, since over time it enriches the language and contributes to a better interpretation of knowledge.

The language of science is disseminated not only by researchers but also by translators of the language of science texts. Károly (2024: 05) points out that competences required for academic translation encompass knowledge, abilities, skills, and attitudes. These competences are not only of a linguistic nature, but also contain other components, such as linguistic and extralinguistic knowledge, documentation skills, the ability to use translation and search tools, as well as to transfer the exact meaning conveyed by the author of the text.

Given that translation in science has more aspects than those related to philology, Károly develops her own conceptual model of translation competence in science relevant not only for translators, but also to researchers (2024: 1). The competences of the model are: bilingual communicative competence, extra-linguistic competence, strategic competence, knowledge about translation, instrumental competence, bilingual disciplinary communicative competence, extra-linguistic disciplinary competence, epistemic competence, and partial lack-of-expertise compensatory strategic competence (Károly 2024: 15).

## 1.1 The communicative functions of the research texts and their translations

First, it might be useful to mention that the language of science texts, being part of language at large, have a communicative function, which has been extensively researched in relation to the functional approach to language. The mentioned communication involves researchers, students, as well as other interested parties, such as translators.

Thus, to determine how the meaning of the original text can be transferred to the translation, several important notions have to be analysed. For the study described in the present dissertation, the notion of *communicative translation* is fundamental in order to single out the basic principles that translators of management science dissertation summaries have to adhere to in order to produce translated texts equivalent to the source text. Hyland (2009: 30) emphasises that writing is an interaction between writers and readers, which adds a communicative dimension to writing. "It moves away from our stereotype of an isolated writer hunched over a keyboard to explain composing decisions in terms of the writer's projection of the interests, understandings, and needs of a potential audience". Reiss (1983: 302) defines communicative translation as follows: "the *communicative* type of translation includes translations which try to avoid foreignness in the choice of words and sentence structures; translations which immediately serve (everyday, literary, aesthetic or persuasive) communication in the receptor language community, and are therefore (not identical, but) equivalent to the original in as many of its dimensions as possible, syntactic, semantic and pragmatic. Only in this case does appropriateness, the adequacy of the choice of linguistic signs for building up the receptor language text, aim to produce equivalence on the level of the entire text. For this reason, in this type of translation, adequacy is not merely a matter of making the right choice of words, grammatical structures, and style, in isolation from one another; the adequate choice is always related to the linguistic macrocontext, the inner and outer situational context, and the sociocultural context of any particular text".

Given that the translators participate in the mentioned interaction with the audience, it can be concluded that, to a large extent, the assessment of the communicative situation by the translators determines the quality of the translation.

The communicative approach was established by Buhler (1934). Buhler's 'Organon (Tool/Vehicle) model' (2011: 34–39) pertains to cognitive linguistics and reflects the functions of language at large.

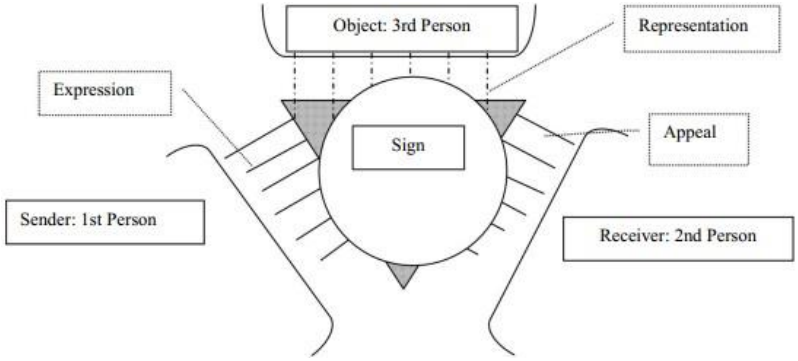


Fig. 1. Bühler's Organon model (three-function schema), reproduced from Bühler (2011, p. 35).

Based on the "Organon model", language can be perceived as a means of interpersonal communication. In Buhler's classification, one of the central roles is allotted to text. The main 'representational' function deals with the content of the text; the other two functions are: the 'expressive' function pertaining to the writer and the 'appeal' function pertaining to the reader. In Buhler's model, a linguistic sign envisages three functions, based on its correlation to other model elements: the symbolic function, when referring to objects and facts, existing in reality, the appeal function, permitting to present an instruction to a person involved in the communication, and the symptom function providing information about the person using the sign. Jakobson describes Buhler's language model as triadic, as it includes the first person, the addressee, the second person or the addresser, and the third person, someone or something spoken of and remarks that the model can be complemented by additional verbal functions (Jakobson 1987: 66).

*Representation* in Bühler's Organon model provides a framework for analysing the functions of management science dissertation summary texts, focusing on the accuracy and objectivity of scientific language, precise description of research findings and theoretical concepts, clear and coherent logical argumentation, and the use of exact terminology.

*Expression* in turn pertains to the perspective of the researcher, academic rhetorical devices used primarily to express authorial stance, while *appeal*, indicating an appellative or persuasive function of management science dissertation summary texts refers to the language the author (or translator) of the text may use to appeal to the reader, to persuade the audience of the salience of the research, to describe the practical implications or to provide

recommendations.

Buhler has particularly contributed to the research of deixis by recognising deictic signalling, or factual deixis, and anaphoric signalling and providing a thorough analysis of the phenomenon of deixis (2011: 91 – 165).

Buhler's theoretical framework has served as a foundation for subsequent research in cognitive linguistics, carried out by Jakobson and Halliday, to name just a few. In the extended model of language communication, Jakobson (1960: 66) highlights the code and the social context of communication and discerns the following constituent factors of communication permitting the visualisation of a speech act: the addresser, the context, the message, the contact, the code, and the addressee. According to Jakobson, the message cannot be understood without its context established by the addresser; both the addresser and the addressee should at least partially share and understand a common code. Each of the six factors determines a different function of language (ibid.). Jakobson discerns the following language functions: (1) the referential, 'denotative', 'cognitive function'[context], as the leading function, combined by other functions, such as (2) the 'emotive' or 'expressive' function, which is focussed on the addresser and expresses the speaker's attitude and intent, (3) the conative function, with the orientation toward the addressee, the effect that the message is expected to have on the addressee (Jakobson 1987: 67), expressed by the vocative and the imperative; (4) the phatic function, expressed by phrases serving to establish, prolong, or discontinue communication, to attract attention or confirm that the interlocutor is still paying attention; (5) metalingual function, related to the lexical code the communication participants are using, and (6) the poetic function, whereby the message not only carries information, but becomes an aesthetic object itself (Jakobson 1987: 68).

It can be stated that in Jakobson's model, from the perspective of dissertation summary texts, the addresser is the researcher, the author of the management science dissertation summary, communicating the findings and insights of the study, conducted and described in the respective dissertation. The author shares the authorship with the translator, whose responsibility is to convey the author's ideas and findings in such a manner that they can be understood by the respective audience.

The message the researcher is conveying to the academic community is represented by the dissertation summary text itself, whereas the broader context of the message is constituted by management science research, theories, and their practical applications. The context is influenced by the academic and scientific writing traditions and conventions of the respective community the audience represents.

Referring to Jakobson's model, the contact with the target academic audience is implemented by using channels through which the ideas and insights disclosed in the dissertations and their summaries are disseminated and undergo approbation, such as conference presentations, publication of articles on the aspects of respective research disclosed in the dissertations and their summaries in academic journals and conference proceedings, inclusion of the dissertation summary texts into the respective databases and corpora for subsequent studies.

The code of the academic language to be 'decoded' and understood by the scholarly audience, in turn, is reflected in specialised terminology, theoretical frameworks and methodological approaches described in the dissertations and their summaries.

The metalingual function, in turn, is implemented through effective encoding and interpretation of key concepts, theories, and research methods, the specialised language and contextual factors disclosed in the dissertations and their summaries both by the authors and the translators, whereby the responsibility of the translators is to ensure that the author's ideas are adequately represented and are not lost in the translation.

Jakobson's model has permitted the analysis of the synergy of the different communication elements in the context of management science doctoral dissertation summaries:

The texts of management science dissertation summaries employ specialised language both from the perspective of academic communication and the language and terminology of management science. Adding to the communication models described by Buhler and Jakobson, Roelcke (2024: 203) derives the linguistic definition and explains the functions of specialised communication, based on his model of linguistic communication. Table I presents a model proposed in the present study. The model synthesizes the functional approaches of Bühler (1934) and Jakobson (1960), and is further informed by perspectives on specialised communication (Roelcke, 2024).

Table 1

Functional categories in the proposed model (author's synthesis based on Bühler (1934), Jakobson (1960), and informed by Roelcke (2024)).

| Component of communication | Function in the proposed model | Function according to Jakobson (1960) | Function according to Bühler (1934) |
|---|---|---|---|
| Text producer | symptomatic (speaker-oriented) | emotive | symptom |
| Text recipient | appellative (receiver-oriented) | conative | appeal |
| Specialised context | referential (context-oriented) | referential | symbol |
| Specialised knowledge | epistemic (knowledge-oriented) | — | — |
| Text / response | aesthetic (text-oriented) | poetic | — |
| Communication medium | phatic (channel-oriented) | phatic | — |
| Sign system | semiotic (code-oriented) | metalinguistic | — |
| Common co-text | discursive (text-internal context) | — | — |
| Common context | situational / social / cultural (extra-textual context) | — | — |

Source: author's synthesis based on Bühler (1934), Jakobson (1960), and Roelcke (2024).

The model of specialised communication proposed by Roelcke highlights the interaction between domain-specific language and its practical application in professional contexts. In the present study, this framework is applied to the analysis of management science dissertation summaries, with particular attention to the use of specialised terminology, the accessibility of the theoretical content, and the extent to which technical language facilitates communication both within expert communities and for broader audiences.

In the model presented above, the symptomatic function in the context of dissertation summaries may be related to the sender and interpreted as reflecting the author's stance, perspective and motivation underlying the research. The appellative function relates to the engagement of the audience, inter alia, the extent to which the

text captures attention, facilitates comprehension of key ideas, and encourages further reading. The referential function serves to convey factual information, such as research objectives, methodology and results, whereas the epistemic function complements the model by emphasising the role of the summary in constructing and disseminating knowledge through the presentation of new insights and findings.

The specialised text of the language of science reflected in management science dissertation summaries performs an aesthetic function, represented by clarity, coherence and readability. The specialised sign system, including the presentation of visual elements such as tables, charts and graphs, contributes to the effective communication of complex information and represents the semiotic function. The phatic function, in turn, is related to the communication medium, ensuring continuity of interaction, whereas the discursive function is represented by the linguistic co-text, while the broader non-linguistic context performs situational, social and cultural functions.

Thus, it may be inferred that dissertation summaries play a crucial role in ensuring the accessibility of research findings and stimulating scholarly discussion within the academic community. No matter whether the translator of the dissertation summary is a hired professional or the author of the dissertation, the role of the translator is to ensure the accessibility of scientific information expressed in the dissertation across linguistic boundaries.

Halliday perceives language as 'social semiotic' (Halliday, 1978: 2), concentrating on meaning, and paying particular interest to the use of language in a specific situational and cultural context. According to Halliday features of a text are related to the situation in which the text is used. Halliday maintains that "language arises in the life of the individual through an ongoing exchange of meanings with significant others" (ibid.), therefore, language serves as a medium of communication between people. Halliday's findings are especially important for the field of translation, since the author and the translator have to be as precise as possible in evaluating the social and communicative background of the translated text and be aware of "the choices people make within the linguistic systems at their disposal ('textual function') in response to their social ('interpersonal function') and cognitive ('ideational function') needs. The three functions (or 'metafunctions') provide the basic architecture of the approach within which the key concept is the network (or system) of choices. Taken

together, these features explain the use of 'systemic-functional linguistics' as the name for his approach" (Malmkjær 2009: xxxv).

Studies devoted to the communicative aspects of the language of science encompass reader-writer interaction, the expression of evaluation and opinions (Biber 1999), the hedging expressions or hedges (Swales 1990; Hyland 1998; Salager-Meyer 1994). The elements mentioned above help to adjust the content to the specific audience and ensure that the information is presented in an engaging and credible manner. To preserve the original intent and impact of the summary texts in translations, the mentioned aspects, along with coherence, clarity, and conciseness have to be carefully preserved, especially given that some of the management science terms in English do not even exist in Latvian and have to be translated in a descriptive manner, not to mention that terms in Latvian may also have parallel forms, one of them being a loanword, while the other is a lexeme of native origin. In order to ensure effective communication in academic writing, both the authors and the translators have the obligation to comply with the expectations of the audience and the conventions of the genre.

Without doubt, the translated language of science texts serve the communicative function as well. As Schäffner has pointed out: "translation has often been characterised as an act of communication across linguistic and cultural boundaries (Schäffner 2019: 28). The communicative approach to translation in linguistic theory is represented by Kade, Jäger, and Neubert of the Leipzig School, who perceive translation as a specific communication activity (Kade 1968). Linguistic research is considered to constitute an important part of the process, but in a broader communicative context, also focusing on situational constraints (Jalayeri 2010).

The translations of management science doctoral dissertation summaries can be attributed to the public domain. The texts are published on the sites of the respective universities, and translations are done by professional translators or sometimes by doctoral students submitting the summaries for defence (Latvian into English). Schmied (1994:171) emphasises that there are several interested parties comprising the readership of the management science dissertation summaries, and singles out three types of public translation domains:

a) international publishers, where internationally interesting texts from one language and culture are transferred into another language or culture,

b) international agencies, where information has to be distributed to various national agencies, and

c) bicultural institutions, where texts from one target culture have to be translated specifically for the readership in another target culture.

Clearly, the dissertation summaries researched in the present study pertain to the third category: as the dissertations are defended in Latvia, they are part of the language of science discourse of Latvia, but they are also of interest to broader research communities globally, *inter alia* in the native countries of the doctoral students if their country of origin is not Latvia. Management science dissertation summaries are also read by academia, branch specialists, and students in more than one country.

When defining discourse, Hyland refers to the definition provided by Kress (1989: 07) that discourses are "systematically organised sets of statements which give expression to the meanings and values of an institution." Hyland and Salager-Meyer (2008: 02) perceive academic writing as a social, communicative activity, arguing that "successful academic writing depends on the individual writer's projection of a shared professional context. Writers seek to embed their writing in a particular social world, which they reflect and conjure up through approved discourses. As a result, the genres of the academy have attracted increasing attention as they offer a rich source of information about the social practices of academics. Texts, in other words, are socially produced in particular communities and depend on them for their sense, so that by studying the ways academics write, we learn more about disciplinary inquiry and how knowledge is constructed, negotiated, and made persuasive".

When researching the texts relevant to the present study, one of the important aspects to be considered is the discourse community. Swales elaborated the concept of discourse communities (1990: 217) based on the definition provided by Herzberg (1986:1): "Use of the term 'discourse community' testifies to the increasingly common assumption that discourse operates within conventions defined by communities, be they academic disciplines or social groups. The pedagogies associated with writing across the curriculum and academic English now use the notion of 'discourse communities' to signify a cluster of ideas: that language use in a group is a form of social behaviour, that discourse is a means of maintaining and extending the group's knowledge and of initiating new members

into the group, and that discourse is epistemic or constitutive of the group's knowledge". To clarify the term "discourse community" Swales formulates a question of how a particular discourse community uses its discoursal conventions to initiate new members or how the discourse influences particular values and beliefs (Swales 1990: 218) and provides six necessary and sufficient defining characteristics for identifying a group of individuals as a discourse community:

a. a broadly agreed set of common public goals,
b. the presence of mechanisms of intercommunication among its members,
c. the use of participatory mechanisms primarily to provide information and feedback,
d. utilising and possession of one or more genres in the communicative furtherance of the aims,
e. specific lexis in addition to owning genres,
f. a threshold level of members with suitable degree of relevant content and discoursal expertise (Swales 1990: 221–223).

Hyland (2015c: 295) emphasises the importance of discipline in defining discourse community as follows: "…corpus studies show discipline to be a decisive factor in the construction of academic genres. Individuals use language as members of social groups and they write essays, theses and articles by framing problems and understanding issues in ways specific to their disciplines" (Hyland, 2004).

Hyland and Bondi also describe the discourse community from the perspective of texts and contexts: "With the idea of discourse community we arrive at a more rounded and socially informed theory of texts and contexts. It provides a principled way of understanding how meaning is produced in interaction and proves useful in identifying how writers' rhetorical choices depend on purposes, setting, and audience (e.g., Bruffee 1986; Starfield 2002). When applied to academic domains, the expression of community in the notion of discipline therefore offers researchers a framework for conceptualising the expectations, conventions and practices which influence academic communication and help determine the life chances of thousands of students and academics around the world" (Hyland & Bondi 2006: 20).

When addressing academic discourse, Hyland characterises it as referring

to the ways of thinking and using language existing in the academy (Hyland 2011: 171). Hyland points out that dissertation texts are central to the academic enterprise. Dissertation summaries are secondary texts related to the dissertations and often serve the salient role of providing detailed information about the dissertations to the readership, albeit in a different language. As such, they are important in the dissemination and advancement of knowledge and ideas, expressed in the dissertations. Hyland remarks that academic discourse also determines the social roles and relationships between the academics and students and that the academic discourse sustains the universities, the disciplines, and the creation of knowledge itself. "Individuals use language to write, frame problems and understand issues in ways specific to particular social groups and in doing these things they form social realities, personal identities and professional institutions". Hyland places discourse 'at the heart of the academic enterprise' as "the way that individuals collaborate and compete with others, to create knowledge, to educate neophytes, to reveal learning and define academic allegiances. The academy cannot be separated from its discourses and could not exist without them. No new discovery, insight, invention or understanding has any significance until it is made available to others, and no university or individual will receive credit for it until it has seen the light of day through publication" (ibid.).

Hyland (2011: 173) points out that, confronted with the discoveries of the sociology of scientific knowledge, the perception of academic discourse has shifted from seeing it as "independent demonstration of absolute truth". Hyland argues that texts cannot be seen as accurate representations of "what the world is really like" because this representation is always filtered through acts of selection and foregrounding, and thus data can always be interpreted in more than one way. Thus, it becomes important to study how the researchers prove their claims and produce argument, to research texts in order to discern their textual practices of producing argument.

For the domain of translation, concepts of discourse are important for several reasons. As pointed out by Schäffner (2019: 28), translation can be characterised as an act of communication across linguistic and cultural boundaries, with source text and target text representing language in use. Schäffner remarks that "translators are faced with texts whose content and linguistic structure depend on the specific aim for which they have been produced, in short, they represent

language in use" (ibid.).

Schäffner emphasises that "language in use is always socially situated, contextualised, in time, space, and culture, and fulfilling specific communicative purposes". Schäffner (2019: 28–29) points out that the term *discourse* encompasses not only speech, but also text, and deals with the common features "beyond one individual text". Such common features can be related to text typologies and genres, such as common features of the genre, the texts created by a specific author, or texts pertaining to a specific field, such as the language of science texts, or a common topic, such as in the case disclosed in the present dissertation the discourse of management science dissertation summaries and the genre they represent.

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

Primary texts refer to original scientific research papers, authored by researchers conducting studies, presenting discoveries, and discussing them, such as dissertations. Secondary texts, in turn, are publications that analyse, review, or summarise the content of the primary texts, such as the summaries of doctoral dissertations. Weinreich (2010: 42) points out that the original texts are to be considered primary scientific texts, while secondary texts are understood by German-speaking linguists as "reproduction of primary texts" (Weinreich, 2010: 44), i.e., texts that reflect the knowledge of the original primary text in a concentrated way.

According to Göpferich, secondary texts, as derived texts, are closely related to primary texts (Göpferich 1995: 132) and can be published independently of primary texts. Dissertation summaries belong to this group of secondary texts.

In her classification of the texts, belonging to the language of science, Göpferich (*ibid.)* also singles out the so-called auxiliary texts or paratexts with metainformation [in German *Auxiliartexte*]. In scientific communication, such texts are components of the scientific text, such as keywords, words of gratitude, or abstracts that are never published independently of the primary texts. In some writing traditions, the texts of dissertation summaries, especially public summaries, belong to the mentioned text type.

In order to establish what specifically are the factors influencing diversity in the text types of doctoral dissertation summaries in different writing traditions,

it might be worthwhile to examine a broader range of text classifications in the language of science.

Mention should be made of the German linguist Gläser's (1990; 1998) multi-stage classification model for special-purpose texts (including the language of science texts). In this model, R. Gläser considers the extralinguistic factors of specific text types, such as *the field of communication*, *the basic communicative function of the text type*, and *the criteria of textuality*. At the highest level of abstraction, Gläser first groups written and oral texts according to the field of communication (communication partners), namely, the symmetry or asymmetry of communication, distinguishing between texts intended for communication between professionals in the field (symmetrical communication) [in German *fachinterne Texte*] and between professionals in the field and non-professionals (asymmetrical communication) [in German *fachexterne Texte*]. In addition, Gläser (1990: 47) points out that the degree of specificity (scientificity) of texts may vary (from high to low). In the next level of hierarchy below this level, based on the communicative function of texts, R. Gläser distinguishes four groups of text types: sector-specific information texts, person-to-person/ contact texts, directive texts, and didactically adapted texts. In the next stage, based on the principles of textuality, the researcher distinguishes between "well-formed" types of texts (in German: *wohlgeformte Texte*) and "quasi-text types" (in German: *Quasi-Texte*) as well as primary and secondary texts (in German: *Prätexte* and *abgeleitete Texte*). Primary text types in this sense are texts that generate new information and are designed to circulate and transmit information, while derived texts are created by processing primary text information. The specific types of texts used in science communication are ranked at the lowest stage in each of these groups. According to this classification model of special-purpose texts (here, scientific communication texts) proposed by Gläser, the dissertation is to be classified as a primary type of text providing sector-specific (scientific) information intended for specialist (scientific) communication, while the dissertation summary is a secondary text, providing information on the respective dissertation. From the point of view of the translation of the language of science texts, the importance of Gläser's classification model has been singled out by Kußmaul (2004: 634). Even though Kußmaul (2004: 637) mentions that for translation it is important not only to understand the typology, but also to discern how different text types are reflected

in different cultures.

Another typology by the communicative function that can be distinguished in German linguistics in relation to the ways of grouping scientific communication texts is the typology of texts proposed by Göpferich in the field of natural sciences and technology (Göpferich 1995). According to the typology of Göpferich (1995, 124), it can be concluded that the communicative function of dissertation summaries is to provide information about the relevant dissertation.

At the highest level of typology, Göpferich, according to the type of communicative function of texts, distinguishes four groups or types of special-purpose texts: legal normative texts, progress-oriented innovation texts, didactic instructional texts, and knowledge summarising texts (Göpferich 1995: 124). By arranging these four types of texts listed on the same level, the degree of specificity of the texts decreases, thus increasing the number of potential recipients from industry specialists to a wide range of recipients. It should be noted that the communicative function – to provide information – is common to all these four types of texts. The types of the specified four groups are obtained by specifying the communicative function by the kind of information communicated and the purpose of communication.

At the first level, texts are classified according to their communicative function, in particular their orientation towards theory or practice. At the second and third levels, texts are classified according to their mode of information presentation and their optical and stylistic features. At the fourth and fifth levels, a distinction is made between primary and secondary texts (Göpferich 1995: 124). The significance of Göpferich's matrix of "Written Text Varieties for Science and Technology" for translation has been singled out by Wright (2012: 04) as "the most useful pragmatic framework for working translators". Wright (2012: 05) complements the matrix developed by Göpferich with electronic publication aspects and translation-specific varieties.

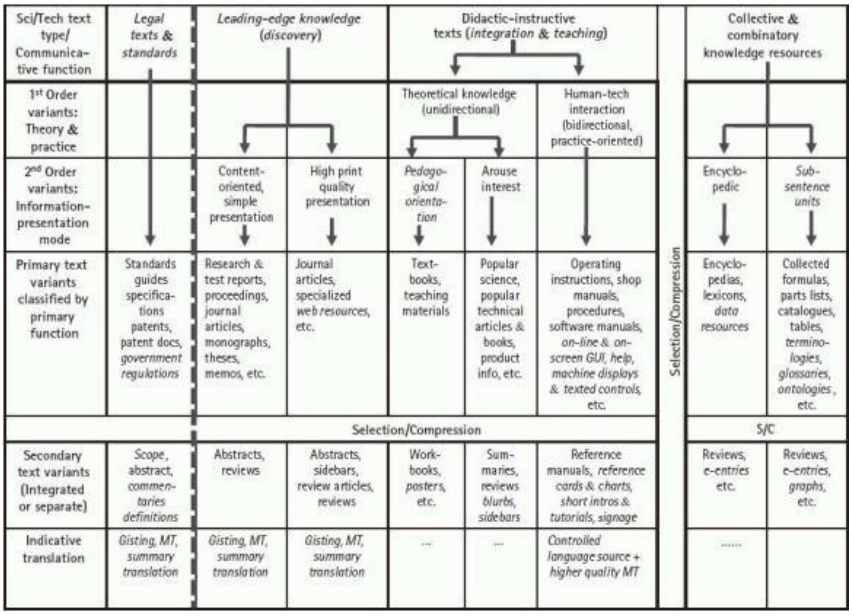


Figure 2. Continuum of scientific and technical texts; based on a chart by Göpferich (1995). Italics indicate instrumental modifications in the chart (Wright 2012: 05).

Both Göpferich and Wright, in their classifications, analyse scientific and technical texts based on the type of information they provide and assign certain communicative functions to each of the text types. The authors point out that the main function of these texts is to provide information. Whereas the primary texts inform the readers about significant progress-oriented discoveries and ensure the creation of knowledge, the communicative function of secondary (derived) texts is to provide information on the primary texts.

Wright (2012: 05) complements the matrix developed by Göpferich with electronic publication aspects and translation-specific varieties. The chart reflects the subject field, the register, the text type and text variety of the language of science texts and points out that the function of the secondary texts is to summarise the contents of the primary texts.

Pipere and Znotiņa (2018: 77–78) group the texts of scientific publications into three categories: primary texts, such as original peer reviewed publications, including dissertation texts, describing original research presenting new discoveries; secondary publications, such as dissertation summaries, in turn describe, analyse, evaluate, interpret, summarise or reorganise the information researchers provide in primary publications; tertiary publications in turn address a

wider audience, and encompass encyclopaedias, manuals, textbooks and similar publications. The classification into primary and secondary texts and paratexts, in turn, is proposed by Laiveniece (2015a: 75). It has been detected that paratexts, such as *words of gratitude*, may differ from the primary and secondary texts, especially in the expression of the authorial stance. In scientific communication, summaries containing concentrated information about the knowledge disclosed in the primary dissertation texts can be attributed to a group (text type) of secondary or derived texts. Dissertation summary texts so far have been researched in Latvia from the perspective of social sciences and from a general perspective: available studies pertain to the introductory texts of doctoral dissertation summaries (Dubova & Proveja: 2018; 42–51) and wording detected in the introductory parts (Lele-Rozentāle & Egle 2018: 92–101). However, depending on the field of science and the sub-sector, the specific structural elements of the dissertation summaries may differ.

As it has been demonstrated by the text classification models described above, research texts are grouped into primary and secondary (derived) texts. Primary research texts in scientific communication are considered to be the most important group of texts on original research. Dissertations may be ranked as belonging to the group of these texts, while dissertation summary texts belong to secondary texts.

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

In the present dissertation, in order to arrive at the classification of different text types, styles, and genres in the language of science multilevel text models, where texts are grouped according to the level of abstraction, have been explored. For the purpose of classification, some researchers distinguish between the terms denoting text type (ger.) *Texttyp* and (ger.) *Textsorte*, where *Texttyp* is used in order to group the texts into theoretical categories according to the highest level of abstraction (Heinemann & Heinemann 2002: 143), while *Textsorte* is used to describe the class of texts mainly according to their communicative function. Schmied (2011: 19), citing Hyland (2006: 221), describes the features of good academic writing in the text as follows:

"Texts are explicit, with clear discussion of data and results.

Texts follow an inductive "top-down" pattern, with topic sentences and an

introduction to help readers see where the text will lead.

Texts contain metadiscourse, such as *to summarize*, *in conclusion*, *firstly*, *secondly*, etc., to help guide readers through the argument.

Texts are emotionally neutral and strive to appear objective.

Texts contain hedges like *probably* and *might* to avoid sounding too confident.

Texts are intertextual, drawing on other texts for their structure, form, and patterns of argument.

Texts adopt the right tone to show appropriate confidence and modesty. Texts acknowledge prior work and avoid plagiarism.

Texts comply with the genre requirements of the community or classroom".

The mentioned classification of texts has also served as a basis for text analysis in the present dissertation. Schmied (2011: 1) emphasizes that "the understanding of academic writing has changed fundamentally from a formal text-based perspective to a functional perspective that concentrates on the writer and the writing process and, even more, on the reader and the cognitive construction of discourse in a community".

Kretzenbacher (1998: 137) characterises the language of science texts as argumentative and persuasive, and emphasises the culture-specific nature of these texts.

Different language of science text types have not been researched to an equal extent, as Bunton (2005: 207) remarks "the genre analysis of academic writing has tended to focus on the research article (RA) far more than on longer theses and dissertations for research degrees", in turn the detailed description of language of science text types, introduced by the prototype approach (Schmied: 2015) can provide an overview of the perceived position of significance the texts researched in the present dissertation occupy.

J. Schmied provides a classification of genres as represented in Figure 3.

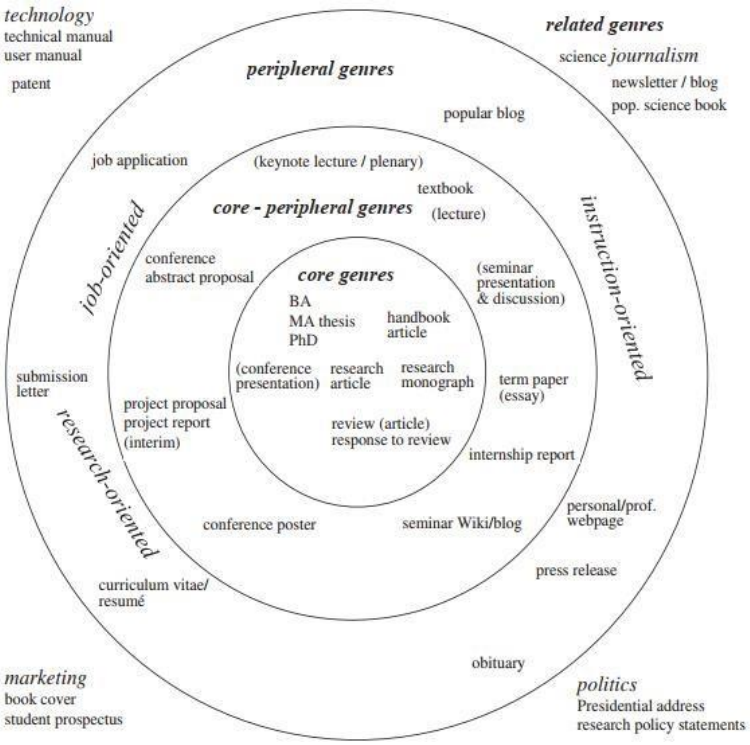


Fig. 3. A prototype approach to academic writing (Schmied, 2015:11)

Schmied perceives a PhD thesis as one of the core text types of academic writing, but does not single out summaries of PhD theses, given that in some academic traditions, a summary is not a separate document. However, it can be concluded that to explore the language of science, it has to be perceived as a system, consisting of different text types, which can be researched according to different models, built on the basis of different traditions or expectations of the respective audience. It can be inferred that the texts pertaining to different genres in the understanding of Schmied may differ depending on the field, communicative purpose, and academic writing conventions. The mentioned traditions and expectations manifest themselves first of all in the macrostructure of the respective language of science text type, *inter alia,* dissertation summaries in management science.

The explored classifications of texts in the language of science highlight the complexity of these texts, based on different writing traditions and target audiences. In the examined classifications difference between primary texts, such

as dissertations presenting original research, and secondary texts, such as dissertation summaries providing condensed information about the primary texts, has been indicated. The mentioned classifications, especially those proposed by Gläser and Göpferich, emphasise the role of communicative function and the audience in determining the characteristics of these texts. Additionally, the significance of understanding genre conventions and the macrostructure of these texts, particularly in the context of management science, could be singled out.

In the present dissertation, management science dissertation summaries are researched, and taking into account that the language of science is viewed as a form of *professional communication*, it can be inferred that the mentioned term is an important notion for understanding the theories disclosed herein. In a broader sense, professional communication research involves the study of communicative practice in organised contexts (including both business and scientific settings to determine how communicative practices influence and are influenced by culture, technology, and theories of communication (Hans & Hans 2014: 72). It might be useful to discern the notion of sublanguages applied to sector-specific areas, such as computational linguistics or statistics.

Professional communication and the texts pertaining to professional communication occupy a very high position in the classifications of the linguistic models examined in the present dissertation and involve efficient language use in a professional context to convey precise information to a specific audience. The mentioned approach to communication emphasises the importance of context, analysis of the audience, discourse conventions, and the effective structuring of information. Halliday's (1978: 02) Systemic Functional Linguistics (SFL) model highlights how different purposes (or 'metafunctions') of language—such as ideational (conveying information), interpersonal (establishing relationships), and textual (organising information) shape successful professional communication. An example of the professional communication perspective can be found on the website of the University of Tampa, where professional communication is defined as “a specialty subfield of communication that pays close attention to the theories and practice of communication

within professional contexts" (UT-e: 2025).

This perspective helps identify how professionals can tailor the texts they create to accommodate the informational needs of their audience while also situating their message within the relevant social context. Management science dissertation summaries have to disclose complex research findings in a concise way that allows a variety of stakeholders, including academics, industry practitioners, and policymakers, to understand the main ideas disclosed in the dissertations and presented in the summaries, crafted in such a way that the readership would retain interest and engagement while reading the summary texts. From this point of view, effective academic writing may be related to ESP (English for Specific Purposes) and EAP (English for Academic Purposes).

Besides, given that in the present dissertation translation of management science dissertation summaries has been researched, one of the main considerations is how translators could evaluate the texts they have to translate. Wright (2012: 02) singles out the following: the language of the source text; the potential language(s) of the target text(s); the subject field(s) of the source text, which is/are embodied in: special language terminology; source language constraints and conventions anticipated by the target language audience for the subject field; the source text register and the appropriate target language register; the source language text class factors, such as type and variety and desired target text class factors; presentation issues, such as layout and medium; the specification of translation job parameters. Thus, the notions *special language*, *style*, *text type, register* and *genre* have to be analysed.

Wright (2012: 02) defines the subject field of the text from the language of science text translation perspective as coordination with its special language. The scientist also remarks that 'language for special purposes' (LSP) can be confusing, as it is often associated with foreign-language pedagogy. The scientist defines special language as "a language used in a subject field and characterised by the use of specific linguistic means of expression, [which] always include(s) subject-specific terminology and phraseology and also may cover stylistic or syntactic features".

The notion of management science as a language domain is important for researchers and translators alike. First of all, management science, founded by Frederick Taylor, is a broad, interdisciplinary field of decision making and problem solving within organisations with strong ties to economics, engineering, management, business administration, and other fields. Management science implements various

scientific principles such as mathematical models, algorithms, and statistics. The objective of management science is to increase and improve the capital of a company and to make more precise and rational decisions. Management science helps organisations reach their goals using scientific principles and methods, and can be defined as a problem-solving process used by an interdisciplinary team to develop models that represent simple and complex functional relationships and provide management guidance for decision-making ($TH_{-e}$). Thus, management science has a wide range of terms, is specific and describes a defined set of phenomena, albeit in different sectors of economics. The language of science texts may also be related to the discipline of academic writing and perceived as pertaining to English for Specific Purposes (ESP), which has emerged as a response to the needs of international students to master academic writing and of researchers with native languages other than English to publish in English (Dudley-Evans & St John, 1998: 122). The findings of ESP are based on the theory developed by Halliday, MacIntosh & Strevens (1964). Hyland (2018a: 01) defines English for Specific Purposes as "referring to language research and instruction which focuses on the specific communicative needs and practices of particular social groups".

In contrast to the perspective of LSP as described by Wright (2012: 02), Kretzenbacher (1998: 133) argues that the language of science texts in general may be perceived as texts of the *language for specific purposes* or *special language.* The importance of the subject field of the text for translation and coordination with its special language, in turn, as well as the need for translators to pay attention to both the use of terms in the source and target language, is singled out by Wright (2012: 1).

Reader-oriented research emphasizing the mediation between writers/institutions/cultures, and conventions "describing the stages which help writers to set out their thoughts in ways readers can easily follow and identifying salient features of texts which allow them to engage effectively with their readers" has been singled out by Hyland (2010: 194), when characterising EAP (English for Academic purposes). Hyland and Hamp-Lyons (2002: 2) define EAP as referring "to language research and instruction that focuses on the specific communicative needs and practices of particular groups in academic contexts".

The main findings of EAP provide a fundamental basis for research on the language of science concerning reader–writer interaction. Schmied characterises

English for Academic Purposes as follows: "I see academic writing as an important, if not the most important, part of academic language behaviour in a discourse community. This discourse community uses English for Academic Purposes in research and teaching/learning, not only in universities in native-speaker cultures but also in universities where English is used as an international language or *lingua franca* at levels of international cooperation, where researchers […] are non-native speakers of English" (Schmied 2011: 2). It can be inferred that the texts of the management science doctoral dissertation summaries pertain to EAP, as well as to the field of the language of science and are sector-specific texts researched in the present study, based on the material from the defended doctoral dissertations.

Some of the basic notions used in the study of the language of science pertain to the theory of functional styles. The theory has been elaborated by Jakobson (1960), who developed a model of language functions. According to Aaronson, "in science writing, the best style is transparent; the reader sees through the words to the underlying phenomena and concepts. The best scientific writing is characterized by brevity, clarity, and precision" (1977: 02). The above principle has been further elaborated by many authors, *inter alia* Rabinowitz and Vogel (2009: *vii*), who emphasize precision, clarity and veracity "a profound sense of reality—a connection to the genuine human thought processes that gave rise to theories; to the details and vicissitudes of the experiments that support one contention or another; to the real-life circumstances of science and to the very human concerns that colour what on the surface seem to be highly theoretical concerns, even when dealing with the hardware and measurements of the laboratory" as well as the concept of scientific writing as a social and educational enterprise. The scientific writing style is also characterised by a clear structure and emotional neutrality.

The scientific functional style has been examined in Latvian linguistics, most notably by Rozenbergs, who characterises it as a form of language used for the expression and structuring of specialised knowledge. Rozenbergs (1995: 83–85) emphasises the predominantly monologic nature of scientific discourse, as well as its reliance on means of intellectual expression, emotionally neutral lexis, specialised terminology and internationalisms. At the same time, he notes that excessive use of loanwords should be avoided where appropriate equivalents exist

in Latvian. The scientific functional style is further characterised by precision, clarity and logical coherence, with particular emphasis on the structured presentation of facts, analysis and conclusions.

Apart from emphasis on objectivity and an impersonal approach to writing scientific prose, in the light of communication models designed by Buhler (1934), Jakobson (1960), and Roelcke (2024), it becomes clear that there are more factors to be taken into account than those pertaining to the functional styles. A more precise approach in conjunction with the communicative purpose and communicative function is ensured by the notion of *genre* in academic and research settings. The term genre is defined as a *kind* or *manner* (OED-e, 2023). In the Anglo-Saxon tradition, the genre traditionally denotes the intent of the communicator, such as narrative, procedural, expository, hortatory, and descriptive genres (GLT-e, 2023).

Swales defines genre as "a class of communicative events, the members of which share some set of communicative purposes which are recognised by the expert members of the parent discourse community" (Swales 1990: 58). At the same time, genres are also structured according to specific expectations of the target audience, therefore in the present dissertation attention is paid to the macrostructure and microstructure of management science dissertation summaries.

Bhatia (2014: 26–27) characterises genres as follows:

1. "Genres are recognisable communicative events, characterised by a set of communicative purposes identified and mutually understood by members of the professional or academic community in which they regularly occur.
2. Genres are highly structured and conventionalised constructs, with constraints on allowable contributions not only in terms of the intentions one would like to give expression to and the shape they often take, but also in terms of the lexico-grammatical resources one can employ to give discoursal values to such formal features.
3. Established members of a particular professional community will have a much greater knowledge and understanding of the use and exploitation of genres than those who are apprentices, new members or outsiders.
4. Although genres are viewed as conventionalised constructs, expert members of the disciplinary and professional communities often

exploit generic resources to express not only 'private' but also organisational intentions within the constructs of 'socially recognised communicative purposes.

5. Genres are reflections of disciplinary and organisational cultures, and in that sense, they focus on social actions embedded within disciplinary, professional, and other institutional practices.
6. All disciplinary and professional genres have integrity of their own, which is often identified with reference to a combination of textual, discursive, and contextual factors."

Some other important considerations that Bhatia (2014: 29) mentions when characterizing the construct of genre, are as follows: "genres, even though they are identified on the basis of conventionalized features, continually develop and change; expert members of professional communities use and create typical textualization patterns; genres serve typical socially recognized communicative purposes and may convey private or organizational intentions; in reality genres are often seen in hybrid, mixed and embedded forms; different members of discourse communities have varying perspectives on and interpretations of genres; genres used in academic contexts can be interdisciplinary and have disciplinary variations"; and finally, even though "genre analysis is typically viewed as a textual investigation, yet comprehensive analyses tend to employ a variety of tools, including textual analyses, ethnographic techniques, cognitive procedures, computational analysis and critical awareness, to name only a few" (ibid.), as the case may be.

The research of Hyland (2008, 2015b) is especially important in the field of the language of science, documenting the range of functions and grammatical constructs in scientific texts, as well as specifying the genre. Hyland (2015b: 32) remarks that "few concepts have had a greater impact on how we understand and teach language than genre". Perception of genre is offered by Hyland as a term for grouping texts together, representing how writers typically use language to respond to recurring situations (Hyland 2008: 543) and highlights the importance

of prior texts of the same kind in determining the structure of a specific publication. Thus, the concept of genre as described by Hyland indicates the use of specific text organisation, including observing a certain tradition, compliance with which is expected by the audience. The mentioned idea highlights the importance of researching the dissertation summary macrostructure and microstructure, especially the expression of authorial stance.

According to the classification indicated above, management science dissertation summaries clearly pertain to the formal academic writing style and represent the language of science texts. However, *genre, register*, and *text type* need further interpretation. Lee (2001: 37) problematizes the issue of distinction between different classification categories by stating that different linguists and literary theorists describe the mentioned terms in different ways, and points out that researchers need to know exactly what kind of language they are describing. Lee (2001: 38) remarks that "*genre* can be defined as a category assigned on the basis of **external** criteria such as intended audience, purpose, and activity type, that is, it refers to a conventional, culturally recognised grouping of texts based on properties other than lexical or grammatical (co- ) occurrence features, which are, instead, the **internal** (linguistic) criteria forming the basis of text type categories" that according to Biber (1988: 170) are assigned on the basis of use rather than on the basis of form. Swales (1990: 27), in turn, mentions that a discourse community utilises and hence possesses one or more genres in the communicative furtherance of its aims. Lee (2001: 40) points out that some scientists use the notions *text type* and *genre* interchangeably. The same idea is also supported by Biel (2018: 152), who maintains that the two concepts are related; however, *genre* evokes the social context of use and associated concepts, while *text types* group texts at a higher level of abstraction.

Lee (2001: 47) argues that even though the terms *genre* and *register* are sometimes used interchangeably, the term *genre* is preferable when describing groups of texts collected and compiled for corpora or corpus-based studies. Lee describes the mentioned groups as "more or less conventionally recognisable as text categories, associated with typical configurations of power, ideology, and social purposes, which are dynamic/negotiated aspects of situated language use" (ibid.).

Reiss emphasises that from the perspective of *Skopos* theory, "text typologies help the translator specify the appropriate hierarchy of equivalence levels needed for a particular translation" (Reiss & Vermeer 1984:156). Based on Buhler's 'Organon

model (1934), Reiss (1989:105) singles out two basic notions of text typology, namely, *Texttyp* according to the communicative function and *Textsorte* according to both the linguistic properties of the text and conventions, which broadly corresponds to the Anglo-Saxon classification of text types (Schmied, 2015), as indicated above.

Nord (1997: 37 – 53) remarks that, based on the German concepts of text classification usage register is at least partly determined by issues of text type and text variety (genre). The scientist distinguishes the following properties of the two categories: *Texttyp* (categorization of the intention or function of a text or text segment) and *Textsorte* (class of texts based on common regularities in style, vocabulary, presentation, and intention, i.e. communication practices; see Nord 1997:53). Nord (1997: 37) remarks that the relationship between text type and variety is intersecting rather than hierarchic and points out that translators need pragmatic guidance in this regard rather than conflicting theory, therefore identifying type and variety of the text is crucial for the final translation product. Nord (ibid.) summarises the required translation strategy as making the text correspond to the text type in the target language community.

By summarising and systematising the selected sources according to the aspects of research in the language of science discussed in them, several rather extensive theme groups represented by original research can be distinguished, such as:

- studies on the macrostructure of a scientific text and its constituent elements (Kintsch & Van Dijk 1978; Van Dijk, & Kintsch, 1980, 1983);
- studies on the microstructure of a scientific text and its constituent elements (Kintsch & Van Dijk 1978; Van Dijk & Kintsch 1983),

Kinch and Van Dijk (1978: 365) provide a model for researching text, distinguishing microstructure from macrostructure; both authors elaborate on the concepts in their further publications. Van Dijk (2012: 600) highlights the importance of macrostructure in research texts and characterises macrostructure as crucial for the identification of global discourse topics, the planning and recall of discourse in processing, as well as the description of many genre properties of text and talk – such as titles and abstracts in scholarly papers, conclusions in many kinds of discourse.

When analysing the texts of the language of science, the mentioned

classification has also been used by Latvian researchers. The classification of the language of science texts according to their macro- and microstructure is described by several scientists (Martinsone & Pipere 2018: 77); Dubova, Egle, & Proveja (2020: 33); Ansberga & Dubova (2020: 235); Egle & Tomase (2020: 281). The macrostructure of research articles in the social sciences, including the structural features of articles in economics and business, has been analysed by Egle, Kopankina and Tomase (2021: 145–151).

Dubova & Laiveniece (2021: 85) point out that in research articles *IMRaD* structure has been detected. The mentioned classification is used in the present dissertation, concentrating on the research related to the summaries of management science doctoral dissertations. Dubova & Laiveniece (2021: 85) conclude that further research on the language of science text macrostructure is necessary for other disciplines (such as management science – I.K.), and other text types (such as management science dissertation summaries, analysed in the present dissertation – I.K.). According to Dubova & Laiveniece (2021: 85), another research trend in the Latvian language of science is the study of the microstructure of scientific texts. For further research, specialised corpus of scientific texts is needed - by time periods, branches of science, types of texts, in order to determine whether the microstructure tendencies of the texts, for example, the impersonality of the author's expression, the ways of quoting and paraphrasing, references to research conducted by others, etc., are generalizable, i.e., applicable to the entire Latvian language of science, or whether they are specific, that is, different depending on the type of text, branch of science, the time when the study was described, etc. Such a perspective opens up a wide field of study.

Given that the texts of management science dissertation summaries for dissertations defended in Latvia in English and Latvian have not been previously researched, the present dissertation is intended to cover the research gap mentioned above by studying management science dissertation summaries written and translated into English and Latvian.

To choose the appropriate design and research methods for management science dissertation summary texts, first of all, the characteristic features of the mentioned texts have to be described.

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

The texts researched in the present study are summaries of management

science doctoral dissertations written and defended in Latvia and their translations into English and Latvian. In terms of volume and structure, in the study presented here, a dissertation summary is a text type that is specific to the academic writing traditions and the conventions of the language of science and management science texts in Latvia. Summaries of doctoral dissertations (theses) as a text type in the language of science exist in many countries. In Latvia, multilingualism and the dissemination of research results in science, as well as the preservation of the Latvian language of science, are ensured by several legislative documents. The current regulation of Latvia "Procedures and Criteria for the Awarding of a Doctoral Degree" (Cabinet of Ministers 2005 No. 1001) envisages that a summary of the doctoral thesis has to be written in Latvian (Cabinet of Ministers 2005 No. 1001: 8.3), whereas the translation of the summary of the doctoral dissertation has to be translated in a foreign language (Cabinet of Ministers 2005 No. 1001: 16.2.). The Law on the State Language, Article 15 of which refers to the language of document submission necessary for the award of a scientific degree stipulates that they should be submitted in the official language or a foreign language with a summary in the official language (VVL 1999 / 2000).

In practice, Latvian doctoral students predominantly draft their dissertation summaries in Latvian and translate them into English, while foreign doctoral students draft doctoral dissertation summaries in English and translate them into Latvian, even if their native language is not English. This is done with the intention to retain the research results of foreign students for the interested parties reading in Latvian, whereas the research results represented in the summaries written by the Latvian students gain more recognition abroad. This tendency highlights the importance of research pertaining to the language of science texts, such as management science dissertation summaries in Latvian and English. The translation of the mentioned summaries, therefore, plays a significant role in the dissemination of the research and deserves a comprehensive analysis.

The summary of a doctoral dissertation written in Latvia typically encompasses 35 – 70 pages in total, represents the scientific writing style and is a separate document.

However, as remarked by Swales (1990: 186), "the exigencies for meeting the requirement even in situations where the document is typically written in English vary quite widely from one country to another. The nature of 'the document' is also diversifying" (Swales, 1990: 186).

Thus, a dissertation summary in many cultures is part of the dissertation itself, not a separate secondary text written in the language of science. Summaries of theses or dissertations defended according to the traditions of some other countries are written in the language of popular science and are intended for a general audience as *public summaries.* In the Netherlands, the webpage of the Eindhoven University of Technology provides the following recommendations: "First, the candidate should highlight the societal significance of their work, particularly in the opening sentences of the summary. What effect will this work have on society in the future? Why is it important for healthcare, energy, computing technologies, building infrastructure, etc? Second, it's critical that the summary is written using language that would make it understandable and readable for a diverse audience" (ODPAC-e-Office of Doctoral Presentations and Academic Ceremonies, Eindhoven University of Technology: 2023). In Estonia, dissertation summaries are much shorter (around 10 to 15 pages) and intended for the audience of Estonian-speaking readers. Here it has to be remarked that in Latvia the perception of what the dissertation summaries will look like in the future is not improved by the Ministry of Education conceptual report "On the Implementation of a New Doctoral Model in Latvia" (Cabinet Order No. 345 2020) (MK-e), according to which it has been determined that in the future the summary of the doctoral thesis will no longer be an independent secondary text of the language of science, but only a constituent part of the doctoral thesis written in the language of popular science. "The doctoral thesis includes a summary in Latvian: the doctoral student does not have to submit a separately published summary of the doctoral thesis […] The doctoral thesis includes a brief explanation of the topic of the doctoral thesis and its relevance, the scientific and societal impact of the doctoral thesis in the style of popular science, in Latvian and another EU official language" (2020: 29). This kind of solution might not be beneficial for the Latvian language of science concerning term translation and knowledge dissemination in Latvian.

At present, in Latvia, the summary of a doctoral dissertation is a separate document linked to the dissertation. Doctoral dissertation summaries are published under the same titles as doctoral dissertations. Thus, structures similar to those in the doctoral dissertations are present in the dissertation summaries as well. "The

thesis or dissertation - terminology does not travel easily across the oceans - can either be a *rite de passage* into the targeted discourse community or an exit qualification that enables the holder to leave the university world and enter another one.

A PhD thesis represents a substantial and original research work submitted by a doctoral candidate as a requirement for obtaining a Doctor of Philosophy (PhD) degree. It is typically the final piece of academic work demonstrating the candidate's expertise in their chosen field of study and the ability to conduct independent research (UHD-e, 2026). Table 2 below summarises the definitions of a dissertation as provided by explanatory dictionaries:

Table 2

Definitions of a dissertation from explanatory dictionaries

| Source | Definition |
|---|---|
| Cambridge Dictionaries Online. Advanced Learners (CDO-e 2024) | a long piece of writing on a particular subject, especially one that is done in order to receive a degree at college or university |
| Merriam-Webster Dictionary (MWD-e 2024) | a long piece of writing about a particular subject that is done to earn an advanced degree at a university |
| Collins English Dictionary (CED-e 2024) | a long formal piece of writing on a particular subject, especially for a university degree |
| American Heritage Dictionary (AHD-e 2024) | a lengthy, formal treatise, especially one written by a candidate for the doctoral degree at a university; a thesis |
| Latviešu literārās valodas vārdnīca [The Latvian Dictionary of Literary Language (LLVV, 1972–1996)]; Tēzaurs [Thesaurus (TZ-e 2024)] | a scientific work that the author publicly defends to obtain a scientific degree. |

As a text type, a dissertation can be perceived as a primary text, describing original research conducted by the PhD candidate. All definitions provided in Table 2 above characterise a dissertation as a "long" or "lengthy" piece of writing, done to earn a degree; three of them indicate "particular subject", one of them indicates that the dissertation is written for the doctoral degree at a university, and another mentions "advanced degree at a university". The mentioned discrepancy

in the formulations of the purpose of the dissertation may be explained by different academic writing traditions.

There is an ongoing discussion among the academia as to whether writing in English is a disadvantage for those who are not native English speakers, while it has been also widely recognized that indeed "anyone who has spent any time learning an L2 will realize immediately that it will be more difficult to write in the L2 than the L1, even after many years of practice and study" (Flowerdew 2019: 251). When discussing the possible pitfalls, Paltridge and Starfield point out that "few second-language students embarking on thesis and dissertation writing are likely to have seen many of these kinds of texts before they start writing. Thus, what to experienced researchers and supervisors might seem common knowledge, to a great number of their students, perhaps, is not" (Paltridge & Starfield 2007: 74-75). The Latvian authors sometimes write or translate their summaries into English themselves and are not always able to adequately evaluate their competencies, or if they delegate the job to translators, the competences of translators to do so, which may have major consequences, even leading to the rejection of the texts by the reviewers. For the students from other countries, defending their theses in Latvia, English is either the second or foreign language, as the case may be, and they usually do not have sufficient command of Latvian to write their dissertation summaries in Latvian themselves; therefore, the dissertation summaries are translated by professional translators.

Dissertation summaries and not the dissertations themselves were chosen for the present study because, in contrast to the dissertation texts, their summary texts are available in English and Latvian, and contrastive analysis, determining similarities and differences, as well as the analysis of the translation specifics is possible. In the present study, management science dissertation summaries electronically published in Latvia from 2013 to 2023 in the official sources have been researched.

The material for the present study, written in Latvian and translated into English, consists of the summaries of management science dissertations defended in RISEBA, University "Turība", Latvia University of Life Sciences and Technologies, BA School of Business and Finance, and Riga Technical University.

In order to obtain the material for the present study written in English and translated into Latvian, the following programs providing training to foreign

doctoral students in management science were examined: Doctoral Programme of the University of Latvia in management science, Global Management and Leadership Module, implemented jointly with the University of Salzburg Business School (Austria) as well as the inter-university doctoral study program "Business Administration" of BA School of Business and Finance and RISEBA University of Applied Sciences in cooperation with Stockholm School of Economics in Riga (Latvia) and Kaiserslautern of University Applied Sciences (Germany).

The present study is corpus-based; the texts of the management science dissertation summaries have been first analysed manually, and only after detecting the structural and linguistic elements important for the present study, a search for wording collocations, for example, has been performed. To establish existing differences, the original texts of the summaries have been contrasted with the texts of their translations.

In the present study, overall, 120 texts of dissertation summaries written and defended in Latvia have been researched. Four small corpora of original English texts (n=30) with their translations into Latvian (n=30) and of original Latvian texts (n=30) with their translations into English (n=30) have been created. The size of the corpora was restricted by the number of available original texts in English, as there were only two major international programs for doctoral students in Latvia during the research period, and the number of defended dissertations was not large.

All summary texts and their translations have been retrieved for analysis from the official sites of promotional councils and universities. The texts have been anonymised and the corpora have been uploaded to the CLARIN-lv repository (CLARIN-lv$_{-e}$).

The corpus size of management science dissertation summaries is provided in Table 3.

Table 3

The number of word tokens in the corpora of the present study

| **LV > EN** | | | |
|---|---|---|---|
| **Latvian** | | **English** | |
| Subtotal | Per summary | Subtotal | Per summary |
| 346527 | 11551 | 448544 | 14951 |
| **ENG - LV** | | | |
| **English** | | **Latvian** | |
| Subtotal | Per summary | Subtotal | Per summary |
| 388955 | 12965 | 322724 | 107574 |
| **Total English** | | **Total Latvian** | |
| 837499 | 27917 | 669251 | 22308 |
| **Total word tokens** | | | **1506750** |

Source: developed by the author (2023)

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 (388955 word tokens in the texts written in English, and 448544 word tokens translated into English), while the Latvian subcorpora contain 669,251 word tokens (346527 word tokens in the texts written in Latvian, and 322724 word tokens translated into Latvian), yielding an overall corpus size of 1,506,750 word-tokens. Where frequency comparison is required across corpora of unequal size, raw frequencies are interpreted cautiously and, where relevant, complemented by normalised values. Corpus processing and frequency analysis have been conducted using AntConc, which enabled the identification of the analysed lexemes, their distribution, and recurrent co-textual patterns. Raw frequency counts were obtained using AntConc and served as the primary basis for identifying recurrent patterns of use within and across the corpora. Quantitative findings were subsequently interpreted qualitatively with reference to genre conventions and contrastive differences in the expression of the analysed lexemes in English and Latvian academic writing. It can be concluded that the corpora are balanced in terms of the number of parallel text pairs: 30 original English texts with their Latvian translations and 30 original Latvian texts with their English translations and encompass the majority of management science dissertation summary texts, created in Latvia in the period between 2013 and 2023 and therefore the

corpora can be used for the research described in the present dissertation.

**Conclusions for the first chapter**

Adhering to the expectations of the audience is central to successful dissertation summary writing and communicative translation equivalent to the original text in syntactic, semantic and pragmatic dimensions, ensuring adequacy to the linguistic macrocontext, the inner and outer situational context, and the sociocultural context. Therefore, in the present dissertation, attention has been paid to the communicative functions of the mentioned texts by examining different models of communication. The notion of discourse community has been explored, singling out such common features as: a broadly agreed set of common public goals, the presence of mechanisms of intercommunication among its members, the use of participatory mechanisms primarily to provide information and feedback, utilizing and possession of one or more genres in the communicative furtherance of the aims, specific lexis in addition to owning genres, a threshold level of members with suitable degree of relevant content and discoursal expertise. The readership of the mentioned texts inter alia comprises academic peers, students and researchers, advisors and reviewers, and academia in general. In the translation of language of science texts, the translators require linguistic and extralinguistic knowledge about the respective text type, documentation skills and ability to use translation and search tools, in order to transfer the exact meaning conveyed by the author of the text.

The texts researched in the present study may be perceived from the perspective of professional communication. The mentioned approach to communication emphasises the importance of context, analysis of the audience, discourse conventions, and the effective structuring of information, highlighting different purposes (or 'metafunctions') of language - such as ideational (conveying information), interpersonal (establishing relationships),

and textual (organising information) shape successful professional communication. The mentioned texts also belong to the broader discourse category of social sciences and, more specifically, to that of management science. Management science can be defined as a problem-solving process used by an interdisciplinary team to develop models that represent simple and complex functional relationships and provide management guidance for decision-making. This perspective helps identify how professionals can tailor the texts they create to accommodate the informational needs of their audience while also situating their message within the relevant social context. Management science dissertation summaries have to disclose complex research findings in a concise way that allows a variety of stakeholders, including academics, industry practitioners, and policymakers to understand the main ideas disclosed in the dissertations and presented in the summaries, crafted in such a way that the readership would retain interest and engagement while reading the summary texts.

For translation of management science dissertation summaries, it is important not only to understand the typology but also to discern how different text types are reflected in different cultures. The dissertation texts can be perceived as the language of science core texts, while the dissertation texts are primary texts; the dissertation summary texts are secondary texts. Primary texts refer to original scientific research papers, authored by researchers conducting studies, presenting discoveries, and discussing them, such as dissertations, secondary texts, such as the summaries of doctoral dissertations are publications that describe, analyse, evaluate, interpret, summarise or reorganise the information researchers provide in primary publications, especially considering that the readership may not be familiar with the full texts of the dissertations first of all due to language constraints. The dissertation summaries in turn contain paratexts, such as abstracts, words of gratitude, and, in some universities, academic concise biographies of the authors. It has been detected that paratexts, such as words of gratitude, may differ from the primary and secondary texts. Writers and translators, in order to have a clear understanding of the role and function of management science dissertation summaries, might find it useful to examine the classifications of

summaries listed in the present study in the context of different cultures and writing traditions.

As a text type, dissertation summaries in management science belong to the category of secondary texts with a clearly defined macrostructure and wording. Some scientists use the notions of text type and genre interchangeably. The two concepts are related; however, genre evokes the social context of use and associated concepts, while text types group texts at a higher level of abstraction. Identifying the type and variety of the text is crucial for the final translation product, besides the translation strategy applied has to ensure that the text corresponds to the text type in the target language community.

As a functional style, genre, and text type from the perspective of the sector-specific language, primary and secondary texts, and reader–writer interaction, the language of science is a separate genre. It can be stated that the language of science not only develops, but also enriches language as a whole; language is a system constantly enriched by new contributions. Therefore, the study of the language of science, including scientific texts, such as doctoral dissertation summaries in management science, is essential not only for this aspect of language but also for the research of the language in general, since over time it enriches the language and helps to interpret knowledge better.

The style of management science dissertation summaries may be broadly characterised as the style of scientific prose. The texts pertaining to the functional style of scientific prose strictly adhere to the norms of the literary language, and main attention is paid to the logical structure of the text. The mentioned style is characterised by brevity, clarity, veracity and precision, clear structure and emotional neutrality. The texts of the management science doctoral dissertation summaries pertain to the field of the language of science and are sector-specific texts researched in the present study, based on the material from the summaries of defended doctoral dissertations.

Scientific writing is also a social and educational enterprise, the emphasis being on the reader-writer interaction. For the present study, the notion of genre in academic and research settings, in conjunction with the communicative purpose and communicative function, has been explored.

Several genre classifications that document the range of functions and grammatical constructs in scientific texts have been analysed, such as the concept of genre as a term for grouping texts together, i.e. representing how writers typically use language to respond to recurring situations, and indicating the use of specific text organisation, including observing a certain tradition, compliance to which is expected by the audience, emphasizing the importance of macrostructure of the text. Genre can be defined based on external criteria such as intended audience, purpose, and activity type; that is, it refers to a conventional, culturally recognised grouping of texts based on properties other than lexical or grammatical features, which are, instead, the internal (linguistic) criteria forming the basis of text type categories.

In Latvia, the summary of a doctoral dissertation is a separate document; however, it is linked to the dissertation itself. Doctoral dissertation summaries are published under the same titles as doctoral dissertations. It can be concluded that in scientific communication, dissertation summaries containing concentrated information about the knowledge disclosed in the primary texts of the dissertations can be attributed to a group (text type) of secondary or derived texts.

To obtain the material for the present study, the texts of defended management science dissertation summaries were selected from official sites; programs providing training to foreign doctoral students in management science were examined for the period from 2013 to 2023. The two languages compared are English and Latvian. Overall, 120 texts of dissertation summaries written and defended in Latvia have been researched. The average summary size is 46.8 pages (250 words per page), representing a sufficient amount of text for corpus analysis.

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

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

In the present dissertation, a study on the characteristic linguistic features of management science doctoral dissertation summaries and their translations in contrastive linguistics based on the findings of the designed parallel corpora has been described.

*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 the classical contrastive research, the term *contrastive analysis* is used by linguists in order to denote the comparison of languages, namely the third step of comparison: description, juxtaposition, 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.). 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 differently realised linguistically 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, the study of management science doctoral dissertation summaries and the characteristic linguistic features of their translations is a study in linguistics using contrastive analysis and corpus linguistic methods. 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, 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 (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.

The linguistic study of the microstructure and macrostructure of texts, namely, the use of 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. The rationale for applying methods of contrastive linguistics using small bilingual parallel corpora of management science dissertation summary texts compiled by the author of the present dissertation is detailed below. In the present dissertation, the characteristic linguistic features of management science doctoral dissertation summaries and their translations are examined within the framework of contrastive linguistics, drawing on the analysis of the compiled parallel corpora. The choice of contrastive analysis is determined by the research aim, namely, to identify similarities and differences in the linguistic and discourse features of the selected texts in English and Latvian.

Contrastive analysis is generally understood as a branch of linguistics concerned with comparing two or more languages in order to identify both similarities and differences (Fisiak 1981: 1). In classical contrastive research, this comparison is typically described as a sequence of stages, namely description, juxtaposition and comparison (Krzeszowski 1990: 11). Such an approach makes it possible to observe both structural correspondences and divergences between languages, which is particularly relevant in translation-oriented studies. Historically, contrastive analysis developed within structural linguistics, but later expanded its scope to include functional, pragmatic and discourse-oriented perspectives, which are particularly important in the study of specialised texts.

Within the present study, contrastive analysis is used to examine how linguistic and discourse features are realised across English and Latvian languages. It allows the author of the present dissertation to identify different types of equivalence, as well as shifts that occur in translation. In this respect, contrastive analysis contributes to the understanding of how meaning is transferred between the two languages and how differences in linguistic systems and discourse conventions affect translation outcomes. It is therefore not limited to the comparison of isolated linguistic units, but also encompasses larger textual and discourse-level phenomena, such as the use of modal verbs, *it* + *that* constructions, personal pronouns (including the first- and third-person forms), deixis, and the Passive Voice.

An important aspect in this context is genre analysis. As noted by Malmkjær (2018: 5), genre can be defined as a type of text or discourse recognised by its formal and stylistic features as well as by its communicative function. Genre analysis focuses on identifying these features and on explaining the social, communicative and cultural factors that shape them. From the perspective of translation, it is particularly important to examine how genre conventions differ across languages and cultures (ibid.). Biel (2018: 151) points out that such conventions are not only genre-specific but also culture-dependent, which means that the same genre may be realised differently in different linguistic environments. These differences may appear at various levels, ranging from cohesive devices and formulaic expressions to broader organisational patterns such as moves and stages (Biel 2018: 156).

From a historical perspective, contrastive analysis developed within

structural linguistics and was initially associated with language teaching and the prediction of learning difficulties. Early contrastive studies focused on systematic differences between languages and assumed that such differences could explain errors in second language acquisition. Although this strong predictive version of contrastive analysis was later criticised, the method itself has remained an important tool in linguistic research, particularly in studies that require a systematic comparison of languages at different levels of structure and use. In contemporary linguistics, contrastive analysis is no longer limited to formal comparison, but incorporates functional and discourse-oriented approaches, which makes it particularly suitable for the study of specialised texts.

Contrastive analysis in translation studies is closely related to, but distinct from, approaches such as error analysis and descriptive research. While error analysis focuses on deviations from target language norms, contrastive analysis is concerned with identifying regular patterns of similarity and difference between languages. Even though in Chapter V of the present dissertation, the analysis of the so-called false friends of a translator is presented, along with the problems and undesirable translations detected in management science doctoral dissertation summaries, the study is clearly a corpus-based contrastive analysis study. It therefore allows the author of the present dissertation to move beyond isolated instances of incorrect usage and to identify broader tendencies in translation. This distinction is particularly relevant in the present study, where the aim is not only to identify problematic cases but also to describe systematic features of management science dissertation summaries and their translations.

The relevance of contrastive analysis becomes even more apparent in the context of scientific discourse. Scientific texts are shaped by established conventions that govern the presentation of knowledge, including the organisation of information, the use of specialised terminology and the expression of authorial stance. At the same time, these conventions are not identical across languages, but reflect differences in academic traditions and communicative preferences. Contrastive analysis, therefore, makes it possible to identify how comparable communicative purposes are realised differently in different linguistic environments.

In the case of management science doctoral dissertation summaries, such differences may be observed in the use of the first- and the third-person pronouns

in English and Latvian, both in the original texts and in their translations, i.e. in the expression of the authorial stance, and the linguistic means used to express evaluation, such as the modality.

From this perspective, contrastive analysis makes it possible to identify how similar communicative purposes are realised differently in different linguistic and cultural contexts. In the case of management science doctoral dissertation summaries, such differences may be observed both at the level of textual organisation and in the selection of linguistic means used to present research results. The comparison of original texts and their translations further allows for the identification of translation strategies and potential deviations from established discourse conventions.

In this respect, contrastive analysis of management science doctoral dissertation summaries is essential for identifying how knowledge is structured and communicated in English and Latvian. It allows for a comparison of both linguistic features and discourse conventions in the parallel corpora and provides a basis for the subsequent analysis of macrostructural and microstructural elements.

From a methodological perspective, contrastive analysis in the present study is closely linked to corpus linguistic approaches. The availability of parallel corpora makes it possible to analyse authentic language data and to identify recurring patterns in the use of linguistic forms. Corpus-based contrastive analysis allows for both qualitative interpretation and quantitative verification of findings, thus increasing the reliability of the results. At the same time, the use of corpora enables the author of the present study to move beyond individual examples and to identify tendencies that characterise the selected text type as a whole.

Another important methodological aspect is the distinction between different types of contrastive analysis. In linguistic research, both unilateral and bilateral approaches are distinguished. The unilateral approach focuses on analysing linguistic features in one language and interpreting them through the system of another language, while the bilateral approach involves the establishment of a tertium comparationis, which serves as a common basis for comparison. The latter is particularly important in translation-oriented studies, as it allows for a more systematic comparison of linguistic phenomena across languages.

In Latvian linguistics, as indicated by Dubova, Laiveniece, Lele-Rozentāle et al. (2021: 85), several studies have focused on comparing Latvian with German and English. For example, Lele-Rozentāle and Egle (2018) investigated subordinate word-groups in modern Latvian scientific texts, while Lele-Rozentāle (2016) analysed intertextuality in German and Latvian research articles. Other research has examined structural differences in titles and text organisation, as well as similarities and differences in theses and conference materials (Dubova, Leitāne, Lele-Rozentāle 2009; Leitāne 2009). These studies confirm the relevance of contrastive analysis for the study of scientific discourse.

In the present dissertation, contrastive analysis is used together with corpus linguistic methods to examine similarities and differences between English and Latvian management science doctoral dissertation summaries and their translations. The detailed procedures of corpus compilation, data selection and analytical methods are described in the following section.

### 2.2 Description of the research methods used in the dissertation

The present dissertation focuses on management science doctoral dissertation summaries defended in Latvia. The contrastive framework outlined in Section 2.1 is implemented through a combination of corpus linguistic and qualitative methods.

For the study described in the present dissertation, classification into qualitative and quantitative methods is relevant. The mentioned classification is widely used in linguistic studies (Dörnyei 2007: 2007: 30 - 42), based on inductive or deductive cognitive processes. Both approaches are often combined (Newman, 1998: 13 - 27). The classification into qualitative and quantitative methods is also distinguished in corpus linguistics. In corpus linguistics, *manual* and *automatic corpus analysis* are sometimes referred to when attributing research methods to quantitative and qualitative ones (Mair 1991: 68).

In corpus linguistics, quantitative approaches require:

- compilation of *frequency lists* (Biber *et al,* 2006 263), statistical determination of collocations.

- *detection of colligations*. Colligations (for combinations of parts of speech) refer to the level of grammar, while *collocations* (for word combinations) mainly provide an idea of the level of lexis. The mentioned approach can be used,

for example, to determine the grammatical formulations of the research objective, aim, or goal in the language of science.

- *selection of concordance rows* by searching for a specific character string or a labelled/annotated text element.

Whereas in the present study the quantitative approach has been used in providing relevant statistics from the compiled corpora of management science dissertation summaries, the macrostructure and microstructure of the summaries, and especially linguistic phenomena such as the authors' stance, deixis, evaluative constructions and false friends of a translator have been studied using an array of qualitative research methods. A mixed-methods approach has been employed, combining corpus linguistics methods and contrastive analysis. Corpus linguistics tools have been applied both in the qualitative research (pilot study) and quantitative analysis with the help of *AntConc*.

In linguistic research, mixed-type methods, i.e., a combination of both quantitative and qualitative method elements, are frequently employed. The characteristics of both qualitative and quantitative methods are manifested in one or more of the following stages of the study: the purpose of the study, the form of data and activities, the form of analysis, and the form of conclusions (Leech & Onwuegbuzie, 2009: 267).

Formally, it may be considered that studies in linguistics using mixed-type methods began in 2007, when the *Journal of Mixed Methods Research* was launched (A. Mehdi Riazi, 2016, xii). These methods allow linguists to integrate both qualitative and quantitative approaches into their research. When researching the language of science by means of corpus linguistics, such a combination might be beneficial, since initially the selection and study of the material is carried out, and only then are the obtained insights confirmed and summarised with the help of the corpus. Thus, a semasiological analysis of terms (false friends) that could cause difficulties in the translation process detected in the researched texts has been performed, subsequently investigating the respective examples in the compiled corpora.

For the analysis of texts, *AntConc* software has been given preference in the present study due to its ease of use. AntConc was chosen for this task because it "has a freeware license, it includes an easy-to-use, intuitive graphical user interface and offers a powerful concordancer, word and keyword frequency

generators, tools for cluster and lexical bundle analysis, and a word distribution plot" (Anthony, 2005: 7). Moreover, during the phase of creating corpora it has been detected that in some cases different versions of the original summary texts and their translations were published (n=7). This means that AntConc was the only tool at hand that allowed contrasting and analysing the text segments with 100% correspondence.

Corpus linguistics, over time, has been defined in different ways. Halliday and Martin (1993: 24) point out that corpus linguistics reconnects data collection and processing activities, allows new conclusions to be drawn, and argues that corpus linguistics leads to qualitative changes in our perception of language. The most important peculiarities of qualitative and quantitative analysis in corpus linguistics have been summarised by Mair (1991: 68).

The Oxford Companion to the English Language defines *corpus linguistics* as an approach to the study of language, including translation and lexicography, using computers to analyse a corpus or corpora (OCEL$_{-e}$, 2018). The linguistic material for computerised processing and research is selected in accordance with specific criteria, determined by the researchers.

Academic discourse has been researched with corpus linguistic methods by Hyland (2012, 2015c); Biber (2006, 2012); Teubert (1996, 2001); Schmied (2015); Baker (1993, 1995, 2018, 2020) and many other outstanding researchers. The description of research with language corpora of both native and non-native academic texts has been provided by Schmied (2015).

Teubert (2001: 128) remarks that "corpus linguistics is closer to the semantic concept inherent in the continental European structuralism of Ferdinand de Saussure, which regards the meaning as inseparable from the form, that is, the word, the phrase, the text. In this theory, the meaning does not exist *per se*. Corpus linguistics rejects the ubiquitous concept of the meaning being 'pure information,' encoded into language by the sender and decoded by the receiver. Corpus linguistics, instead, holds that content cannot be separated from form; rather, they constitute the two aspects under which texts can be analysed. The word, the phrase, the text is both form and meaning" (ibid.), which is of particular significance for the translation of the texts represented in the present study.

Teubert (2001: 128) defines the programme of corpus linguistics by stating that "it is mainly interested in those phenomena on the fringe between syntax and

lexicon, the two subjects of classical linguistics. It deals with the patterns and structures of semantic cohesion between text elements that are interpreted as compounds, multi-word units, collocations, and set phrases. In these phenomena, the importance of the context for the meaning becomes evident. In the study presented in the dissertation, corpus linguistics is perceived as a methodological basis for the language of science research; comparison between the original texts and their translations has been implemented on the basis of the parallel corpora of management science dissertation summaries designed by the author of the present dissertation.

The following criteria for corpora design and text selection have been singled out: the corpora encompass the texts of management science dissertation summaries for the dissertations defended during the period from 2013 to 2023 and their translations in English and Latvian respectively; the published electronic bilingual versions of the texts from official sites of the universities and programs have been selected; based on their availability; given that in the present study, the original texts, written both in Latvian and in English along with their translations have been researched, management science dissertation summaries for the dissertations defended according to international programs in Latvia have been selected. Care has been taken to select as many original texts in Latvian and English from the international doctoral programs of Latvian universities as possible, and 30 original texts in Latvian and 30 original texts in English have been selected, together with their respective translations, to ensure that the corpora are balanced in terms of the number of parallel text pairs. As a quality criterion of the officially published texts, the fact that the dissertations have been defended was applied. Computerised processing, in turn, allowed analysing the authentic text in detail in order to obtain the statistics of use, identifying the features of authentic texts, and comparing them with those found in other texts.

The theoretical basis for the design of the present study corpora was developed by studying the existing corpora in different languages devoted to the language of science texts.

Hyland (2015c: 294) remarks that corpus analyses have been productive in identifying the structural regularities in dissertation acknowledgements and in PhD theses (ibid.: 292), i.e. their macrostructure, and states that "The impact of corpora in the study of written academic English over the past twenty years has been

enormous, transforming how we understand, study and teach this key area of language use. Corpora provide language data that represent a speaker's experience of language in a particular domain and therefore offer evidence of the typical patterning of academic texts. It is a method which focuses on community practices and the ways members of particular disciplines understand and talk about the world".

In the present study, original texts and their translations are analysed using the compiled parallel corpora in order to identify similarities and differences between English and Latvian. Therefore, it may be stated that in the present study, the compiled corpora are bidirectional. Since the beginning of contrastive research in the language of science, new empirical methods have been introduced, especially corpus-based ones. The availability of specialised corpora (including parallel corpora) has restored the link between contrastive linguistics and practical language research; for example, knowledge obtained from (quantitative) contrastive analysis proved useful in translation studies (Gast 2012). The theoretical and terminological concepts, elaborated by Johansson (2007), encompass the definition of 'parallel' and 'translation' corpus, the notions of 'translation paradigm', 'mutual correspondence', and 'zero correspondence', in the case no formal cross-linguistic correspondence exists (Facchinetti, 2007: 02). Altenberg and Granger (2002: 08) remark that research on the basis of multilingual and bilingual corpora has initiated a revival of contrastive linguistics.

The researchers provide the following classification of the corpora:

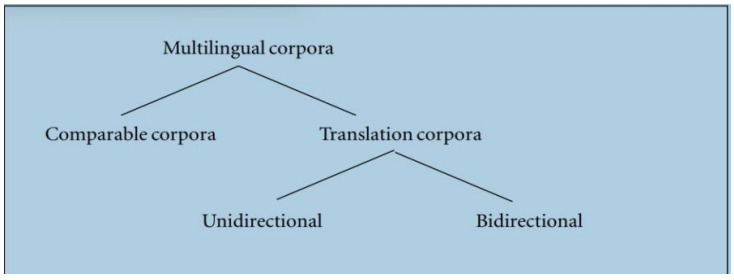


Fig. 4. Types of multilingual corpora (Altenberg & Granger 2002: 08)

According to Altenberg and Granger (2002: 08) multilingual and bilingual corpora can either be restricted to some specific domain (in the case of the present dissertation study, that of management science) or be large 'balanced' corpora representing a wide range of text types. Further, Altenberg and Granger distinguish translation corpora, whereby original texts in one language and their translations

into one or several other languages are compiled. Altenberg and Granger point out that the term 'parallel corpus' may be used as a generalising term for both comparable and translation corpora, but it might be more appropriate for aligned translation corpora, where a unit (paragraph, sentence or phrase) in the original text is linked to the corresponding unit in the translation (ibid.).

Baker (1995: 225) proposes three types of corpora that are used in translation studies: parallel, multilingual, and comparable corpora. Parallel corpora are bilingual corpora consisting of source texts in one language and their translations in a different language (Granger 1996). Multilingual corpora, in turn, consist of monolingual sub-corpora in different languages and might be used *inter alia* to research differences in the geo-academic traditions and how they impact the specific text types. Comparable corpora, in turn, are corpora that consist of "two separate collections of texts in the same language" (Baker 1995: 234). In other words, a comparable translational corpus contains two sub-corpora: one compiled of original, spontaneously produced texts in the language in question and the other consisting of translations in the same language (ibid.).

In order to determine an appropriate corpora design for the study of management science dissertation summaries, a number of existing corpora in different countries have been examined. Research of the language of science with corpus linguistics methods takes place at the University of Leipzig in the projects "Gesprochene Wissenschaftssprache: Deutsch im Vergleich zum Polnischen und Englischen" [The spoken *language of science – German versus Polish and English*] (GeWiss, 2018) on oral scientific texts in German, English and Polish, as well as in the project "Das gemeinsame sprachliche Inventar der Geisteswissenschaften" [*Common Means of Language Expression in the Humanities* (GeSIG)] (GeSIG, 2018) on the study of the means of language expression in the humanities. A number of studies have also been carried out on scientific communication in German and Italian, i.e., language, texts, and discourse, which started with a joint research project "La comunicazione scientifica in Italia e Germania. Lingua, testo, discorso" (*Scientific communication in Italy and Germany. Language, text, discourse*) (Calaresu, Guardiano & Hölker 2007), Darmstadt Technical University project "Linguistic Profiles of Interdisciplinary Registers" (LingPro), the project "Cultural Identity in Academic Prose" (KIAP), a study of 450 research articles across disciplines in English,

Norwegian and French, has been carried out by the University of Bergen in cooperation with the AKSIS department at the Unifob research organization and involved extensive international cooperation (Fløttum, Dahl & Kinn, 2006), the English-Norwegian Parallel Corpus (ENPC) of the University of Oslo for contrastive analysis and translation studies consisting of original texts and their translations between English and Norwegian (ENPC$_{-e}$). Other language of science data collections encompass the following resources: SciPar (SciPar$_{-e}$), focusing on parallel corpora from scientific abstracts, *inter alia* from theses and dissertations; OPUS (Open Parallel Corpus), a collection of translated texts from the web. CAPES and SciELO corpora within OPUS contain scientific texts, including abstracts, in languages like English, Portuguese, and Spanish (OPUS$_{-e}$); CLARIN (Common Language Resources and Technology Infrastructure) providing access to various language resources, including corpora of academic texts. CLARIN ERIC (CLARIN ERIC$_{-e}$); general corpora, such as the British National Corpus (BNC) or the Corpus of Contemporary American English (COCA), BAWE British Academic Written English Corpus - Coventry University corpus (BAWE$_{-e}$). After examining the selected corpora, it has been detected that, while some corpora, such as BAVE and CLARIN ERIC, may serve to provide broader contextual information for the research described in the present dissertation, others are of limited relevance due to the fact that they encompass texts in other languages than Latvian, do not deal with dissertation summaries as a text type or only contain the introductory parts of the dissertations.

In Lithuania, within the framework of academic discourse research, hedging formulations and their use in BA students' academic texts with English as L2 have been researched by corpus linguistics methods (I. Šeškauskiene, 2008). N. Burneikaitė (2006), in turn, has analysed MA theses written in English by Lithuanian students of two academic disciplines - Applied Linguistics and Business Management, as well as created two corpora of MA dissertations, one written in English by Lithuanian students, the other one written by native English speakers.

In Latvia, Natalia Cigankova (2009) has researched a corpus of academic discourse texts in English, the authors of which are not native speakers of English, with the level of English proficiency close to that of the native speakers.

The linguistic variation studies of the English language have been carried

out by N. Cigankova and Z. Vinčela with the methods of corpus linguistics in different corpora (Cigankova, Vinčela, 2012; 2013).

The language of science has been studied with corpus-based methods within the framework of several projects, including the Ventspils University of Applied Sciences project "Language and Structure of Scientific Introductory Texts" (2017), by researching the features of the microstructure and macrostructure of the summaries of doctoral dissertations with the help of the analysis of the introductory parts of these texts, a corpus of these texts in the Latvian language has been created (Lele-Rozentāle & Egle: 2018; Dubova, Proveja, 2018). In the joint project of Ventspils University of Applied Sciences and Liepaja University, "Intralingual Aspects of the Latvian Scientific Language", research articles were examined, creating a corpus of research articles in the Latvian language (2018 - 2020). Both studies are based on *AntConc* software. Summarising the results of the mentioned study, a website (www.zinatnesvaloda.lv) has been published, helping the interested parties to get acquainted with the types of scientific texts and phrases used in the Latvian language of science, along with their English translations.

Mair (1991); Doorslaer (1995); Durian (2002), Benz and Newman (1998; 2008), and Tognini-Bonelli (2001) indicate that there are two different approaches in corpus linguistics: the corpus-based and corpus-driven approach. The difference between corpus-based and corpus-driven research in corpus linguistics has been best described by Tognini-Bonelli (2001). It has been established that in corpus-based studies, corpus data are used to explore a theory or hypothesis to validate it, refute it, or refine it. Therefore, corpus linguistics may be seen as a *method*, whereas in corpus-driven linguistics, the corpus *itself* becomes the source of language–related hypotheses. In other words, the corpus itself embodies a theory of language (Tognini-Bonelli 2001: 84–85).

The design of the study can be described as follows: prior to the present study, a small pilot study of management science dissertation summary introductory parts was conducted with corpora of just 20 doctoral dissertation summaries and their translations (10 English texts and 10 Latvian texts) to determine the macrostructure and wording. According to Šeškauskiene (2008: 73), "the introduction is the part which gives the rationale of the whole paper". The introductory part, thus, starts with giving background to the problem and the

chosen field by reviewing major sources, then identifies a niche for the research undertaken and raises a research question to be solved, i.e., the research space is being created (Swales 1990), as described in Chapter 3 of the present dissertation. Thus, it can be stated that the introduction of a summary provides the most important information about the dissertation itself. As soon as the parallel corpora had been created, it was possible to track the use of macrostructure elements, the wording, and the microstructure elements throughout the corpora.

In exploring the macrostructure of management science dissertation summary texts, the macrostructure of the management science dissertation summaries has been compared to the requirements, expressed in the normative documents and guidelines, the C.A.R.S. model (Creating a Research Space) developed by John Swales (1990: 141), as well as *IMRAD, AIMRAD*, and *AIMAC* models.

In the present dissertation, the terms used in the original texts and their translations have been analysed concerning their frequency and use based on *AntConc* results, and the translation of terms has been explored in English and Latvian summary texts. Bilingual term lists have been compiled. *WordList* and *Keyword list* tools have been used to compare the frequency of terms (Cabré 1998: 528). False friends of a translator (e.g. *promotion paper/promocijas darbs*) and loan translations (e.g. *manager/menedžeris* vs *vadītājs*) have been identified and described. Term stability has been explored across corpora (e.g. *risk management/ riska vadība* vs *riska pārvaldība*).

Grammar constructions, analysed in the present dissertation, include the use of the Passive Voice concerning the authorial stance and the author's identity construction (e.g. *it is assumed that../tiek pieņemts, ka..*), the modal verbs concerning the use of hedges and boosters, determining whether hedging is retained or modified in translations with the help of contrastive analysis, and the emphatic *that* construction with or without *it.* Given the high importance of context, the descriptive method was used, indicating the examples of use and subsequently confirming the findings by exploring the designed corpora. The use of tenses and modal verbs in different sections of doctoral dissertation summaries has been examined. When exploring hedges and boosters, Hyland's model of stance markers (2005) was applied.

Due to the small size of the corpora, aligning the texts with their translations has been done manually and has not required additional resources. To sum up, the present study is a mixed-method study with elements of qualitative and quantitative research used to determine the representation of certain elements in the respective texts; the study is corpus-based in the sense that all the theoretical assumptions are proved by researching the respective corpora.

**Conclusions to the second chapter**

The second chapter of the present dissertation deals with the methods of researching the corpus of management science doctoral dissertation summaries and their translations, as well as the course of the study.

Many domains of the Latvian language of science have not been previously researched, including the full texts of management science doctoral dissertation summaries, four corpora consisting of authentic English > Latvian and Latvian > English dissertation summary texts have been created by carefully selecting and aligning summary texts that are related in terms of content, genre, and theme in order to research the macro- and microstructure and carry out meaningful cross-linguistic comparison of the management science summary texts.

The present study of the management science doctoral dissertation summaries and their translations in English and Latvian, and their characteristic linguistic features, is a bilingual corpus-based study in contrastive linguistics based on the methods of contrastive analysis. First, the unilateral method of research was applied, analysing the grammatical and lexical phenomena of the above-mentioned texts, and their macro- and micro-structures in English and Latvian, then the bilateral method was used, performing semasiological analysis of the false friends of a translator and clarifying the results of the interlingual comparison.

In the present study, methods and techniques for corpus-based interlingual contrastive study of dissertation summaries of management science in English and Latvian have been evaluated and selected, based on the examined theoretical literature. The comparison of parallel corpora of the present study is based on earlier, more generalised studies, such as research on the introductory parts of dissertation summaries in social sciences and comparison of deixis in research articles, as well as analysis of grammar constructions widely used in the language

of science and means of expression of authorial stance.

Prior to the present study, a small pilot study was conducted with corpora of just 20 doctoral dissertation summaries and their translations (10 English texts and 10 Latvian texts) to determine the macrostructure and wording in the introductory parts of the doctoral dissertation summaries. In the further course of research, the created corpora with the summaries of the doctoral dissertations of management science written in English at various Latvian universities and their translations to Latvian and with the summaries of the doctoral dissertations of management science written in Latvian and their translations into English have been analysed in a more extensive manner.

In the present dissertation, the terms used in the original texts and their translations have been analysed concerning their frequency and use based on *AntConc* results, and the translation of terms has been explored in English and Latvian summary texts using *WordList* and *Keyword list* tools and compiling bilingual term lists to compare the frequency of terms. False friends of a translator and loan translations have been identified and described. Term stability has been explored across corpora.

Grammar constructions, analysed in the present dissertation, include the use of the Passive Voice concerning the authorial stance and the author's identity construction, modal verbs concerning the use of hedges and boosters, determining whether hedging is retained or modified in translations with the help of contrastive analysis, and the use of the emphatic *that* construction with or without *it.* The use of tenses in different sections of doctoral dissertation summaries has been explored. Given the high importance of context, the descriptive method was applied, indicating the examples of use. When exploring hedges and boosters, Hyland's model of stance markers (2005a) has been used.

# 3. Macrostructure of the management science doctoral dissertation summaries

The macrostructure of text, or plan for its creation, is a "conventionalized composition" of the text formed by textual structural elements (Gläser 1990:55). Given that summaries of doctoral dissertations to a certain extent reflect the structures of the dissertations, in the present study, the structures of dissertation summaries have been researched in more detail.

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

To research the macrostructure of management science dissertation summaries, several existing macrostructure models, such as IMRAD, AIMAC and C.A.R.S. have been examined. Given that the structures of the management science dissertation summaries depend on the types of dissertations summarised, the classification of dissertation types has been researched. In this context, the types of dissertations might be described in general terms, using the *IMRaD* (*I — introduction*, *M — materials and methods*, *R — results*, *D — discussion*) structure proposed by Swales (Swales, 1990: 137–174).

When referring to the overall structure of a dissertation or thesis, Paltridge discerns three main types of thesis organisation: the typical 'IMRaD' (introduction–methods–results–discussion) type thesis can be referred to as a 'traditional' thesis. This category can be refined further by dividing traditional theses into those having 'simple' and those having 'complex' patterns of organisation. Thus, a thesis with a 'simple' traditional pattern would report on a single study and would have a typical organizational structure of 'introduction', 'review of the literature', 'materials and methods', 'results', 'discussion' and 'conclusion', whereas a thesis with a 'complex' internal structure would report on more than one study. It would typically commence with an 'introduction' and a 'review of the literature' sections, the same as the simple traditional thesis, but may contain a 'general methods' section followed by a series of sections that report on each of the individual studies. The thesis would end with a general overall conclusions section. Paltridge also describes a 'topic-based' thesis commencing

with an introductory chapter, which is then followed by a series of chapters that have titles based on sub-topics of the topic under investigation. Paltridge further describes doctoral theses, which are based on a compilation of publishable research articles and remarks that this type of thesis is different from the previously described ones (Paltridge 2002: 130).

The summary of the dissertation structures is presented in Table 4.

Table 4

Summary of dissertation types and their typical organisational structures

| | |
|---|---|
| Traditional: simple | Introduction<br>Literature review<br>Materials and methods<br>Results<br>Discussion<br>Conclusions |
| Traditional: complex | Introduction<br>Background to the study and review of the literature<br>(Background theory)<br>(General methods)<br>Study 1<br>Introduction<br>Methods<br>Results<br>Discussion and conclusions<br>Study 2<br>Introduction<br>Methods<br>Results<br>Discussion and conclusions<br>Study 3 etc<br>Introduction<br>Methods<br>Results<br>Discussion and conclusions<br>Discussion<br>Conclusions |
| Topic-based | Introduction<br>Topic 1<br>Topic 2<br>Topic 3 etc.<br>Conclusions |

| | |
|---|---|
| Compilation of research articles | Introduction<br>Background to the study<br>Research article 1<br>Introduction<br>Literature review<br>Materials and methods<br>Results<br>Discussion<br>Conclusions<br>Research article 2<br>Introduction<br>Literature review<br>Materials and methods<br>Results<br>Discussion<br>Conclusions<br>Research article 3 etc.<br>Introduction<br>Literature review<br>Materials and methods<br>Results<br>Discussion<br>Conclusions |

Source: based on Paltridge (2002: 130)

Paltridge emphasises that "it is by no means the case that every thesis written in a particular area of study will necessarily take the same form of presentation" (2002:134). When researching the summaries of management science doctoral dissertations in Latvia, however, only structures of the first type were established. Thus, all the examined management science dissertation summaries contained *an introduction, a description of materials and methods, results, discussion and proposals or suggestions, conclusions, and a literature review or bibliography (typically at the end of the dissertation, before the annexes).*

As indicated by Schmied (2015: 5), the IMRaD format has been adopted by an increasing number of academic journals since the first half of the twentieth century and has come to dominate academic writing in the sciences, although it is not suitable for all genres. It has to be noted that IMRaD is not the only model used in the research of the language of science. The macrostructure of management science dissertation summaries has been analysed and compared to the Introduction-Method-Results-Discussion model according to Swales (1990; 2011), as recommended for reference in writing of dissertations by many authors, inter alia, Kamler and Thomson (2014, 114). "The traditional

format for the thesis is often described as IMRaD (Swales: 1990): Introduction, Methods, Results and Discussion. Most people include the notion of Literature Review and Conclusion […]. The virtue of IMRaD is that it focuses attention on: Why this research (Introduction), How will it be done (Methods), What was the result (Results), and so what (Discussion)" (Kamler &Thompson, 2014: 114). Here it has to be reiterated that dissertations and their summaries in the East - European academic writing tradition, *inter alia* in the national language of science in Latvia, are two related but different text types, of which the dissertation is the primary text, whereas its summary is a secondary one, to a certain extent describing and reflecting the structure of the dissertation itself. Although the structures of both text types are somewhat similar, they do not completely coincide. The communicative purpose of the doctoral dissertation summary, written in a Latvian university, is different from that of the dissertation itself, namely, it is to inform the scientific community of the contents of the dissertation or thesis. Therefore, the summary macrostructures differ from the IMRaD model. Thus, it might be directly stated in the dissertation summary headings, that the dissertation chapters have been summarised, such as *summary chapter I / I. nodaļas kopsavilkums, summary Chapter II / II. nodaļas kopsavilkums* (b1) etc.; whereas the chapters may contain wording *consecutive description of the…work /*
*..darba secīgs apraksts* (b1, b9, b10, b14, b21, b24, b 29), *consecutive description of the doctoral thesis* / *secīgs..darba apraksts* (b 4)*; darba vispārējs raksturojums / general description of the work* (a20, a21, a 27).

In the summary headings, it is often indicated that only the main results are being described, such as, *the main aim of this thesis / disertācijas galvenais mērķis* (b9), *main conclusions and suggestions* / *galvenie secinājumi un priekšlikumi* (a4, a7, a11, a17, a24, a26), *galvenie secinājumi un priekšlikumi / main conclusions and proposals* (a4, a7, a11, a17, a24, a 26).

Schmied argues that recently, the IMRaD structure has been expanded into AIMRaD to include a structured summary or abstract and a list of keywords (ibid.), as well as other features that might be useful for the research of dissertation summaries.

The findings of Schmied pertaining to the revised *IMRaD* structure *AIMaC* are described in Table 5 below.

Table 5

The revised *IMRaD* structure: *AIMaC*

| structure | substructure (tactical alternative) | key lexemes/phrases (as indicators) |
|---|---|---|
| *A = abstract* | keywords in context | *focus, discuss, approach* |
| *I = issue* | new | *not enough research yet* |
| | relevant | *important, academic discourse, practical application* |
| | focused | *concentrate, emphasise, purpose* |
| *M = methodology* | previous research, i.e., lit. review incl. evaluation | *concept developed, review, refer to, proceed to, claim* |
| | hypotheses possible? | *research question* |
| | data base | *corpus, data collection* |
| | tests/procedure | *calculate* |
| *A = analysis* | examples as evidence | *illustrate, show, prove* |
| | statistical tables as summaries | *table, figure, diagram, graph, bar* |
| | significance to generalise | *significant, chi²* |
| *C = conclusion* | summary | *in conclusion, finally/at last, we have shown, discussed above* |
| | interpretation | *this proves that* |
| | contextualization | *in a wider perspective, apply* |
| | limitations | *more data, beyond the scope* |
| | outlook | *further research is necessary, dissemination/application of results* |

Source: based on research by Schmied (2015:32)

The AIMaC model is a revised IMRaD model, based on Swales's CARS model, and has been useful in the research of summaries of doctoral dissertations and discloses the writing tradition in terms of the structure and wording of doctoral dissertation summaries in management science. The particular gain from the AIMaC model is that it takes into account the structure, the substructure, and key lexemes or phrases used in scientific writing. Even if it might be an impossible task to elaborate a common structure for all dissertation summaries, given their very diverse nature, the model is a good starting point for grouping the elements of the dissertation summaries in a meaningful manner. Definitely, the management

science doctoral dissertation summaries have other structural elements as well, but they may not be present in all summaries. A more detailed analysis is presented further.

Approach to the English text concerning the language of science essential to the present research has been described in the C.A.R.S. model (Creating a Research Space) developed by John Swales (Swales 1990: 141). The model reflects the moves applied in academic writing. Swales initially designed the model for analysing the introductions of research articles and singled out three moves in writing the respective texts, namely, establishing a territory, establishing a niche, and occupying the niche.

Paltridge describes typical moves in thesis Introductions, based on Swales & Feak (1994:175) and Bunton (2002: 67), as indicated in Table 6.

Table 6

Typical moves in thesis *Introductions*

| *Move I* | *Establishing a research territory* |
|---|---|
| | a. by showing that the general research area is important, central, interesting, problematic, or relevant in some way (optional) |
| | b. by providing background information about the topic (optional) |
| | c. by introducing and reviewing items of previous research in the area (obligatory) |
| | d. by defining terms (optional) |
| *Move 2* | *Establishing a niche* |
| | a. by indicating a gap in the previous research, raising a question about it, or extending previous knowledge in some way (obligatory) |
| | b. by identifying a problem/need (optional) |
| *Move 3* | *Occupying a niche* |
| | a. by outlining purposes/aims, or stating the nature of the present research or research questions/hypotheses (obligatory) |
| | b. by announcing principal findings/stating value of research (optional) |
| | c. by indicating the structure of the thesis and providing mini synopses (previews) of each subsequent chapter (obligatory) |
| | d. by outlining the theoretical position (optional) |
| | e. by describing the methods used in the study (optional) |

Source: based on Paltridge (2007: 83), Swales & Feak (1994:175), and Bunton (2002: 67)

During the present study, it has been detected that the organisation and wording of the introductory parts of dissertation summaries coincide with that presented above and are similar to those of the respective dissertations. However, as pointed out by Schmied (2015: 6), "it may be difficult to present a detailed series of moves and steps as a model for a complete thesis […]". Even Swales & Feak (1994:175) only mention moves explicitly in the introduction and the methodology sections.

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

The general procedure for granting a doctoral degree (on the basis of a defended doctoral dissertation) and the rules for the development of a doctoral dissertation are determined by the Cabinet of Ministers of the Republic of Latvia (1001: 2005), regulations of higher education institutions, as well as faculties (study programs), which determine the procedures for the writing and defence of doctoral theses, including those for the dissertation structure and the structure of dissertation summary.

In Latvia, the possible types of the dissertation structures are stipulated by Regulation No. 1001 of the Cabinet of Ministers "On the Procedure and Criteria for the Awarding (Promotion) of a Doctoral Degree" (LV, 210 (3368), 2005), determining the following structure: dissertation (Article 3.1); a thematically unified set of academic publications. Publications shall be published 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). For the present study, in terms of the requirements for the macrostructure of dissertation summaries, university and faculty requirements are of relevance. Based on the legislative 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 defense; 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 organizations that have contributed to the creation of the work.

As indicated further, the summary macrostructures may vary depending on the specific university and program as defined by the regulatory documents, such as recommendations of the faculties and the universities, where the dissertations have been defended[1].

The macrostructure of dissertation summaries indicated in the guidelines of the universities and faculties or programs is similar. Thus the regulatory documents of the University of Latvia (LUPDK$_{-e}$: 2012) state that the summary should include: *an abstract*, *a table of contents of the summary*; *general description of the research* under the title *General Description of the Study* or *Introduction:* including *topicality of the chosen theme and research novelty*; *the aims and tasks of the dissertation*; *hypothesis*, *research questions* or *theses to defend* (coinciding with the theses in the dissertation); brief *description of the methods used*; *approbation of the results of the doctoral dissertation*, including information on the related research projects; *a list of scientific publications* of the

[1] Guidelines for Preparing, Formatting and Presentation of Doctoral Thesis (RISEBA); Regulations for the Development and Preparation of Summaries of Doctoral Theses of the University of Latvia (LU); Guidelines for Doctoral Thesis (Promotional Work) of the Module of Program of Management Doctoral Studies "Global Management and Leadership" (LU); Regulations on the Compilation and Layout of Doctoral Theses and their Synopses (Turība University); Procedures for the Implementation of the Doctoral Study Programme "Management Science and Economics" and Drafting of Doctoral Theses, (Faculty of Engineering Economics and Management, RTU)

doctoral student related to the dissertation; *information on scientific seminars and conferences*, in which the results of the research have been presented*, a list of published conference proceedings*, *the volume and structure of the doctoral dissertation; a brief outline of the dissertation:* including *a brief theoretical justification of the study, methods used in the study, main research results, discussion and interpretations, limitations of the study, main conclusions and proposals, a list of scientific literature used in the summary*. At the discretion of the doctoral student: *Words of Gratitude* or *Acknowledgements* to persons and organisations that have supported the doctoral student in writing the dissertation.

The Guidelines for Doctoral Dissertations of the Global Management and Leadership program for Doctoral Studies of the University of Latvia, Faculty of Economics and Management (GDD$_{-e}$: 2013) envisages that summaries should include: *abstract* (1 page); *topicality of chosen subject*; *aim and tasks of the doctoral dissertation*, *research hypothesis*, *limitations of the research*; *theoretical and methodological background of the work*; *methods used in the research*; *novelty of the research*; *main theses to defend*, *size and structure of the work*; *practical importance of the research* and *the approbation of research results*; *list of publications related to the research*; *information about the scientific seminars and conferences* in which the research results have been presented; *information on research projects* related to the work; *main sources of scientific literature used* in the work and in its summary, *words of gratitude* to people and organizations, promoters of the work (optional); *concentrated explanation of the main content of the doctoral dissertation*. It can be concluded that the requirements related to the macrostructure of the doctoral dissertation summaries are rather uniform, which is also supported by earlier research findings of the dissertation summary introductions (Dubova & Proveja, 2018: 46–47).

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

The present research allowed for an overview of the macrostructure and wording used to denote its elements both in English and Latvian, which might

serve as a reference for doctoral students and translators with respect to the organisation of the structure and wording of management science dissertation summaries.

First, the macrostructure elements identified in the project "Language and Structure of Scientific Introductory Texts" (ZIVS) as sector-specific structural elements for Social Sciences according to Frascati Manual (FOS 2015) (Dubova, Proveja, 2018: 47) have been compared to those singled out in the legislative documents, such as recommendations of universities and faculties in respect to dissertation summaries in all sciences. The results are presented in Table 7:

Table 7

Comparison of the macrostructure elements detected in the normative documents in the present study to the results of earlier research in all disciplines (ZIVS project)

| No. | **ZIVS project** | | **Guidelines and normative documents** | |
|---|---|---|---|---|
| | ENG | LV | ENG | LV |
| 1. | topicality of the study / work / theme / problem | pētījuma / darba / tēmas / problēmas aktualitāte | actuality of the topic, topicality | tēmas aktualitāte |
| 2. | the aim (-s) of the study / work | pētījuma / darba mērķis (-i) | aim, purpose, objective, goal | mērķis |
| 3. | tasks of the study / work | pētījuma / darba uzdevumi | tasks / aim and tasks/ purpose and tasks | uzdevumi / mērķi un uzdevumi |
| 4. | research methods / methods / methodology | pētījuma metodes / metodika / metodoloģija | methods / methods and sources used / methods applied for testing the theses for defence / methods of analysis / methods of research / methods used for analysing […] / methods used in the research / methods used / the theoretical and methodological basis | metodes / izmantotās metodes un avoti, / metodes, kas izmantotas pierādāmo tēžu apstiprināšanai / analīzes metodes / pētījumu metodes / metodes, kas izmantotas, analizējot […] / pētniecībā izmantotās metodes/ izmantotās metodes / teorētiskā un metodoloģiskā bāze |
| 5. | the object | pētījuma | research object | pētījuma objekts |

| No. | ZIVS project | | Guidelines and normative documents | |
|---|---|---|---|---|
| | ENG | LV | ENG | LV |
| | and subject of the research | objekts un priekšmets | research subject | pētījuma priekšmets |
| 6. | research hypothesis (-es) / hypothesis(-es) proposed in the work | pētījuma hipotēze (-es) / darbā izvirzītā hipotēze | hypothesis / main hypothesis / hypothesis and research question / hypothesis and theses to defend (statements for defence) / research questions and hypothesis / hypotheses and propositions | hipotēze / galvenā hipotēze / hipotēze un pētniecības jautājums / hipotēze un pierādīšanai izvirzītās tēzes (apgalvojumi) / pētījuma jautājumi un hipotēzes / hipotēzes un pieņēmumi |
| 7. | scientific /practical novelty (of the work) | (darba) /zinātniskā / praktiskā novitāte | novelty / novelty of research | novitāte / pētījuma novitāte |
| 8. | practical significance / practical value of the work | (darba) praktiskā nozīme / nozīmība / praktiskais nozīmīgums / praktiskā vērtība | practical significance of the research scientific significance and novelty of the research | pētījuma praktiskais nozīmīgums pētījuma zinātniskais nozīmīgums un novitāte |
| 9. | structure / overview of the work | darba struktūra / apskats | size and structure of the dissertation | promocijas darba apjoms un struktūra |

It can be concluded that, although the wording may slightly differ, the macrostructure elements singled out in the present study correspond to the earlier findings in respect to the structure provided in the normative documents and guidelines for summaries in all the researched disciplines. Here, it has to be noted that in the ZIVS project, general requirements for summaries in social sciences have been analysed, without singling out dissertation summaries in management science.

The title wording in Latvian normative documents and guidelines is clearly stated and prescribed, such as: *pētījuma mērķis* / aim *of the study*, *pētījuma uzdevumi* / *tasks of the study*, *pētījuma metodes* / *research methods*, *pētījuma hipotēze* / *research hypothesis, darba struktūra / structure of the work.* When analysing the findings listed in Table 7, it may be observed that the compared

datasets include the following recommended elements: *pētījuma / darba aktualitāte* (*topicality / relevance of the study*), *pētījuma / darba mērķis* (*aim / purpose of the study*), *pētījuma / darba uzdevumi* (*tasks / objectives*), *pētījuma metodes / metodoloģija* (*research methods / methodology*), *pētījuma objekts un priekšmets* (*research object and subject*), *pētījuma hipotēze (-es)* (*research hypothesis / hypotheses*), *(darba) zinātniskā un praktiskā novitāte* (*scientific and practical novelty*), *(darba) praktiskā un zinātniskā nozīmība* (*practical and scientific significance*), *darba struktūra / darba apskats* (*structure / overview of the work*), *novitāte / novelty* and *nozīmīgums / significance*.

Synonymy is rather scarce, the wording recommended for use in the titles and subtitles of the management science dissertation summaries is clearly defined and prescribed, such as, *aktualitāte* / *topicality*, *relevance* rather than descriptive paraphrases, *mērķis / aim,* clearly distinguished from *uzdevumi* / *tasks*, *hipotēze* / *hypothesis*, *pētniecības jautājumi / research questions,* and *pieņēmumi* / *assumptions, propositions.*

In both obtained datasets compared, closely related analytical categories, such as *pētījuma objekts / research object* vs *pētījuma priekšmets/ research subject; zinātniskā novitāte* / *scientific novelty* vs *praktiskā novitāte / practical significance*, have been clearly separated.

One of the core notions, stated in normative documents and guidelines across both examined datasets, concerns research methods, such as, *teorētiskā un metodoloģiskā bāze / theoretical and methodological basis; analīzes metodes* / *methods of analysis; analīzes metodes* / *methods of analysis.*

Provided that only the introductory parts of dissertation summaries have been researched, therefore, several significant macrostructure elements that pertain to the whole text of the summaries, such as *discussion of the main results of the dissertation; conclusions and proposals (conclusions and suggestions; conclusions and recommendations; list of abbreviations (if necessary); list of sources used in the summary (references)* have not been listed. Faculty and program regulations for management science dissertation summaries usually list them. Even though dissertations and their summaries are two different text types, it can be concluded that the wording of the titles in dissertation summaries, to a large extent, coincides with that of the dissertations themselves.

When further analysing the word combinations suggested in the normative

documents, the findings of ZIVS project and the findings in the present study of the dissertation summary corpora, it also has to be remarked that the term *significance* has been used as a separate title in six cases, in the word combination *significance of the research* (n=60) whereas the word combination *practical significance of the research* has been detected only in 16 summaries. The word combination *practical value of the work* has not been detected at all. This could be explained by the fact that research can also be very theoretical, and what could be expected in the dissertations and their summaries, as correctly established in the normative documents, is the distinction between the theoretical/scientific value or significance and the practical value or significance of research or the combination of both. The titles *practical significance and scientific novelty*, *theoretical significance and scientific novelty* detected in the corpora of the present study are just a few examples illustrating the proposition mentioned above.

Having obtained the results mentioned above, the next step has been to carry out a comparison of introductory parts of 10 summaries in English and Latvian (EN n=10, LV n=10) in respect of sector-specific macrostructure wording and elements for management science doctoral dissertation summaries in a pilot study. The results are indicated in Table 8:

Table 8

Comparison of the established macrostructure elements to earlier findings in respect to Social Sciences (ZIVS project)

| **No.** | **ZIVS project** | | **Present study** | |
|---|---|---|---|---|
| | **EN** | **LV** | **EN** | **LV** |
| 1. | proposed scientific theses / theses for defence | aizstāvamās zinātniskās tēzes / aizstāvamās tēzes | theses / theses for defence / theses to be defended / theses to defend / the thesis presented for defence | tēzes /aizstāvamās tēzes / aizstāvēšanai izvirzītās tēzes / pierādīšanai izvirzītās tēzes / pierādāmās tēzes |
| 2. | (main) results | (galvenie) rezultāti | results / main results and conclusions / main results of the research / main results | rezultāti / galvenie rezultāti un secinājumi / galvenie pētījuma rezultāti, izpētes rezultāti, pētniecības rezultāti / galvenie |

| No. | ZIVS project | | Present study | |
|---|---|---|---|---|
| | EN | LV | EN | LV |
| | | | | rezultāti |
| 3. | approbation, i.e., publications, reports, projects | aprobācija, t. i., publikācijas, referāti, projekti | approbation of research results / approbation of the results of research / approbation of the most relevant results | izpētes rezultātu aprobācija / pētījuma rezultātu aprobācija / nozīmīgāko rezultātu aprobācija |
| 4. | research restrictions / limitations | pētījuma ierobežotība / ierobežojumi | limitations / limitations for the application of the […] model | ierobežojumi / […] modeļa izmantošanas ierobežojumi |
| 5. | research question (-s) | pētījuma / izpētes jautājums (-i) | research question / research questions | pētniecības jautājums, pētījuma jautājums / pētījuma jautājumi, izpētes jautājumi |
| 6. | theoretical basis of the research / literature / theoretical framework | pētījuma teorētiskā bāze / literatūra / teorētiskais ietvars | theoretical background / theoretical background of the research | teorētiskie pamati / pētījuma teorētiskais satvars |
| 7. | data, sources, empirical research base used | izmantotie dati / avoti / pētījuma empīriskā bāze | -[2] | - |
| 8. | study period / study period stages | pētījuma veikšanas periods / pētījuma posmi | research period / stages of the study | pētījuma veikšanas periods / pētījuma posmi |

It may be concluded that guidelines and normative documents provide only the general idea of what should be included in the dissertations and their summaries written and translated in Latvia. The exact wording depends on factors such as the conventions of the academic writing of a specific university, faculty or program.

[2] Have not been singled out under a separate heading, however, are described in the text.

In the present study, the lexeme *pētījuma ierobežotība / restrictions of the study* has not been detected when describing the *limitations* of the research.

It has also been established that the *main results and conclusions* under the same title have been used only in two dissertation summaries. In all other cases, the *main results* and *conclusions* have been described under separate titles.

The word combination *pētījuma posmi / stages of the study* has been used only in one summary, the wording detected is *pētījuma veikšanas periods/research period*.

From the comparison, it can also be deduced that in the management science dissertation summaries, data, sources, or empirical research base might not be singled out in a separate subchapter. In all other cases, the findings generally coincide with those of the previous research, although the wording of the titles may differ.

### 3.4 Sector-specific macrostructure wording and elements for management science

Based on the results obtained in the pilot study of the introductory parts of management science dissertation summaries, such as the actual structures of the management science dissertation summaries and their wording both in the original documents and their translations, the general similarities with the structures of dissertation summary texts have been singled out, a further study of the full dissertation texts has been performed to obtain a more detailed overview of the specific text type researched in the present dissertation and to establish the macrostructure and wording used in the full texts of management science dissertation summaries. First, the macrostructure and wording in the texts written in English and translated into Latvian have been explored. The results are presented in Table 9.

Table 9

Elements and wording specific to the macrostructure of management science doctoral dissertation summaries, EN -LV

| EN | LV |
|---|---|
| General information about the doctoral thesis | Vispārīga informācija par promocijas darbu |
| General review<br>General characteristics of the work | Darba vispārējais raksturojums |
| Introduction; general review / general description of the work | Ievads; vispārējs apskats / darba vispārējs apraksts |
| Aim of the study | Pētījuma mērķis |
| Purpose | Vispārējais nolūks |
| Tasks | Uzdevumi |
| Aim and tasks of the research | Pētījuma mērķis un uzdevumi |
| Topicality, topicality of the research | Aktualitāte, pētījuma aktualitāte |
| Novelty | Novitāte |
| Limitations,<br>research limitations, limitations of the research,<br>limitations of the study | Ierobežojumi<br>pētījuma ierobežojumi |
| Publications,<br>scientific publications | Publikācijas,<br>zinātniskās publikācijas |
| Structure of the dissertation | Disertācijas struktūra |
| Volume and structure of the dissertation | Disertācijas apjoms un struktūra |
| Theses presented for defence<br>Theses for defence | Aizstāvēšanai izvirzītās tēzes<br>Tēzes aizstāvēšanai |
| Research methods,<br>methods, methods and data,<br>used methods and sources | Pētniecības metodes,<br>metodes, metodes un dati,<br>izmantotās metodes un avoti |
| Research design | Pētījuma dizains, pētījuma plāns |
| Design and methodology, design and methods; design of the research, design of the empirical study; research setup | Dizains un metodoloģija, dizains un metodes; pētījuma dizains, empīriskā pētījuma dizains; pētījuma dizains |
| Summary of research design and methodology | Izpētes dizaina un metodoloģijas kopsavilkums |
| Consecutive description of the work | Secīgs darba apraksts |
| Summary of theoretical foundations | Teorētisko pamatu kopsavilkums |
| Summary of the theoretical framework | Teorētiskā satvara kopsavilkums |
| Key scientific tenets | Pētījuma būtiskākie zinātniskie rezultāti |
| Research sample and sampling size | Izpētes kopa un izlases |

| EN | LV |
|---|---|
| Principal findings | Galvenās atziņas |
| Discussion; discussion and implications; discussion and interpretations; discussion of the major findings | Diskusija; apspriešana un ietekme; diskusija un interpretācijas; galveno secinājumu apspriešana |
| Main conclusions; conclusions and proposals; main conclusions and proposals; suggestions | Galvenie secinājumi; secinājumi un priekšlikumi; galvenie secinājumi un priekšlikumi; priekšlikumi |
| Suggestions; recommendations; conclusions;<br>suggestions and managerial implications;<br>suggestions and recommendations;<br>suggestions for practical implementation; suggestions for future research in management science;<br>outlook and suggestions | Priekšlikumi; ieteikumi/ierosinājumi; secinājumi;<br>ieteikumi un ierosinājumi vadībai;<br>ieteikumi un ierosinājumi;<br>ieteikumi praktiskai ieviešanai;<br>ieteikumi attiecībā uz turpmāko izpēti vadības zinātnē;<br>perspektīvas un ieteikumi |
| Conclusions from the empirical research | Empīrisko pētījumu secinājumi |
| References used for the summary | Kopsavilkumā izmantotā literatūra un avoti |
| List of literature; used sources in the summary; literature review; bibliography; bibliography used in the summary | Literatūras saraksts; kopsavilkumā izmantoto literatūras avotu saraksts; literatūras apskats; bibliogrāfija; kopsavilkumā izmantotā bibliogrāfija |
| words of gratitude; acknowledgements | pateicības vārdi; atzinības vārdi |
| list of tables | tabulu saraksts |
| list of figures | attēlu saraksts |
| list of abbreviations | saīsinājumu saraksts |
| Abbreviations | Saīsinājumi |
| Appendices | Pielikumi |
| Scientific glossary | Zinātnisko terminu glosārijs |

It can be observed that in the management science dissertation summaries, except one case, publications and scientific conferences are singled out under separate headings, usually under the title of *approbation of research results* / *pētījuma rezultātu aprobācija*. S*uggestions, recommendations, and conclusions,* as listed in Table 8, may be listed in a separate chapter or subchapter as well.

*Reliability and validity of data / datu ticamība un derīgums* have been described but not singled out under a separate heading in the English SL

dissertation summary texts. Given that the dissertation texts describe the research carried out in the dissertations, whereas the summaries disclose what has been described in the dissertations, the headings in the summaries might also contain titles: *summary of chapter one / pirmās nodaļas kopsavilkums, summary of chapter two / otrās nodaļas kopsavilkums, summary of chapter three / trešās nodaļas kopsavilkums.*

One instance that might cause problems both for the authors of the summaries and for the translators has been found. For the English lexemes *aim*, *goal*, and *purpose,* only one Latvian equivalent exists, namely, *mērķis*, whereas *objectives* clarify the aim, purpose or goal and should be translated as *uzdevumi* used in the plural form. It might be expected that the summaries should list only one aim that is sufficiently important and corresponds to the requirements for the contents of a doctoral dissertation. Nevertheless, even in the regulatory documents written in English, both *aim* and *purpose* are mentioned. In this respect, the results of the study are not uniform. In English, generally, the construction *aim/purpose/objective + is + to + infinitive* has been used, but in four cases, more than one aim has been indicated. In the translated version, a solution has been found by translating *purpose* as *nolūks* and *vispārējais nolūks*, which corresponds to the meaning of the wording used in English. In one case, synonymy was discovered, namely in English, both *purpose* and *objective* were used in reference to the aim of the dissertation, such as *the purpose of the thesis at hand is to*..., *the objective of the present thesis is to*..., *tasks required to achieve the research objective are to... Objective,* in turn, has not been used in its function to clarify the aim of the research, but rather instead of the *aim,* such as *the overall objective of the dissertation was to theoretically derive, develop and empirically confirm*..; *the objective of the doctoral thesis is to research...* It might be useful to use *objectives* when describing the tasks of the research; however, it has been discovered in the present study that the use in the researched summary texts and their translations is different, e.g., *to achieve the previously defined objectives of the thesis, the author conducts the following tasks:..* It has been detected in the translations from English to Latvian that for the Latvian lexeme *uzdevums/objective, task* only *task* has been used, e.g., *to achieve this goal the author has put forward the following tasks*: *the most important tasks for achieving the goal are*; *research aim and main tasks..; research goal and main tasks../ research goal and hypotheses…* In light of the

mentioned findings, it might be recommended both to the doctoral students and the translators of summaries to carefully evaluate the use of the lexemes *aim, purpose, goal,* and *objective* in order to avoid unnecessary synonymy that might cause confusion.

In the present study, introductions as one of the constituent parts of management science dissertation summary texts have been explored.

All management science dissertation summaries contain introductory parts; while the macrostructure elements are generally listed in the introductions of the summaries, they may also be structured under the headings *general review, general description of the work*, *general characteristics of the work / darba vispārējs raksturojums; consecutive description of the work / secīgs darba apraksts*.

The theoretical background of the research has been disclosed under the headings: *summary of theoretical foundations / teorētisko pamatu kopsavilkums*; *key scientific tenets / galvenie zinātniskie principi*; *summary of the theoretical framework / teorētiskā satvara kopsavilkums.*

The results indicate that the macrostructure in all dissertation summaries included in the present study is rather uniform and with minor deviations in the wording of the macrostructure elements. However, the macrostructure does not completely correspond to the Swales IMRaD model. This might be explained by the fact that a summary is a document different from the doctoral thesis or dissertation, with the communicative purpose of providing the reader with information about the doctoral dissertation. Apart from the *introduction*, *materials and methods*, *results*, and *discussion,* summaries contain chapters with *general information about the doctoral dissertation / vispārēja informācija par promocijas darbu; consecutive description of the work / secīgs darba apraksts, structure of the dissertation../ disertācijas struktūra.., volume and structure of the dissertation../ disertācijas apjoms un struktūra..*

Comparing the two models, IMRaD and AIMaC, it can be observed that in the AIMAC model Schmied indicates *limitations* as part of the *conclusion,* whereas in the academic writing tradition of Latvia, as demonstrated by the management science corpora of the present study, research *limitations* are indicated in the introductory parts of dissertation summaries, therefore, in the majority of cases *limitations* have been indicated in the introductions of the dissertation summaries.

In the researched corpus of dissertation summaries written in Latvian and translated into English, more variety can be observed in the order of the macrostructure elements, such as *the words of gratitude /acknowledgements* may be indicated at the beginning of the summary.

Table 10 lists the findings of the present study pertaining to the macrostructure and wording of management science doctoral dissertation summaries written in Latvian and translated into English.

Table 10

Elements and wording specific to the macrostructure of management science doctoral dissertation summaries, LV-EN

| **LV** | **EN** |
|---|---|
| Informācija par publikācijām un pētniecisko darbu | Information about research papers and scientific work |
| Ievads | Introduction |
| Pētījuma aktualitāte | Topicality of the research |
| Pētījuma novitāte | Research novelty |
| Pētījuma mērķis | Aim of the study |
| Pētījuma uzdevumi | Tasks of the study |
| Ierobežojumi, pētījuma ierobežojumi | Limitations, research limitations |
| Teorētiskais un metodoloģiskais pamats | The theoretical and methodological basis |
| Pētniecības metodes | Research methods |
| Pētījuma loģika, pētījuma dizains, pētījuma plāns | Research design |
| Zinātniskās publikācijas | Scientific publications |
| Pētījuma rezultātu aprobācija | Approbation of research results |
| Disertācijas struktūra<br>Disertācijas apjoms un struktūra | Structure of the dissertation<br>Volume and structure of the doctoral thesis |
| Pētījuma ierobežojumi | Research limitations |
| Ticamība un derīgums | Reliability and validity |
| Aizstāvēšanai izvirzītās tēzes | Theses presented for defence.<br>theses put forward for the defence |
| Pētījumu rezultātu praktiskais lietojums | Practical value of research results |
| Vispārējs apskats<br>Darba vispārējais raksturojums | General review<br>General characteristics of the work |
| Galvenās atziņas | Principal findings |
| Galvenie secinājumi | Main conclusions |

| LV | EN |
|---|---|
| Secinājumi un priekšlikumi<br>Galvenie secinājumi un priekšlikumi | Conclusions and recommendations<br>Main conclusions and proposals |
| Secinājumi, kā teorētisko studiju rezultāts | Conclusions as a result of theoretical study |
| Diskusija un interpretācija | Discussion and interpretation |
| Kopsavilkumā izmantotā literatūra un avoti | References used for the summary |
| Secinājumi un priekšlikumi<br>Secinājumi un ieteikumi | Conclusions and proposals<br>Proposals and recommendations |
| Secinājumi, kā teorētisko studiju rezultāts | Conclusions as a result of the theoretical study |
| Empīrisko pētījumu secinājumi | Conclusions from the empirical research |
| Problēmas un priekšlikumi to risināšanai | Problems and proposals for their solution |
| Priekšlikumi<br>Ieteikumi | Proposals<br>Recommendations |
| Pateicība, pateicības vārdi | Acknowledgements, words of gratitude |
| Izmantotās literatūras saraksts<br>Izmantotā literatūra | List of literature |
| Bibliogrāfiskais saraksts | Bibliography |
| Galveno izmantoto literatūras avotu saraksts | List of the bibliographic sources used |
| Izmantotās literatūras un avotu saraksts | List of used references and sources |
| Pēcvārds | Afterword |
| Galveno saīsinājumu saraksts | List of main abbreviations |
| Pielikumi | Appendices, annexes |
| | |

Tables 9 and 10 do not include paratexts of management science dissertation summaries, however, it has to be noted that all dissertation summaries also have a small introductory text called *annotation (abstract)/anotācija.* Whereas in the corpora of texts written in English and translated into English the title of the one-page text is A*nnotation*, it has to be remarked that in the given case *Abstract* would have been a more precise title, as it is used in the majority of the English-speaking countries. It has to be taken into account, however, that universities have their own regulations determining the use of the titles. In two cases in the summaries from "Turība" university, the term *Synopsis* has been used instead of *Introduction / Ievads* in the English translation. Both issues indicated above will be addressed further in the chapter on undesirable translations.

The section *words of gratitude* or *acknowledgements* is optional, but only

one of the dissertation summary texts written in English did not contain them. The author of the summary used the title *Afterword* instead. In the summary texts written in Latvian, *words of gratitude* or *acknowledgements* have been detected in 15 summaries, i.e. in 50% of the texts. In one case, *acknowledgement* was used in the singular form.

Since dissertations in management science may discuss a vast range of economics sectors and some concepts might be perceived differently in different cultures and contexts, it might be useful to include a scientific glossary or glossary of terms in all summary texts to clarify the precise definition of all terms used in the dissertations and their summaries. It has been detected that a glossary of terms has been indicated in four dissertation summaries, written in Latvian and two summaries, written in English.

In the dissertation summaries written in the Latvia University of Life Sciences and Technologies, Faculty of Economics and Social Development, there is a short subchapter called *information about research papers and scientific work/ informācija par publikācijām un pētniecisko darbu* above the introduction, briefly listing publications and research done within the framework of the respective dissertation. While it may be argued whether it is worthwhile to indicate the mentioned information outside the introduction, there might also be a positive influence of the mentioned tradition, namely, the audience is provided with the opportunity to learn about the respective research in a concise manner. The dissertation summaries defended at Riga Technical University, in turn, contain a concise description of the author of the dissertation, main biographical data and academic and research achievements on the back of the last cover page.

Based on the study of the designed corpora, some general observations have been derived. Definitely, the titles in the dissertation summaries written in English and Latvian overlap, however corpus examination provided an opportunity to identify successful choice of wording. Thus, *pētījuma loģika*, used in the LV source text, describes *research design* very precisely, whereas the term "dizains" can also have a different meaning. The phrase *pētījuma loģika* appears in seven original summary texts written in Latvian. Detected examples of less successful wording are provided in Chapter 5 of the present dissertation in the results of the study on the false friends of a translator.

The wording *problems and proposals for their solution*/*problēmas un priekšlikumi to risināšanai* detected in two dissertation summaries written in Latvian and translated into English present the author of the respective dissertation

summary with a suitable prompt as to what kind of proposals should be indicated in the dissertation and its summary.

In the present study, it has been detected that in management science dissertation summaries, research models are used to describe the researched phenomena and processes. In the summary texts, model descriptions have not been singled out in separate chapters; instead, they are indicated in subchapters with the following wording describing the research model under the following headings:

*Model development and research methodology for the evaluation of.. / modeļa izveide un izpētes metodoloģija...; ...model for market entry decision... / ... modelis par uzskatiem attiecībā uz...ieiešanu tirgū...; model indicators and building blocks.. / ..modeļa rādītāji un elementi..; .. conceptualized research model / ..konceptualizētais izpētes modelis; technology acceptance model.. / .. tehnoloģiju akceptēšanas modelis..;..applications of the technology acceptance model../ ..tehnoloģiju akceptēšanas modeļa pielietojums..; research model, hypotheses and data collection / pētījuma modelis, hipotēzes un datu vākšana; research model, identification of main model variables, and related measuring concepts / pētījuma modelis, galveno modeļa mainīgo noteikšana un ar tiem saistītās novērtēšanas koncepcijas; new model of.. / jauns ... modelis..; the development of the hypotheses and of the causal model for.. / ..hipotēžu un kauzālā modeļa izstrādāšana..; developmentof acausal model.. / ..kauzālā modeļa izveide; limitations for the application of the model.. / ..modeļa izmantošanas ierobežojumi..; ..model development..., development of model.. / ..modeļa izstrāde...; ...tertiary sector model.. / .. terciārais sektoru modelis..; ..development of the research model.. / ..izpētes modeļa izstrādāšana..; ..modeļa izstrāde.*

It also has to be noted that more than one hypothesis has been stated in management science dissertation summaries. A reasonable substantiation for the number of hypotheses in social sciences has been provided by Trochim (KB-e):

"The way we would formally set up the hypothesis test is to formulate two hypothesis statements, one that describes your prediction and one that describes all the other possible outcomes with respect to the hypothesized relationship". The main hypothesis is usually marked as $H_0$, while the other hypotheses, such as $H_1$, $H_2$, $H_3$, *etc.*, are necessary to substantiate the main hypothesis. In the texts written

in Latvian, as many as four sub-hypotheses have been detected; in the texts written in English, there are up to 8 sub-hypotheses.

The hypotheses are then either confirmed or rejected based on the results of the calculations. The most frequently used wording in the given case is *..can be confirmed../ ..var apstiprināt..* and *..cannot be confirmed../ nevar apstiprināt.* The phrase *cannot be confirmed* has been used in 10 summary texts, and *can be confirmed* has been detected in 17 summary texts written in English.

In summaries written in Latvian, the following wording pertaining to hypotheses has been detected: *..ir apstiprināta.. / ..is confirmed.., ..tiek apstiprināta.. / has been confirmed;* ..tika apstiprināta.. / ..was confirmed.., *..neapstiprinājās.. /.. was not confirmed.., ..cannot be confirmed.. / ..nevar apstiprināt...*

The results of the present study, obtained by exploring the existing theoretical macrostructure models and comparing them to the structures and wording, detected in management science dissertation summary titles, as well as by exploring the results of earlier studies on the introductory parts of summaries in social sciences, have allowed to obtain an overview of the general structures of dissertation summaries in different universities and the paratexts used in them.

**Conclusions to the third chapter**

The third chapter is devoted to the research on the macrostructure of the management science doctoral dissertation summaries, analysed and compared to the Introduction-Method-Results-Discussion model according to Swales. Summary, however, is a document different from the doctoral thesis or dissertation with the communicative purpose of providing the reader with information about the doctoral dissertation. Therefore, the summary macrostructures in management science differ from the IMRaD model. Apart from *the introduction*, *materials and methods*, *results*, and *discussion,* summaries contain chapters with *general information about the doctoral dissertation / vispārēja informācija par promocijas darbu; consecutive description of the work/ secīgs darba apraksts, structure of the dissertation../ disertācijas struktūra.., volume and structure of the dissertation../ disertācijas apjoms un struktūra..*

The macrostructure elements may be indicated in the *introduction,* but they may also be structured under the headings *general review, general description of the work*, *general characteristics of the work / darba vispārējs raksturojums*; *consecutive description of the work / secīgs darba apraksts*.

The theoretical background of the research has been disclosed under the headings: *summary of theoretical foundations / teorētisko pamatu kopsavilkums*, *key scientific tenets / galvenie zinātniskie principi, summary of the theoretical framework / teorētiskā satvara kopsavilkums; theoretical and methodological basis / teorētiskais un metodoloģiskais pamats.*

In management science dissertation summaries, research models are used in order to describe the researched phenomena and processes. The lexeme model has been used in the subheadings in the majority of dissertation summaries, although not in all of them. Sometimes models have been described under different, more generalized titles.

The differences in wording used in the dissertation summaries for the Latvian term *mērķis* have been researched. For the English lexemes *aim*, *goal*, and *purpose,* only one Latvian equivalent exists, namely, *mērķis*, whereas *objectives* clarify the aim, purpose or goal and should be translated as *uzdevumi.* In English, generally, the construction *aim/purpose/objective + is + to + infinitive* has been used. In four cases, more than one aim has been indicated.

More than one hypothesis has been stated in management science dissertation

summaries. The largest number of sub-hypotheses detected in the summary texts written in English is eight; in the texts written in Latvian, it is four. In management science, hypotheses are then either confirmed or rejected, based on the statistical results. The wording used most frequently in management science dissertation summaries is as follows: *can be confirmed/ var apstiprināt* and *cannot be confirmed/ nevar apstiprināt.*

In two cases in summaries from the same university, the term *Synopsis* has been used instead of *Introduction / Ievads* in the English translation. This will be addressed further in Chapter 5 on undesirable translations.

The section *Words of gratitude* is optional, but only one of the dissertation summaries written in English examined so far did not contain them. The results of the present study allowed to obtain an overview of the general structures of dissertation summaries in different universities and the paratexts used in some of them. In the dissertation summaries written in the Latvian University of Life Sciences and Technologies, Faculty of Economics and Social Development, there is a short subchapter called *information about research papers and scientific work/ informācija par publikācijām un pētniecisko darbu* above the introduction, briefly listing publications and research done. The dissertation summaries defended at Riga Technical University contain a concise description of the author of the dissertation, main biographical data and academic and research achievements on the back of the last cover page.

# 4 Microstructure of management science doctoral dissertation summaries

Swales (1990: 188) emphasizes that the authors of dissertations direct the readers in understanding the material rather than merely inform them about the findings. The microstructure as well as the constituent elements of scientific text might be important for understanding the syntax and style, but may also contribute to the better quality of academic writing. The microstructure of text is the internal structure of a text, which is sometimes also universally referred to as metadiscourse, meaning the constructions that the author of the text uses to inform the reader about the structure of the text (Breitkopf & Vassileva, 2007: 215), facilitating its perception.

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

The elements of the microstructure are used according to language conventions, which provide the reader with an understanding of the structure of the text, such as what will follow further in the text or what has already been mentioned. These language elements facilitate the perception of a new micro-subject, the recognition of the introductory and concluding part of the text. Initially, Kintsch and Van Dijk (1978: 365) formulated the microstructure of text as follows: "the microstructure is the local level of the discourse, that is, the structure of the individual propositions and their relations".

In order to describe the microstructure elements of the management science doctoral dissertation summaries, the elements comprising microstructure have to be systematized. First of all, in relation to elements such as subject matter introduction, retrospective and prospective indications, micro-theme introduction, references to examples, indications of a technical nature, and introduction of conclusions, Swales has to be mentioned. Swales defined the concept of discourse communities (Swales 1990: 21), described the revised CARS model (ibid: 141), mentioned above in Chapter 3 of the present dissertation, as well as provided the general structure of the research texts on the example of research articles

(ibid.: 155) and explained how these moves and the respective lexis and grammar reflect the stance of the authors of these texts (ibid.: 155-156). Besides, Swales also defined the concept of research-process genres and referred to theses and dissertations as one of them (ibid. 187). Swales (2004: 99 – 145) described the doctoral dissertation as a research genre and provided a further description of the summary microstructure (Swales & Feak, 1994: 203), albeit without specifically referring to the summaries of doctoral dissertations.

Halliday (1985/1994: xvi–xvii) has researched both the importance of meaning in language and the formal properties of language, such as grammar, and the relationship between the mentioned phenomena, while also addressing cohesion. Halliday (ibid.) perceives language as a system of choices, linked to particular contexts through patterns of lexico-grammatical and rhetorical features.

According to Halliday and Hasan, the property of being a text is called *texture.* Texture is what distinguishes a text from a non-text. Texture is derived from the fact that the text functions as a unity with respect to its environment. But if texture is an abstract entity, a property, how can we distinguish a text that has texture from one that does not? Texture is realised in relations existing between parts of a text (Taboada 2004: 155). Thus, the microstructure of a text may be seen as one of the core elements related to text organisation.

The central concepts for the microstructure of the text, in turn, are described by the terms *cohesion* and *coherence*. Halliday and Hasan (1976: 04) relate the notion of cohesion to meaning as follows: “Cohesion refers to the relations of meaning that exist within the text, and is expressed through the stratal organisation of the text… It occurs where the interpretation of some elements in the text is dependent on that of another”. De Beaugrand & Dressler (1981: 23) describe *cohesion* as referring to the surface text, i.e., grammatical dependencies in the surface text, and *coherence*, a notion related to *cohesion* as referring to the textual world, i.e., the configuration of concepts and relations which underlie the surface text. Consequently, cohesion refers to the internal linking of the text, which ensures the logical sequence of the text, the relationship and conditionality of the individual parts of the text, and which might be expressed by lexical and grammatical means. Taboada (2004: 158) points out that “cohesion is a non-structural text-forming relation that works alongside the structural relations to provide texture”. The research

in the present dissertation, in terms of coherence and cohesion of the text, has been largely based on the wording indicated in the Academic Phrasebank of the University of Manchester, designed by John Morley, based on research carried out by Swales in the 1990s. a general resource for academic writers, organised on the basis of text functions, such as *introducing work, referring to resources, describing methods, reporting results, discussing findings, and writing conclusions* (AP-e 2023). The original corpus from which the phrases were 'harvested' consisted of 100 postgraduate dissertations completed at the University of Manchester and is constantly being enriched by phrases from newly added texts.

The text, as perceived by the audience, would thus have certain presupposed elements. "When the presupposed element is to be found in the text, the type of reference is *endophoric,* that is, it happens inside the text. But the presupposed element can also be found somewhere else, in which case we have an *exophoric* reference, one that takes place outside the text" (Taboada 2004: 158). The reference can be made to both the situational context and the cultural context. In the present dissertation, endophoric devices, sometimes also called endophoric markers (Hint, Lemendik, Egle, Ruskan, Susman 2024), i.e. markers referring to the other parts of the text, pertaining to the microstructure of the researched texts of management science dissertation summaries, such as different forms of deixis, have been researched both in English and Latvian.

For the study described in the present dissertation, Hyland's model of academic interaction and specifically the authorial stance represented through the elements of text microstructure are of particular interest.

Hyland (2009: 74) uses the term *stance* "to refer to the writer's textual 'voice' or community-recognised personality. This is an attitudinal, writer-oriented function that concerns the ways writers present themselves and convey their judgements, opinions, and commitments. *Engagement*, on the other hand, is more of an alignment function. It concerns the ways that writers rhetorically recognize the presence of their readers to include them as discourse participants, and guide them to interpretations. In other words, statements must incorporate an appropriate awareness of self and audience by presenting a credible writer persona and anticipating readers' possible objections and alternative positions." Hyland's stance and engagement model (2005a: 177) is indicated in Figure 5 below:

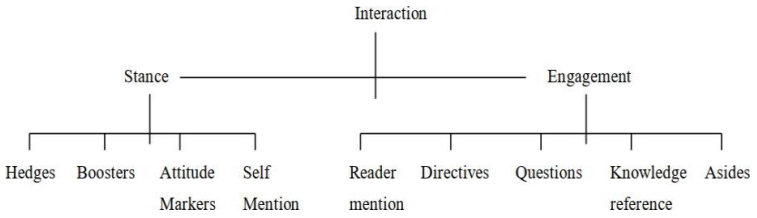


Figure 5. Key resources of academic interaction according to Hyland's stance and engagement model (2005a: 177)

Hyland (2015c: 303) remarks that "authors are everywhere in their texts, presenting a stance towards their topics and readers".

In terms of personal or impersonal stance as reflected in the language of science, Hyland & Bondi (2006: 30) point out that "the sciences tend to produce more impersonal, or at least less reader inclusive, texts. More precisely, they indicate how the resources of language mediate the contexts in which they are used. The presence or absence of the author, however expressed, is a conscious choice by writers to adopt a particular stance and disciplinary-situated authorial identity. Hyland and Jiang point out that "in the sciences, it is common for writers to downplay their personal role to highlight the phenomena under study, the replicability of research activities, and the generality of the findings. In other words, we find scientists subordinating their own voice to that of unmediated nature. Such a strategy subtly conveys an empiricist ideology that suggests research outcomes would be the same irrespective of the individual conducting it. In the humanities and social sciences, in contrast, personal credibility, and explicitly getting behind arguments and personally intervening to evaluate material and express a point of view, plays a far greater part in creating a convincing discourse, enabling writers to emphasize their contribution to the field and to seek agreement for it" (Hyland & Jiang 2016: 268).

Hyland & Bondi (2006: 29-32) claim that there exist variations in research texts depending on discipline. The disciplines are grouped into "soft" and "hard disciplines". Engagement with disciplinary audiences is analysed from the mentioned perspective, emphasizing their differences, be it concerning stance, hedges, attitude markers, boosters, or self-mention. The authors provide a thorough analysis of these differences as described by different researchers with

respect to stance features, self-mention, and different patterns of author representation, criticisms, mentions of discourse producers, *the author, we,* or impersonality.

Hyland remarks that self-mention in 'soft' fields of philosophy, sociology, applied linguistics, and marketing contains 75% more stance items than the engineering and science texts (Hyland & Bondi 2006: 29).

Based on the communication models described in the present dissertation, it may be stated that academic texts are not simply informational and objective; they are also interactive, evaluative, and interpersonal. Interaction in academic texts has attracted a great deal of research interest in recent years, encouraging a view of scholarly writing as evaluative and interpersonal rather than simply informational and objective. Research has sought to reveal how academic writers intervene in their texts to not only present their findings but also "evaluate these findings, comment on them, and build solidarity with their readers" (Hyland and Tse 2005: 39).

Hyland and Bondi characterize evaluative *that* constructions as follows: "This is a powerful construction for expressing evaluative meanings in academic discourse as it allows the writer to thematize the evaluation, making the attitudinal meaning the starting point of the message. By realizing attitudinal meaning as a proposition on its own, separate from what is evaluated, this structure turns such evaluations into an explicit statement of opinion with the potential for elaboration and further discussion. Support for this kind of impersonality in the sciences was also observed in the higher frequencies of evaluative *that* structures, such as *we believe that* and *it is possible that*, in the social sciences in both research article and theses abstracts" (Hyland & Bondi 2006: 30).

This coincides with the earlier findings of Hyland and Tse in respect to evaluative *that* constructions as "a structure which allows a writer to thematize attitudinal meanings and present an explicit statement of evaluation by presenting a complement clause within a superordinate clause". Comparing the results from six disciplines, the authors have found that the structure has been widely employed and "is an important means of providing author comment and evaluation. Evaluative *that* therefore helps writers to manage their discourse in various ways and to signal a clear stance towards the information they present" (Hyland & Tse 2005a: 40). In the study described in the present dissertation, evaluative *that*

constructions have been found in 100% of the corpora texts written and translated into English, therefore the mentioned construction has been further analysed in detail.

Hyland discerns the following features of stance:

1. Hedges, devices "which withhold complete commitment to a proposition, allowing information to be presented as an opinion rather than fact".
2. Boosters, allowing "the writers to express their certainty in what they say and to mark involvement with the topic and solidarity with their audience" (Hyland 2009:75).

Hedges and boosters communicate the attitude of the writer to the ideas expressed in the text and to the readers.

Thus, a topical aspect of the authorial stance detected in the texts of management science dissertation summaries and their translations concerning the mentioned construction is that of certainty and uncertainty. As indicated by Dubova, Laiveniece, Lele-Rozentāle and Egle (2023: 177–178) the markers of certainty along with those of authorial stance are the most commonly used markers of interactional metadiscourse. In the Latvian language of science, the formulations used to express certainty (boosters) and uncertainty (hedges) have been described by Laiveniece (2021: 174–183). The researcher singles out modality as the basic notion related to the dichotomy of certainty–uncertainty, as well as defines epistemic modality as related to the expression of attitude towards the contents of the utterance or the situation (2021: 175). In the present dissertation, the categories of certainty and uncertainty are disclosed through the modality in evaluative *that* constructions.

As Laiveniece and Dubova (2021:82) have pointed out, another important aspect is how the set of microstructure elements allows targeted tracking of scientific text throughout its duration from introduction to conclusion. The findings of the microstructure element composition in the dissertation summary texts correspond to the classification described by Laiveniece and Dubova (2021: 81):

1) introducing the subject matter of the text (e.g., *in the summary the following themes will be addressed../..kopsavilkumā skatītas, analizētas šādas*

*tēmas..*) [Laiveniece and Dubova (2021: 81) provide the following example: *rakstā pievērsīsimies divām no nosauktajām tēmām../ in the article the following themes will be addressed*…][3], which is sometimes accompanied by indicating the limitations in the presentation of the subject matter (e.g., *in this summary… will not be addressed /. Šajā kopsavilkumā netiek skatītas…*) [Laiveniece and Dubova (2021: 81) provide the following example: *šajā rakstā netiks aplūkoti../ …in the article … will not be addressed],* the expression of the communicative purpose of the author, the aim or goal of the study (e.g., *the aim*/*goal/purpose of the study is to analyse..*) [Laiveniece and Dubova (2021: 81) provide the following example: *promocijas darba mērķis ir analizēt…/ the aim of the dissertation is to analyze…*].

2) retrospective (e.g., *it has already been mentioned above that…*) and prospective indications (e.g., *the following examples illustrate/ nākamie piemēri ilustrē..*), which help the reader to follow the course of the author's thoughts and the order of the narrative [Laiveniece and Dubova (2021: 81) provide the following example for retrospective indications *iepriekš jau tika minēts, ka../ it has already been mentioned that..* and prospective indications *nākamie piemēri ilustrēs../ the following examples will illustrate..*).

3) micro-theme introduction: *tomēr šī pētījuma metodoloģija ir jāpaskaidro, pamatojoties uz* / *however, the methodology of the present study has to be clarified, based on..*[Laiveniece and Dubova (2021: 81) provide the following example: *vispirms jānoskaidro, kas šajā pētījumā tiek saukts par…/ first, it is necessary to find out what is understood by … in this study*] or thematic transition from one micro-theme to another, such as, *in the following chapters of the dissertation more attention will be paid…/ nākamajās disertācijas nodaļās vairāk uzmanības tiks pievērsts../ in the following chapters of the dissertation more attention will be paid to..*[ Laiveniece and Dubova (2021: 81) provide the following example: *raksta turpinājumā vairāk uzmanības tiks pievērsts../ in the present article, more attention will subsequently be paid to ..*]. As indicated by Laiveniece and Dubova (ibid.) the mentioned kind of transitions are characterised by a certain automation of linguistic means, using circumstantial adverbs, such as *firstly*, *initially*, *further,* or by phrases or word combinations, such as *in the next*

[3] Examples from theses summary text corpora are provided by the author of the present dissertation, based on the research corpora and indexed accordingly by *a* for texts originally written in Latvian and *b* for texts originally written in English.

*chapter*, etc., which also coincides with the findings of the study for the present dissertation.

4) references to examples and their analysis, such as *kā liecina tālāk minētie piemēri* / *as demonstrated by the examples below.* [Laiveniece and Dubova (2021: 81) provide the following example: *kā rāda minētie piemēri*.. / *as demonstrated by the examples above..*]. Laiveniece and Dubova (2021: 81) point out that the mentioned references also display retrospective and prospective characteristics depending on the material chosen by the author and the type of presentation of the analysis for the mentioned material.

5) indications of a technical nature *kā parādīts ..tabulā, ..attēlā../ as shown in the table.., figure..; kā parādīts zamāk redzamajā attēlā../ as shown in the figure below..*[Laiveniece and Dubova (2021: 81) provide the following example: *kā rāda zīmējums ar divvirzienu bultiņām (4. att.)../ ..as shown in the figure with bidirectional arrows (Fig.4)*]; such indications are used to direct the reader's attention to the illustrative material attached to the text — a diagram, table, map, picture, chart, etc.

6) introduction of the conclusions ..[Laiveniece and Dubova (2021: 81) provide the following example: *apkopojot visu iepriekš minēto par.., var secināt, ka..*/ *summarizing all of the above …, it can be concluded that…*), which is also largely characterized by the automation of language means, using wording *nobeigumā, noslēgumā / in conclusion, to conclude*; *kopumā* / *in general*; *rezultātā* / as *a result*; *apkopojot / summarizing*, word combinations, such as *līdz ar to* / *therefore, var secināt / it can be concluded*, etc. In this respect, the findings of Laiveniece and Dubova (2021:82) and the findings from the corpora of the present study coincide.

The microstructure elements featured in the present dissertation are deixis, the authorial stance, the use of the first and the third person pronouns, the use of the evaluative *that* constructions; the Passive Voice, terms characteristic of management science summary texts, and, given that in the present dissertation translation problems in research texts are disclosed, also the false friends of a translator, further analysed in Chapter 5 of the present dissertation. The wording pertaining to the macrostructure of the researched summaries is described in the chapter devoted to the macrostructure of the text.

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

Deictic constructions are also known as deictic expressions or deixis. In the language of science, they play a significant role, allowing the authors to refer to specific entities, time, location, or other authors and research. The term "deixis" was first introduced in linguistics by the British linguist and philosopher Peirce (1932). Peirce used the term "deixis" to refer to a linguistic phenomenon where the interpretation of certain words or expressions depends on the context of the speech act. Bühler **(**1990: 97-166), in turn, defined the spatial and temporal deixis.

Thus, a deictic lexeme is a lexeme determined by the speech situation: the speaker, the addressee, the moment, and the place of the speech. As Alan Cruse has pointed out, spatial deixis is manifested mainly in the form of the adverbs of place "*here*" and "*there*", as well as by the pronouns "*this*" and "*that*" (Cruse 2000: 319, 321), which corresponds to the concept of the abstract space as described by Langacker (2002: 01).

Cruse points out that "deixis means different things to different people" (Cruse 2000: 319) and provides the following key diagnostic criterion for deictic expressions: "the sensitivity of their use in designating a given referent to certain speech-situational parameters, particularly location in space and time relative to the speaker, and participatory status". Cruse recognizes five main types of deixis: person deixis, spatial deixis, temporal deixis, social deixis, and discourse deixis (ibid.). The same categories of deixis are also described by Levinson (2008: 54 – 94). Levinson (2008: 54) states that "deixis is the single most obvious way" in which the relationship between language and context is reflected "in the structure of languages themselves' by the use of demonstratives, first and second person pronouns, tense, specific time and place adverbs, like *now* and *here,* and a variety of other grammatical features 'tied directly to the circumstances of the utterance" and remarks that "deixis concerns the ways in which languages encode of grammaticize features of the context of utterance or speech event and thus also concerns ways in which the interpretation of utterances depends on the analysis of that context of utterance". Therefore, ideas of spatial and temporal deixis, as well

as the psychological perception of spatial deixis (Cruse 2000: 324; Levinson 2008: 73–85) can serve as a starting point when researching deixis in the language of science. It has to be noted, however, that in the instances cited above, when describing deixis, Cruse and Levinson refer to general English, not to the language of science in particular.

The reflection of the dimension of space in the language of science is expressed through the deixis of space and the dimensions of time, by prospective and retrospective phrases. The authors and readers of scientific texts together form a common dimension of abstract time and space of subjective psychological perception (Langacker 2002: 01); the deictic constructions and prospective and retrospective phrases in scientific texts facilitate communication between authors and readers. The study presented herein is intended to improve the recognition and use of the mentioned lexis by the authors and translators of management science doctoral dissertation summaries.

As Hyland has emphasized, from a functional point of view, context matters more than explanation in a dictionary (Hyland 2005b: 24). The term "functional" in metadiscourse research refers to how language is used to achieve communicative goals. The mentioned textual elements are important for text formation and serve to build a common perspective between the author and the target audience.

The expression of deixis, as pointed out by Malmkjær, would differ between different languages as well. The scientist indicates that "a number of studies carried out in the 1980s and 1990s focus on the linguistic realization in different languages of the apparently universal category, deixis (Gumperz & Levinson 1996; and Bowerman 1996: 149–50). The scientist argues that 'all languages make categorical distinctions among spatial configurations for the purpose of referring to them with relatively few expressions, such as the spatial prepositions', although what counts as a particular spatial relationship varies between languages" (Malmkjær 2009:354).

In Latvian, the notion of distance can refer both to temporal and spatial deixis. When describing spatial deixis, the abstract psychological space of communication is referred to by Kalniete (2016: 60). Kalniete mentions the following pronouns in the function of spatial deixis in Latvian: *tas, tā / that*; *šis*, *šī / this*; *tāds*, *tāda*; *šāds, šāda / such*, and *viņš / he"* (Kalniete 2016: 59). The pronoun

*viņš* / *he* detected by Kalniete in her research material denoting the maximum distance in terms of time or space, has not been found in the researched summary texts in this function. The demonstrative pronouns, in turn, draw the reader's attention to those objects, qualities, signs, or phenomena that are closer or further away from the speaker (in terms of the perceived space or time), more or less familiar, mentioned recently or previously. The differentiated use of pronouns, pointing to closer things with the pronoun *šis, šī / this*, or to further things *tas, tā / that* has been detected not only in relation to physical space but also in abstract communication situations (Kalniete 2016: 68). This finding may also be attributed to how distance is marked in scientific communication. Kalniete (2016: 61) points out that deictic pronouns have practically no function of indicating proximity or distance of places or objects in physical space, since physical space to navigate does not exist. These pronouns indicate realities or processes that are more or less important from the point of view of the speaker.

In linguistic research, the concept of deixis is not new. Gintarė Judžentytė has conducted a contrastive study on the use of the spatial deixis in Lithuanian and Latvian languages (Judžentytė 2018). The deictic adverbs in the Baltic languages have been researched by Berthold Forssman. He points out that in Latvian, the deictic adverbs of space localize the space and reflect it from the point of view of the ego (Forssman 2003: 36). He also remarks that all the adverbs of space of the Latvian language are deictic (ibid.).

Concerning other text types, deixis has been studied by Ločmele (2001) and Kalniete (2016). Deixis pertaining to time in engineering discourse, singled out in research articles, encyclopaedias, and textbooks, from the perspective of pragmatics and discourse analysis, based on the use of the deictic adverbs of time, has been analysed by Čerņevska (2021). Čerņevska (2021: 37) concludes that deixis is a complex phenomenon that is discussed in relation to the semantics-pragmatics interface and comprises both linguistic and extralinguistic aspects of meaning. The scientist (ibid.) remarks: "It should be noted that there can be deictic and non-deictic usage of deixis, which presents an additional analytical challenge". Čerņevska (2021: 38) also notes that "the pragmatic meaning of temporal deictic expressions may vary depending on the genre". In the study of the present dissertation, the deictic use of the time expressions has been analysed from the perspective of the language used in management science dissertation summaries.

Prospective and retrospective phrases, as well as pronouns in the Latvian language of science in relation to the microstructure-forming elements of text in linguistics research articles, have been studied by Laiveniece (2013: 123 – 125). The author has compiled elements of the language that are used to attract the attention and interest of readers, with the function of both pointing to what has been mentioned earlier and what will be presented further in the text. Laiveniece points out that the expressions of space and time in the introductions of research articles are used to introduce the theme and purpose of the article, as well as to attract the readers' interest. The authors of the scientific text use space and time expressions, often accompanied by the pronoun *šī*, *šis* / *this* (e.g., *šajā rakstā / in this article; šajā pētījumā / in this study*; *šajā rakstā / publikācijā / pētījumā / in this paper/publication/study / article*; *šajā reizē*, *šoreiz/this time*[4] (Laiveniece 2013: 125). Likewise, the verb may be used in the Passive Voice (such as *aplūkots, skatīts, iecerēts / discussed, viewed, intended /*). In the main part of the language of science text, these microstructure-forming expressions are used to remind the reader of what has been mentioned earlier, using retrospective phrases, e.g., *kā jau minēts / as already mentioned*; *iepriekš jau tika minēts / it has already been mentioned (that)/*, or to start the next micro-theme with prospective phrases, such as *turpmāk*, *tālāk tekstā* / *further*, *further in the text* (Laiveniece, 2013: 127).

Laiveniece (2013: 130 – 131) states that the prospective and retrospective phrases in the scientific text contain "the markers of the planned structure and interrelation of statements /micro-themes, helping the reader to track the course of the author's ideas throughout the text". In the concluding parts, the authors of scientific texts use such phrases as *apkopojot iepriekš pausto, līdz ar to secināms / summarizing the above*, *to conclude*", encouraging the reader to indirectly interact with the author of the text and interpret the findings of the author's research accordingly.

The findings described further with respect to the management science dissertation summaries are based on earlier research carried out by the author of the present dissertation, jointly with Artūrs Viļums and describing deixis in

[4] Translation of the Latvian lexemes into English here and further in the dissertation text is provided by the author of the dissertation.

research articles (Kopankina & Viļums 2021). The study of textual elements has been performed according to their functional role in the text: the space dimension expressed by the deictic constructions of place (demonstrative pronouns and adverbs) and the time dimension, expressed by prospective and retrospective phrases and constructions (adverbs and adjectives). The most frequently used wording expressing the mentioned dimensions has been singled out, determining deictic phrases in the management science dissertation summaries and their translations based on the research of corpora compiled by the author of the present dissertation. The research has revealed that the deictic space and prospective and retrospective time constructions are present throughout the summaries defended in Latvia and their translations, i.e., in the introductory parts, in the main bodies, and in the conclusions of the mentioned texts and serve the function of creating common psychological space and time for the author and the audience with the intention to facilitate the perception of the texts.

The findings of the present study indicate that the most commonly used phrase for creating psychological space in management science dissertation summaries written in English is *this research / šis pētījums* (n= 212); *this dissertation / šī disertācija* (n=181); *this study /šis pētījums* (n=113); *this thesis/ šis pētījums* (95); *this means* / *tas nozīmē* (n=67); *in this context / šajā kontekstā* (n=53), this work /šis darbs (n=50); *this result / šis rezultāts* (n= 22); *in this case/ šajā gadījumā,* (n=18); *this aspect /šis aspekts* (n=16). In the summary texts, written in Latvian, the results are similar. *Šis pētījums /this research* (n=127); *šis pētījums* / *this study* (n=93); *šī disertācija / this thesis* (n= 37); *tas nozīmē / this means* (n=33); *this work /šis darbs* (n=29); *in this case / šajā gadījumā* (n=27); *šī disertācija /this dissertation* (n=22); *šajā kontekstā /in this context* (n=14). It can be observed from the examples, listed both for the dataset of texts written in English and in Latvian, that synonymy is very limited, especially in the texts written in Latvian. The results of the present study coincide with those from the previous research of other text types of the language of science, carried out by the author of the present study (Kopankina & Viļums, 2021) and it can be concluded that in the Latvian language of science, the authors use demonstrative pronoun(s) "*šis, šī / this; šāds, šāda* / *this kind of* to refer mainly to their own research, and *tas / tā / tāds, tāda* / *that* to refer to the research of other scientists.

In Latvian, the demonstrative pronouns *šis, šī/this* and *tāds, tāda/that* may

also correspond to the definite article *the* in English. As remarked by Kalniete (2016: 66), in Latvian article does not exist as a separate grammatical category; the demonstrative pronouns *šis, šī / this; šāds, šāda* / *this kind of* in some cases denote the category of definitiveness. In the Latvian language of science, the mentioned demonstrative pronouns in the function of the definite article do not serve to point out physical distance, but to indicate the importance of an object or a phenomenon, or to single it out from other objects or phenomena; therefore, they can be considered to represent deixis. When analysing the statistics of the use of the demonstrative pronouns *šis, šī, šāds, šāda /this, this kind of* and *tāds, tāda/that, that kind of* for the texts originally written and translated into Latvian, a considerably higher prevalence of the demonstrative pronoun *šis, šī/this, this kind of* can be observed in comparison to the use of the demonstrative pronoun *tāds, tāda/that, that kind of.* In the original texts in Latvian (n=885)[5] of the demonstrative pronouns *šis, šī, šāds, šāda /this kind of* has been encountered, while in the translations from English into Latvian, the number of the detected cases is even higher (1001). The demonstrative pronoun *tas, tā/that, that kind of* has been used to a much lesser extent, n=35 in the texts written in Latvian, n=53, and in the texts translated into Latvian, n=38. Deictic indications in the texts of the management science doctoral dissertation summaries frequently serve to refer to a study, fact, or author, as well as to help the reader better understand the outlined regularities. It may be concluded that the demonstrative pronoun *this* is the most frequently used deictic indication both in the original texts and their translations, followed by a nominal phrase, which in turn is further explained in the text and refers to own research of the author of the respective summary.

Another category of deixis is that of discourse deixis. The use of the emphatic demonstrative pronoun *this* signalling discourse deixis in a text written in English, is represented by the following wording detected in the research corpora of MS dissertations written in English:

> *FinTech companies are not only those that offer products or services but also those that develop them.* ***This is what*** *gives the general public the idea of a FinTech as a massive digitalized and innovative company with automatic processes and a paperless office* (research corpus EN-b26).

[5] Number of cases encountered in the research corpora

*FinTech uzņēmumi ir ne tikai tie uzņēmumi, kas piedāvā produktus vai pakalpojumus, bet arī tie, kas tos izstrādā.* ***Tieši tas*** *plašai sabiedrībai dod priekšstatu par FinTech uzņēmumiem kā ļoti digitalizētiem un inovatīviem uzņēmumiem ar automatizētiem procesiem un elektroniskiem birojiem* (research corpus LV-b26)[6].

Here, the deictic phrase serves both to emphasise and detail the preceding statement and can be attributed to discourse deixis. Cruse (2000: 323), in turn, defines discourse deixis as referring to such matters as "the use of *this* to point to future discourse elements, that is, things that are about to be said" (ibid.). In the example provided above, however, the demonstrative pronoun *this* emphasises the previous statement and is closer to the interpretation of the adverbs *therefore, furthermore* and *hereby*. Cruse (2000: 324) also refers to such adverbs as *therefore*, *furthermore,* and *hereby* as including an element of discourse deixis, "as they require the recovery of a piece of previous discourse to be understood" (Cruse 2000: 324).

The adverb *furthermore* has been frequently detected in the MS doctoral dissertation summary text corpora, both written in English (n=171) and translated from Latvian (n=99). What complicates direct quantitative comparison of the original and translated texts is that in the texts written in or translated into English, the adverb *moreover* has also been used and, being a synonym of *furthermore* (CD. ₀ 2025), as demonstrated by the examples below, has the same counterpart in Latvian, namely the particle *turklāt.*

***Furthermore****, the Six Forces Model describes.* (research corpus EN-b17)
***Turklāt***, *sešu spēku modelis atspoguļo..*(research corpus LV-b17)
***Moreover****, this teaching method investigation includes..* (research corpus EN-b12)
***Turklāt****, šajā mācību metožu analīzē ir ņemtas vērā..* (research corporus EN-b12).

The adverb *therefore* has also been extensively used in the MS doctoral dissertation summary texts of the research corpora, both written in English and translated from Latvian, as the mentioned adverb helps the authors to substantiate statements in their summaries. *Therefore* translates into Latvian as the adverb *tādēļ*

[6] To preserve the anonymity of the dissertation summary authors, in the present dissertation the corpora are coded as follows: a + number of the dissertation summary in the corpus refers to the dissertation texts written in Latvian and translated into English; while b + number of the dissertation summary in the corpus refers to the dissertation texts written in English and translated into Latvian.

and is equally represented in the original English texts (n = 396) and texts translated from Latvian (n = 397).

The adverb *hereby* has been used only 13 times in the summary texts written in English and has not been detected at all in the summary texts of the research corpora written in Latvian and translated into English. This can be explained by the fact that *hereby* does not have a precise counterpart in Latvian that could be used in all situations. Cambridge Dictionary Online ($CDO_{-e}$) attributes *hereby* to formal lexis and lists the following meaning for the mentioned adverb: *with these words or with this action.*

*Hereby* is either omitted in the Latvian translations, as shown in the next two examples:

> *The main sources **hereby** were models..* research corpus EN-b3)
> *Galvenie avoti ir ..modeļi* (research corpus LV-b3)
>
> *..factor **hereby** is the strongest one..* (research corpus EN-b3)
> *Visspēcīgākais.. ir.. faktors* .. (research corpus LV-b3).

or translated by an adverb, related to the manner of action, the process, or characteristics, as demonstrated by the following example:

> *The model **hereby** neutralizes..* (research corpus EN-b30)
> *Modelis **šādi** novērš*.. (research corpus LV-b30).

*Hereby* may also be translated into Latvian using the adverb of place *šeit / here* as indicated by the example below:

> ***Hereby**, the author uses.....*(research corpus EN-b28)
> ***Šeit** autors izmanto*.. (research corpus LV-b28).

*Here/šeit* is frequently used in management science dissertation summaries written in English to denote perceived proximity. In the researched corpus (EN>LV) in the original texts *here* has been detected in 51 cases.

Table 11

The use of deictic adverb *here* in management science dissertation summaries EN > LV

| | |
|---|---|
| Reference to a study, fact, author, or technology | *..opinions differ slightly here /..viedokļi šeit nedaudz atšķiras*; *the core capacity here is to../ pamatspēja šeit ir..* |
| Reference to the author's own research | *..on the issue presented here /.. par šeit izklāstīto jautājumu*; *..the results of the findings presented here../..šeit izklāstīto pētījumu rezultāti..*; *..which is used here as.. /..kas šeit tiek izmantota kā ..*;*..tested here../ šeit pārbaudītie..* ; *here, based on../ šeit, pamatojoties uz..*; *here, the concept … is described../ šeit …jēdziens ir aprakstīts..*; *here, the distribution indicates../šeit sadalījums norāda..; here, the results were…obtained../šeit tika iegūti …rezultāti;…was not accounted for here / šeit nav apskatīts …* |
| Facilitating the understanding of the outlined regularities | *the focus here lies on.. /šeit galvenā uzmanība ir pievērsta.. ; ..must be underlined here / šeit būtu jāuzsver..; overall, this shows the need for more detailed research here / kopumā tas liecina, ka šeit ir nepieciešami detalizētāki pētījumi; ..as long as the limitations argued here are respected /..ievērojot šeit izklāstītos ierobežojumus..*; *this is where … can make a powerful contribution.. /tieši šeit … var dot spēcīgu ieguldījumu..;* |

Similar to the results of the study on demonstrative pronouns, the use of the deictic pronoun *here / šeit* can be broadly assigned to three categories:

- Reference to a study, fact, author, or technology (n=4);
- Reference to the author's own research, i.e. methods of their research, results (n=31);
- Facilitating the understanding of the outlined regularities, suggestions to the audience (n=16).

In the majority of cases the authors have described their own research, such as methods, models, calculations and research results, in one case even a technology significant for the study has been referred to, a comparatively lesser number of cases has been detected, when the deictic adverb *here* has facilitated the perception by the audience of the regularities, outlined by the authors of the

summaries. The phrases containing the deictic adverb *here* are preceded by statements that the mentioned phrases are detailing.

The results of the LV-EN corpus examination, considering the function of deixis in management science dissertation summaries, are described in Table 12.

Table 12

The use of deictic adverb *šeit* / *here* in management science dissertation summaries LV-EN

| | |
|---|---|
| Reference to a study, fact, author, or technology | *šeit izklāstītie ...pamatprincipi / the basic principles ...set out here* |
| Reference to the author's own research | *šeit arī tiek pielietota .. / here ... has been applied as well*; *šeit tiek izmantota autores modificētā un aprobētā .../ ...modified and tested by the author, is used here*; *study method, instruments, the sample are discussed here / šeit tiek apskatītas pētījuma metodes, instrumenti, pētījuma izlase* |
| Facilitating the understanding of the outlined regularities | *Tomēr šeit ir daudz vietas inovācijām / but here there is a place for innovations* |

In the researched summary texts, written in Latvian, the adverb *šeit /here* has been used relatively seldom (n=16), in some cases reference has been made to Latvia as a physical territory (n=4), however, the adverb *šeit* / *here* has been used also to refer to the study text organisation, such as *šeit un turpmāk / hereinafter*; methods of research, such as *..šeit tiek izmantota …anketa.. / ..questionnaire…is used here..*; important assumption mentioned before, such as *..tomēr šeit ir daudz vietas inovācijām../.. but here there is a place for innovations..* (n=12).

The use of the adverb *tur* / *there* with a deictic function has been detected in the Latvian texts translated into English in very few cases (n=13), which is most likely explained by a certain clumsiness of such a construct in the Latvian language, except when followed by a subordinated clause explaining the mentioned adverb *kur / where*. Moreover, in the texts translated into English, usually different wording has been used, omitting the deictic adverb. The following are examples of the mentioned use in Latvian and in the translated English text:

*..to varētu izskaidrot ar resursu piešķiršanu tur, kur tie dotajā brīdī visvairāk nepieciešami*;

*..which can be explained by allocating resources where they are needed the most* (research corpus EN-a28).

*..funkcija nedrīkst būt izvietota tur, kur var rasties interešu konflikts* (research corpus LV-a28).

*..the function should not be placed wherever conflict of interests may arise* (research corpus EN-a15);

In eight cases, the deictic adverb *tur /there* has been used to denote virtual reality as opposed to the real world, such as:

*..kas rada sajūtu, ka cilvēks tur nav vientuļš* (research corpus LV-a12).

*..that make one feel that one is not lonely there..* (research corpus EN-a12).

The deictic adverb *tur / there* denotes other countries as opposed to Latvia in two cases, and in one case, reference is made to legal documents, using the expletive *there are*:

*Pavisam tur ir noteikti desmit pārkāpumu veidi..* (research corpus LV-a15)

*In all, there are ten violation kinds determined..* (research corpus EN-a15).

In the corpus of dissertation summaries written in Latvian and translated into English, the expletive *there* appears in the construction *there is /there are* in all possible combinations (n = 485). Even though the expletive is a formal construction and has no counterpart in Latvian, it still retains the function of indicating that something is situated somewhere; therefore, it has retained certain spatial characteristics. The expletive may serve to improve the sentence structure, whereas its use depends on the level of proficiency of the writer or translator.

The next category of deixis researched in the present study is the category of temporal deixis, which coincides with the categories singled out by Cruse (2000: 319) and Levinson (2008: 73 – 79).

In the present dissertation, the use of the retrospective phrases has been researched first. Initially, examples in the texts available in the corpus have been searched by specifying the adverb *previously* and the adjective *previous* as keywords. The results for the use of the adverb *previously / iepriekš* in the research corpora EN > LV are summarised in Table 13 below:

Table 13

The use of the adverb *previously / iepriekš* in the researched corpora of original texts of English and Latvian and their translations

| | | | |
|---|---|---|---|
| To illustrate better / Lai uzskatāmāk ilustrētu | | previously / iepriekš | analysed/viewed/described/discussed calculated/quoted/presented/discussed/ selected/nominated/mentioned /indicated/ observed/written/spoken .. analizēto/aplūkoto/aprakstīto/ apskatīto aprēķināto/citēto/izklāstīto/iztirzāto/ izvēlēto/izvirzīto/minēto/norādīto/ novēroto/rakstīto/runāto .. |
| Given that: / Ņemot vērā | | | |
| Compared (to) / Salīdzinot (ar) | | | |
| This is consistent with / Tas saskan ar | | | |
| From / No | previously / iepriekš | analysed/viewed/described/viewed/ , analizētā/aplūkotā/aprakstītā/apskatītā/ calculated/quoted/presented/discussed/ nominated/selected/referred to/ observed/written/spoken aprēķinātā/citētā/izklāstītā/iztirzātā/ izvirzītā/izvēlētā/minētā/norādītā/ novērotā/rakstītā/runātā | it can be inferred .. / secināms .. it follows .. / izriet .. it can be seen .. / redzams .. it is clear that .. / saprotams .. |

As it has been demonstrated in the table above, the authors of summaries use the adverb *previously / iepriekš* mostly to draw the reader's attention to both analytical actions (*analysed, calculated, observed / analizēts, aprēķināts, novērots*) and descriptive actions (*described, reviewed, quoted, indicated / aprakstīts, apskatīts, citēts, norādīts*) that have been performed earlier.

The adjective *previous / iepriekšējs, agrāks* in all research corpora has been predominantly used to direct the reader towards a specific part of the presentation of the summary (chapter, section, subsection), such as *in the previous section ...were described .. / - iepriekšējā apakšnodaļā tika raksturoti..; for the reasons*

*mentioned in the previous section, it is emphasized... / iepriekšējā nodaļā minēto iemeslu dēļ ir akcentēts ..*; *previous chapter includes, describes .. / iepriekšējā nodaļā ietverts, aprakstīts..* or even a completely different study carried out earlier: *an analysis of previous study showed that ... / iepriekšējā darbā veiktā analīze parādīja, ka ..*; *based on previous analysis../.. pamatojoties uz iepriekš veikto analīzi., based on previous research../ pamatojoties uz agrākajiem pētījumiem…*

In the texts translated from Latvian into English, the retrospective phrases with *previous* appear more frequently (n = 81) than with the adverb *previously* (n = 37). The same proportion is also true for the texts with English as a source language: retrospective phrases with *previously* (n = 46) have been used markedly more often than those with *previous* (n = 161). The reason might be that the level of precision when describing phenomena with *previous* + noun is much higher than that of the adjective previously, which is more general.

In further research of the corpus, it has been detected that the authors attract the reader's attention to retrospective facts also without using the above-mentioned adverbs and adjectives. Examples are provided in Table 14.

Table 14

Retrospective phrases not followed by adverbs or adjectives

| | | |
|---|---|---|
| As …/ Kā…<br>As it has been… / Kā … | already / jau… | described / disclosed / calculated / quoted/ outlined / discussed / pointed out / mentioned/ indicated / observed / mentioned; aprakstīts/apskatīts/aprēķināts/ citēts/ /izklāstīts/iztirzāts/ norādīts/ minēts/ norādīts/novērots/ minēts |

In the Latvian texts of management science dissertation summaries, the indicated phrases are predominantly used with adverbs and adjectives *agrāk / agrāks / agrāka* as part of a clause, or with a clause that may not even contain the mentioned adjectives or adverbs.

The retrospective phrases with *earlier* have been singled out in translations of the summaries from Latvian into English, when the authors refer to previous research or existing theories etc., such as *..indices recognized earlier by experts..,*

*..based on earlier conducted surveys.., ..constructs studied earlier.., ..due to earlier ideas.., ..earlier of great importance.., ..dominated in earlier research stages.., ..model with earlier revealed key factors.., ..according to earlier studies..*

In the present study, the term *'prospective' is used as a reference to the phrases that follow* further in the text (prospective phrases).

As with the retrospective phrases, examples in the text have been initially searched by selecting the keywords *below / turpmāk, tālāk* and *further / turpmāks, tālāks*. The results are summarised in Table 15.

Table 15

The use of the adverb *below / turpmāk* and the adjective *further / turpmāks* in the summaries EN>LV

<table>
<tr><td>Below /turpmāk:</td><td>in this study / šajā pētījumā<br>in the study / pētījumā<br>..</td><td>... will be analysed / viewed /described / calculated / quoted; tiek (tiks) analizēts / aplūkots / aprakstīts / apskatīts / aprēķināts / citēts..<br>..outlined / discussed / pointed out, izklāstīts/iztirzāts/izvirzīts..<br>…selected / used / mentioned / indicated / observed / written / viewed; izvēlēts / lietots / minēts / norādīts / novērots / rakstīts / skatīts</td><td>..</td></tr>
<tr><td rowspan="3">The obtained results are / Iegūtie rezultāti ir</td><td rowspan="3">further / turpmāk</td><td rowspan="3">.. analysed / viewed / described / discussed /outlined, indicated; analizēti/aplūkoti/aprakstīti/ apskatīti/izklāstīti/iztirzāti / norādīti</td><td>in more detail / sīkāk</td></tr>
<tr><td>in more detail / detalizētāk</td></tr>
<tr><td>in the discussion section / diskusijas sadaļā</td></tr>
<tr><td colspan="4">In the following analysis, data on ... are being used / Turpmākajā darba rezultātu apstrādē izmantoti dati par..<br>The following section of the summary focuses on ... Turpmākajā kopsavilkuma sadaļā uzmanība pievērsta...</td></tr>
</table>

In cases when the author indicates events that would follow, they are mainly related to analytical actions (analyse*, calculate, view, observe / analizēt, aprēķināt, apskatīt, novērot*) and descriptive actions (*cited, mentioned, indicated, written / citēts, minēts, norādīts, rakstīts*). On the other hand, the use of an

adjective indicates not only the part of the presentation of the summary (section of the summary), but also the processes that the author intends to perform (processing of the results of the work, analysis).

According to Cruse (2000: 322), an important category for understanding relationships between the author of the text and the audience is social deixis. Cruse exemplifies social deixis by certain uses of the French pronouns *tu / vous* (*tu / jūs* in Latvian). In the present dissertation, social deixis has been illustrated by examples in the Latvian language. Cruse remarks that to pertain to the mentioned category, the use of the pronouns of second person singular has to signal the social status of the speaker and hearer, in the present dissertation, that of the author of the summary and the audience.

As regards the polite form of addressing a person with the personal pronoun *jūs,* first of all, it has to be noted that in the study corpus of the 30 Latvian texts, the pronoun *jūs* appears only in two summaries and only four times; the form of the same pronoun *jums* has been detected two times.

Another remark regarding the deictic use of the 2nd-person pronoun *jūs* in the texts in Latvian needs to be made, based on the research corpus data. In the example cited below, the audience addressed in the summary is represented not only by academia and interested parties but also by developers and users of AI, who are being politely asked to show decency and cite content written by researchers. The following is an example of a premise for research performed *inter alia,* also by the author of the summary:

> *"Šajā pētījumā ... tiks ievērota prasība "ja* ***jūs*** *vēlaties citēt mani vai izmantot manu sniegto informāciju rakstā,* ***jums*** *noteikti vajadzētu sniegt atsauces uz manu avotu. Citējot mani vai izmantojot manu sniegto informāciju, jūs rīkojaties atbildīgi un godprātīgi un arī sniedzat lasītājiem iespēju izsekot un pārbaudīt jūsu izmantoto avotu*" (research corpus LV-a12).

It can be concluded that social deixis in the Latvian texts of MS dissertation summaries expressed by the second person pronoun *jūs* has been encountered in very few cases, and the second person pronoun *jūs* rather denotes a form of polite address (n=12). Person deixis in MS dissertation summaries, as researched in the present dissertation, is described in the chapters below, in accordance with the findings of Cruse (2000: 319) and Levinson (2008: 69–72), when analysing authorial stance and the use of personal pronouns.

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

Given that writing in science is communicative, and in the majority of cases the authors of the dissertations and their summaries are not native English speakers, the writer-reader interaction as reflected in management science dissertation summaries, the expression of the writer's 'persona' through the resources for self-reference and the presentation of attitudes, evaluations and commitments to potential readers (Hyland: 2005: 176) acquire particular topicality. Hyland (2009: 74) uses the term *stance* "to refer to the writer's textual 'voice' or community-recognised personality. This is an attitudinal, writer-oriented function that concerns the ways writers present themselves and convey their judgments, opinions, and commitments. *Engagement*, on the other hand, is more of an alignment function. It concerns the ways writers rhetorically acknowledge the presence of their readers to engage them actively with the argument, include them as discourse participants, and guide them toward interpretations. In other words, statements must incorporate an appropriate awareness of self and audience by presenting a credible writer persona and anticipating readers' possible objections and alternative positions." Hyland (2002a: 01) states that "most obviously … a writer's identity is created by, and revealed through, the use or absence of the *I* pronoun". After analysing the use of the first-person pronouns to denote the author of the text in the so-called "soft" and "hard" disciplines Hyland argues that a stronger identity is claimed in the humanities and social sciences papers (2002: 03) and that "the expert writers were *three times* more likely to use author pronouns in their texts, and this ratio held across both hard and soft disciplines". These findings suggest that it might be helpful for the writers to understand the difference between their native culture and the culture in which they are defending their dissertations and the expectations of the audience in their discipline.

Halliday and Hasan (1976: 44) indicate that "in terms of traditional text linguistics, I and we are treated as a means of realisation of personal reference". The use of the respective pronoun *we* in the Anglo-Saxon tradition is perceived either as exclusive, referring to the author of the text only, or as inclusive,

involving the academic and professional community. Vassileva (2014: 293) points out that "The wide variety of meanings and connotations of the academic 'we' and its ensuing ambiguity make it an excellent tool in the attempt to convince one's audience".

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).

The findings of Halliday and Hasan (1976), Hyland (2002a, 2005, 2009, 2015c), Cruse (2000); Levinson (2008); Schmied (2015); Vassileva (1998, 2006; 2014); Laiveniece (2010); and Kalnbērziņa (2015) suggest that there exists 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

Personal pronouns, which serve as references to the author of the text in different writing traditions, as well as depending on the language, may be expressed differently. Hyland (2015c: 295) points out that recent research has focused on different perceptions of interpersonal appropriacy and self-representation in academic writing in different languages, and first-person pronouns are far more frequent in English research texts than those written in Italian and Spanish. Therefore, especially when translating the mentioned texts, attention should be paid to the language traditions and the differences in readers' perception. Halliday and Hasan (1976: 44) indicate that "in terms of traditional text linguistics, *I* and *we* are treated as a means of realisation of personal reference". The use of the respective pronoun *we* in the Anglo-Saxon tradition is perceived either as exclusive, referring to the author of the text only, or as inclusive, involving the academic and professional community (Downing & Locke 1992: 411).

In the Latvian academic writing tradition, the use of the first-person self-reference to the authors is not welcome. Laiveniece (2021: 187) remarks that impersonality is regarded to constitute 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, given that the research results have to be described in such a manner that the study in question can be replicated with the same results as indicated by the authors. Laiveniece (2010) provides a distinction between the subjective and objective forms of authorial stance and remarks, that the first-person pronoun *we*, when used by a single author and is not inclusive, is not welcome given that it represents the tradition of the soviet times, when collective merits were emphasized more than individual input (Laiveniece, 2010: 111).

When examining the use of *we* in the research corpus of MS dissertation summary texts written in Latvian, the inclusive *mēs / we* has not been frequently detected (n = 13). Whereas in the translations into English, in some examples the inclusive *we* has been retained, such as: *..**mēs** dzīvojam laikā, kad../..**we** live in a time when..*(a21)*; tīra pieredze nekad nav pieejama; **mēs** to pieredzam pēc notikuma../ .. pure experience is never available; **we** experience it after the event* (a12)*; **mēs** varam izmantot spēļu teorijas principus../.. **we** can use principles of game theory..*(a15); *..**mēs** sagaidām ilgtermiņa lojalitāti.. /.. **we** can expect long-term loyalty* (a13); in other cases *we* has not been retained in the translation, such as: ***mēs** iegūstam vidējo administratīvo pakalpojumu sniegšanas kvalitāti../..the mean quality of service provision is obtained* (a13); *līdz **mēs** sasniedzam lielāko ranžējumu../..till reaching the largest rank* (a13). As the examples above illustrate, in 4.3% of the detected examples, the we pronoun has not been retained in the translation, which might indicate that even in the texts translated into English, the tradition of retaining objectivity is present. The inclusive *we* has been used more frequently in the original summary texts written in English (n = 23). In 77% of the original summary texts written in English, the inclusive *we* has been used. In contrast, in the Latvian translations, *we* has been retained only in 47% of the texts (n = 14 of 30). In the remaining cases, the pronoun can be omitted in Latvian, as in the following examples from the original management science dissertation summaries: *tātad, varam būt pārliecināti, ka savāktie dati ir piemēroti faktoru analīzei* / *thus, we can be confident that the collected data are suitable for factor analysis* (a13); *attiecīgi varam secināt, ka* / *accordingly, we can conclude that* (a3); *varam uzskatīt, ka* / *we can consider that* (a8); and *ko varam tulkot kā* / *which can be translated as* (a19).

The following examples with the use of the plural form of the first person pronoun in the corpus of the texts written in English have been detected: *shall we*

*(and can we) re-establish the shareholder as../ vai mēs atjaunosim (un vai mēs varam atjaunot) akcionāra .. tiesības..*(b16); *we cannot know everything, we have to trust../ mēs* ***nevaram*** *zināt visu, mums ir jāuzticas..*(b4).*we find more men than women in top business positions../* ***varam*** *konstatēt, ka augstākā līmeņa biznesa amatos ir vairāk vīriešu nekā sieviešu* (b24). The constructions in Latvian have been used with the form of the verb *varēt*. Even if the pronoun *we* has not been retained in the last example, it is implied, which coincides with the findings of Egle & Viļums (2021: 188). At the same time, in the texts, written initially in Latvian, the translators have given preference to impersonal constructions. Egle & Viļums (2021: 190) point out that in very few cases, primarily when referring to a study carried out by a group of scientists, the first-person plural form of the pronoun *we* can be used in Latvian; however, this kind of use is not considered welcome.

In Table 16, the self-references of the authors have been represented in the texts written in English and translated into Latvian.

Table 16

The self-references of the authors in the first-person plural, using personal pronouns and translated into Latvian with impersonal constructions EN - LV

| **ENG** | **LV** |
|---|---|
| *in chapter two* ***we*** *also found out that..*(b24) | *otrajā nodaļā arī* ***konstatēts****, ka..* |
| ***we*** *can understand the very first step of the entrepreneurial process better..*(b12) | *..****ir iespējams*** *labāk izprast pašu pirmo uzņēmējdarbības procesa stadiju..* |
| *this comparison shows that throughout Europe* ***we*** *find companies..*(b6) | *..šis salīdzinājums parāda, ka visā Eiropā* ***ir*** *uzņēmumi, kas..;..* |
| *summarizing the result* ***we*** *would like to mention a number of initiatives..*(b7) | *..****apkopojot*** *rezultātus, būtu jāpiemin vairākas iniciatīvas..* |

In the texts of management science dissertation summaries, translated

into Latvian, impersonality is also obtained by using participial constructions (b24; b7), or by simply omitting the personal pronoun *we* and using the Present Simple in a form of a statement instead (b12; b6). The findings align with those of Laiveniece (2021: 189), confirming that the pronoun *we* is not frequently used in the research texts translated into Latvian. The examples cited above illustrate the use of impersonal constructions without the lexeme *author(s)*.

In the dissertation summary texts, alongside personal pronouns, possessive determiners, such as *our* also serve as markers of authorial stance. Possessive determiners as explained further in the present dissertation have also been found in the dissertation summary texts. The use of the possessive determiner *our*, also serving to express authorial stance, has been discovered in the summary texts rather seldom: in the English translations from Latvian (n=13), in the texts written in English (n=20). In the present dissertation, an analysis of the most frequently used categories of meaning they refer to is provided. In the texts translated from Latvian, the possessive determiner *our* has been used either (a) to describe the research carried out by the author of the dissertation summary, such as: .. *in our case, design is of limited use..; in our case, it means that..*(a11); *..as it is in our research*..(a11)*; ..of our research* ..(a11)*;* or circumstances related to it, including affective use, such as *to our regret,* ..(a17); and to refer to the general background, such as ..*to bring our culture to the world..*(a20)*, .. due to the characteristics of our landscape, climate, architecture and cultural environment..*(a26)*, the quality of our lives* (a11)*; …our local authors*..(a17)*; …our main competitors are...*(a26). Some authors and, consequently, translators give preference to using the possessive determiner *our,* while others prefer objective constructions.

In the text written in English and translated into Latvian, in one case, the possessive determiner *our* has been replaced in the translation, giving preference to a more neutral construction with the lexeme *mūsdienu / modern (contemporary)* in Latvian (TZ$_{-e}$, 2026).

It can be inferred that the personal determiner *our / mūsu* has been used to express generalisations both in the texts written in English and translated into Latvian, such as, *model that meets the necessities of our contemporary era.. / modelis, kas atbilst mūsdienu vajadzībām..*(b17)*; ..knowledge of our other intelligences../..zināšanas par citiem mūsu intelekta veidiem..*(b27)*;* and in the texts written in Latvian and translated into English, such as, *..mūsu izpratni par.. /*

*..our understanding of..*(a12).

In contrast to the personal pronouns *I/es* and *we/mēs*, the personal determiner *our / mūsu* has been retained in the majority of translations of English texts (n=18) into Latvian (n=14). The inclusive *we*, in turn, in the translations of English texts (n=38) into Latvian (n=14) has been retained in less than a half of the cases.

The inclusive *we* and *our* have been used more frequently in summary texts, both written in English and translated into English, when describing theory or generalising an idea, especially in sections devoted to discussion and interpretation of results (examples 2, 3 and 4 listed in Table 15).

The use of the self-mention with *mans(a) / my* in the first person singular has been detected only in one case outside the *words of gratitude* or *acknowledgements* section in a summary text written in Latvian, namely, *kā apstiprināja* ***mans*** *pētījums../ as* ***my*** *study has confirmed* (a8), which might be explained by the fact that the authors of management science doctoral dissertations are not linguists and it might be difficult for them to grasp all the complexity of the writing style in the Latvian language of science.

In one instance, the use of *mans / my* has been detected in the section *Words of Gratitude.* In the majority of the self-mentions by the authors with *I/es, my/mans, mana etc.*, have been found in the summary chapters *Words of Gratitude*, *Acknowledgements* or *Afterword*, such as: *I would especially like to thank my advisor*(b27)*, I would like to extend my cordial thanks to my family…*(b11)*, I would like to express my deep gratitude to the University…*(b15, b22)*, I owe my deepest gratitude to…*(b29)*, I am particularly grateful to my family and friends for their help…*(b27)*, my special thanks go to…*(b8, b15, b26)*, I would like to thank my supervisor…*(b5, b11*,* b20, b23)*…in my view on* (b8). In total, 73 mentions, both in English and Latvian, have been discovered in the paratext parts of the dissertations. This kind of use in English and Latvian is perfectly legitimate for the expression of gratitude and appreciation.

Unfortunately, this is not true concerning the next category of the authorial stance, the use of which is not always welcome, unless absolutely necessary, such as when referring to figures, tables, and graphs. Both in the texts written in English and translated into English, the nominal phrases containing *author(s)* have been used, especially in the introductory parts of the summaries, as well as in the

chapters devoted to suggestions and recommendations. In the English language translations with Latvian as SL, the mentions of *the author* in third person singular have been detected in 1551 cases, while in the original Latvian texts, there are 1613 mentions of *the author* in the research corpora. In the texts with English as SL, 810 mentions of the author have been detected, and in the texts translated into Latvian, the mention of the *author / autors(e)* has been encountered in 780 cases. The differences in numbers are accounted for by the fact that impersonal constructions have been used in all the research corpora texts as well. However, an important conclusion regarding self-reference can be made, based on the frequency comparison provided above between the use of the first-person singular pronoun *I* and the nominal phrase with *author*, namely that the first-person pronoun *I* is used markedly less than the phrase with *author,* both in the texts and their translations in all research corpora. By function, the mentioned constructions are frequently used when referring to figures, tables and graphs, such as *created by the author* (b12, b19, b24*,* b27), *designed by the author* (b25)*, developed by the author* 9b3, b6, b7, b8, b17, b30)*, …compiled by the author* (b27).

It has also been detected that impersonal constructions with *author(s)* have been used in an equal proportion in the texts written in English and their translations, and in the texts written in Latvian and their translations. Both in the Latvian SL and English SL texts, however, other passive and impersonal constructions have been used to a much lesser extent than the nominal phrases including *author(s)*.

Examples of the use of the nominal phrase with *autors (e) / author* in the Latvian texts and the first-person pronoun in the translated English texts are provided in Table 17.

Table 17

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

| | Latvian | English |
|---|---|---|
| 1. | Lai sasniegtu pētījuma mērķi, **autore** izvirzīja pētījuma jautājumu… | To attain the aim of the study, **I** have asked the following research question… |
| 2. | …darba **autore** atklāj nepilnības pašreizējās zināšanās par mācību izvērtējumu uzņēmumos. | …**I** have identified a gap in current knowledge on training evaluation in enterprises |
| 3. | …pētījumā **atklātie** mācību izvērtējuma kritēriji… | …evaluation criteria **I** have identified in my study… |
| 4. | **Autore** ieviesusi jaunus terminus…klasifikācijā… | **I** have also proposed new terms of classification of… |
| 5. | Pētījuma nobeigumā **autore** izveidojusi pirmo mācību izvērtējuma modeli… | Finally, **I** have developed a training evaluation model… |
| 6. | 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… |
| 7. | Darba **autore** iesaka.. aktivitātes, kas veicamas.. izvērtējumā… | **I** recommend activities describing… |

In Table 17, it can be observed that the author of the summary refers to herself in the third person as *autore* / *author* in six cases and uses an impersonal construction in the Latvian text in one case; the personal pronoun *I* has been used only in the English text. This might have been done in order to better comply with the Anglo-Saxon writing tradition, albeit without adhering to the tradition that the Latvian audience would appreciate.

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 MS summary texts written in Latvian and English, as well as in their translations, it can be concluded that the use of the mentioned first-person references may rather be seen as an exception and not as a rule.

When researching the authorial stance, one of the main grammatical categories to be analysed is the Passive Voice. The meanings, forms and functions

of the Passive voice in Latvian and English are comparable, because in both languages the forms of the Passive Voice are analytical and usually consist of an auxiliary verb and the past participle of the Passive Voice; in both languages, the Passive Voice is used to emphasise the action, not the doer. Kalnbērziņa emphasises that the given function of the Passive Voice also determines its popularity in scientific language, which strives for an objective explanation of facts (Kalnbērziņa 2015: 147). Laiveniece (2010: 134) indicates that the language of science in Latvian is characterised by the objective expression of the authorial stance. In Latvian, Passive Voice is one of the ways how impersonal stance when referring to the author is expressed without mentioning the author. In other words, the authors use the Passive Voice in the Latvian language of science to distance themselves from the factor of subjectivity and to respect the principles of objectivity.

Laiveniece (2010: 134) mentions that the impersonal constructions of authorial stance in Latvian may also be expressed by Present Tense Passive Voice participle, such as a *domājams, secināms, redzams, vispārināms etc*.).

In the texts, translated from English into Latvian, researched in the present study, impersonal constructions with *domājams* with the synonyms *laikam, droši vien, iespējams* (TZ$_{-e}$:2026), often used to indicate that the content of the statement might be true, might happen, might be credible etc. (MLVV$_{-e}$ 2026) appear in the following examples:

*Further, it **seems** to be of importance to have or foster a good relationship with the family..*

*Turklāt, **domājams**, ir svarīgi, lai pārmantotājam būtu labas attiecības ar ģimeni..*(b2);

*..transformational leadership **is believed to be** the most effective currently known leadership style..*

*..pārveides vadība, **domājams**, ir efektīvākais šobrīd zināmais vadības stils* (b25).

*..**presumably** only approximated by very high involvement purchases in B2C context.*

*..kam, **kā domājams**, tikai tuvojas ļoti augstas iesaistes pirkumiB2C kontekstā* (b1).

In all three examples cited above, the Latvian participle *domājams* in the

translation represents a hedge, which can also be detected in the original English text.

The use of the participle *secināms,* with the meaning of *something that has been assumed or done as the result of the conclusion made* (ID-e 2026) in the original Latvian texts is demonstrated by the examples provided below, where a higher degree of certainty has been expressed by the authors and translators of the summaries, when stating conclusions.

*Faktoru analīzes rezultātā* ***secināms****,..*(a24)

*Factor analysis* ***shows*** *that..*

*..tāpēc* ***secināms****, ka aplūkotie pētījumi nedod skaidru priekšstatu par..*(a6)

*therefore,* ***it is concluded that*** *these studies do not give a clear picture of..*

The Latvian participle *redzams* is frequently used when illustrating tables, figures, and graphs, such as: *(kā) redzams …attēlā (tabulā) / (as) provided, given shown, presented in the figure (table)* (a1, a2, a3, a6, a7, a9, a11, a13, a14, a21, a25, a30; b2, b 5, b8, b12, b13, b16, b17, b20, b23, b25, b27).

The Present Tense Passive Voice participle *vispārināms* has been used in the summaries written in Latvian and also translated into English to express a more definite opinion as follows:

*Šāds rezultāts* ***nav vispārināms****..* (a8)

*The obtained results* ***should not be generalised****.*

In the given example, based on the research results, the author has expressed a stronger argument, while in the translation it has been worded in a more tentative form.

Some other Present Tense Passive Voice participles that are used in Latvian are: *tiek darīts, darāms, izdarīts, padarīts*.

The mentioned constructions may be used when the doer is not important and/or the statement is generalised, such as:

***Parasti tas tiek darīts, kad*** *ir grūti noteikt konstrukcijas konceptuālo pamatu* (a13).

***It is usually done when*** *it is hard to detect the conceptual base of the construction.*

*..dažādu autoru darbi, kuros* ***izdarīts*** *mēģinājums mūsdienot..*(a5)

*.. works of different authors have been identified,* ***attempting*** *to modernize..*

These mentioned examples illustrate the functions of the Passive Voice described in English and Latvian in the studies of Halliday & Hasan, (1976: 31–75); Biber, Johansson, Leech, Conrad, & Finegan, 1999: 475–494; Laiveniece, 2015b: 113–116, Laiveniece, 2021: 89), confirming their occurrence in Latvian and English management science dissertation summaries, where the actor is unknown, irrelevant, or the statement is generalised.

Laiveniece (2021: 89) points out that the use of the Passive Voice is one of the most characteristic means of expressing authorial stance impersonally, without mentioning the doer in texts of the language of science.

Institutional writing guidelines, although not scientific texts themselves, reflect the operationalisation of these grammatical norms in academic practice. The attitude to the use of the Passive Voice in the language of science, as reflected in the university recommendations, differs. In Latvia, some universities, such as the Latvian University of Life Sciences and Technologies, strongly recommend to authors the use of the Passive Voice in research writing, whereas the University of Toronto (in PV-e 2025) recommends discerning between the desirable and undesirable use of the Passive Voice. The recommendations of the University of Toronto state that while in an active sentence, the person or thing responsible for the action in the sentence comes first, in a passive sentence, the person or thing acted on comes first, and the doer is added at the end, introduced with the preposition *by*. The Passive Voice may also be expressed by omitting the doer. The passive form of the verb, in turn, is signalled by a form *to be* ($PV_{\text{-e}}$ 2025). The passive voice can be acceptable if: (a) the actor is unknown, (b) the actor is irrelevant, (c) the responsibility for certain reasons cannot be stated, (d) the general truth is expressed (e) the topic described is more significant than the doer, and (f) the use of the Passive Voice is preferred by the genre.

In Table 18, examples of Passive Voice in Latvian and English Dissertation summaries are listed:

Table 18

Examples of Passive Voice in Latvian and English Dissertation Summaries

| Language | Passive construction | English / Latvian translation | Section / context | Function |
|---|---|---|---|---|
| LV | tiek veikts | is done, is carried out | Materials and Methods | Actor unknown / general statement |
| LV | veikts | has been done, carried out | Materials and Methods / Results and discussion | Actor irrelevant / focus on process |
| LV | veikts | completed / accomplished | Results and discussion | Emphasizes result rather than actor |
| EN | the data were analysed | dati tika analizēti | Materials and Methods | Process-focused / impersonal |
| EN | works of different authors have been identified | Noteikti dažādu autoru darbi | Materials and Methods / Literature review | Focus on results / generalization |
| EN | the results were calculated using statistical software | rezultāti tika aprēķināti, izmantojot statistisko programmatūru | Materials and Methods | Process-focused / impersonal |
| EN | the hypotheses were tested through multiple experiments | hipotēzes tika pārbaudītas, veicot vairākas eksperimentālās pārbaudes | Materials and Methods / Results and discussion | Generalised statement / focus on procedure |

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*, however expressed. Another case where the Passive Voice is frequently encountered is are descriptions of a procedure or process and generalisation. And finally, in the dissertation summaries, it is typically used when referring to tables, figures, and graphs with the following expressions: *are shown in Table../ kā parādīts ..tabulā, illustrated*

*in../ attēlots..; presented in../ parādīts..; provided in../..attēlots..; summarised in../ apkopots; seen from../ redzams.., parādīts.., attēlots…*and sometimes linked by a clause with the help of *as / kā*: *as seen../ kā parādīts..; as can be seen in../ kā parādīts…*

Impersonal constructions with Passive Voice, with or without *it*, e.g., *it has been suggested / ir piedāvāts.., …the results suggest that../ rezultāti parāda, ka....* have also been detected.

In the researched texts, verbal constructions in the Passive Voice are frequently used with the following verbs: *studied…, viewed…, investigated...*

The authorial stance is also expressed with the help of verbal constructions with modal verbs, such as *as can be seen in Figure../ kā redzams …attēlā; it can/could be concluded that../ var / varēja secināt, ka; ..can be described as…var raksturot kā..; can be determined .. /..var noteikt..; can be applied to ../ var piemērot..; can be answered../ var atbildēt..; can be approached../ var apskatīt, kā..; can be explained../ var paskaidrot..; can be formulated as../ var formulēt..; can be interpreted as../ var interpretēt..; ..may be achieved../ var panākt..; may be taken into consideration ../ var ņemt vērā; …may be suggested that../ ..var piedāvāt..; may be interpreted../ var interpretēt..; ..may be found../ var novērot...; may be used as../ var pielietot kā..; ..it might be assumed that../ var pieņemt, ka..; ..might be explained../ var izskaidrot ar..; ..it might be useful to/ varētu būt lietderīgi..* In the given cases, the Passive Voice has been expressed in Latvian by *varēt* and might be used as a hedge. In the next subsection, the use of the modal verbs with hedges and boosters will be explained in more detail.

The present study allowed 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 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,

especially concerning epistemic modality.

Hyland and Tse (2005a: 42) have described the mentioned constructions with *it* as "the opportunity to simultaneously express a stance while remaining in the background". Halliday & Matthiessen (2004: 615) describe these constructions as "explicitly objective modalisation, providing the writers with an alternative expressive option to other evaluative *that* patterns". In other words, the mentioned constructions allow writers to express an evaluative stance while maintaining impersonality and guiding the reader's interpretation.

The authorial stance in the present dissertation is based on the findings of Hyland and Bondi (2006) and Hyland and Tse (2005). Hyland and Tse (2005: 39) remark that the mentioned construction is a relatively overlooked interpersonal feature; however, evaluative *that* constructions allow a writer to thematize attitudinal meanings and present an explicit statement of evaluation by presenting a complement clause within a superordinate clause:

The evaluative *that* structure Hyland and Tse (2005: 40) researched can be represented as follows:

**matrix** clause [evaluation] + that-clause [evaluated entity]

Having explored evaluative *that* structures in 240 research article abstracts, Hyland and Tse have found that the mentioned structure is employed in these abstracts about once every five sentences, and constitute an important means of providing author comment and evaluation. "Evaluative *that* therefore helps writers to manage their discourse in various ways and to signal a clear stance towards the information they present" (Hyland and Tse 2005a: 39). Matrix clauses often contain verbs such as *is important, indicates, shows, confirms, suggests*, while the subordinate *that* clause specifies the evaluated entity. Hyland and Tse (2005:39) note that these structures are frequent in research writing and enable authors to evaluate their own findings, previous research, as well as methods, models or theoretical frameworks.

Having examined the use of evaluative *that* construction in management science dissertation summaries, in the present study, it has been detected that the mentioned structure has been used for (a) evaluation of own findings of the authors; (b) evaluation of previous studies; (c) and evaluation of the methods, models, or theories the authors had drawn on in the research, such as:

(a) analysis **confirmed** *that* all the variables needed to be included in.. (b22)
(b) Research results **suggest** *that* the critical factors in..(b18)
(c) Some researchers **even believe** *that* the requirement for a valid panel study is.. (b16)
(d) This is reasonable support for the underlying exploratory learning theory, that acquiring target-specific knowledge helps balance information asymmetry (b18).

As already pointed out, in the Latvian academic writing tradition, impersonality is sometimes even required by the recommendations for writing dissertations and their summaries issued by the universities and faculties; therefore, it is worth discussing the mentioned wording to understand why a specific construction has been used. The material for researching the evaluative *that* construction is really versatile. It has to be noted that constructions with evaluative *that* with the pronoun *it* to signal an impersonal construction have been the most frequently used ones in the researched corpora. Thus, in the summaries with Latvian as a source language, evaluative that constructions with *it* have been used in the English translations 1271 times, the most frequently used ones being *it can be concluded…that.. / ..var secināt, ka..; ..it is assumed that.. / ..tiek pieņemts, ka..; it can be assumed that../ ..var pieņemt, ka…* In the summaries with English as a source language evaluative *that* constructions with *it* have been used 1311 times, the most frequently used ones being *it can be stated that../ var apgalvot, ka..; it can be assumed that../ ..var pieņemt, ka..; it can be concluded…that.. / ..var secināt, ka...* with the use of the pronoun *it* to signal an impersonal construction. In Latvian, the mentioned constructions have been used either with the subordinating conjunction *ka* or with *var/can,* as well as a verb in the passive voice. A theoretical overview of evaluative *that* constructions with *it* has been presented in Table 19.

Table 19

Theoretical overview of evaluative *that* constructions with *it*

| Pronoun | Verb / Expression | Complement / Nominal Phrase | Function / Evaluation | Example (ENG > LV) |
|---|---|---|---|---|
| it | is important, confirms, demonstrates, focuses, means, indicates, illustrates, shows, testifies, becomes clear, becomes evident, becomes quantifiably obvious, becomes visible, follows, suggests, appears, assumes, implies, does not affect, does not mean | that + noun / nominal phrase | General evaluation / authorial stance | *It is important that all variables are included → Ir svarīgi, lai būtu iekļauti visi mainīgie* |
| it | can be concluded, is assumed, can be assumed | that + clause | Concluding statements / procedural evaluation | *It can be concluded that the hypothesis holds → Var secināt, ka hipotēze ir apstiprināta* |
| it | indicates, shows, illustrates | that + clause | Presenting results / evidence | *It shows that the method is reliable → Tas apstiprina, ka metode ir ticama* |
| it | to emphasise, | that + clause | Procedural / emphasis | *It is important to* |

| Pron oun | Verb / Expression | Complement / Nominal Phrase | Function / Evaluation | Example (ENG > LV) |
|---|---|---|---|---|
| | to ensure, to point out, to acknowledg e, to understand, to mention, to note, to consider | | | *point out that the model requires validation → Ir svarīgi norādīt, ka modelim nepieciešama validācija* |
| it | appears, seems | that + clause | Epistemic modality / hedging | *It appears that the results are consistent → Tas norāda, ka rezultāti sakrīt ar* |

Based on descriptions from English and Latvian theoretical literature (Hyland & Tse, 2005a:42; Halliday & Matthiessen, 2004:615; Laiveniece, 2021:187).

In Table 19, a wide variety of authorial stance patterns from theoretical literature with examples from the present study corpora of dissertation summaries written in English and translated into English have been presented, illustrating both the opportunities for the authors to express a strong belief or certainty and to distance themselves from a statement, indicating also the detected phrases supporting rejection of a fact or statement. Given that some of the lexemes indicated in Table 19 are affective, the context of each statement might also play an important role in determining the stance of the author. What complicates the situation further is the fact that constructions with *it* + evaluative *that* cannot be translated to Latvian word for word. Therefore, in the present dissertation, the findings in the English texts are provided first, and the results from the Latvian text corpora, highlighting their constructions, are presented afterwards. It can be concluded that the mentioned constructions have been used rather extensively and represent a versatile material for examination.

Constructions such as *ir pierādīts* (as represented in the corpora of the present study, a5, a27, a29; b5, b9, b15, b12, b16, b18, b26, b27)*, apstiprināts* (as represented in the corpora of the present study b2)*, konstatēts* (as represented in the corpora of the present study a4, a6, a7, a28; b1, b5, b14, b16, b17)*, secināts* (as represented in the corpora of the present study a15, a23; b2, b15, b17)*, ka…*

are characterised in Latvian grammar as compound passive forms consisting of the auxiliary verb *būt* ("to be") and a past passive participle, they are frequently impersonal, and are used to describe the result or conclusion rather than the doer (Kalnača, Lokmane 2021: 55–64).

When examining the corpora of the present study, it has been detected, that the constructions mentioned above are used to report findings, summarize prior research, or express conclusions, such as: *ir pierādīts, ka šī metode ir efektīva* / *it has been proven that this method is effective*, and *secināts, ka dati apstiprina hipotēzi* / *it has been concluded that the data confirm the hypothesis*.

In scientific writing, the use of tense depends on the section of the dissertation and its summary being written. Thus, Simple Present might be used to define the objectives of the study, to describe literature about the research topic, to state well-known facts or general truths, and the results of past research, relevant to the study in question. Past Simple, in turn, might be used to state facts that were believed in the past, but have been currently revoked, or methods of previous studies. Simple Past could be used to describe existing research on the topic. A combination of tenses may be used as well, such as, past tense to focus on the study, or on the authors of the study, but the present tense to share the ideas of the author about the respective study. Present Perfect can be used to describe recent studies, or to make generalisations about past research in the area. Simple Past can be used when describing the actions taken during the process of research, given that the actions have already been completed. Past Perfect, if necessary, can be used to describe earlier stages of the research process. Past Tense would signal that the procedure or process has already been accomplished at the time of writing, while Present Tense can be used to refer to tables, figures, and graphs used to present results, as well as when discussing the results of the paper as a whole. In the discussion section past tense can be used to summarise findings, while the present tense can be used to interpret the results, discuss the significance of the findings, or present conclusions. The future tense can be used to make recommendations for further research or to indicate a future course of action based on the results of the research (INFO$_{-e}$ ).

Mārtinsone, Pipere, and Kamerāde (2016: 450) point out that past tenses are used when referring to the research process, whereas the present tense is used when discussing the contribution of the respective research in comparison to other

studies, as well as in other cases when the process of the research performed is not being directly discussed (Mārtinsone, Pipere, Kamerāde 2016: 450). In the English dissertation summary texts, the category of tense with the analysed construction can be summarised as follows:

Table 20

The category of tense in management science dissertation summary texts

| **Tense** | **English example** | **Latvian example** |
|---|---|---|
| Present Simple | it is widely known, acknowledged, believed, admitted, argued that… | ir plaši zināms, atzīts, uzskatīts, pieņemts, argumentēts, ka… |
| Present Perfect | it has been found out, acknowledged, assessed, concluded, confirmed, discovered, established, evaluated, identified, observed, proved / proven, revealed, shown | ir noskaidrots, atzīts, izvērtēts, secināts, apstiprināts, atklāts, pierādīts, identificēts, novērots, parādīts, ka… |
| Past Simple | turned out; found out, demonstrated, argued, ascertained, assumed, concluded, confirmed, determined, elicited, emphasised, established, expected, further assumed, identified, pointed out | izrādījās; tika noskaidrots, demonstrēts, argumentēts, konstatēts, pieņemts, secināts, apstiprināts, noteikts, iegūts, uzsvērts, atklāts, gaidīts, tālāk pieņemts, identificēts, norādīts, ka… |
| – | was / became | kļuva acīmredzams, skaidrs, ka… |

In 60% of the dissertation summary English texts, the evaluative *that* + *it* construction has been used with the Present Perfect, while in 35% of the texts, the Past Simple has been used, and in 15% of the texts, the Present Simple has been used. Thus, in the majority of cases, the use of two tenses, namely the Present Perfect and the Past Simple, has been detected, as they are characteristic of the construction examined.

When examining the Latvian dissertation summary texts analysed in the present study, it has been established that in Latvian, the following constructions have been used:

(a) *ir* + past participle (passive voice) + subordinating conjunction *ka* + noun or nominal phrase (subordinate clause) such as *ir pierādīts, apstiprināts, konstatēts, secināts, ka…* ;

(b) *tiek* + past participle (passive voice) + subordinating conjunction *ka*

+noun or nominal phrase (subordinate clause)such as *tiek definēts, pieņemts, secināts, atzīts, pierādīts, uzsvērts, norādīts, apgalvots, konstatēts, ka…*

(c) *tika*+ past participle (passive voice) + subordinating conjunction *ka* +noun or nominal phrase (subordinate clause)such as *tika pieņemts, secināts, apstiprināts, noskaidrots,* and a shift from the Present to the Past Tense of the auxiliary verb *tikt* can be observed.

In case of the mentioned constructions, in the Latvian texts, the category of tense is expressed only by the use of the particle *tiek* and *tika* in the present or past, respectively, since the rest of the construction consists of the past participle in the passive voice. If the particles *tiek* and *tika* are omitted, which is possible in Latvian, the whole construction is translated with a past participle + *ka*, as already indicated above.

The construction *ir* + past participle (passive voice) + subordinating conjunction *ka* + noun or nominal phrase (subordinate clause), in turn, indicates the use of the Present Tense.

Another category that pertains to the authorial stance is epistemic modality.

The deontic and epistemic modality in English academic texts is expressed by modal verbs such as can, may, must, and should, indicating possibility, probability, necessity, or obligation. In Latvian similar modal meanings are expressed with the help of impersonal modal predicates and the debitive construction (*jā + infinitive*), while a grammatical subject is not needed. Deontic and epistemic modality refer to linguistic expressions that convey the speaker's attitude, degree of certainty, probability, necessity, permission, and other subjective meanings regarding the content of the discourse. Deontic modality in Latvian is defined as type of modality that indicates the attitude of the author of the text to the development of the situation, usually expressing an order, prohibition or recommendation, whereas epistemic modality is defined as a modality type, indicating the attitude of the author of the text to the content of a statement or judgment, expressing necessity, possibility or probability (AkadTerm$_{-e}$-2026). Modality allows authors to indicate their stance, confidence, and the nature of their claims in scientific texts, playing a crucial role in shaping the tone of the discourse and guiding the reader's interpretation of the presented information. Therefore, it might be useful to analyse it further. Thus, the modal verbs of the first category are used to describe the results

of the study that prove or disprove the hypothesised ideas and facts, while the modal verbs of the second category are used to describe hypotheses, ideas, and facts to be proved and defended. From this perspective, the constructions with *it* can be seen as hedges and boosters. In the context of the present study, the modal verbs illustrate the categories of certainty and uncertainty, permissibility and possibility. The results are presented in Table 21.

Table 21

The categories of certainty and uncertainty in management science doctoral dissertation summaries expressed by modal verbs

| **Modal verb EN** | **EN** | **Modal verb LV** | **LV** |
|---|---|---|---|
| can | be assumed, concluded, said, stated, summarised, verified, argued, interpreted, concluded, asserted, assured, confirmed, considered, expected, explained, generalised, highlighted, interpreted, noted, postulated, predicted, seen, shown, suggested, verified | var | pieņemt, secināt, teikt, apgalvot, apkopot, pārbaudīt, argumentēt, interpretēt, secināt, apgalvot, nodrošināt, apstiprināt, uzskatīt, sagaidīt, izskaidrot, vispārināt, izcelt, interpretēt, norādīt, postulēt, prognozēt, redzēt, parādīt, ieteikt, pārbaudīt |
| cannot / could not | be confirmed | nevar /nevarēja | apstiprināt |
| could | be concluded, assumed, derived, expected, noted, seen | varēja | secināt, pieņemt, iegūt, sagaidīt, norādīt, konstatēt |
| may | be concluded, suggested | var | secināt, ieteikt |
| might | be assumed, said | varētu | pieņemt, apgalvot |
| must | be acknowledged, admitted, asserted, assumed, concluded, considered, emphasized, ensured, mentioned, noted, stated, taken into account, understood, argued | jā- | -atzīst, -apstiprina, -pieņem, -secina, -uzskata, -uzsver, -nodrošina, -min, -norāda, -apgalvo, -ņem vērā, -saprot, -argumentē |
| needs to | be stated | jā- | -norāda |
| has to | be mentioned, emphasized, assumed, stressed, noted, admitted, mentioned | jā- | -min, -uzsver, -pieņem, izcelts, norādīts, atzīts, minēts |
| should | be noted, mentioned, assumed, considered, explained, further remarked, pointed out, stated, stressed, taken into account, taken into consideration, understood | būtu | -norāda, -min, -pieņem. -uzskata, -paskaidro, -min arī, -apgalvo, -uzsver, –ņem vērā, -saprot |

| Modal verb EN | EN | Modal verb LV | LV |
|---|---|---|---|
| would | be more accurate to, necessary to | | precīzāk būtu, būtu nepieciešams |
| seems | obvious, plausible | šķiet | acīmredzams, ticams |

While constructions with *shall, must, need to, cannot* express strong certainty of the author, constructions with *can, could, may, might, should, would,* and *seems* are more tentative and express less certainty.

The modal verb ***can*** in *that* constructions with *it* allows the author to evaluate the scientific acceptability of a claim, to express a permission, such as:

*It **can be assumed** that the cultural setting on the national level plays a role as well. (b6);*

***Var pieņemt**, ka nozīme ir arī kultūras nostādnēm valsts līmenī…*

The construction is expressed in Latvian using the third person form *var* of the verb *varēt* (can) + the infinitive form of the verb + subordinating conjunction *ka* + the nominal phrase (subordinate clause) representing the content or subject of the assumption, conclusion, indication, or assertion. From a discourse perspective, the construction may also serve the function of indicating the purpose, content, or subject of the assumption, conclusion, indication, or assertion.

Although often encountered in other contexts, (n=58) in the corpus of dissertation summary texts written in English, and (n=52) in the corpus of dissertation summary texts translated from Latvian, the negative form of *can* with *it* is not frequently used; the form *cannot* with the analysed construction has been detected only in one instance, namely, in the construction and serves to disprove an assumption:

*It **cannot be confirmed** that the ownership system is more important than the other systems..(b2)*

***nevar apstiprināt**, ka īpašumtiesību sistēma ir svarīgāka par citām..*

In the case cited above, a substantial certainty, based on facts, has been expressed. The verb *apstiprināt* (to confirm) in the infinitive falls under the subcategory of assertion or validation. *Nevar* in Latvian is the negative form of the verb *varēt.* The use of *nevar* indicates the present tense of the action, the negative form, expressing inability or impossibility. Thus, the construction *nevar*

*apstiprināt, ka...* in Latvian combines the negative form *nevar* of the verb *varēt* (cannot), the infinitive form of the verb *apstiprināt* (to confirm), and the subordinating conjunction *ka* to convey the idea that something cannot be confirmed. The implied subject and the structure of the subordinate clause add to the grammatical composition of the sentence.

The modal verb *could* in a statement with *it* represents a lesser degree of certainty:

> *.. This procedure was applied in cases where it* ***could be assumed*** *that the individual quotes had the same meaning* (b15).
>
> *.. Šī procedūra piemērota gadījumos, kad* ***varēja pieņemt****, ka atsevišķiem dalībnieku izteikumiem bija vienāda nozīme..*

In the example above, the verb *varēja* (could) in Latvian indicates a past tense aspect of possibility. The verb *pieņemt* (to assume) is in the infinitive, indicating the action being performed on the subject.

The modal verb ***may*** permits the author of the summary to distance himself/herself from the conclusion they made, thus, in the given context, it is an impersonal statement representing a hedge*:*

> *For academics as advanced undergraduate, graduate and senior academics it* ***may be suggested*** *that [..] the research needs to be put into a practical context..(b17)*
>
> *Akadēmiskajiem spēkiem, augsti kvalificētiem studentiem, maģistriem un vecākajam zinātniskajam personālam* ***var ieteikt*** *[..] iekļaut pētījumus praktiskā kontekstā..*

Thus, the construction may be described as follows:

*Var* - third person form of the modal verb *varēt (can)* + Infinitive form of the verb *secināt* in the active voice + subordinating conjunction *ka* + (nominal phrase) a subordinate clause indicating the content or subject of the conclusion. The subject of the sentence is omitted but implied, referring to the author. The verb *secināt (to conclude*) is in the infinitive, indicating the subject performing the action and is associated with the idea of making conclusions.

The general structure can be represented as follows:

*var* + the infinitive form of the verb + subordinating conjunction *ka* + the nominal phrase (subordinate clause)

The modal verb ***might*** represents a relatively weak assertion and is more

tentative than *may*; therefore, as reflected in the following example, it can be qualified as a hedge:

*It **might be assumed** that this result is owed to at least a certain extent of actual lack of crisis preparedness of hotel organisations* (b30).

***Varētu pieņemt**, ka šo rezultātu vismaz zināmā mērā nosaka faktiskā viesnīcu organizāciju gatavības krīzēm nepietiekamība…*

The construction consists of the modal verb *(*present conditional) + *varētu* + infinitive *pieņemt (to assume)* + subordinating conjunction *ka* + noun or nominal phrase (subordinate clause). The subject is omitted but implied. The modal verb *varētu* indicates that, based on the context, it could be assumed that the indicated result is possible. The sentence suggests the possibility of making an assumption about the specific mentioned result and, therefore, in the context described, represents a hedge.

The general structure can be represented as follows:

*varētu* (might) + the conditional form of the verb + subordinating conjunction *ka* + the nominal phrase (subordinate clause).

The modal verb ***must*** provides the author with an opportunity to make a strong statement, and serves to emphasise it, acting as a booster. The statement detailed below is made based on research results and is strengthened by *accordingly* and *indeed**:***

***Accordingly**, it **must be admitted** that managers find questioning, critical awareness, and diversity fundamental, **indeed*** (b6).

***Līdz ar to** ir jāatzīst, ka vadītāji uzskata apstrīdēšanu, kritisku izpratni un daudzveidību par **patiešām** fundamentāliem jēdzieniem*. …

The construction *jāatzīst* indicates necessity, implying that there is a need to acknowledge something. The general structure can be represented as follows:

Auxiliary form *to be* in third person *ir* + the verb *jāatzīst* (to acknowledge, to admit) + Subordinating Conjunction *ka* +nominal phrase (Subordinate Clause). *Jāatzīst* is in the debitive mood = third person present stem prefixed with *jā-*.

The modal verb ***needs to*** expresses a slightly less direct but still a strong statement, in the given case, when referring to the theories already discussed by the author and qualifies as a booster:

***It needs to be stated** that **only** selected theories have been taken into account as a foundation for this research* (b24)

***Ir jānorāda**, ka par pamatu šajā pētījumā ir izmantotas **tikai** izvēlētās teorijas.*

The construction consists of: *ir* - third person singular form of the auxiliary verb *būt* (to be), which is optional, *jānorāda* - debitive mood of the verb *norādīt* (to indicate, to point out) + verb + subordinating conjunction *ka* introducing a subordinate clause. The construction *jānorāda* indicates the debitive mood, expressing necessity, obligation, or duty. To sum up, the Latvian sentence *Ir jānorāda, ka...* features a verbal construction where the auxiliary verb *ir/is* (present third person form of the auxiliary verb *būt*/*to be*) is combined with a verb in the debitive mood *jānorāda* (needs to be indicated, pointed out), expressing necessity or obligation. The construction is followed by the subordinating conjunction *ka*, which introduces a subordinate clause. Subsequent listed examples with modal verbs have a similar structure.

Statements with ***have to*** express a need or necessity, such as:

***Tāpēc ir jāatzīst**, ka pastāv būtiska atšķirība starp pētījumā iesaistīto vadītāju emocionālā intelekta pašnovērtējumu un citu vērtējumu* (b27).

*Therefore, it has to be admitted that there is a significant difference between the self- and other-rating of the investigated managers' emotional intelligence.*

The modal verb *shall* is a very categorical expression of modality, more characteristic of legal terminology than of academic discourse:

*It shall be the responsibility of the management (CEO) to decide… (b16)*

*Izlemt… ir augstākās vadības atbildība*

In the example above, the translated statement is less categorical than the statement, expressed in the original version of the text.

In contrast to ***shall***, an expression of modality more characteristic of legal terminology than of academic discourse, the modal verb ***should,*** has been detected in the research corpora more frequently:

*It **should be noted** that costs and time constraints will also limit the research **to a certain extent*** (EN-b13)

***Jāatzīmē**, ka izmaksas un laika limits arī **zināmā mērā** ierobežo veikto pētījumu* (LV-b13).

In the case above, *should* mitigates the strength of the statement and serves the function of a hedge. In this example, the form *būtu* is omitted but implied. The

construction with the form *būtu* however has been encountered in the researched texts in other cases, as demonstrated in the next example with the modal verb *would*.

In the research corpora, it has been detected that ***would*** expresses tentative statements whereby the authors wish not to alienate the audience by being too categorical and has the properties of a hedge, such as:

> *To avoid such a time selection bias,* ***it would be necessary*** *to base the data analysis on time-shifted periods* (EN-b16)
>
> *Lai izvairītos no šādas laika atlases neobjektivitātes,* ***būtu jāpamato*** *datu analīze uz periodiem ar laika nobīdi* (LV-b16).

The verbal construction *būtu jāpamato* consists of *būtu* – from the verb *būt* (to be), *jāpamato* - debitive mood of the verb *pamatot* (to justify, to substantiate) + nominal phrase. The Latvian phrase *būtu jāpamato* represents a verbal construction where the conditional *būtu* is combined with the debitive mood marker *jā-* + verb in the third person *pamato* (to justify, to substantiate). The verbal construction followed by the nominal phrase expresses the necessity or obligation to justify or substantiate the nominal phrase.

Another *it* construction with *that* allowing the authors to make stronger statements, but still qualifying as a hedge, is ***it seems [..] that:***

> *..it* ***seems obvious*** *that reaching significant effects on entrepreneurial affect and intention is easier with the help of an authentic lecturer..* (EN-b12)
>
> *..****ir acīmredzams****, ka būtisku efektu uz indivīda afekta stāvokļa un uzņēmējdarbības nodomu veidošanos ir vieglāk panākt ar autentiska lektora [..] palīdzību..*(LV-b12).

In the English sentence modality is expressed through the predicate *seems obvious*, with an expletive subject *it* in the construction. In the Latvian translation *ir acīmredzams, ka…*, the same evaluative meaning is conveyed through an impersonal construction without a grammatical subject. This corresponds to the pattern described by Kalnača and Lokmane (2021: 500), whereby epistemic stance in Latvian is expressed through impersonal predicates rather than through extraposition with an expletive subject.

In the given case, the translator has used a stronger statement than the author; therefore, in English, the construction is more tentative than in the Latvian translation. The phrase conveys the idea that something is evident or obvious, and

this is further explained or supported in the subordinate clause introduced by the connector *ka*.

The constructions expressing impersonality in English and Latvian, as indicated above, are widely used and may be regarded as constituting a characteristic feature of the Latvian management science dissertation summary writing tradition. The role of a translator in the given case is to respect the manner of expression of the author and not to unwillingly make the statements stronger or weaker than the author has envisaged.

### 4.4 Specialised lexis and terms in the doctoral dissertation summaries

As described in the first chapter of the present dissertation, management science dissertation summary texts are characterised by the use of specialised vocabulary and represent secondary texts, which can be broadly attributed to the genre of the language of science, and more specifically, to the text type of dissertation summaries.

The criteria defined by the International Organisation for Standardization (ISO 704, 2009) indicate that, ideally, the term has 1) transparency (at least partly unambiguous in a given sector); 2) consistency or systemicity (it fits appropriately into a given sector's system); 3) relevance (it is based on meaning patterns recognized in the given language and does not cause confusion); 4) linguistic economy (it is expressed with the minimum of necessary linguistic means); 5) derivability (it is possible to derive other lexemes from it); 6) linguistic correctness (it corresponds to linguistic morphological and phonological norms).

Skujiņa (1993: 23) indicates the basic principles for term creation: 1) systemicity, 2) accuracy of meaning and shortness of form, 3) lack of ambiguity, 4) mononymity, 5) context-independence, 6) emotional neutrality, as well as the connection of word-formation with a particular language system, and the regularities of creating new words, namely certain structurally semantic models (Skujiņa 2005b, 69), according to which this process takes place. In addition to Skujiņa, other Latvian authors who have contributed to the study of terminology and term translation include Baldunčiks, Veisbergs (2007), Helviga (2015), and Baltiņš (2007a; 2007b), discussing principles of term formation, translation

strategies, and terminological stability.

Given that management science doctoral dissertation summaries describe dissertations devoted to a very wide range of areas—from art to AI, from family enterprises to automobile and railroad industry, from gender equality to hospitality—in practice, during the translation process, the proposed terms are coordinated with the experts in the respective field, the faculty, and the doctoral student.

What is common to all the researched texts is the use of statistical terminology. In the present dissertation, the terms of statistics related to models, regressions, tests, tables, graphs, correlations, and weights are indicated. Thus, terms and their translations are an indispensable part of researching management science texts, including those examined in the present study, given that management science is a specialised field. "Management science is concerned with developing and applying models and concepts that may prove useful in helping to illuminate management issues and solve managerial problems. The models used can often be represented mathematically, but sometimes computer- based, visual, or verbal representations are used as well or instead" (LUM-e). The results of the study on statistical terms in management science doctoral dissertation summaries are presented in Annex I.

The specialised lexis and terminology in management science doctoral dissertation summaries can be attributed to the following categories according to their function:

1. Terminology pertaining to statistics, such as:

- Terms of descriptive statistics: *mean/vidējais; median/mediāna; mode/moda; standard deviation/standartnovirze*;
- Hypothesis testing and inference: *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: *regression/regresija; linear regression/lineārā regresija; multiple regression/daudzfaktoru regresija; correlation/korelācija; Pearson correlation/Pīrsona korelācija*;
- Time series and forecasting: *time series/laika rindas; seasonal adjustment/sezonālā izlīdzināšana; forecasting/prognozēšana*

• Sampling and survey methods: *sample/izlase; population/kopa; survey/aptauja; questionnaire/anketa; response rate/ atbilžu biežums*

• Models for hypothesis validation: *model fit/modeļa atbilstība; goodness of fit/atbilstības pakāpe; model validation/ modeļa validācija*

2. Sector-specific terms:

When analysing sector-specific terms, translators should pay special attention to the context in which the particular term is used. Thus, in Germany and Austria, the concept of family business has historic traditions, representing long-term generational business roots, and its continuity is seen as a positive factor, a strength related to sustainability.

In Latvia, family enterprises are relatively young and often represent a response to economic opportunities during a period of economic restructuring. The concept is more flexible; Latvian family enterprises often lack the traditions of German and Austrian family enterprises established over centuries. In the German and Austrian contexts, a key concept related to family businesses is succession. Succession planning is a process with formalised components, such as education and training of the next generation and a clearly established legal succession framework of family business ownership. In Latvia, most family businesses are first-generation enterprises; therefore, the succession mechanisms are still developing both legally and practically. The number of employees in Latvian family enterprises also tends to be considerably smaller than in the German and Austrian context.

3. Terminology pertaining to management science: In the present dissertation, the terms pertaining to the following fields have been researched: organisational and business terms, financial management terms, human resources management terms, strategic management terms, innovation and entrepreneurship terms, risk and crisis management terms, digital and technological management terms, and leadership and governance terms. Even though it has not been possible to compare the density of terms in the management science dissertation summaries and their translations, taking into account that the dissertation themes are too varied, the most frequent terms based on the term frequency in the Wordlist of AntConc have been provided, and the results are documented in Annex II.

In the Latvian academic writing tradition, the terminology of management

science has been exposed to a more dynamic development, because starting from the 1990s, the terms have been intensively elaborated, coordinated, and approved in numerous fields, including economics and management science. With the shift in the system from regulated economic development to the free market, as well as due to intensive language contacts with the English language, especially during the accession period of Latvia to the EU and the EU membership period, the meaning and scope of specialised terms is shifting and subject to change. New terms are emerging and require translation. Accession to the EU has led to the adoption of modern management concepts that focus on innovation, sustainability, entrepreneurship, and efficiency. Some of the terms found in the corpus of management science dissertation summaries written in Latvian and translated into English are listed below: uzņēmējdarbības vide/ business environment (a26, a 29, a 16, a 17, a 5, a 18, a 21, a1, a23, a13, a 22, a3, a8); globālais tirgus/ global market (a5); Eiropas Savienības fondi/European Union funds (a26); kompetenču attīstība/ competency development (a21, a11); stratēģiskā plānošana/ strategic planning (a35, a21); uzņēmējdarbības veicināšana /business promotion (a20, a4); riska analīze/ risk analysis (a26); digitālā transformācija/ digital transformation (a30); uzņēmumu pārvaldība/corporate governance (a26, a 21). The list of the mentioned terms is not comprehensive, given that the selection of terms has been influenced by the fact that the dissertations and their summaries are written about specific management science themes, and the dissertations have been defended during the period of the present study, whereas the respective Academy of Science terminology commissions do not have sufficient capacity to approve all the emerging terms in the given fields.

The translations of specialised terms are emerging as the result of coordination between interested parties and represent a wide spectrum of fields. Therefore, in the present dissertation, specialised terms have been presented, based on suggestions found in doctoral dissertation summaries and obtained from experts in the respective fields, rather than relying solely on dictionary meanings. For translators, the process of translating scientific texts requires understanding how to establish effective communication with the relevant parties.

In the translation process, the considerations mentioned by Helviga (2015: 18) should be taken into account, given that the terms might not even exist in Latvian. Helviga describes the process of term interpretation, the individual stages

of which can also be used in translation as follows: "…different linguists (terminologists) have different interpretations of the same process, which may change over time due to linguistic and non-linguistic factors." When summarizing and critically supplementing the information from theoretical literature, the most important stages in the process of modern terminology should be considered: (1) investigation of the situation, identification of existing resources (terms already used), clarification of needs; (2) identification, selection, compilation, systematization of key terms; (3) development of missing terms, finding suitable equivalents, clarification of meanings; (4) development of term definitions; (5) discussion and harmonization of terms, agreement on cases of traditionally different use; (6) approval of terms; (7) regular investigation of needs and replenishment of terminology. Definitely, translators are also confronted with a choice between using new terms of Latvian origin and terms borrowed from English or other languages. This is where the bidirectional corpora of management science dissertation summaries might become especially useful. The corpus, however, cannot serve as the only source in the translation process, and it might be necessary to look up the terms both in the English and Latvian resources, such as glossaries, explanatory dictionaries and term bases, the translators can also ask the doctoral students themselves and clarify which meaning of the term has been used in the cases, where several meanings exist.

Veisbergs notes that a single English term may correspond to several competing Latvian equivalents, leading to terminological instability, while descriptive lexicographic practice may further reinforce this variation by recording rather than resolving competing forms (Veisbergs 2023: 156–157, 167).

The creation of missing terms becomes a topical issue when working with culturally specific vocabulary. Of course, when choosing or creating terms, one should first consider possible solutions and verify whether a term in Latvian already exists using specialised dictionaries. Table 22 illustrates the different meanings a term can have, based on the material on loanwords from the present study. Internet resources may also be useful[7]. As already mentioned, it is

[7] Useful Internet resources encompass the webpage Termini.gov.lv listing management science terms provided by the State Language Centre, http://termini.lza.lv/term.php LZA indicates the following list of recommended Internet resources: Latvian Language Agency, State Language Centre, Latvian Language Institute, Academic Term Database AkadTerm, tezaurs.lv, .

impossible to develop an unambiguous definition of the term that corresponds to all communicative situations. Therefore, cooperation with the experts and specialists in term coordination often becomes an indispensable part of the translation process.

Table 22

Loanwords detected in the texts of management science doctoral dissertations translated from English into Latvian used in parallel with the Latvian equivalents

| English term | Loanword | Latvian equivalent |
|---|---|---|
| Communication channel | Komunikācijas kanāls | Saziņas kanāls |
| Innovation | Inovācija | Jaunrade, jauninājums, jaunievedums |
| Project planning | Projekta plānošana | Projekta sagatavošana |
| Financial analysis | Finanšu analīze | Finanšu pārbaude |
| Management | Menedžments | Vadība, pārvaldība |
| Business plan | Biznesa plāns | Uzņēmējdarbības plāns |
| Risk management | Riska menedžments | Riska pārvaldība |
| Leader's competence | Līdera kompetence | Vadītāja prasme |
| Teamwork | Komandas darbs | Komandas sadarbība |
| Customer service | Klientu apkalpošana | Pircēju apkalpošana |
| Business analysis | Biznesa analīze | Uzņēmējdarbības pārbaude |
| Organisational | Organizatorisks | Organizāciju / organizācijas |

From the mentioned examples, obtained from the researched corpora of

ThEuroTermBank, termnet.lv, IT Term Localization Database "Vocabulary", VVC Terminology Database, IATE — The EU's multilingual term base, University of Vaasa Terminology Forum, EAFT — European Association for Terminology, TermNet — The International Network for Terminology, Infoterm — the International Information Centre for Terminology, The LINGUIST List, European Parliament Terminology Coordination bloge range of electronic dictionaries is also available on the website 'Valsts valoda' [http://www.vvk.lv/?sadala=180], A valuable resource in this regard is www.termnet.lv, the terms are divided into sectors, as well as additional resources are indicated, there is also a discussion concerning the use of terms. Some useful resources in English are: Eurotermbank, Business: Management: Terms and Concepts (Management & Leadership), Worldsupporter, Policy Press (Bristol University).

management science dissertation summaries, it can be inferred that one of the factors influencing the specific use of the term is the field and the context; another influencing factor may be attributed to habit and ease of use. Some of the terms listed in the table above are already becoming obsolete.

Thus, the term **"menedžments" / "management,"** a loanword from English, is seldom used in the texts of the doctoral dissertation summaries; however, it surprisingly appears in two researched Latvian texts. In one case, the term is used in the phrase *vispārējais kvalitātes menedžments*, even though the Latvian equivalents *vadība* and *pārvaldība* exist. In the other case, the doctoral student was citing terms from the government webpage, Termini.gov.lv. The term *menedžments* might still exist in the language of popular science, but academia would rather prefer a different term, at least since the cases in which the term has been used in research corpora are considered. The citation is from the version published in 2021, which remains current to the present day.

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.

An example of a different approach to terms may be attributed to the tradition of academic writing. Thus, the adjective **organisational** can be detected in numerous word combinations, such as organisational activities, behaviour, culture, development, innovativeness, structure, theories, trust, etc. In Latvian, it is usually used and translated as *organizāciju / organizācijas*. Termini.gov.lv, however, offers translations for the terms *organisational arrangement* as *organizatorisks pasākums*, *organisational changes* as *organizatoriskas pārmaiņas*, etc., but not *organisational learning* as *organizāciju mācīšanās*, *organisational evolution* as *organizācijas attīstība*.

In the corpora examined in the present dissertation, in one case, the Latvian term *organizatorisks atbalsts* has been used for *organisational support*, and in another, *organizatorisks modelis* has been used to describe the organisational model. Given the infrequent occurrence of the term in the research corpora of the texts written and translated into Latvian, it might be concluded that the term *organizāciju / organizācijas* is preferred to the term *organizatorisks*.

A term used in the specific field of management science is the adjective **performance**, e.g., in the phrase *organisational performance*. Termini.gov.lv offers *sniegums*, such as *organizāciju sniegums*, and *veikums*, e.g., *government performance* as *valdības veikums*. In the researched texts, the adjective *sniegums* has been found in the following combinations: *mārketinga sniegums* for marketing performance, *uzņēmējdarbības sniegums* for business performance, *korporatīvais sniegums* for corporate performance, *inovāciju sniegums* for innovation performance, etc. The term *veikums*, with the meaning of performance, has been found only once in the corpora of MS summary texts written in Latvian, as compared to the term *sniegums*, which has been used 45 times. In the corpus of MS summary texts translated into Latvian, the term *veikums* has not been found at all, whereas the term *sniegums* has been detected 95 times.

From the mentioned examples, it can be inferred that one of the factors influencing the specific use of the term is the field and the context; another influencing factor may be attributed to habit and ease of use.

There exists a certain asymmetry in the development of concepts in management science and practice between different European countries. Therefore, the need for translation of new terms may arise. In the context of the research in the present dissertation, the terms existing in English have to be translated into Latvian, even if they do not have a generally accepted equivalent in Latvian. Sometimes they remain untranslated, such as, in the researched summary texts, the word combination *agile methodologies*, which has been translated as *agile darba metodes*, even though the term could be translated into Latvian. In contrast, *dynamic transformation* has been translated as *dinamiskā transformācija*, providing an equivalent in Latvian that conveys the meaning best of all.

On the website Termini.gov.lv several other terms containing *agile* are listed, such as *spējā testēšana* for agile testing, *spējā vide* for agile environment, *spējā programmatūras izstrāde* for agile software development. The adjective

*spējš*, however, does not fit all contexts where the term *agile* has been used.

It is also worth noting that the majority of borrowings are found in the field of IT. They are often left untranslated, such as *Scrum* or *Kanban* (research corpus a2).

In the present dissertation specialised terms are listed in Annex I and Annex II. The statistics terminology presented in Annex I was compiled using a concept-driven approach. First, the Official Statistics Portal of the Republic of Latvia (OS-e) was consulted in order to identify standardised statistical concepts, definitions, and terminological equivalents in English and Latvian. These entries were then cross-checked against the research corpora of the present dissertation, consisting of English and Latvian doctoral dissertation summaries in management science and their translations, in order to verify actual usage in authentic academic texts and to ensure terminological relevance within the disciplinary discourse.

The terms were grouped according to their communicative and analytical function in research reporting*, including descriptive statistics, hypothesis testing and inference, regression and correlation analysis, multivariate modelling, non-parametric testing, time series analysis, sampling and data collection, and models for hypothesis validation.* This functional categorisation reflects how statistical terminology operates within management science texts rather than merely reproducing formal taxonomies from statistics handbooks, and allows for clearer observation of translation patterns across languages.

Annex II was compiled using a frequency-driven corpus approach. The management science terms were extracted from the research corpora using the *AntConc* Wordlist tool and subsequently filtered manually in order to exclude general academic vocabulary and retain discipline-specific lexical units. The English and Latvian equivalents were then aligned on the basis of translation correspondences observed in the corpus. Although this method does not provide full frequency tables for all extracted items, such exhaustive tabulation would have been both time-consuming and analytically sluggish in relation to the aims of the present study, which prioritises qualitative interpretation over raw quantitative listing.

It should be noted that the workflow proceeded from terminological standardisation to corpus validation rather than the reverse: standardised terms were first identified in the Official Statistics Portal and only then examined in the

corpora. While this approach may limit the detection of emergent or non-standardised variants, it ensures conceptual consistency and terminological stability in the analysis of translated management science discourse, which is essential for reliable contrastive and translation-oriented interpretation.

In compiling Annexes I and II, specialised management science and statistics terms were verified by consulting English-language explanatory dictionaries and glossaries, including the *Oxford Business English Dictionary*, *Cambridge Business English Dictionary*, *Macmillan Dictionary Online*, *Merriam-Webster Online*, and the European Union's IATE portal. These sources provided authoritative definitions, usage examples, and standard collocations, allowing the selection of the most precise Latvian equivalents in line with the research corpora. Additionally, Latvian-language resources, such as Tēzaurs and the Termini.gov.lv portal, were used to ensure consistency with established Latvian terminology and to detect any native equivalents of English terms. The research corpora were also examined to validate actual usage in management science doctoral dissertation summaries.

Building on theoretical principles of terminology, including transparency, consistency, context-dependence, and derivability (ISO 704, 2009; Skujiņa, 1993, 2005), the study described in the present dissertation demonstrates how statistical and management science terms are used in doctoral dissertation summaries, highlighting functional groupings, translation choices, term frequency, and the balance between Latvian equivalents and borrowings, thus providing an empirically and theoretically grounded foundation for the subsequent research.

**Conclusions to Chapter 4**

In Chapter 4, the microstructure of management science dissertation summaries is explored, paying attention to the language traditions and differences in the readers' perception in English and Latvian, especially with a focus on aspects that may cause difficulties or, on the contrary, facilitate the translation of the researched summary texts. To explore the use of objective versus subjective modes of authorial expression in the present study, the authorial stance has been researched through the following representations: the first-person/third-person perspective, the Passive Voice, and impersonal constructions with and without the mention of the author in the third person. The analysis showed that these linguistic choices significantly influence the expression of objectivity and authorial presence in both English and Latvian doctoral dissertation summaries.

First, given that the aspect differing most in the English and Latvian research writing traditions — namely the use of first- and third-person pronouns — has been explored. In the Latvian academic writing tradition, the use of first-person self-reference by authors is not welcome, with a preference for more impersonal and objective choices. After examining the research corpora, singular and plural forms of the first-person pronouns *es* and *mēs* have been encountered in very few cases, contrary to the lexeme *author*, which has been encountered frequently in both Latvian and English texts and their translations. The inclusive *we* and *our* have been used more frequently in summary texts with English SL when describing theory or generalising an idea. Both in the texts with Latvian and English SL, the majority of the self-mentions of the authors in the form of the first-person pronouns, such as *I/es*, *my/mans*, *mana*, etc., have been found in the summary chapters *Words of Gratitude*, *Acknowledgements*, or *Afterword*, i.e., in the paratext parts of the dissertations. Given the exceedingly small number of cases when first-person pronouns have been used in the analysed summary texts written in Latvian and English, as well as in their translations, it can be concluded that the use of these pronouns is rather an exception and not a rule. Both in English and Latvian SL texts, the nominal phrases containing *author(s)* have been detected when the author of the summary refers to herself/himself, especially in the introductory parts of the summaries and in the chapters devoted to suggestions and recommendations. Passive and impersonal constructions have been used to a much lesser extent than the nominal phrases including the author(s). By function, these phrases are frequently used when

explaining figures and graphs or describing research, confirming that the nominal expression of the author remains the dominant strategy for authorial stance.

When researching authorial stance, one of the main grammatical categories detected has been the category of the Passive Voice. In both English and Latvian, the Passive Voice is used to emphasise the action rather than the doer. In Latvian, Passive Voice is one of the ways how impersonal stance is expressed without mentioning the author, distancing the authors from subjectivity and respecting the principles of objectivity. The attitude toward the use of the Passive Voice differs across universities. For example, the Latvian University of Life Sciences and Technologies strongly recommends its use, whereas the University of Toronto provides more nuanced guidance distinguishing desirable and undesirable uses. The Passive Voice was most frequently encountered in sections such as *Materials and Methods*, in descriptions of procedures or processes, and when referring to tables, figures, and graphs. This confirms that the Passive Voice is used strategically to focus the reader's attention on research outcomes rather than on the researcher.

Based on the general findings, the study provided 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, and impersonal constructions are widely used, forming a characteristic feature of both languages' academic writing traditions.

Chapter Four also provides a study on the use of deictic pronouns, as well as adjectives and adverbs of deictic nature. Deictic elements in the summaries frequently refer to the study, a fact, or the author, helping the reader understand the outlined regularities. The deictic pronoun *here/šeit* was mainly used to refer to the study text organisation, research methods, and previously mentioned important assumptions. The adverb *tur/there* was rarely used in Latvian texts translated into English; in translations, this adverb is often omitted or replaced by alternative wording. Demonstrative pronouns *this/these* were used more frequently than *that/those*, highlighting their role in guiding readers through the text and emphasising important elements of the argument.

The use of retrospective and prospective phrases was examined, including constructions with adverbs such as *above* and *below/hereinafter*, as well as constructions without adverbs. The adverb *previously/iepriekš* is primarily used to draw attention to prior analytical and descriptive actions. Adjectives like *previous/iepriekšējs* or *agrāks* help direct the reader to a specific part of the summary or even to a different study. Retrospective phrases with *earlier* were identified in translations from Latvian into English, especially when referring to previous research or existing theories. Prospective uses typically relate to upcoming analytical or descriptive actions, showing how temporal markers structure the presentation of research results.

Social deixis, expressed by the second-person pronoun *jūs* in Latvian texts, was rarely observed (one case) when addressing the audience directly. Discourse deixis, signalled by the demonstrative pronoun *this*, points to future discourse elements. The adverb *furthermore* was frequently used, and in English texts, *moreover* appears with the Latvian counterpart *turklāt*. The adverb *therefore/tādēļ* is widely used to substantiate statements. The adverb *hereby* appeared only 13 times in English summaries and was absent in Latvian summaries; in Latvian translations, it is often omitted or replaced by a related adverb indicating manner, process, or location. These findings indicate a clear preference for specific deictic elements in guiding the reader and structuring the discourse.

Constructions with evaluative *that* and the pronoun *it* to signal an impersonal construction, also expressed with the help of verbal constructions with modal verbs, were the most frequently used constructions in the research corpora. Although impersonal constructions differ between English and Latvian, they are widely used and constitute a characteristic feature of the Latvian management science dissertation summary writing tradition. This shows that such constructions are a core mechanism for expressing objectivity and authorial stance in both languages.

Specialised lexis and terminology in management science doctoral dissertation summaries can be attributed to the following categories: terminology pertaining to statistics, terminology pertaining to management science, and sector-specific terms. The majority of detected terms belong to the field of statistics. The study also highlighted asymmetries in the development of management science concepts across European countries and the process of translating new terms.

Borrowings, especially from the field of IT, are frequently left untranslated, reflecting the need for translators to balance precision, readability, and standardisation. These findings provide practical insights for doctoral students, translators, and terminology developers.

The annexes (Annex I and II) compile the statistics and management science terminology used in the summaries. Annex I presents terms grouped according to their purpose, such as descriptive statistics, hypothesis testing, regression and correlation, multivariate models, non- parametric tests, time series and forecasting, sampling, and models for hypothesis validation. Terms according to their frequency in the research corpora are listed in Annex II. The annexes were compiled by first consulting the Official Statistics Portal of the Republic of Latvia and then verifying usage in the research corpora, providing a robust foundation for understanding term usage and translation practices in management science doctoral dissertation summaries.

# 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 study discloses the research results obtained to identify potential false friends in management science doctoral dissertation summaries, based on actual cases of false friends found in the mentioned texts. To do so, the existing literature has been explored, and the classifications of false friends offered in the state-of-the-art literature in Latvia and abroad have been summarised. The types of semantic relationships have been analysed for Latvian and English word pairs.

False friends have been detected both in management science doctoral dissertation summaries translated from Latvian into English and in the recommendations of the faculties and programs. In the translations from English into Latvian, in turn, it has been detected that linguists are not always of the same opinion concerning the translation of terms.

False friends in different languages have been contrastively studied rather extensively; however, not concerning the specific area analysed in the present dissertation, while in the literature, material pertaining to English and Latvian translators' false friends in the language of science is not too versatile (Baldunčiks 1989, 2005; Veisbergs 1993, 1994, 1996, 1998; Žīgure, 2008).

A difference exists also in the quality of translations of scientific texts, including dissertation summaries, as translations are carried out by both the authors themselves and professional translators.

When investigating cases of false friends in the texts of management science dissertation summaries, explanatory dictionaries in English and Latvian, specialised dictionaries, and dictionaries of loanwords have been used. The study analyses the semantic structures of the lexemes in both languages, their common and distinct features, and determines the types of semantic relationships.

To study false friends, the definitions of the relevant term have been explored first. The study of false friends in different languages has been a long-

standing research interest, dating back to the 17th century (Broz, 2007). The term "false friends" was coined in 1928 by Koessler and Derocquigny. In English, false friends are also often referred to as *false equivalents, false cognates, false pairs, deceptive words, treacherous twins,* and *belles infidèles* (Broz (2007: 200). Bussmann (1996: 405) offers the following explanation of the term: “The term refers to word pairs from different languages, which, despite having a similar form, have different meanings. Such similarities often lead to interference errors in the learning of a second language”, i.e., already learned and known linguistic structures may interfere with the learning of new structures”.

According to Chamizo-Domínguez, false friends are a complex linguistic phenomenon that has been studied in linguistics in terms of translation and language learning. False friends cannot be investigated without addressing the issue of their classification (Chamizo-Dominges 2008, xiv).

The existing range of classifications of false friends is not extensive, and they differ. Chamizo-Dominges and Nerlich have studied false friends from both synchronic and diachronic perspectives (Nerlich & Chamizo-Dominges, 2002).

False friends have been studied from synchronic and diachronic perspectives (Nerlich & Chamizo-Dominges, 2002), and there exist classifications by language level, including phonetic, grammatical, and lexical false friends (Munday 2009: 188). Hayward and Moulin (1984: 190–191) distinguish orthographic, morphological, syntactic, idiomatic, semantic, and pragmatic false friends. However, in the present dissertation semantic false friends are analysed, as they constitute the most relevant category for the study of management science doctoral dissertation summaries. According to Hayward and Moulin, *semantic false friends* are the most common, widely researched, and classified type of false friends (Hayward and Moulin 1984: 192). Semantic false friends are formed due to differences in the semantic structures of word pairs. Therefore, when conducting a comparative study of lexemes, it is important to identify differences in the semantic structures of the corresponding language pairs. Semantically equivalent lexeme pairs do not form false friends. On the other hand, if there are differences in the semantic equivalence of lexeme pairs, the target language translation process may potentially lead to the formation of false friends; therefore, it is important to determine the semantic relationships of the respective word pairs.

Catford examines textual equivalence and considers finding target

language equivalents to be the main problem of translation practice. Catford identifies the primary task of translation theory as clarifying the essence and properties of equivalence (Catford 1965: 21) and distinguishes between linguistically relevant and functionally relevant situational features for the communicative text function in a given situation. Catford acknowledges the role of the translator in determining the approach to translation. Equivalence is one of the concepts widely used to assess the quality of translations in relation to semantic false friends. Nida (1964) and Catford (1965), even though they use different terminology, express similar ideas. Nida (1964) examines formal and dynamic equivalence and the principle of equivalent effect, stating that the translation should produce the same effect on readers as the original text. Nida maintains that it is not enough to adhere to formal equivalence and points out that in translation equivalent response to the translated text by the readers has to be ensured (1964: 156–193). Nida (1964: 145–156). Nida remarks that to produce a successful translation, the translator has to observe the spirit and manner of the original text. This concept aligns with the notion of semantic and communicative equivalence, as developed by Newmark (2007: 110). Newmark's communicative translation is defined as the transfer of the exact contextual meaning of the original text in a way that is acceptable and comprehensible to readers (1988: 45–47).

Veisbergs (1994: 03) defines false friends as "pairs of words in both languages, which have a similar spelling and pronunciation, but different meanings. False friends are almost always related in meaning and origin, which makes it difficult to separate them and increases the possibility of error in use".

False friends have been contrastively studied rather extensively; however, research focusing on English–Latvian false friends in the language of science remains limited (Baldunčiks 1989, 2005; Veisbergs 1993, 1994, 1996, 1998; Žīgure 2008). For the purposes of the present study, the concept of semantic false friends is central, as differences in the semantic structures of formally similar lexemes constitute the main source of translation difficulties in management science doctoral dissertation summaries.

Semantic false friends arise when lexemes with shared form and etymology develop partially overlapping or diverging meanings in different languages (Veisbergs 1998: 12).

The classification of Baldunčiks is similar to the classification mentioned

above by Veisbergs. Baldunčiks distinguishes false friends as pairs of words in two languages with a similar form but different meaning (or one of several meanings), dividing them into full false friends having completely different meanings in both languages and partial false friends having one or several meanings in both languages that coincide, while the other(s) differ, whereas one of the two languages may have no other meanings at all (Baldunčiks 2005: 56-64).

For the study of management science dissertation summaries, the concept of semantic false friends is essential. Semantic *false friends* may have semantic or etymological causes. Words may have a common etymological origin, but their meanings can differ significantly in each language, albeit to some extent related (Veisbergs 1998: 12). These differences can be perceived as polysemy, but they belong to different languages. This applies both to false friends with meanings that are entirely different in English and Latvian, and to false friends with meanings that partly overlap.

In most cases, false friends arise when a word is borrowed from one language into several other languages, but with different meanings. This kind of meaning may be based on the narrowing of the meaning, i.e., only one meaning remains when a word is transferred from one language to another. In Latvian, English terms are sometimes borrowed without proper judgment, which can potentially lead to the use of false friends. Baldunčiks describes the current situation in the Latvian language as follows: "A large part of the 'merit' for increasing undesirable influence of English pertains to Latvians themselves, their inability to strictly distinguish between the two languages, their inability to see the equivalents of the English lexemes that already exist in Latvian. As a result, unnecessary lexical and semantic borrowings, word formation models, and sentence constructions are introduced into Latvian" (Baldunčiks 2005: 56 – 64).

Analysis of the types of false friend semantic relationships in the study of the present dissertation, based on specialised corpora in English and Latvian for management science dissertation summaries, has been performed according to the methodology developed and described by Polish Germanists Schatte and Lipczuk. Schatte and Lipczuk compared the structures of meaning in internationalisms in German and Polish (Schatte 1990: 88–91; Lipczuk 1991: 410–411). As pointed out by Dubova (2013: 105), "in the contrastive semantic studies of German linguistics, this model is used to analyse the differences in the semantic structures

of internationalisms, as well as to detect real and potential false friends in the analysed languages".

Based on the classifications proposed by Schatte (1990) and Lipczuk (1991), the interlingual types of semantic relationships in English and Latvian have been examined. With the help of contrastive analysis, the study and comparison of the lexemes selected for analysis in English and Latvian have been carried out. In the comparison, the common and distinctive features of the semantic structures of the two language lexemes have been analysed, determining the types of meaning equivalence of the selected English and Latvian lexemes.

When investigating the cases of false friends in the texts of management science dissertation summaries, explanatory dictionaries in English and Latvian, specialised dictionaries, and dictionaries of loanwords have been utilised. The study analyses the semantic structures of lexemes in both languages, their common and distinct features, and determines the types of semantic relationships.

The eight-volume Latviešu literārās valodas vārdnīca (LLVV, 1972–1996) [*Latvian Literary Language Dictionary*] and Mūsdienu latviešu valodas vārdnīca (MLVV, 2008) [*Modern Latvian Language Dictionary*] were selected as the Latvian explanatory dictionaries. The following loanword dictionaries were used: Svešvārdu vārdnīca (SVV, 2008). Additionally, dictionaries of terms and specialised lexicon included: Ekonomikas skaidrojošā vārdnīca (ESV, 2000) [*Economics Explanatory Dictionary*], Ekonomikas, grāmatvedības un darba organizācijas terminu vārdnīca (ELDO, 1996) [*Dictionary of Economics, Accounting and Work Organisation Terms*], RSU pētniecības terminu vārdnīca (PTV-e) [*RSU Dictionary of Research Terms*], Lingvistikas pamatjēdzienu skaidrojošā vārdnīca (VPSV, 2007) [*Explanatory Dictionary of Basic Linguistic Terms*], Latviešu–angļu un angļu–latviešu "viltus draugu" vārdnīca (LAVV, 1993, 1994) [*Latvian–English and English–Latvian False Friends Dictionary*], and reference materials (Mārtinsone & Pipere, 2018) [*Research Methodology: Explanatory Dictionary of Terms*].

For English lexemes, the following dictionaries were used: Cambridge Academic Content Dictionary (CACD-e), Cambridge Dictionary Online (CDO-e, 2011), Oxford Dictionaries Online (LOLD-e and OD-e, 2010), Etymology Dictionary Online (OED-e**),** Longman Contemporary English Dictionary Online (LDCE-e), Routledge Dictionary of Language and Linguistics (RDLL, 2006),

management science dictionaries (CDMT-e, 2011 and MD-e), Business Term Dictionary (BD-e), and Business and Management Science Dictionary (BMG-e).

However, when examining dictionaries, it might be useful to keep in mind that dictionary entries may not be precise. Ķiršakmene's analysis of English–Latvian dictionaries (Avots, Jāņa Sēta, Tilde, letonika.lv) reveals that false friends may not be distinguished from correct equivalents and may be presented without contextual clarification (Ķiršakmene 2024: 53).

Pairs of false friend lexemes have been analysed first by researching false friends in the language of science texts, such as the recommendations of faculties and departments, translated into English, as well as in the existing literature. After that, the false friends have been detected in the summaries of management science doctoral dissertations and researched, based on the corpora findings. The examples used have been collected from the research corpora. In the present study, particular attention has been paid to the analysis of the types of the following semantic relationships of false friends:

Type of semantic relationships: *Privativity (ger. Privativität)*

Semantic relationships of the type "privativity" are observed if the lexeme of one language has sememes that are common to the sememes of the other language, but there are also sememes that are not found in the structure of the meaning of the lexeme of the other language (Schatte 1990: 88; Lipczuk 1991: 410). The loanword *integrācija* in Latvian (TZ-e), to which the English lexeme *integration* corresponds, has a common sememe with the English lexeme 'inclusion in an organization or group' (OD-e, SVV 2008: 352), "a form of internationalisation of economic life: free trade between Member States" (CDO-e 2011, SVV 2008), as well as 'calculation of the integral' (CDO-e 2011), but does not have the meaning of "the act or process of combining two or more things so that they work together", which in Latvian is expressed by a verb *to integrate* (LLVV-e), while in English the word *integration* has the mentioned meaning (OD-e).

Type of semantic relationship: *Inclusion (ger. Inklusion)*

The next type of semantic relationship is inclusion. It is observed if the meaning of one language lexeme is broader than the meaning of the corresponding lexeme in the other language when the meaning of the second language lexeme fits into the meaning of the first language lexeme (Lipczuk 1991: 410).

The sememe of the Latvian loanword *diskusija* 'public discussion of a controversial, unclear issue' (SVV 2008) corresponds to the sememe *dispute* of the English term *discussion* (LDCE-e). It should be noted, however, that the other sememes, which are identical for the term *"discussion"* and *"diskusija"* in English and Latvian are more related to the language of science, namely, discussion as part of a scientific article (Mārtinsone, Pipere 2018: 259), whereas *Akadterm, Tēzaurs,* and *Svešvārdu vārdnīca* do not list the mentioned meaning, in English dictionaries the following entry has been found "a piece of writing that discusses many different aspects of a subject" (OD-e). In English, the lexeme *discussion* has a sememe "detailed presentation" (OD-e), which is not found in Latvian dictionaries.

Dubova (2009: 82), points out, that in Latvian the meaning of the mentioned lexeme is "*discussion of a controversial or unclear issue"* (oral text type), whereas Baltiņš perceives it as a component of a scientific article with the function of generalizing the research results (Baltiņš 2003: 10). The definition of Baltiņš for this lexeme can also be applied to the texts of doctoral theses in management science, written according to the *IMRAD* structure, where the heading *discussion* is frequently used in English for the text with the same function. Concerning doctoral dissertations, Rudestam and Newton (2001) note that the discussion chapter is where students should move beyond their data and integrate the results of their study with existing theory and research (Paltridge, 2000: 145).

Type of semantic relationships: *Equipollence (Ger. Äquipollenz*)

As the third type of semantic relationship, R. Lipczuk distinguishes equipollence (Lipczuk 1991, 410). In this case, there is a partial overlap between the sememes in two languages, i.e., despite common use, there are other uses for a sememe in one of the languages, which the corresponding sememe of the other language does not have. For example, the lexeme *design* in English has the meaning "a drawing or a set of drawings showing how the building should be built or how the product should be manufactured, how it will look or function; a drawing, plan, project, art direction related to the design development" (OD-e), but in Latvian, the lexeme *design* has the meaning "artistic design and construction of objects and the environment; as well as the form of the product, which takes into account material, functional and aesthetic criteria" (SVV 2008: 191). The Latvian language of science uses the term *pētījuma dizains*, in English *research*

*design*, with the meaning "research plan", which includes the researcher's decisions about the course of the research, ranging from extensive methodological assumptions to detailed methods of data collection and analysis. "It is the intersection of philosophical assumptions, cognitive strategies, and specific methods" (PTV-e). As already mentioned, when describing potential false friends, a consensus regarding the translation of terms to Latvian does not always exist among linguists, which, in turn, is the basis for the use of terms in translations of doctoral dissertation summaries in management science to Latvian, for example, whether the term "research design", or a "research plan" should be used. Research design, as stated in the RSU Research Terminology Dictionary, is a "research plan […] that incorporates the researcher's decisions about the course of research, from extensive methodological assumptions to detailed methods of data collection and analysis. It is the intersection of philosophical assumptions, cognitive strategies, and specific methods" (PTV-e).

The term, with its Latvian language origin, is not applicable to other meanings used in other branches of science. More information is listed in Annex III. Another case of equipollence is the lexeme *expert*, frequently used in the original summary texts in English. In English the *expert* is "a person with a high level of knowledge or skills concerning a specific field or activity" (OD-e), in Latvian the meaning of the lexeme *experts* is "a person who performs an expert evaluation or assessment" (SVV 2008: 215).

Type of semantic relationship *contrasting (ger. Kontrarität)*

Contrasting occurs if there exists an opposite meaning between the sememes of the lexemes in a language pair (Lipczuk 1991, 410). The foreign words *scheme* and *shēma*, for example, have a shared meaning of 'structure' or 'plan', but in English it is also a negatively connotated activity, meaning a 'secret plan, a conspiracy' (OD-e), whereas in Latvian this activity is perceived neutrally and refers to a specific result – 'representation, draft, drawing' (SVV 2008: 805). Presently, the meaning in Latvian is changing; for example, the lexeme *scheme, shēmot* has acquired a negative connotation as one of the meanings, such as in the context of fraud or phishing. The negative meaning has not yet been listed in Latvian dictionaries, but can be found in press, such as *"Ģimene aizbrauc no Latvijas: "Bez shēmošanas mazais bizness Latvijā nav iespējams!"* (la.lv).

Lexemes *thesis(es)* and *tēze(s)* have a common sememe "opinion, the truth

of which must be proved" (SVV 2008: 916), whereas in English this lexeme has the meaning "long written presentation or dissertation, which includes the author's research, and which is written by an applicant for a scientific degree", for example, *doctoral thesis,* whereas in Latvian – "briefly formulated basic opinion, conclusion" (OD-e).

Type of semantic relationships: *Exclusion (ger. Exklusion)*

Lipczuk distinguishes one more type of semantic relationship, namely *exclusion* (Lipczuk, 1991: 411). It is present when similar lexemes in two languages have no common semantic elements or semantic components in their meaning structure.

For example, *promotional paper* in English refers to the production of advertising paper, as found in numerous translations from Latvian into English, because in Latvian, *promocijas darbs* refers to a specific form of research work. In turn, *promocija* in Latvian is the awarding of a scientific degree (SVV 2008: 695).

*Promocijas darbs* – '*doctoral dissertation', 'doctoral thesis'*. However, also *'promotional paper* ', *'promotional work', 'essence of promotional work…'*, '*promotional work is the final result of research made under the supervision of promotional work's supervisor in the form of dissertation with the scientific novelty and new inferences in management about an actual subject related to international business* [*Guidelines for Doctoral Thesis (Promotional Work*]', (LU, 2018: 01). In English, the word combination *'promotional work'* is far from being perceived as related to the doctoral thesis. In English, '*promotional paper products'* are often used to denote paper products (notebook paper, etc.) with a company or event logo, so the meaning is not related to the language of science but to advertising products. This term is also used with the meaning of advertising and promoting awareness (OD-e).

The meaning of the English lexeme *expert* is often not accurately translated to

It is essential to consider that the authors of the PhD dissertation summaries included in this study do not have English as their mother tongue. Examination of the specialised corpora of dissertation summaries created for this study has further confirmed the findings disclosed above concerning the possible presence of false friends in the mentioned texts.

Examples of false friends, detected during the study of the dissertation summaries in management science in English and Latvian, are explained in more detail below.

A difference exists in the quality of translations of scientific texts, including dissertation summaries, as translations are carried out by both the authors themselves and professional translators.

As already mentioned, the use of false friends has been detected in the university recommendations for foreign doctoral students; therefore, it is not surprising that they also appear in the doctoral dissertation summary texts and their translations from Latvian into English, such as:

The present dissertation lists only the most striking examples of the use of false friends found in the researched texts of management science dissertation summaries translated from Latvian into English:

1) *Core stone:* "Tourism destination is one of the *core stone* [cornerstones] [8] *of for* (of) tourism company management". In Latvian, the author has expressed the following idea: "Destination is one of the management foundations for companies in the tourism industry" / "Galamērķis ir viens no tūrisma nozares uzņēmumu vadīšanas pamatiem", which is difficult to recognise in translation (2018: 18a)[9]. *Core stone* appears as a term in certain computer games, such as *Deep Rock Galactic*, although it has nothing to do with management science. The translator has tried to create a neologism (false friend) in English on the basis of similarity with the word *cornerstone*.
2) *Inclusion, included:* „*Inclusion* of security issue can be *included* following wider research on service quality maintenance, *including* security as one of the quality management system aspects" / "Lai gan drošība var tikt *aplūkota* autora veiktā pētījuma kontekstā, tās iekļaušana autora izstrādātajā modelī var būt iespējama, veicot plašāku pētījumu par pakalpojumu kvalitātes nodrošināšanu, ietverot drošību kā vienu no kvalitātes vadības sistēmas aspektiem". In the

[8]The brackets indicate the lexeme that the interpreter could have used.
[9]Here and below the examples from the summaries of the doctoral dissertations included in the research corpus are indicated.

original text written in Latvian, the author has expressed the idea that: "although safety may be *considered* in the context of the research conducted by the author, its *inclusion* in the model developed by the author might be possible by conducting a broader study on quality assurance of services, *including* safety as one of the aspects of the quality management system" (2018: 18a).

3) *Block – system, structure:* "...research framework (the scope of the study) does not allow to explore completely included business model *block* [structure, system] ..." / "… pētījuma apjoms neļauj izpētīt pētījumā ietverto modeļa bloku par finanšu plūsmas izmaiņām, tai skaitā veikt izmaksu struktūras analīzi, izmantojot izstrādāto modeli...". The summary of the doctoral thesis in Latvian contains the following text: "… the scope of the study does not allow to research the structure of the model included in the study…" (2018: 18a). In the text in Latvian, it would be more appropriate to use the lexeme *system* or structure rather than *block*. *Scheme - plan:* "to develop a conceptual *scheme* [outline, plan] of defining potential of country's financial sector in export of financial services" / "izstrādāt konceptuālo shēmu finanšu pakalpojumu eksporta potenciāla noteikšanai valsts finanšu sektorā". In the original text the Latvian author has indicated the following as one of the tasks to be carried out in the doctoral thesis: "to develop a conceptual system for determining the export potential of financial services in the public financial sector" (2018: 17a).

Exploring the lexemes, inter alia, in management science dissertation summary section titles, it has been observed that the role of context in the language of science is crucial when it comes to the choice of headings that, at first glance, might seem synonymous. Unfortunately, it has been detected that the lengthy texts of the doctoral dissertation summaries have been titled as *synopsis*, even though Merriam-Webster Dictionary, Oxford Languages, Cambridge Dictionary, and Collins English Dictionary unanimously define *synopsis* as a condensed statement or outline: abstract, a brief summary, a short description of the contents (MWD$_{-e}$, OL$_{-e}$, CD$_{-e}$, CED$_{-e}$).

In the process of translation from English to Latvian there are cases when

it is necessary to specify, by contacting the author of the dissertation summary, in what sense the lexeme is to be translated to Latvian, such as the use of the lexemes *expert* and *specialist*: in reality, when conducting expert interviews, the doctoral students select experts themselves, often they are experienced industry specialists and scientists in the relevant field. However, sometimes doctoral students utilise the services of experts, so it is impossible to unequivocally conclude whether the term has been misused in translation without additional information. The cases of false friends in the translations of management science doctoral dissertation summaries have been examined through a contrastive study of texts in English and Latvian. The present research has been conducted to facilitate the writing and translation of dissertations in both English and Latvian.

### 5.2 Undesirable wording in management science doctoral dissertation summaries

To promote science, it is essential to maintain a high quality of materials published in management science dissertation summaries, and the mentioned goal can be attained *inter alia* by observing the requirements of the language norms in English and Latvian, by adhering to the genre and traditions and conventions acceptable and expected by the respective audience. Based on the corpora compiled for the study of the present dissertation, it has been determined that overall, both the original corpora texts and their translations comply with the mentioned requirements. However, as indicated below, instances of undesirable translations have also been detected. The reasons might vary, given that in the majority of cases the authors are still novice writers and might not be familiar with all the nuances of the academic writing style, given that for the authors of the summaries English is not their mother tongue, and that it has to be admitted that the authors often work under stressful conditions, especially taking into account the global events of the last years. The translators, in turn, have to adhere to the exact requirements as the authors do in terms of understanding the expectations of the audience and the conventions and norms that have to be respected, as well as have a thorough knowledge of the terminology and at least sufficient knowledge of the topics disclosed in the dissertations and their summaries not to make logical

or factual mistakes. Therefore, identifying poor content in the published translations of management science dissertation summaries may help avoid mistakes in the future.

In the present subchapter, management science dissertation summary text translations that indicate poor command of general English have been discussed first, followed by examples of undesirable use of specialised lexis and poor style pertaining to the language of science and management science.

First of all, it has to be mentioned that the text translations are not expected to contain any spelling mistakes, such as:

> *Lee et al. (2008) observe that port evolution in advanced western economies has been different from that observed in developing ones…,* (2018: a3).

Correction (the word should be capitalised):

> *Lee et al. (2008) observe that port evolution in advanced Western economies has been different from that observed in developing ones…,*
>
> *Management of travel agencies and tourism operators... is examined aso ne of the examples..*

Correction (typo): *...is examined as one of the examples...*

Unfortunately, in the case of a word-for-word translation, the communicative aim of the translated text is lost, which can significantly influence the outcome of the dissertation defence. Thus, in one case, the translator has used the enumeration *firstly, secondly, thirdly, fourthly,* and *fifthly.*

*Fifthly, an international tourism company management model should include a place - destination where a tourism company offers its product* (2018: 18a).

Luckily, the fifth point was the last one the author of the original summary text had used. Whereas this kind of enumeration *pirmkārt, otrkārt, treškārt, etc.* is possible in Latvian, if translated word for word, it is perceived as extremely clumsy in English. The translator might have used alternative wording, such as "first and foremost," "next," "after that," "finally," and "last but not least," in English.

The use of *firstly, secondly, thirdly* in the provided example represents a transfer from Latvian rhetorical structuring and does not coincide with the contemporary norms of academic English, preferring a shorter listing along with a better structure of the enumeration, using *first, second,... finally* (Biber et al. 1998:

259–260; Swales &Feak 2012: 175–176).

The absence of the definite article before the ordinal (*fourth part*) does not correspond to the grammar rule that ordinal numerals require the definite article *the* (Quirk et al. 1985: 259–260).

The construction *author's performed research* is grammatically wrong, because in English the construction possessive + past participle when mentioning the doer is not possible, while a *by*-phrase in this situation is mandatory (Huddleston & Pullum 2002: 468–470). The absence of an article before a singular count noun (*intangible asset*) contradicts the rules of noun phrase structure (Biber et al. 1999: 257–260).

In some cases, inappropriate use of grammar has been detected in the translations from Latvian into English, such as:

*..while fourth, empirical part, consists of author's performed three stage research, consisting of quantitative end consumer survey, tourism industry professional's survey and approbation of elaborated model using focus group interview* (2018: 18a).

Here, the incorrect use of the possessive case and the missing definite article before the ordinal numeral and the word *model,* as well as the repeated word *consists,* distract the attention of the reader from the information disclosed in the summary text, not to mention the wrong spelling of *three-stage*. In Standard English, the doer has to be indicated either by an active clause or by a passive clause with a by-phrase (Huddleston & Pullum 2002: 468–470; Quirk, Greenbaum, Leech & Svartvik 1985: 327–329, 750–752; Biber, Johansson, Leech, Conrad & Finegan 1999: 476–478).

Correction:

*..while the fourth, empirical part, performed by the author, encompasses a three-stage research, consisting of a quantitative end-consumer survey, a survey of tourism industry professionals, and the approbation of the elaborated model using a focus group interview*.

Another field of common grammar mistakes is syntax, such as sentences lacking clear structure, missing articles and prepositions. The following sources have been used in this dissertation to substantialize the standard English norms: phrases in management (Huddleston & Pullum 2002: 274–276), structure of prepositional phrases and noun-phrase modification (Biber et al. 1999: 302–305),

academic noun-phrase structuring and prepositional linking in research prose (Swales & Feak 2004: 33–35).

> *Therefore, the author concludes that client communication (and indirectly - communication with tourists) international tourism company management cannot rely solely on the assessment of its services* (2018: 18a).
>
> Correction:
>
> *Therefore, the author concludes that client communication (and indirectly, communication with tourists) in international tourism company management cannot rely solely on the assessment of its services.*

Wrong word order in a sentence, inappropriate use of the Passive Voice, and missing articles do not add to the comprehension of the text. In English, a singular countable noun requires a determiner, therefore *intangible asset* must be preceded by an article (*an intangible asset*) (Biber et al. 1999: 258–260; Quirk et al. 1985: 253–255). In relative clauses and declarative clauses in general, the word order should be Subject–Predicate (Quirk et al. 1985: 49–52, 137–140; Huddleston & Pullum 2002: 1033–1038). In passive constructions the grammatical subject must precede the auxiliary *be* and the past participle; hence forms such as *has been developed cultural…* violate the basic syntactic structure of the English passive (Huddleston & Pullum 2002: 1429–1436). Finally, the choice of prepositions after abstract nouns such as *knowledge* and *communication* is determined lexically (*knowledge of / about*, *communication with / in*), and deviations from these patterns result in non-standard constructions (Biber et al. 1999: 303–305; Quirk et al. 1985: 657–660), such as:

> *Knowledge has been identified as intangible asset on which are dependant all organization management principles* (2018: 18a).
>
> Correction:
>
> *Knowledge has been identified as an intangible asset on which all organisational management principles depend.*
>
> *Based on specific knowledge on end consumer, has been developed cultural differences awareness based approach to client segmentation and channels* (2018: 18a).
>
> Correction:
>
> *Based on specific knowledge concerning the end consumer, a cultural*

*difference awareness-based approach to client segmentation and channels has been developed*.

The next example proves that the translator has had no idea about text organisation, word order, or punctuation in an English sentence. The deviations in the examples below can be explained with reference to standard descriptions of English syntax and punctuation. In English, parenthetical adverbials such as *in turn* are normally integrated into the clause and set off by commas, not fronted in a way that disrupts clause structure (*In its turn, tourism research is characterized… can be explored…*), (Quirk et al. 1985: 497–500; Huddleston & Pullum 2002: 1365–1370). Coordination and listing of nominal groups must follow parallel structure and a fixed word order, with the verb preceding the coordinated objects (*can be explored X, Y, Z*), not inserted between subject and complement in a way that violates normal structure (Biber et al. 1999: 894–897; Quirk et al. 1985: 916–918). Furthermore, punctuation in academic English requires a colon and not a dash to introduce an explanatory list (Biber et al. 1999: 884–886).

In the sentence *In all there are determined ten violation kinds*, the postverbal placement of the subject and the use of a past participle without auxiliary *have* contradict the standard word order of the English perfect passive, which requires the sequence *subject + auxiliary have + been + past participle* (Huddleston & Pullum 2002: 1429–1436). In addition, quantifying adverbials such as *in total* normally precede the clause or the noun phrase they modify, while *there*-constructions require a finite verb agreeing with the notional subject (*there have been determined ten types…*), not the inverted and incomplete structure found in the translation (Quirk et al. 1985: 140–144; Biber et al. 1999: 939–941).

> *In its turn, tourism research is characterized by universalism – can be explored tourism geography, consumers and the behavioural sociology change, tourism economic impact, tourism entrepreneurship, tourism company management and several further aspects* (2018: 18a).
>
> Correction:
>
> *Tourism research, in turn, is characterised by universalism: the geography of tourism, consumer behaviour, sociological change, the economic impact of tourism, tourism entrepreneurship, tourism company management, and several further aspects can be explored*.

Another error in word order is outlined below:

*In all there are determined ten violation kinds* (2013: 15a).

Correction:

*In total, ten types of violations have been determined.*

One more type of errors complicating the perception of text is poor coordination between singular and plural. The errors in the examples below concern subject–verb agreement and the distinction between countable and uncountable nouns in English. In standard English, the verb must agree in number with the grammatical head of the subject noun phrase, not with a prepositional complement. Thus, in t*he aim of port governance changes*, the head noun is *aim* (singular), which requires the singular verb *is*, whereas the plural verb *are* is incorrectly attracted by the plural noun *changes* inside the prepositional phrase (*of port governance changes*). This type of agreement error is described as faulty agreement by proximity and is non-standard in written academic English (Quirk et al. 1985: 757–760; Biber et al. 1999: 239–242).

In the second example, *research* is an uncountable noun in English and therefore takes a singular verb (*research consists*), not a plural form (*research consist*). The misuse of plural agreement with uncountable abstract nouns is a well-documented learner and translation error, since such nouns do not have a plural form and control singular verb agreement (Quirk et al. 1985: 176–178; Huddleston & Pullum 2002: 348–350; Biber et al. 1999: 258–260).

*The aim of port governance changes in most cases are directed at lowering transaction costs* (2018: 3a).

Correction:

*Port governance changes, in most cases, are directed at lowering transaction costs.*

*Empirical research consist of quantitative and qualitative research methods.*

Correction:

*"Empirical research consists of quantitative and qualitative research methods."*

In terms of lexis, the most common source of mistakes is the confusion of similar words. In the example below, the error is lexical and word-class related: the adjective *considerable* ("large, significant in amount or degree") has been

mistakenly used instead of the past participle *considered*, which functions as part of the passive verb form (*be considered* = "be regarded as"). In standard English, the construction *be + past participle* is required to express evaluative judgement, whereas the adjective *considerable* cannot fulfil this syntactic and semantic role. The confusion illustrates a typical case of formal similarity leading to category and meaning substitution, i.e. mixing an adjective with a verbal participle of a different lexeme. Such errors are discussed in descriptions of word-class distinctions and participial passives (Quirk et al. 1985: 96–99, 167–169; Biber et al. 1999: 508–510; Huddleston & Pullum 2002: 1429–1432).

..research is *considerable as analytical..* (2018: 18a).

Correction:

..research is *considered analytical*..

In the majority of texts in the research corpus, present tenses have been used, which could be explained by the authors and translators referring to facts or universal truths disclosed in the dissertation summaries, such as:

(1) *For the first time, the term venture capital attraction has been defined…*(2014: 23a).

(2) *During the research, it has been discovered that the most profitable market is the Estonian non-life insurance market with the lowest combined ratio over the past six years* (2023: 27a).

Confusion is generated by the incoherent use of tenses when the present tenses are used in the author's narrative side-by-side with the past tenses. The alternation of Present Simple with Past Simple in one and the same narrative frame (general description of research results) violates the principle of tense consistency in academic prose. In research reporting, present tenses are typically used to state general facts and current relevance (the "general present"), whereas past tenses are used to report completed research actions (Biber et al. 1999: 455–459; Quirk et al. 1985: 175–178). Mixing these without a discourse shift, as in the sequence *provides … put forward … are*, creates temporal incoherence and disrupts the informational structure of the text (Swales & Feak 2004: 112–114; Huddleston & Pullum 2002: 134–138).

In addition, the verb *attract* in the relative clause must agree in number with its singular subject *stock market* and therefore requires the 3rd person singular

form (*attracts*), according to the rules of subject–verb agreement in English (Quirk et al. 1985: 148–150; Biber et al. 1999: 239–241). The possessive construction *companies' financial indicators* is also syntactically clumsy in this context (Biber et al. 1999: 293–295; Huddleston & Pullum 2002: 479–482), such as:

*"A well-developed stock market provides an alternative opportunity for companies to acquire financing for their economic activity and development without requesting loans from the bank, as well as attract more investors to the stock exchange and the companies, thereby fostering economic growth, increasing employment opportunities, and the value added of goods and services. The author put forward a hypothesis that stock market listed companies' financial indicators and capital structure are essential for the enhancement of the stock market for the Baltic States development"* (2022: 22a).

The meaning of some sentences detected in the LV>EN corpus of management science doctoral dissertations cannot be understood at all without consulting the parallel original texts, such as: *management science examines tourism companies as one of the service industry companies, exploring the management specifics* / *vadībzinātne aplūko tūrisma uzņēmumus kā vienu no pakalpojumu nozarēm, pētot to vadīšanas specifiku* (2018: 18a), where the sentence means the following: "*management science researches tourism companies as representatives of one of the service industries, and explores their management specifics*". Based on the findings of the research corpus, total grammatical and lexical confusion has been experienced only by two translators of management science dissertation summaries.

As already disclosed in chapter IV of the present dissertation, another instance that has led to errors is the correct representation of the author's presence in management science dissertation summary texts in English and Latvian, is the use of the lexeme *author*.

Laiveniece (2010: 134) indicates that the language of science texts in Latvian are characterised by the objective expression of the authorial stance. In Latvian, there are at least five ways of expressing the impersonal stance when referring to the author, such as:

- *The use of the Passive Voice;*

- *The use of specific reflexive verbs (rasties, nākties, etc.) in the third person indicative and/or subjunctive mood combined with the infinitive;*
- *The use of specific modal verbs (most frequently varēt, ļaut) in the third person indicative and/or subjunctive mood combined with the infinitive;*
- *Construction with the passive voice present participle (domājams, secināms, redzams, vispārināms, etc.);*
- *The use of specific verbs in the subjunctive mood (jāsecina, jāuzsver, jāpiebilst, etc.).*

Thus, the translators and authors of the summary texts had a wide variety of options to use instead of the lexeme *author.* In the English language translations with Latvian as SL, the mentions of *the author* in third person singular have been detected in 1551 cases, while in the original Latvian texts, there are 1613 mentions of *the author* in the research corpora. In the texts with English as SL, 810 mentions of the *author* have been detected, in the texts translated into Latvian, the mention of the *author / autors(e)* has been encountered in 780 cases. The differences in numbers are accounted for by the fact that impersonal constructions have been used in all the research corpora texts as well. However, an important conclusion regarding self-reference can be made, based on the frequency comparison provided above between the use of the first-person singular pronoun *I* and the nominal phrase with *author*, namely that the first-person pronoun *I* is used markedly less than the phrase with *author,* both in the texts and their translations in all research corpora. By function the mentioned constructions are frequently used when explaining figures and graphs, such as *created by the author, designed by the author, developed by the author, ...compiled by the author…* or when describing the research, such as *the author acknowledges research limitations..., the author refers to..., the author aimed to..., the author analyses ...; the author argues that...; the author applies …*

The use of the lexeme *author,* third person singular*,* does not contribute to the style of the dissertation summary texts, both original and translated LV>EN, such as:

*As part of the research, the author performed 11 correlations of the average arithmetic service product assessments at 6 destinations with five cultural dimension indicators of G.Hofstede with end-consumer selections representing 12 countries, which have been studied as part of the author's research* (2020: 12b).

*Pētījuma ietvaros autors veica 11 vidējo aritmētisko pakalpojumu produktu novērtējuma 6 galamērķos korelāciju ar G. Hofštedes pieciem kultūru dimensiju rādījumiem 12 valstu gala patērētāju izlasēm, kuras pētītas autora pētījuma ietvaros.*

In the example provided above, apart from a spelling mistake, the word author has been used twice. In one instance, it has even been used in the possessive case. It is also unclear who is referred to as the author in the second case.

In the following example, the English text does not contain the lexeme *author*, which can be found in the Latvian translation and is redundant:

*The methodological basis of this dissertation predominantly is quantitative research* (2020: 12b).

*Autora promocijas darba metodoloģiskais pamats galvenokārt balstās uz kvantitatīvo pētniecību.*

One of the findings of the present study is the wording used to denote doctoral dissertation summaries, used in different universities and higher education establishments of Latvia, such as *promotional paper* already discussed in the chapter above and even included in the *Guidelines for Doctoral Thesis (Promotional Work)*, of the Faculty of Business, Management, and Economics of the University of Latvia (2018: 01). Dissertations or theses have been referred to as *Promotion Work* in the Guidelines for Preparing, Formatting and Presentation of Doctoral Thesis of RISEBA University of Applied Sciences, it has also been mentioned in the Guidelines, that a summary should include *Annotations* (in plural). These are unusual findings, given that the Bachelor Thesis Preparation Regulation (2000: 02, BTPR-e) lists *Thesis* and *Abstract* as the recommended terms to be used by students in their writing.

The use of the term *synopsis* to denote the summaries of doctoral dissertations, discovered in three cases at "Turība" University, can also be characterised as undesirable translation, given that the term *synopsis* denotes a condensed statement or outline ($MW_{-e}$), whereas the *summaries* of doctoral dissertations, as already mentioned, contain 35 to 60 pages. The presence of the false friend *synopsis* to denote dissertation summaries can be explained by the fact that it has been included in the recommendations of "Turība" University for doctoral students "Regulations on the Compilation and Layout of Doctoral Theses and Their Synopses" ($RCL_{-e}$).

In some cases, the wording detected in the summary titles contains faulty logics. In one of the summary translations into English, the title *Defendable thesis/Aizstāvamās tēzes* has been detected. This leaves room for the question of whether there are also theses that cannot be defended or rejected in the respective dissertation. Notably, *thesis* is a singular noun, and *theses* is used in the plural form in the respective Latvian text.

In the doctoral dissertation summary titles, the following wording has been detected *theoretical basis of the research / literature / theoretical framework; pētījuma teorētiskā bāze / literatūra / teorētiskais ietvars; theoretical background / theoretical background of the research; teorētiskie pamati / pētījuma teorētiskais satvars; the theoretical and methodological basis; teorētiskais un metodoloģiskais pamats; theoretical foundations; teorētiskais pamats / teorētiskais pamatojums.* Titles with the lexeme *pamati have* been detected in the doctoral dissertation titles (SL-EN, TL-LV) 14 times. First of all, it is worth noting that the plural noun *pamati* in Latvian more closely pertains to the foundation of a building, and the mentioned noun in the plural is not the best choice for a dissertation summary title. The noun *pamatojums* might constitute a better option. Secondly, even though the doctoral students might have been instructed to provide theoretical substantiation of their research in their dissertation summaries, on the doctoral level the students are expected to be able not only to list theories pertaining to their research, but also to analyse them and discuss the main ideas and concepts, disclosed in the dissertation while in some texts the theories are mentioned, but the theoretical background is not analysed at all. *Teorētiskais pamats* means *the theoretical foundation,* while *teorētiskais pamatojums* means *theoretical substantiation.*

As pointed out by Kamler and Thomson (2014: 117):

*Doctoral researchers are meant to make a unique contribution to knowledge. Even if there have been numerous other studies on the topic, doctoral researchers must add their unique perspective to the work. Factual recounts do little more than say what happened, not why, not why this was important.*

While researching the study corpora, it has been observed that the English translations of the Latvian texts contain numerous omissions. Whole paragraphs are missing and cannot be found in the official translations (n=6), such as:

*Šajā pētījumā ... tiks ievērota prasība "ja jūs vēlaties citēt mani vai izmantot manu sniegto informāciju rakstā, jums noteikti vajadzētu sniegt*

*atsauces uz manu avotu. Citējot mani vai izmantojot manu sniegto informāciju, jūs rīkojaties atbildīgi un godprātīgi un arī sniedzat lasītājiem iespēju izsekot un pārbaudīt jūsu izmantoto avotu* (2016: 12b).

In other cases, the translated text exists, but the order of the paragraphs displayed in the original text and the translation is not the same (n = 6). This might be explained by the fact that the versions of the original summary texts may have been altered after the translations were commissioned from the translators, and the translations have never been amended accordingly.

**Conclusions to Chapter Five**

In Chapter Five, translation problems and cases of undesirable translations in management science doctoral dissertation summaries have been analysed. It has been determined that for the false friends of a translator the following types of semantic relationships can be singled out: privativity, inclusion, equipollence, contrasting, and exclusion. To detect the so-called false friends, types of semantic relationships have been examined for Latvian and English word pairs, and cases of false friends have been identified in the translations of management science doctoral dissertation summaries.

Given the presence of false friends both in the already defended management science doctoral dissertation summaries and the recommendations of university faculties and programs, and given that concerning some of the terms, such as *research design / pētījuma plāns (dizains)*, opinions of the academia in Latvia differ, it can be concluded that the phenomenon of false friends has to be researched further to help researchers and translators avoid them. It has also been detected that grammatical false friends, such as *researches* / *pētījumi* are present both in the original and translated English texts of management science dissertation summaries.

After examining the corpora of management dissertation summaries and their translations, it has been detected that in Latvian, English terms are sometimes borrowed without proper judgment, which can potentially lead to the use of false friends, e.g., the Latvian term *promocijas darbs* refers to a form of research work, synonymous with a dissertation, while in English, *promotional paper* pertains to the field of marketing.

It has been established that the translations of management science dissertation summaries contain spelling mistakes, in one case enumeration, such as *firstly, secondly, thirdly* does not coincide with the contemporary norms of academic English, articles and missing, or used without adhering to the grammar norms in English for ordinal numbers, possessive case is used in a way that does not coincide with the grammar norm in English, poor coordination between singular and plural has been detected as well. The use of the term *synopsis* to denote the summaries of the doctoral dissertations has been discovered in three cases in the texts of dissertation summaries defended by the PhD students of "Turība" University.

In some cases, poor grammar and spelling have been detected in the dissertation summaries translated into English. Wrong word order in a sentence, inappropriate use of the Passive Voice, and missing articles do not add to the comprehension of the text. Inconsequence in the use of the present and past tenses has been discovered, which complicates the perception of the translated text. In the translations of Latvian summaries into English, omissions have been detected, which complicates the research of the parallel texts.

The distribution of errors in management science doctoral dissertation summaries is uneven. While the majority of the summary texts do not contain multiple errors, two texts translated into English contain the majority of human errors detected in the researched texts. When comparing the original texts written and translated into English, it has been established that the majority of errors in the original English texts are grammatical false friends, such as the use of plural abstract nouns that do not exist in English. In the translated texts, false friends have also been encountered. In the texts translated into English, the most frequent errors are related to wrong noun-verb agreement. Another broad category is that of errors in the logic of the narratives, such as *defendable theses*.

# 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, 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.

3. 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.

4. 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 dissertation summaries has been carried out.

5. 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.

6. 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 statistically grounded comparison of micro- and macro-structural 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.

# Bibliography

## Sources


1. AcadTerm-e-*Akadēmiskā terminu datubāze AkadTerm.* Retrieved from https://www.akadterm.lv/term.php?term [Last accessed: 17.01.2026].
2. AHD-e - *American Heritage Dictionary*. Retrieved from: https://www.ahdictionary.com/word/search.html?q. [Last accessed 05.10.2024]
3. AP-e – *Academic Phrasebank*, University of Manchester, Manchester. Retrieved from: https://www.phrasebank.manchester.ac.uk/ [Last accessed 24.07.2024].
4. BAWE-e - British Academic Written English Corpus - Coventry University. Retrieved from: https://www.coventry.ac.uk/research/research-directories/current-projects/2015/british-academic-written-english-corpus-bawe/ [Last accessed 23.03.2025].
5. BD-e – *Business Dictionary* Retrieved from: http://www.businessdictionary.com/ [Last accessed 15.09.2025].
6. BMG-e – *Business and Management Glossary*. Retrieved from: https://www.businessballs.com/glossaries-and-terminology/business-and-management-glossary. [Last accessed 15.09.2025].
7. BTPR-e (2000) – Bachelor Thesis Preparation Regulation, RISEBA University of Business, Arts and Technology. Retrieved from: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://doc.riseba.lv/EN/NL0092.pdf [Last accessed 22.01.2026].
8. BWRITE-e (2025) – BWRITE. Academic Writing in the Baltic States: Rhetorical Structures through cultures and languages. Retrieved from: https://www.bwrite.ut.ee/#discover [Last accessed 21.03.2025].
9. CACD-e – *Cambridge Academic Content Dictionary*, Cambridge: Cambridge University Press. Retrieved from: https://dictionary.cambridge.org/dictionary/english/ [Last accessed 11.07.2025]
10. CDMT-e (2011) – *Concise Dictionary of Management Terms.* Retrieved from: https://www.unitar.org/hiroshima/sites/unitar.org.hiroshima/files/Management%20Glossary%20-%20Musa%20Kamawi.pdf. [Last accessed 25.10.2025].
11. CDO-e (2011) – *Cambridge Dictionaries Online. Advanced Learners.* Cambridge: Cambridge University Press. Retrieved from: http://dictionary.cambridge.org/ [Last accessed 15.09.2025].
12. CED-e – *Collins English Dictionary.* Retrieved from https://www.collinsdictionary.com/dictionary/english. [Last accessed 05.11.2024].
13. CLARIN-e - *CLARIN 2020 Book of Abstracts.* [Retrieved from: https://www.clarin.eu/content/clarin2020-book-abstracts]. [Last accessed

23.03.2026].
14. CLARIN ERIC-e (2025) - Common Language Resources and Technology Infrastructure. Retrieved from: https://www.clarin.eu/resource-families/corpora-academic-texts [Last accessed 23.03.2025]
15. CLARIN-lv-e - CLARIN-LV repository. Retrieved from: http://hdl.handle.net/20.500.12574/30. [Last accessed 23.03.2025]
16. ELDO (1996) – *Ekonomikas, lietvedības un darba organizācijas terminu vārdnīca*, Rīga: LZA Latviešu valodas institūts.
17. ENPC-e - the English-Norwegian Parallel Corpus. Retrieved from: https://www.hf.uio.no/ilos/english/services/knowledge-resources/omc/enpc/introduction/ [Last accessed 23.03.2025]
18. ESV-e (2000) – *Ekonomikas skaidrojošā vārdnīca*, Rīga: Zinātne. Retrieved from: https://termini.gov.lv/kolekcijas/72 [Last accessed 08.08.2025].
19. FOS – Frascati Manual (2015). *Guidelines for Collecting and Reporting Data on Research and Experimental Development.* Retrieved from: https://read.oecd-ilibrary.org/science-and-technology/frascati-manual-2015_9789264239012-en#page60 [Last accessed 08.09.2025].
20. GDD-e - Guidelines for Doctoral Thesis (Promotional Work) of the Module of Program of Management Doctoral Studies "Global Management and Leadership". Retrieved from: https://www.lu.lv/en/studies/study-programmes-1/doctoral-studies/economics-and-business-global-economics-and-leadership/ [Last accessed 25.01.2018].
21. GLT-e - *Glossary of Linguistic Terms*. Retrieved from: https://glossary.sil.org/term/text-genre. [Last accessed 06.05.2023]
22. ID-e – Idiom. Retrieved from: https://getidiom.com/dictionary/latvian/secin%C4%81ms. [Last accessed 15.01.2026].
23. INFO-e - *Infographic: The secret to using tenses in scientific writing*. Retrieved from: https://www.editage.com/insights/the-secret-to-using-tenses-in-scientific-writing [Last accessed 19.04.2025].
24. KB-e – *Research Methods Knowledge Base.* Retrieved from: https://conjointly.com/kb/#what-is-the-research-methods-knowledge-base. [Last accessed 24.10.2024].
25. LA.LV-e (2026) – *Ziņu portāls Latvijai.* Retrieved from: https://www.la.lv/gimene-aizbrauc-no-latvijas-bez-shemosanas-mazais-bizness-latvija-nav-iespejams. [Last accessed 21.09. 2026].
26. LAVV (1993) – Veisbergs, Andrejs. *Latvian-English, English-Latvian Dictionary of False Friends*, Rīga: Si, 1993.
27. LAVV (1994) – Veisbergs, A. *Latviešu-angļu, angļu-latviešu viltus draugu vārdnīca = Latvian-English, English-Latvian Dictionary of False Friends*. 2nd revised and expanded edition. Rīga: SI, 1994. 88 pp.
28. LDCE-e – *Longman Dictionary of Contemporary English.* Retrieved from: https://www.ldoceonline.com/dictionary/heated-argument-debate-

discussion-etc [Last accessed 17.09.2023].
29. LLU-e – Latvijas Lauksaimniecības universitāte. Ekonomikas un sabiedrības attīstības fakultāte (2016). *Metodiskie norādījumi promocijas darba izstrādāšanai un aprobācijai.* Retrieved from: *https://goo.gl/EtdSP3.* [Last accessed 02.03.2025].
30. LLUMN-e – *Latvijas Lauksaimniecības universitātes metodiskie norādījumi*. Retrieved from: *http://*www.llu.lv/getfile.php?id=69333 [Last accessed 02.07.2023].
31. LLVV (1972–1996) – *Latviešu literārās valodas vārdnīca* (1972–1996) Laimdots Ceplītis (red.) Latvijas PSR Zinātņu akadēmija. Andreja Upīša Valodas un literatūras institūts (Latvijas Zinātņu akadēmija. Latviešu valodas institūts). 8 sējumos. Rīga: Zinātne.
32. LOLD-e – *Latvian Oxford Living Dictionaries* Retrieved from: https://lv.oxforddictionaries.com/definition [Last accessed 09.07.2019].
33. UHD-e (2026) – Universität Heidelberg. Dissertation (= Doktorarbeit). Retrieved from: https://www.psychologie.uni-heidelberg.de/studium/a-z/dissertation-doktorarbeit [Last accessed 07.10.2026].
34. VVL – Valsts valodas likums [Law of the State Language]. *Latvijas Vēstnesis*, 428/433, 21.12.1999.; Latvijas Republikas Saeimas un Ministru Kabineta Ziņotājs, 1, 13.01.2000. Retrieved from: https://likumi.lv/ta/id/14740-valsts-valodas-likums [Last accessed 13.09.2023].
35. LTSV (2011) – *Lingvodidaktikas terminu skaidrojošā vārdnīca*, Rīga: Latviešu valodas aģentūra.
36. LU (2012), *Latvijas Universitātes promocijas darbu kopsavilkumu izstrādāšanas un noformēšanas noteikumi*. Retrieved from: *https://goo.gl/KbyA4N*. [Last accessed 15.07.2019].
37. LU (2018) – *Guidelines for Doctoral Thesis (Promotional Work)*, LU Biznesa, vadības un ekonomikas fakultāte.
38. LUM-e - Lancaster University Management School home page. Retrieved from: https://web.archive.org/web/20090725065138/http://www.lums.lancs.ac.uk/departments/ManSci/DeptProfile/WhatisManSci/ [Last accessed 15.07 2023].
39. LUMN-e – Latvijas Universitātes Pedagoģijas, psiholoģijas un mākslas fakultātes metodiskie norādījumi. Retrieved from: *w3.ppf.lu.lv/pn/prof_bak/bakdarbs.doc* [Last accessed 25.03.2023].
40. LUPDK-e – Latvijas Universitāte (2012). *Rīkojums "Par LU promocijas darbu kopsavilkumu izstrādāšanas un noformēšanas noteikumiem"*. Nr.1/201, LU, 2012. [Order of the University of Latvia on the Regulations Regarding Writing and Designing of Doctoral Thesis Summaries at the University of Latvia]. Retrieved from https://www.apgads.lu.lv/fileadmin/user_upload/lu_portal/apgads/dokumentacija/LU-promocijas-darbu-noform-noteikumi.docx [Last accessed

29.07.2023].
41. MD-e – *Management Dictionary*. Retrieved from: https://www.12manage.com/management_dictionary.html. [Last accessed 15.09.2019].
42. MK (2018a) – *Ministru kabineta noteikumi Nr. 49 par Latvijas zinātnes nozarēm un apakšnozarēm* Retrieved from: http://likumi.lv/ta/id/296661-noteikumi-par-latvijas-zinatnes-nozarem-un-apaksnozarem [Last accessed 15.08.2020].
43. MK (2018b) – Ministru kabineta noteikumi Nr.1001. *Zinātniskā doktora grāda piešķiršanas (promocijas) kārtība un kritēriji. Rīgā, 27.12.2005 (prot. Nr.77 2. §)*, *(Noteikumu nosaukums grozīts ar MK 14.08.2018. noteikumiem Nr. 522).* [The Cabinet of Ministers Regulations No.1001, "On the Procedure and Criteria for the Awarding (Promotion) of a Doctoral Degree". Retrieved from https://likumi.lv/ta/id/124787-zinatniska-doktora-grada-pieskirsanas-promocijas-kartiba-un-kriteriji [Last accessed 12.09.2023].
44. MK-e (2020) - Ministru kabineta rīkojums Nr. 345. Par konceptuālo ziņojumu "Par jauna doktorantūras modeļa ieviešanu Latvijā" [Cabinet Order No. 345 "On the Implementation of a New Doctoral Model in Latvia"], Rīgā 2020. gada 25. jūnijā (prot. Nr. 41 54. §) Retrieved from: https://likumi.lv/ta/id/315685-par-konceptualo-zinojumu-par-jauna-doktoranturas-modela-ieviesanu-latvija [Last accessed 15.02.2025].
45. MLVV-e (2008) – *Mūsdienu latviešu valodas vārdnīca*. Atbildīgā redaktore Ieva Zuicena, 2008 Retrieved from: http://www.tezaurs.lv/mlvv/ [Last accessed 12.12.2019].
46. MWD-e – Merriam-Webster Dictionary Retrieved from: https://www.merriam-webster.com/dictionary. [Last accessed 05.11.2024].
47. MW-e – *Merriam-Webster*. Retrospective. Retrieved from: https://www.merriam-webster.com/dictionary/retrospective#examples [Last accessed 15.08.2025].
48. OCEL-e, (2018) - *The Oxford Companion to the English Language.* 2nd ed. Retrieved from: https://www.oxfordreference.com/search?q=Corpus+linguistics&searchBtn=Search&isQuickSearch=true [Last accessed 15.09.2025].
49. OD-e (2010) – *Oxford Dictionaries Online.* Oxford: Oxford University Press. Retrieved from: www.oxforddictionaries.com. [Last accessed 09.07.2019].
50. ODPAC-e – Office of Doctoral Presentations and Academic Ceremonies, Eindhoven University of Technology (2023), Retrieved from: https://www.tue.nl/en/our-university/about-the-university/support-services. [Last accessed 30.08.2023].
51. OED-e – *Online Etymology Dictionary.* Retrieved from: https://www.etymonline.com. [Last accessed 09.07.2025].

52. OPUS-e - Open Parallel Corpus. Retrieved from: http://opus.nlpl.eu/ [Last accessed 23.03.2025].
53. OS-e –Official statistics portal of the Republic of Latvia, Concepts and Definitions. Retrieved from: https://stat.gov.lv/en/terms [Last accessed: 27.02.2025].
54. PTV-e – *RSU pētniecības terminu vārdnīca.* Retrieved from: https://www.rsu.lv/petniecibas-terminu-vardnica/petijuma-dizains. [Last accessed 14.10.2025].
55. *Public summary of dissertation.* Retrieved from: https://www.tue.nl/en/our-university/about-the-university/support-services/general-affairs/office-of-doctoral-presentations-and-academic-ceremonies/phd-defenses/public-summary-of-dissertation/ [Last accessed 03.01.2026].
56. PV-e – University of Toronto, University College. *When to Use the Passive Voice, and When to Avoid It*. Retrieved from: *http://www.uc.utoronto.ca/passive-voice* [Last accessed 07.02.2023].
57. RCL-e (2022) – Regulations on the Compilation and Layout of Doctoral Theses and Their Synopses, Rīga: "Turība University" LTD.
58. RDLL (2006) – *Routledge Dictionary of Language and Linguistics.* London and New York: Taylor & Francis e-Library.
59. ROS-e (2021) – UNESCO Recommendation on Open Science. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000379949 [Last accessed 22.01.2025].
60. SciPar-e (1997) - The English-Norwegian Parallel Corpus. Retrieved from: https://aclanthology.org/2022.lrec-1.284.pdf [Last accessed 23.03.2025]
61. SDRN-e – *Studiju darbu rakstīšana un noformēšana. Metodiski norādījumi* Liepājas Universitāte. Retrieved from: http://www.liepu.lv/uploads/files/Metodiskie_noradijumi_ VSZF_20.05.2014.pdf. [Last accessed 25.03.2020].
62. SV (2005) – Baldunčiks J., Pokrotniece K. *Svešvārdu vārdnīca*, Rīga: Jumava 2005.
63. SVV (2008) – *Svešvārdu vārdnīca*, I. Andersone, I. Čerņavska, I. Kalniņa, D. Nātiņa, R. Puriņa, L. Vjatere. Rīga: Avots, 2008.
64. TH-e – What is Management Science? Retrieved from: www.toolshero.com/tag/management-science [Last accessed 16.01.2025].
65. TZ-e (2025) – *Tēzaurs. Disertācija.* Retrieved from: *https://llvv.tezaurs.lv/disert%C4%81cija.* [Last accessed 15.08.2025].
66. TZ-e (2025) – *Tēzaurs. Mūsdienas.* Retrieved from: *https://llvv.tezaurs.lv/mūsdienas.* [Last accessed 15.01.2026].
67. UT-e – "What is Professional Communication?" University of Tampa. Retrieved from: www.ut.edu/graduate-degrees/ma-in-professional-communication/what-is-professional-communication [Last accessed 14.01.2025].

68. VPSV (2007) – *Valodniecības pamatterminu skaidrojošā vārdnīca*. Sastādījis autoru kolektīvs V. Skujiņas vadībā. Rīga: Valsts valodas aģentūra.
69. ZV$_{.e}$ – Latviešu zinātnes valoda intralingvālā aspektā [Latvian Language of Science in the Intralingual Aspect]. University of Ventspils, University of Liepāja. Retrieved from: www.zinatnesvaloda.lv [Last accessed 24.07.2024].

## List of literature


1. Aaronson, S. (1977). Style in scientific writing. In E. Garfield (ed.), *Essays of an Information Scientist*, Vol. 3, 4–13. Available at: https://garfield.library.upenn.edu/essays/v3p004y1977-78.pdf. [Last accessed 16.11.2026].
2. Altenberg, B. & Granger, S. (2002). Recent trends in cross-linguistic lexical studies. In B. Altenberg & S. Granger (eds.), *Lexis in Contrast: Corpus-Based Approaches*. Amsterdam/Philadelphia: John Benjamins, 3–48.
3. Ansberga, S. & Dubova, A. (2020). Zinātniskā raksta struktūra humanitārajās zinātnēs. In G. Smiltniece & L. Lauze (atb. red.), *Vārds un tā pētīšanas aspekti: rakstu krājums*, 24(1/2), 234–242. Liepāja: LiePA.
4. Anthony, L. (2005). AntConc: A Learner and Classroom Friendly, Multi-Platform Corpus Analysis Toolkit. In L. Anthony, S. Fujita & Y. Harada (eds.), *Proceedings of IWLeL 2004: An Interactive Workshop on Language e-Learning*. Tokyo: Waseda University, 7–13. Retrieved from: https://www.laurenceanthony.net/research/iwlel_2004_anthony_antconc.pdf [Last accessed 16.11.2026].
5. Baker, M. & Saldanha, G. (2020). *Routledge encyclopedia of translation studies* (3rd ed.). New York: Routledge.
6. Baker, M. (1993). Corpus linguistics and translation studies: Implications and applications. In M. Baker, F. Francis & E. Tognini-Bonelli (eds.), *Text and technology: In honour of John Sinclair.* Amsterdam & Philadelphia: John Benjamins, 233–250.
7. Baker, M. (1995). Corpora in translation studies: An overview and some suggestions for future research. *Target*, 7(2), 223–243.
8. Baker, M. (2018). *In other words: A coursebook on translation.* New York: Routledge.
9. Bakhtin, M. (1986). The problem of speech genres and the problem of the text. In C. Emerson & M. Holquist (eds.), *Speech genres and other late essays.* Austin: University of Texas Press, 250–317.
10. Baldunčiks, J. (1989). *Anglicismi latviešu valodā.* Rīga: Zinātne.
11. Baldunčiks, J. (2005). Tulkotāja viltusdraugu problēma: No vārdiem pie darbiem. *Valodas prakse: vērojumi un ieteikumi,* 1. Rīga: LU Akadēmiskais apgāds, 56–64.
12. Baltiņš, M. (2003). J. Endzelīna un H. Budula 1922. gada polemika par zinātniskās terminoloģijas vārdnīcu. In *Valoda vēstures dzirnakmeņos.* Rīga: LU Latviešu valodas institūts, 13–16.
13. Baltiņš, M. (2007a). Sekmīgas un vispusīgas terminu sistēmas izveides ekstralingvistiski šķēršļi. In *Mūsdienu valoda mūsdienu sabiedrībā.* Rīga: LU Latviešu valodas institūts, 12–16.
14. Baltiņš, M. (2007b). Terminoloģijas procesa normatīvā bāze. *Valsts valodas komisijas raksti,* 3, Rīga: Zinātne, 32–53.
15. Benz, C. & Newman, I. (2008). *Mixed methods research: Exploring the*

*interactive continuum.* Carbondale: Southern Illinois University Press.
16. Bhatia, V. (2014). *Worlds of written discourse: A genre-based view.* London: Bloomsbury.
17. Biber, D. (1988). *Variation across speech and writing.* Cambridge, UK: Cambridge University Press.
18. Biber, D. (1989). A typology of English texts. *Linguistics,* 27(1), 3–43.
19. Biber, D. (2006). *University language: A corpus-based study of spoken and written registers.* Studies in Corpus Linguistics (23). Amsterdam & Philadelphia: John Benjamins.
20. Biber, D. (2012). Corpus-based and corpus-driven analyses. In *The Oxford handbook of linguistic analysis.* Oxford: OUP, 159–192.
21. Biber, D., Johansson, S., Leech, G., Conrad, S. & Finegan, E. (1999). *Longman grammar of spoken and written English.* Harlow: Longman.
22. Biel, L. (2018). Genre analysis and translation. In K. Malmkjær (ed.), *The Routledge handbook of translation studies and linguistics.* New York: Routledge, 151–165.
23. Bondi, M. (2009). Polyphony in academic discourse. In E. Suomela-Salmi & F. Dervin (eds.), *Cross-linguistic and cross-cultural perspectives on academic discourse.* Amsterdam: Benjamins, 83–108.
24. Borin, L. (1999). *Parallel corpora, parallel worlds.* Uppsala: Uppsala University.
25. Breitkopf, A. & Vassileva, I. (2007). Osteuropäischer Wissenschaftsstil. In P. Auer & H. Baßler (Hg.), *Reden und Schreiben in der Wissenschaft.* Frankfurt/New York: Campus, 211–224.
26. Broz, V. (2007). Diachronic Investigations of False Friends: *10th International Cognitive Linguistics Conference*, Krakow.
27. Bühler, K. (1934). *Sprachtheorie.* Stuttgart/New York: Fischer.
28. Bühler, K. (2011). *Theory of language: The representational function of language*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
29. Bunton, D. (2002). Generic moves in Ph.D. thesis introductions. J. Flowerdew (ed.), *Academic Discourse*. London: Longman, 57–75.
30. Bunton, D. (2005). The Structure of PhD Conclusion Chapters. *Journal of English for Academic Purposes* 4/3, 207–224.
31. Burneikaitė, N. (2006). Evidentiality in graduate student writing: A study of Lithuanian students' master's theses in English. *Kalba ir kontekstai*, 1, 97–105.
32. Bussmann, H. (1996), *Routledge Dictionary of Language and Linguistics.* London, New York: Taylor & Francis e-Library.
33. Cabré, M. T. (1998). *Terminology: Theory, methods, and applications.* Philadelphia: John Benjamins.
34. Catford, J. C. (1965). *A linguistic theory of translation.* London: OUP.
35. Čerņevska, J. (2021). Time deixis in engineering discourse. *Baltic Journal of English Language, Literature and Culture,* 11, 21–40.
36. Chamizo-Domínguez, P. J. (2008). *Semantics and pragmatics of false*

*friends.* New York: Taylor & Francis.
37. Cigankova, N. & Vinčela, Z. (2012). Specialised Corpora Structural and Functional Variability in Sociolinguistic Studies of Variation in English. *Valoda 2012*. *Valoda dažādu kultūru kontekstā*. XXII. Daugavpils: Saule, 246–256.
38. Cigankova, N. & Vinčela, Z. (2013). Controlling Sociolinguistic Variables in Quantitative Corpus-based Research of Variation in English. *Valoda 2013*. *Valoda dažādu kultūru kontekstā.* XXIII. Daugavpils: Saule, 304–314.
39. Cigankova, N. (2009). *Linguistic Variation in English Computer-Mediated Academic Discourse.* Ph.D. dissertation. Riga: University of Latvia.
40. Cruse, A. (2000). *Meaning in language.* Oxford: OUP.
41. Crystal, D. (2010). *The Cambridge Encyclopedia of Language* (3rd ed.). Cambridge: CUP.
42. De Avezedo do Campo, J. L. (1998). *Kontrastive Linguistik und Übersetzungswissenschaft.* Rostock: Universität Rostock.
43. De Beaugrand, R. & Dressler, W. (1981). *Introduction to Text Linguistics*. London: Longman.
44. Downing, A., & Locke, P. (1992). *A university course in English grammar.* London: Prentice Hall.
45. Dörnyei, Z. (2007). *Research methods in applied linguistics.* Oxford: OUP.
46. Dubova, A. & Proveja, E. (2018). *Projekts „Zinātnisko ievadtekstu valoda un struktūra – korpuslingvistiskie paņēmieni zinātnisko tekstu analīzē".* [The project "Language and Structure of Introductory Scientific Texts: Corpus Linguistic Methods in the Analysis of Scientific Texts"] *Vārds un tā pētīšanas aspekti:* rakstu krājums, 22 (1/2). Liepāja: LiePA, 42.–51.
47. Dubova, A. (2013). *Politiskās jomas svešvārdi vācu 20. gadsimta leksikogrāfiskajos avotos sastatījumā ar latviešu valodu.* Promocijas darbs. Rīga: Latvijas Universitāte.
48. Dubova, A. (2019). Sekundāro zinātnisko tekstu atlase un to makrostruktūras izpēte. Smiltniece, G , Lauze L. (atb. red.). *Vārds un tā pētīšanas aspekti*: rakstu krājums, 23(1/2). Liepāja: LiePA, 277.–286.
49. Dubova, A., Egle, B. & Proveja, E. (2020). IMRAD usage in Latvian language research papers. *Proceedings of CBU in Social Sciences*, 1, 33–39. Retrieved from: https://doi.org/10.12955/pss.v1.42, (last accessed 06.29.2023).
50. Dubova, A., Laiveniece, D., Egle, D., Lele-Rozentāle Dz. (2023). Metadiskursa Analīzes Teorija Latviešu Zinātnisko Tekstu Pētniecībai [Metadiscourse Analysis Theory in Latvian Scientific Text Research]. *Linguistica Lettica.* Berra, S. (atb. red.). Rīga: LU Latviešu valodas institūts. 170-196.
51. Dubova, A., Laiveniece, D., Lele-Rozentāle, Dz. (2021). Dubova A. (atb. red.). Zinātniskais raksts un tā makrostruktūra. *Zinātnes valoda: stils, teksts, konteksts*. Rīga: Zinātne, 127.–152.

52. Dubova, A., Laiveniece, D., Proveja, E. & Egle, B. (2020). National Language in Science: The Case of Latvian. *Journal of Education, Culture and Society*, 11(1), 325–342.
53. Dubova, A., Leitāne, M., Lele-Rozentāle, Dz. (2009). *Zinātniskā komunikācija starpkultūru kontekstā*. I. d., sērija B: Kontrastīvie pētījumi, 1. Ventspils: VeA, Lietišķās valodniecības centrs.
54. Dudley-Evans, T., & St John, M. J. (1998). *Developments in English for Specific Purposes: A Multi-Disciplinary Approach.* Cambridge: Cambridge University Press.
55. Durian, D. (2002). Corpus-Based Text Analysis from a Qualitative Perspective: A Closer Look at NVivo. *Style*, (36-4), 738–742.
56. Egle, B. & Tomase, K. (2020). Zinātniskā raksta specifika sociālajās zinātnēs. Smiltniece, G., Lauze, L. (atb. red.). *Vārds un tā pētīšanas aspekti: rakstu krājums*, 24(1/2). Liepāja: LiePA, 280–288.
57. Egle, B. & Viļums, A. (2021). Autorība un bezpersoniskums. Dubova (atb. red.). *Zinātnes valoda: stils, teksts, konteksts*. Rīga: Zinātne, 186.– 190.
58. Facchinetti, R. (ed.). (2007). *Corpus Linguistics 25 Years On* (Language and Computers 62). Amsterdam/New York: Rodopi.
59. Fisiak, J. (1981). *Contrastive Linguistics and the Language Teacher*. New York: Pergamon.
60. Fisiak, J. (1990). On the Present Status of Some Metatheoretical and Theoretical Issues in Contrastive Linguistics. In J. Fisiak (ed.*), Further Insights into Contrastive Analysis. Amsterdam / Philadelphia: John Benjamins,* 3–22.
61. Fløttum, K., Dahl, T., Kinn, T. (2006). *Academic Voices*. Amsterdam/Philadelphia: John Benjamins.
62. Flowerdew, J. (2019). The linguistic disadvantage of scholars who write in English as an additional language: Myth or reality. *Language Teaching*, 52, Cambridge University Press, 249–260.
63. Forssman, B. (2003). *Das Baltische Adverb: Morphosemantik und Diachronie*. Heidelberg: Universitätsverlag Winter.
64. Freimane, I. (1993). *Valodas kultūra teorētiskā skatījumā*: mācību līdzeklis latviešu valodas specialitātes studentiem. Rīga: Zvaigzne.
65. Galtung, J. (1981). Structure, culture, and intellectual style: An essay comparing Saxonic, Teutonic, Gallic, and Nipponic approaches. *Social Science Formation*. London/Beverly Hills: Sage, 818 – 856.
66. Galtung, J. (1985). *Ein vergleichender Essay über sachsonische, teutonische, gallische und nipponische Wissenschaft*. [A Comparative Essay on Teutonic, Gallic and Nipponian Science]. Wierlacher, Alois (Hg.): Das Fremde und das Eigene: Prolegomena zu einer interkulturellen Germanistik. München (Iudicium-Verlag), 151–196.
67. Gast, V. (2012). *Contrastive Linguistics: Theories and Methods*. ResearchGate. Retrieved from: https://www.researchgate.net/publication/265070904_Contrastive_Lingui

stics_Theories_and_Methods [Last accessed 23.01.2025].
68. Gläser, R. (1990). *Fachtextsorten im Englischen*. Tübingen: Gunter Narr Verlag.
69. Gläser, R. (1998). Fachtextsorten der Wissenschaftssprachen I: der wissenschaftliche Zeitschriftenaufsatz. Lothar Hoffmann, Hartwig Kalverkämper, Hermann Ernst Wiegand (Hrsg.). Fachsprachen. Languages for Special Purposes. Ein internationales Handbuch zur Fachsprachenforschung und Terminologie Wissenschaft. *An International Handbook of Special-Language and Terminology Research.* (1). Berlin, New York: De Gruyter, 482–488.
70. Göpferich, S. (1995). *Textsorten in Naturwissenschaften und Technik. Pragmatische Typologie – Kontrastierung – Translation* (Forum für Fachsprachen-Forschung, Bd. 27). Tübingen: Narr.
71. Granger, S. (1996). From CA to CIA and back: An integrated approach to computerised bilingual and learner corpora. K. Aijmer, B. Altenberg, and M. Johansson (Eds.). *Languages in contrast: papers from a symposium on text-based cross-linguistic studies, Lund 4-5 March 1994*, Lund: Lund University Press.
72. Gumperz, J. J. & Levinson, S. C. (1996). *Rethinking linguistic relativity.* Cambridge: CUP.
73. Halliday, M. A. K. & Martin, J. R. (1993). *Writing Science: Literacy and Discursive Power*. London, Washington, D.C.: The Falmer Press.
74. Halliday, M. A. K. (2004). Things and Relations: Regrammaticizing Experience as Technical Knowledge. In *The Language of Science: The Collected Works of M. A. K. Halliday* (Vol. 5, ed. J. Webster). New York: Continuum, 49–102.
75. Halliday, M. A. K., & Matthiessen, C. M. I. M. (2004). *An Introduction to Functional Grammar* (3rd edition). London: Edward Arnold.
76. Halliday, M., MacIntosh, A., & Strevens, P. (1964). *The linguistic sciences and language teaching*. London: Longman.
77. Halliday, M. A. K. & Hasan, R. (1976). *Cohesion in English*. Hong Kong: Longman.
78. Halliday, M. A. K. (1998). Language and Knowledge: The 'Unpacking' of Text. In *The Language of Science: The Collected Works of M. A. K. Halliday* (Vol. 5, ed. J. Webster). London, New York: Continuum, 24–49.
79. Halliday, M. A. K. (1978). *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. London: Edward Arnold.
80. Hans, A. & Hans, E. (2014). Role of Professional Communication in Today's World of Business and Commerce. *Quest Journals: Journal of Research in Humanities and Social Science*, 2(9), 72–76.
81. Hayward, T. & Moulin, A. (1984). False friends invigorated. In R. R. K. Hartmann (ed.), *Lexeter '83 Proceedings: Papers from the International Conference on Lexicography at Exeter*. Tübingen: De Gruyter, 190–198.

82. Heinemann, M. & Heinemann, W. (2002). *Grundlagen der Textlinguistik: Interaktion–Text–Diskurs*. Tübingen: Niemeyer.
83. Helviga, A. (2015). *Latviešu literatūrzinātnes terminoloģija: vēsturiskais, lingvistiskais un terminogrāfiskais raksturojums*. Promocijas darbs. Liepāja: Liepājas Universitāte.
84. Hint, H., Lemendik, H., Egle, H., Ruskan, A., & Susman, M. (2024). Metadiscourse features in Estonian, Latvian, and Lithuanian: The case of endophoric markers. *Eesti rakenduslingvistika ühingu aastaraamat*, 20. Tallinn: Eesti Rakenduslingvistika Ühing, 45–62.
85. Huddleston, R., & Pullum, G. K. (2002). *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press, 468–470.
86. Hyland, K., & Hamp-Lyons, L. (2002). EAP: Issues and directions. *Journal of English for Academic Purposes*, 1, 1–12.
87. Hyland, K., Meng Huat, C., & Handford, M. (2012). *Bloomsbury Academic Corpus: Applications in Applied Linguistics*. London: Bloomsbury.
88. Hyland, K. & Bondi, M. (2006). Academic Discourse Across Disciplines. *Linguistic Insights: Studies in Language and Communication* (Vol. 42, ed. M. Gotti). Bern: Peter Lang, 17–49.
89. Hyland, K., & Salager-Meyer, F. (2008). Scientific writing. *Annual Review of Information Science and Technology*, 42(1), 297–338..
90. Hyland, K. & Tse, P. (2005a). Evaluative that constructions: signalling stance in research abstracts. *Functions of Language*, 12(1), 39–63.
91. Hyland, K. & Tse, P. (2005b). Hooking the reader: A corpus study of evaluative that in abstracts. *English for Specific Purposes*, 24, 123–139.
92. Hyland, K. (1996). Writing without conviction? Hedging in science research articles. *Applied Linguistics, 17*(4), 433–454.
93. Hyland, K. (1998). *Hedging in Scientific Research Articles*. Pragmatics & Beyond New Series, Vol. 54. Amsterdam/Philadelphia: John Benjamins.
94. Hyland, K. (2002a). Options of identity in academic writing. *ELT Journal*, 56(4), 351–358.
95. Hyland, K. (2002b). Teaching and Researching Writing. *Applied Linguistics in Action*, Christopher N. Candlin and David R. Hall (eds.), Great Britain: Pearson Education Limited.
96. Hyland, K. (2005a). Stance and engagement: A model of interaction in academic discourse. *Discourse Studies*, 7(2), 173–192.
97. Hyland, K. (2005b). *Metadiscourse: Exploring Interaction in Writing*. London: Bloomsbury.
98. Hyland, K. (2006). *English for Academic Purposes: An Advanced Resource Book*. London: Routledge.
99. Hyland, K. (2008). Genre and academic writing in the disciplines. *Language Teaching*, 41(4), 543–562.
100. Hyland, K. (2010). Researching writing. In B. Paltridge & A. Phakiti (eds.), *Continuum Companion to Second Language Research Methods*.

London: Continuum, 191–204.
101. Hyland, K. (2011). Academic discourse. In K. Hyland & B. Paltridge (eds.), *The Continuum Companion to Discourse Analysis*. London: Continuum, 171–184.
102. Hyland, K. (2015a). *Academic Publishing: Issues and Challenges in the Construction of Knowledge*. Oxford: Oxford University Press.
103. Hyland, K. (2015b). Genre, discipline, and identity. *Journal of English for Academic Purposes*, 19, 32–43.
104. Hyland, K. (2015c). Corpora and written academic English. In D. Biber & R. Reppen (eds.), *The Cambridge Handbook of English Corpus Linguistics*. Cambridge: Cambridge University Press, 292–308.
105. Hyland, K. (2018a). English for specific purposes: Some influences and impacts. In A. Gao, C. Davison, & C. Lung (eds.), *The International Handbook of English Language Teaching* (2nd ed.). Norwell: Springer.
106. Hyland, K. (2018b). Sympathy for the devil? A defence of EAP. *Language Teaching*, 51(3), 383–399.
107. Hyland, K. (2009). *Academic Discourse: English in a Global Context*. London: Continuum.
108. Hyland, K., & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics*, 25(2), 156–177.
109. Hyland, K., & Jiang, F. (2016). Change of attitude? A diachronic study of stance. *Written Communication*, 33(3), 251–274.
110. Jakobson, R. (1960). Linguistics and poetics. In T. A. Sebeok (ed.), *Style in Language*. Cambridge, MA: MIT Press, 350–377.
111. Jakobson, R. (1987). Linguistics and Poetics. In K. Pomorska & S. Rudy (eds.), *Language in Literature*. Cambridge, MA: Belknap Press of Harvard University Press, 62–94.
112. Jalayeri, P. (2010). *Different Approaches to Translation*. Isfahan: Sheikh Bahaei University.
113. Johansson, S. (2007). Seeing through multilingual corpora. In R. Facchinetti (ed.), *Corpus Linguistics 25 Years On* (Language and Computers 62). Amsterdam/New York: Rodopi, 51–72.
114. Judžentytė, G. (2018). A pragmatic approach to space deixis in the Baltic languages. In P. U. Dini (ed.), *Incontri Baltistici in Pisa: Studi e saggi II*. Novi Ligure: Joker, 65–94.
115. Kade, O. (1968). Kommunikationswissenschaftliche Probleme der Translation. In *Grundfragen der Übersetzungswissenschaft,* A. Neubert (ed.), 3–20.
116. Kalnača, A. (2014). Modality and evidentiality. In A. Borowska, H. Metslang, & U. Tepenē (Eds.), *A typological perspective on Latvian grammar* (Studies in Language Companion Series, (149), 134–140). Warsaw, Berlin: De Gruyter.
117. Kalnača, A., & Lokmane, I. (2021). *Latvian Grammar*. Rīga: University of Latvia Press.

118. Kalnbērziņa, V. (2015). Ciešamā kārta latviešu un angļu zinātniskajā rakstu valodā. In A. Kalnača & I. Lokmane (sast. un red.), *Valoda: nozīme un forma* (6). Rīga: LU, 147–154
119. Kalniete, M. (2016). Norādāmie vietniekvārdi kā vietas deiksi latviešu valodā. *Valoda: nozīme un forma*, 7. Rīga: LU Akadēmiskais apgāds, 59–69.
120. Kamler, B. & Thomson, P. (2014). *Helping Doctoral Students Write: Pedagogies for Supervision*. New York: Routledge.
121. Károly, K. (2024). Toward a Conceptual Model of Academic Translation Competence. *International Journal of Academic Translation Competence.* (34/4). Retrieved from: https://onlinelibrary.wiley.com/doi/10.1111/ijal.12644. [last accessed July 15.2025].
122. Kintsch, W., & van Dijk, T. A. (1978). Toward a model of text comprehension and production. *Psychological Review*, 85(5), 363–394.
123. Koessler, M., & Derocquigny, J. (1928). *Les faux amis, ou les trahisons du vocabulaire anglais: conseils aux traducteurs.* Paris: Vuibert.
124. Kopankina, I., & Viļums, A. (2021). Deiktiskās, prospektīvās un retrospektīvās frāzes zinātnes valodā [Deictic, Prospective and Retrospective Constructions in the Latvian Language of Science]. *Vārds un tā pētīšanas aspekti*, 25, 63–70. Liepāja: LiePA.
125. Kress, G. (1989). *Linguistic processes in sociocultural practice*. Oxford: Oxford University Press.
126. Kretzenbacher, H. L. (1998). Fachsprache als Wissenschaftssprache. In L. Hoffmann et al. (eds.), *Fachsprachen: Languages for Special Purposes* (Vol. 1). Berlin/New York: De Gruyter, 133–142.
127. Krzeszowski, T. P. (1990). *Contrasting Languages: The Scope of Contrastive Linguistics*. Berlin: Mouton de Gruyter.
128. Ķiršakmene, E. (2024). Viltusdraugi latviešu valodas tulkojošajās vārdnīcās. *Vārds un tā pētīšanas aspekti*, 28, 47–55.
129. Kußmaul, P. (2004). The translation of humanities texts from a linguistic perspective. In H. Kittel et al. (eds.), *Translation: An International Encyclopedia of Translation Studies* (Vol. 1). Berlin: De Gruyter, 636–641.
130. Laiveniece, D. (2021). Zinātnes valodas apraksti brošūrās, grāmatās un monogrāfijās. Dubova, A. (atb. red.). *Zinātnes valoda: stils, teksts, konteksts*. Rīga: Zinātne, 76–91.
131. Laiveniece, D., & Dubova, A. (2021). Latviešu zinātnes valodas pētniecības virzieni 21. gadsimtā: literatūras apskats. *Baltu filoloģija*, 30 (1/2), 72–92.
132. Laiveniece, D. (2010). Subjektīvā un objektīvā izteiksmes veidi zinātnes valodā. *Vārds un tā pētīšanas aspekti.* Rakstu krājums, 14 (1). Fonētika, gramatika, leksika, stilistika. Vārda diahroniskais un areālais

aspekts. Redkol. vad. Benita Laumane; atb. red. Gunta Smiltniece. Liepāja: LiePA, 128–138.
133. Laiveniece, D. (2013). Teksta mikrostruktūras veidotāji līdzekļi valodniecības zinātniskajos rakstos. *Vārds un tā pētīšanas aspekti*: rakstu krājums, 17 (1). Liepāja: LiePA, 122.–133.
134. Laiveniece, D. (2015a). Zinātniskā raksta pavadteksti latviešu un lietuviešu filoloģiskajos izdevumos. *Scriptus Manet*: *humanitāro un mākslas zinātņu žurnāls*, 1(1). Liepāja: LiePA, 75–88. Retrieved from: https://dom.lndb.lv/data/obj/765928.html [last accessed 25.06.2023].
135. Laiveniece, D. (2015b). *Zinātniskās rakstīšanas skola*. 2nd ed. Liepāja: LiePA.
136. Lancaster, Z. (2016). Using corpus results to guide the discourse-based interview: A study of one student's awareness of stance in academic writing in philosophy. *Journal of Writing Research*, 8(1), 119─148.
137. Langacker, R. W. (2002). Deixis and subjectivity. In F. Brisard (ed.), Grounding: The Epistemic Footing of Deixis and Reference. Berlin/New York: Mouton de Gruyter, 1–28.
138. Lee, D. (2001) Genres, Registers, Text Types, Domains, and Styles: Clarifying the Concepts and Navigating a Path through the BNC Jungle. *Language Learning & Technology*. 5 (3). 37-72.
139. Leech, N. L. & Onwuegbuzie, A. J. (2009). A typology of mixed methods research designs. *Quality & Quantity*. 43 (2), 265–275.
140. Lele-Rozentāle, Dz. & Egle, B. (2018). Vārdkopas mūsdienu latviešu zinātnes valodā. Starpdisciplināri orientētas korpuslingvistiskas analīzes rezultāti, *Vārds un tā pētīšanas aspekti: rakstu krājums*, 22 (1/2). Atb. red. G. Smiltniece and L. Lauze. Liepāja: LiePA, 92.–100.
141. Lele-Rozentāle, Dz. 2016. Intertextualität in deutschen und lettischen linguistischen Aufsätzen: Kontrastive Analyse und interkulturelle Interpretation. Eglė Kontutytė, Vaiva Žeimantienė (Hg.). *Sprache in der Wissenschaft. Germanistische Einblicke* (Duisburger Arbeiten zur Sprach- und Kulturwissenschaft, Bd. 111). Frankfurt a. M.: Lang, 161–174.
142. Levinson, S. C. (2008). Pragmatics (19th printing). Cambridge: Cambridge University Press.
143. Lillis, T., & Curry, M. J. (2010). *Academic writing in a global context: The politics and practices of publishing in English*. London & New York: Routledge.
144. Lipczuk, R. (1991). „Falsche Freunde des Übersetzers": Forschungsprobleme und Streitfragen. Eijiro Iwasaki (ed.). *Begegnung mit dem „Fremden": Grenzen – Traditionen – Vergleiche*. [Akten des Internationalen Germanisten-Kongresses in Tokio 1990]. Akten des VII. Bd. 4. München: Iudicium, 404–411.
145. Ločmele, G. (2001). Means of Manipulation in Latvian Advertising – Products of Change. *Contrastive and applied linguistics, X*: Research

Papers, (64). Riga: University of Latvia, 47–54.
146. Mair, Ch. (1991). Quantitative or Qualitative corpus analysis? Infinitival complement clauses in the Survey of English Usage corpus. *English. Computer Corpora: Selected Papers and Research Guide*. Berlin: Walter de Gruyter, 67–80.
147. Mair, Ch. (2023). The Study of World Englishes: Impulses from Beyond Linguistics. *Arbeiten aus Anglistik und Amerikanistik*, 48(1). Tübingen: Narr Francke Attempto. 15–35.
148. Malmkjær, K. (2009). *The Routledge Linguistics Encyclopedia*, Taylor & Francis e-Library.
149. Malmkjær, K. (2018). *The Routledge Handbook of Translation Studies and Linguistics*. New York: Routledge. Retrieved from: https://www.routledge.com/The-Routledge-Linguistics-Encyclopedia/Malmkjaer/p/book/9780415424325 [Last accessed 23.01.2026].
150. Markkanen, R., & Schröder, H. (1989). Hedging as a translation problem in scientific texts. In L. Hartmann & M. Nordman (eds.), *Special language: From human thinking to thinking machines*. Philadelphia; Clevedon, 171–179.
151. Mārtinsone, K., & Pipere, A. (zin. red.) (2018). *Zinātniskā rakstīšana un pētījumu rezultātu izplatīšana.* Rīga: RSU, 77–78.
152. Mārtinsone, K., & Pipere, A. (2021). *Zinātniskās darbības metodoloģija: Starpdisciplinārā perspektīva.* Rīga: RSU.
153. Mārtinsone, K., Pipere, A., & Kamerāde, D. (zin. red.) (2016). *Pētniecība: teorija un prakse.* Rīga: RaKa.
154. Munday, J. (2009). *The Routledge companion to translation studies.* London & New York: Routledge.
155. Nerlich, B., & Chamizo-Dominguez, P. (2002). False friends: Their origin and semantics in some selected languages. *Journal of Pragmatics, 34,* 1833–1849.
156. Newman, I., & Benz, C. R. (1998). *Qualitative–quantitative research methodology: Exploring the interactive continuum.* Carbondale & Edwardsville, IL: Southern Illinois University Press. Retrieved from https://www.siupress.com [last accessed 26.01.2026].
157. Newmark, P. (2007). A new theory of translation. In *Sborník prací Filozofické fakulty brněnské univerzity. Studia Minora Facultatis Philosophicae Universitatis Brunensis, Series S: Brno Studies in English (13)*. Brno: Masaryk University, 7–19.
158. Nida, E. A. (1964). *Towards a science of translating with special reference to principles and procedures involved in Bible translating.* Leiden: Brill.
159. Nord, C. (1997). *Translating as a Purposeful Activity: Functionalist Approaches Explained*. Manchester: St. Jerome.
160. Paltridge, B., & Starfield, S. (2007). *Thesis and dissertation writing*

*in a second language.* New York: Routledge.
161. Rozenbergs, J. (1995). *Latviešu valodas stilistika*. Rīga : Zvaigzne ABC.
162. Peirce, C. S. (1932). *Collected papers of Charles Sanders Peirce* (Vols. 1–8). Cambridge, MA: Harvard University Press.
163. Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). Nouns and determiners. *A comprehensive grammar of the English language.* London: Longman, 259–260; 327–329.
164. Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). The simple sentence. *A comprehensive grammar of the English language.* London: Longman, 750–752.
165. Rabinowitz, H., & Vogel, S. (eds.) (2009). *The manual of scientific style: A guide for authors, editors, and researchers.* Boston, MA: Academic Press/Elsevier, 5–8.
166. Reiss, K. (1977). Texttypen, Übersetzungstypen und die Beurteilung von Übersetzungen. *Lebende Sprachen, 22(3),* pp. 97–100.
167. Reiss, K. (1983). Adequacy and equivalence in translation. *The Bible Translator, 34(3).*
168. Reiss, K. (1989). Text Types, Translation Types and Translation Assessment. Translated by A. Chesterman. In A. Chesterman (ed.), *Readings in Translation Theory*. Helsinki: Finn Lectura, 105–115.
169. Reiss, K., & Vermeer, H. J. (1984). *Grundlegung einer allgemeinen Translationstheorie.* Tübingen: Niemeyer.
170. Roelcke, T. (2024). Functions of specialist communication. *Linguistic Meetings in Wrocław, 25(I),* 203–213.
171. Riazi, A. M. (2016). *The Routledge encyclopaedia of research methods in applied linguistics.* London & New York: Routledge.
172. Rudestam, K. E., & Newton, R. R. (2001). *Surviving your dissertation: A comprehensive guide to content and process.* Newbury Park, CA: Sage.
173. Salager-Meyer, F. (1994). Hedges and textual communicative function in medical English written discourse. *English for Specific Purposes, 13(2),* 149–171.
174. Salager-Meyer, F. (2008). Scientific publishing in developing countries: Challenges for the future. *Journal of English for Academic Purposes, 7(2),* 121–132.
175. Schäffner, C. (2019). Translation and discourse analysis. *Slovo RU: Baltic Accent, 10(3),* 28–42.
176. Schatte, C. (1990). Internationalismen und „falsche Freunde" in den Lexika des Deutschen und des Polnischen. In P. Braun, B. Schaeder, & J. Volmert (eds.), *Internationalismen*. Tübingen: Niemeyer, 87–93.
177. Schmauss, L. S., & Kilian, K. (2023). Hedging with modal auxiliary verbs in scientific discourse and women's language. *Open Linguistics, 9(1).*

178. Schmied, J. (1994). Translation and Cognitive Structures. *HERMES – Journal of Language and Communication in Business*, 7(13), 169–181. Retrieved from: https://tidsskrift.dk/her/article/view/25082 [Last accessed 16.11.2026].
179. Schmied, J. (2011). Academic Writing in Europe: A Survey of Approaches and Problems. In J. Schmied (ed.), *Academic Writing in Europe: Empirical Perspectives*. REAL Studies 5. Göttingen: Cuvillier, 1–22.
180. Schmied, J. (2015). Graduate Academic Writing in Europe in Comparison: A Research-Based Approach to Metalanguage and Genre. In J. Schmied (ed.), *Academic Writing for South Eastern Europe: Practical and Theoretical Perspectives*. REAL Studies 8. Göttingen: Cuvillier, 1–24.
181. Seidlhofer, B. (2005). English as a lingua franca. *ELT Journal, 59(4).* Retrieved from http://eltj.oxfordjournals.org/cgi/reprint/59/4/339.pdf [last accessed 29.05.2023].
182. Seidlhofer, B. (2011). *Understanding English as a lingua franca.* Oxford: Oxford University Press.
183. Skujiņa, V. (1993). *Latviešu terminoloģijas izstrādes principi.* Rīga: Zinātne.
184. Skujiņa, V. (1999). Terminu modeļi J. Endzelīna caurlūkotajā elektrotehnikas vārdnīcā. *Linguistica Lettica, 4,* 100–109.
185. Skujiņa, V. (2005a). Par dažām jaunākajām tendencēm latviešu valodas attīstībā. *Linguistica Lettica, 14,* 66–75.
186. Skujiņa, V. (2005b). Termins – noturīgais un mainīgais. *Valsts valodas komisijas raksti, 1,* 128–135.
187. Swales, J. M. (1990). *Genre analysis.* Cambridge: Cambridge University Press.
188. Swales, J. M. (2004). *Research genres.* Cambridge: Cambridge University Press.
189. Swales, J. M. (2011). A critical view on the use of corpora. In V. Viana, S. Zyngier, & G. Barnbrook (eds.), *Perspectives on corpus linguistics*. Amsterdam/Philadelphia: John Benjamins, 221–227.
190. Swales, J. M., & Feak, C. B. (1994). *Academic Writing for Graduate Students: Essential Tasks and Skills*. Ann Arbor: University of Michigan Press
191. Swales, J. M., & Feak, C. B. (2012). *Academic writing for graduate students* (3rd ed.). Ann Arbor: University of Michigan Press.
192. Taboada, M. T. (2004). *Building coherence and cohesion.* Amsterdam: John Benjamins.
193. Teubert, W. (1996). Comparable or parallel corpora? *International Journal of Lexicography, 9,* 238–264.
194. Teubert, W. (2001). Corpus linguistics and lexicography. *International Journal of Corpus Linguistics, 6,* 125–153.

195. Tognini-Bonelli, E. (2001). *Corpus linguistics at work.* Amsterdam: John Benjamins.
196. Van Dijk, T. A. (1977). *Text and context.* London & New York: Longman.
197. Van Dijk, T. A. (1980). *Macrostructures.* Hillsdale, NJ: Erlbaum.
198. Van Dijk, T. A. (2012). Discourse and knowledge. In *The Routledge handbook of discourse analysis.* London & New York: Routledge.
199. Van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension.* New York: Academic Press.
200. Vassileva, I. (1998). Who am I/who are we in academic writing? *International Journal of Applied Linguistics, 8(2).*
201. Vassileva, I. (2006). *Author–audience interaction.* St. Augustin: Asgard-Verlag.
202. Vassileva, I. (2014). Bulgarian 'we' and audience involvement in academic writing. In T.-S. Pavlidou (ed.), *Constructing collectivity*. Amsterdam/Philadelphia: John Benjamins, 287–308.
203. Veisbergs, A. (1996). False friends dictionaries. *Lexicography: Euralex 1996/2,* 627–634.
204. Veisbergs, A. (1998). False friends in Latvian dictionaries. *Linguistica Lettica, 3,* 12–26.
205. Veisbergs, A. (2007). Jaunvārdi un valodas attīstības virziens. *Baltu filoloģija, XVI(1/2),* 133–141.
206. Veisbergs, A. (2023). *Term-Formation, Translation, Interpreting, Lexicography*. In *Language for International Communication. Linking Interdisciplinary Perspectives: Language for Specific Purposes in the Era of Multilingualism and Technologies. Volume 4*. Rīga: University of Latvia Press, 156–169.
207. Ventola, E. (1992). Writing scientific English. *International Journal of Applied Linguistics, 2(2),* 191–220.
208. Ventola, E. (1994). From syntax to text. In S. Cmejrková & F. Štícha (eds.), *The syntax of sentence and text*. Amsterdam/Philadelphia: John Benjamins, 283–303.
209. Ventola, E. (1996). Packing and unpacking of information. In E. Ventola & A. Mauranen (eds.), *Academic writing*. Amsterdam/Philadelphia: John Benjamins, 153–194.
210. Ventola, E. (1997). Abstracts as an object of linguistic study. In F. Daneš et al. (eds.), *Writing vs. speaking*. Tübingen: Narr, 333–352.
211. Weinreich, C. (2010). *Das Textsortenspektrum im fachinternen Wissenstransfer.* Berlin/New York: de Gruyter.
212. Weinreich, U. (1953). *Languages in contact.* The Hague: Mouton.
213. Wilson, A. (2012). What is a text? *Studies in History and Philosophy of Science, 43,* 341–358.
214. Wodak, R. (2011). *Language, power and identity.* Cambridge:

Cambridge University Press.
215. Wright, S. E. (2012). Scientific, technical, and medical translation. In K. Malmkjær & K. Windle (eds.), *The Oxford Handbook of Translation Studies*. Oxford: Oxford University Press, 243–261.
216. Žīgure, V. (2008). Leksiskās interferences problēmas ekonomikas tekstu tulkošanā. *Vārds un tā pētīšanas aspekti, 12(2),* 267–275.
217. Znotiņa, I. (2017). *Otrās baltu valodas apguvēju korpuss.* Promocijas darbs. Liepāja: Liepājas Universitāte.

# Annex I

**Statistics terms in management science PhD summaries (en< >lv) grouped according to the purpose of action**

**Descriptive Statistics**

Purpose: Describe and summarise data characteristics

| English Term | Latvian Term |
|---|---|
| Mean | Vidējais |
| Median | Mediāna |
| Mode | Moda |
| Standard deviation | Standartnovirze |
| Variance | Dispersija |
| Range | Diapazons |
| Frequency distribution | Biežuma sadalījums |
| Central tendency | Centrālā tendence |
| Skewness / Kurtosis | Asimetrija / Ekscess |

**Hypothesis Testing & Inference**

Purpose: Generalise findings and test hypotheses

| English Term | Latvian Term |
|---|---|
| Hypothesis testing | Hipotēzes pārbaude |
| Null/alternative hypothesis | Nulles / alternatīvā hipotēze |
| p-value | p-vērtība |
| Confidence interval | Ticamības intervāls |
| Significance level | Nozīmības līmenis |
| T-test | t-tests |
| Z-test | z-tests |
| ANOVA | Dispersijas analīze (ANOVA) |
| Post-hoc test | *Post hoc* tests |

**Regression and Correlation Analysis**

Purpose: Examine relationships and predict outcomes

| English Term | Latvian Term |
|---|---|
| Correlation coefficient | Korelācijas koeficients |
| Linear regression | Lineārā regresija |
| Multiple regression | Daudzfaktoru regresija |
| Logistic regression | Loģistiskā regresija |
| R-squared | R kvadrāts |
| Adjusted R-squared | Koriģētais R kvadrāts |
| Predictor / independent variable | Prognozētājs / neatkarīgais mainīgais |
| Dependent variable | Atkarīgais mainīgais |

**Multivariate and Advanced Models**

Purpose: Explore and classify complex data patterns

| English Term | Latvian Term |
|---|---|
| Factor analysis | Faktoru analīze |
| Principal Component Analysis (PCA) | Galveno komponentu analīze |
| Cluster analysis | Klasteru analīze |
| Discriminant analysis | Diskriminantu analīze |
| Structural Equation Modelling (SEM) | Strukturālo vienādojumu modelēšana |
| Path analysis | Ceļu analīze |
| Multivariate analysis of variance (MANOVA) | Vairāku mainīgo dispersijas analīze |
| Canonical correlation | Kanoniskā korelācija |

**Non-parametric Tests**

Purpose: Used when normality assumptions are violated

| English Term | Latvian Term |
|---|---|
| Mann–Whitney U test | Manna–Vitnija U tests |
| Wilcoxon signed-rank test | Vilkoksona tests |
| Kruskal–Wallis test | Kruskala–Vallisa tests |
| Spearman’s rank correlation | Spīrmana korelācija |
| Kendall’s tau | Kendala tau |

**Time Series and Forecasting**

Purpose: Analyse patterns over time and forecast

| English Term | Latvian Term |
|---|---|
| Time series analysis | Laika rindas analīze |
| Trend analysis | Tendenču analīze |
| Seasonality | Sezonalitāte |
| Exponential smoothing | Eksponenciālā izlīdzināšana |
| ARIMA models | ARIMA modeļi |
| Forecasting | Prognozēšana |

**Sampling, Survey, and Data Collection**

Purpose: Ensure data representativeness

| English Term | Latvian Term |
|---|---|
| Sample size | Izlases apjoms |
| Sampling method | Izlases metode |
| Stratified sampling | Slāņveida izlase |
| Random sampling | Nejauša izlase |
| Response rate | Atbilžu īpatsvars |
| Questionnaire design | Anketas izstrāde |
| Validity / Reliability | Derīgums / Ticamība |

**Models for Hypothesis Validation**

Purpose: Test theoretical frameworks and causal relationships

| English Term | Latvian Term |
|---|---|
| Structural Equation Modelling (SEM) | Strukturālo vienādojumu modelēšana |
| Multiple regression analysis | Daudzfaktoru regresijas analīze |
| Logistic regression | Loģistiskā regresija |
| Mediation / Moderation models | Mediācijas / Moderācijas modeļi |
| Path models | Ceļu modeļi |
| Confirmatory Factor Analysis (CFA) | Apstiprinošā faktoru analīze |
| Latent Growth Modelling (LGM) | Latentā izaugsmes modelēšana (LIM) |

*Source: developed by the author, based on concepts and definitions from the Official Statistics Portal of the Republic of Latvia (OS-e) and the findings from the research corpora of the present dissertation.*

## Annex II

## Statistics terms in management science Ph.D summaries grouped according to frequency in the research corpora

| EN | LV |
|---|---|
| organizational structure | organizācijas struktūra |
| management process | vadības process |
| business environment | uzņēmējdarbības vide |
| internal communication | iekšējā komunikācija |
| processes and procedures | procesi un procedūras |
| decision-making | lēmumu pieņemšana |
| corporate culture | uzņēmuma kultūra |
| organizational dynamics | organizācijas dinamika |
| financial management | finanšu vadība |
| capital structure | kapitāla struktūra |
| cash flow | naudas plūsma |
| cost efficiency | izmaksu efektivitāte |
| budget planning | budžeta plānošana |
| profitability indicators | rentabilitātes rādītāji |
| financial stability | finanšu stabilitāte |
| human resource management | personāla vadība |
| employee motivation | darbinieku motivācija |
| competence development | kompetenču attīstība |
| training and development | apmācības un attīstība |
| performance evaluation | darba snieguma novērtēšana |
| recruitment and selection | personāla atlase un piesaiste |
| employee engagement | darbinieku iesaiste |
| strategic planning | stratēģiskā plānošana |
| competitive advantage | konkurences priekšrocības |
| market positioning | tirgus pozicionēšana |
| sustainable strategies | ilgtspējīgas stratēģijas |

| | |
|---|---|
| business model | biznesa modelis |
| internal and external analysis | iekšējā un ārējā analīze |
| strategic objectives | stratēģiskie mērķi |
| innovation management | inovāciju vadība |
| business start-up | uzņēmējdarbības uzsākšana |
| creativity and innovation | radošums un inovācijas |
| start-up | jaunuzņēmums |
| entrepreneurial ecosystem | uzņēmējdarbības ekosistēma |
| technological development | tehnoloģiskā attīstība |
| innovation implementation | inovāciju ieviešana |
| risk management | riska vadība |
| crisis situation | krīzes situācija |
| threats and opportunities | draudi un iespējas |
| continuity planning | nepārtrauktības plānošana |
| organizational resilience | organizatoriskā noturība |
| crisis communication | krīzes komunikācija |
| digital transformation | digitālā transformācija |
| technology implementation | tehnoloģiju ieviešana |
| data analytics | datu analītika |
| artificial intelligence | mākslīgais intelekts |
| digital environment | digitālā vide |
| IT infrastructure | IT infrastruktūra |
| digital business | digitālais bizness |
| leadership | līderība |
| strategic leadership | stratēģiskā vadība |
| ethical governance | ētiskā pārvaldība |
| governance structure | pārvaldības struktūra |
| stakeholder management | ieinteresēto pušu vadība |
| management style | vadības stils |
| decision transparency | lēmumu caurspīdīgums |

Management science terms from management science summary texts have been listed in order of frequency according to the AntConc Wordlist results.

## Annex III

## False friends of a translator according to the present study results

| No. | EN | LV | False-friend pair | Schatte / Lipczuk type | Semantic mismatch | EN sememes | LV sememes | Suggested correct rendering |
|---|---|---|---|---|---|---|---|---|
| 1 | Systems theory provides the research field with a basic concept applicable universally to the family business as it stresses the reciprocity of the interacting systems business, family, ownership and further arbitrary subsystems. | Sistēmu teorija nodrošina pētījumu lauku ar pamatkoncepciju, kas universāli pielietojama ģimenes uzņēmumam, jo uzsver savstarpēji saistītu sistēmu – uzņēmuma, ģimenes, īpašuma un citu izvēlētu apakšsistēmu savstarpējo ietekmi. | arbitrary – izvēlēts | Privativity | EN *arbitrary* contains the sememe "random / not rule-governed"; LV *izvēlēts* only expresses deliberate selection. Randomness is missing in LV. | arbitrary: random, contingent, not governed by rule (OED; MW) | izvēlēts: apzināti izraudzīts, atlasīts (LLVV; MLVV) | …un citu patvaļīgi / nejauši izvēlētu apakšsistēmu… |
| 2 | Amongst other authors, Churchill and Hatten (1997, p. 59 ff.) have developed a life cycle | Čērčils un Hatens (1997, 59. lpp.) un citi autori ir izstrādājuši dzīves cikla pieeju, kas pamatojas uz | imperative – imperatīvs | Exclusion | EN *imperative* = unavoidable evolutionary necessity; LV *imperatīvs* = grammatical mood / | imperative: inescapable necessity, unavoidable | imperatīvs: pavēles izteiksme, kategorisks | bioloģiskā neizbēgamība / evolūcijas noteikta |

| No. | EN | LV | False-friend pair | Schatte / Lipczuk type | Semantic mismatch | EN sememes | LV sememes | Suggested correct rendering |
|---|---|---|---|---|---|---|---|---|
| | approach – based on "the implacable biological imperative" – to describe the succession process. | "nesamierināmības bioloģisko imperatīvu", lai aprakstītu pārmantošanas procesu. | | | categorical command. No common semantic component. | requirement (OED) | rīkojums (LLVV; MLVV) | nepieciešamība |
| 3 | Some authors state that generational transfer is immanent to a family business definition. | Daži autori norāda, ka pārmantošana no paaudzes uz paaudzi ir neatņemama ģimenes uzņēmuma definīcijas daļa. | immanent – neatņemams | Equipollence | EN *immanent* = inherent by nature; LV *neatņemams* = inseparable, cannot be taken away. Overlap, but ontological vs. legal-functional nuance differs. | immanent: inherent, intrinsic (OED; MW) | neatņemams: tāds, ko nevar atņemt; organiski piederīgs (LLVV; MLVV) | iekšēji piemītošs, būtībā raksturīgs |
| 4 | The elaboration of existing literature supported the development of a guiding (sensitive) model that shaped the framework of the empirical part. | Esošās literatūras izpēte palīdzēja izveidot galveno (sensitīvo) modeli, kas noteica empīriskās daļas ietvaru. | sensitive – sensitīvs | Equipollence | EN *sensitive* = analytically responsive, fine-grained; LV *sensitīvs* = technical "sensitizing", not perceptual responsiveness. Partial overlap only. | sensitive: responsive, subtle, perceptive (OED) | sensitīvs: jutīgs; metodoloģijā – sensitizējošs (MLVV) | orientējošais / sensitizējošais modelis |
| 5 | Performance was assessed by comparing the company's performance with its competition in order to neutralize sector- | Sniegums tika vērtēts, salīdzinot uzņēmuma sniegumu ar konkurējošo uzņēmumu sniegumu, lai neitralizētu nozares ietekmi. | neutralize – neitralizēt | Privativity | EN *neutralize* = cancel out statistically; LV *neitralizēt* primarily chemical, abstract sense secondary. Methodological sememe | neutralize: counteract, offset (OED; MW) | neitralizēt: ķīmiski padarīt neitrālu; pārnestā nozīmē – mazināt (LLVV) | izslēgt / kompensēt ietekmi |

| No. | EN | LV | False-friend pair | Schatte / Lipczuk type | Semantic mismatch | EN sememes | LV sememes | Suggested correct rendering |
|---|---|---|---|---|---|---|---|---|
| | dependent developments. | | | | weaker in LV. | | | |
| 6 | Qualitative content analysis has become a standard method of text analysis. | Kvalitatīvā kontentanalīze ir kļuvusi par teksta analīzes standartmetodi. | standard – standarta | Privativity | EN *standard* = norm-setting benchmark; LV *standarta* = fixed model/specification, weaker evaluative force. | standard: authoritative norm, benchmark (OED) | standarts: paraugs, etalons (LLVV) | vispārpieņemta pamatmetode |
| 8 | To identify significant relationships, a non-parametric regression analysis was conducted. | Lai noteiktu nozīmīgas sakarības, tika veikta neparametriskā regresijas analīze. | significant – nozīmīgs | Equipollence | EN *significant* = statistically significant; LV *nozīmīgs* = important, meaningful. Statistical sememe only partial. | significant: statistically non-random (OED) | nozīmīgs: svarīgs, būtisks; statistikā – ticams (MLVV) | statistiski nozīmīgas sakarības |
| 9 | The subsequent expert round was held in Dornbirn, Austria, on January 18, 2016. | Tālākā ekspertu aptauja notika Dornbirnā, Austrijā, 2016. gada 18. janvārī. | round – aptauja | Exclusion | EN *round* = discussion session ; LV *aptauja* = questionnaire survey. No shared sememe. | round: discussion meeting (OED) | aptauja: anketēšana, iztaujāšana (LLVV) | ekspertu diskusija |
| 10 | The analysis and interpretation of qualitative data resulted in seventeen propositions for effective succession. | Kvalitatīvo datu analīzes un interpretācijas rezultātā formulēti septiņpadsmit ierosinājumi veiksmīgai pārmantošanai. | proposition – ierosinājums | Inclusion | EN *proposition* = theoretical claim; LV *ierosinājums* = practical suggestion. LV meaning narrower. | proposition: hypothesis, theoretical statement (OED; LDCE) | ierosinājums: priekšlikums, ieteikums (LLVV) | teorētiski apgalvojumi / hipotēzes |
| 11 | Based on the quantitative | Pamatojoties uz | significance | Privativity | EN *significance* = | significance: | nozīmīgums: | statistiskā |

| No. | EN | LV | False-friend pair | Schatte / Lipczuk type | Semantic mismatch | EN sememes | LV sememes | Suggested correct rendering |
|---|---|---|---|---|---|---|---|---|
| | data, a correlation analysis shows the significance of relationships. | kvantitatīvajiem datiem, korelācijas analīze norāda uz saistību nozīmīgumu. | – nozīmīgums | (Privativity) | statistical reliability; LV *nozīmīgums* = importance, relevance; statistical component missing. | statistical reliability (OED; MW) | svarīgums, būtiskums (LLVV) | nozīmība |
| 12 | The theories and propositions generated by the exploratory research were subsequently validated by empirical tests. | Izpētes gaitā izvirzītās teorijas un pieņēmumi vēlāk tika apstiprināti ar empīriskiem testiem. | proposition – pieņēmums | Equipollence | EN *proposition* = formulated research claim; LV *pieņēmums* = assumption, not yet argued. Partial overlap only. | proposition: formally stated claim (OED) | pieņēmums: nepierādīta doma (LLVV) | pamatots apgalvojums / hipotēze |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| 1. | "Savukārt ceturto, empīrisko daļu, veido autora veiktie trīs pētījuma posmi, kuri sastāv no kvantitatīvas gala patērētāju aptaujas, tūrisma nozares profesionāļu aptaujas un autora izstrādātā modeļa aprobācijas fokusgrupas diskusijā." | "While fourth, empirical part, consists of author's performed three stage research, consisting of quantitative end consumer survey, tourism industry professional's survey and approbation of elaborated model using focus group interview." | aprobācija – approbation | Exclusion | **LV aprobācija** (pētījumā) = modeļa/metodes **izmēģināšana, pārbaude, validēšana**; **EN approbation** = validation; EN *approbation* = (official) approval / formal acceptance. The semantic cores do not совпide: "testing / | **MLVV/LLVV**: aprobācija = izmēģināšana/pārbaude, lai noteiktu derīgumu; (arī "atzīšana par labu" kā atsevišķa nozīme) | **OED/OD/OALD**: approbation = approval; official approval/sanction | "…and **validation / testing** of the elaborated model in a **focus-group discussion**." |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | | | | | validation” ≠ “official approval”. | | | |
| 2. | “Zināšanas raksturotas kā galvenais uzņēmuma nemateriālais aktīvs, kuram pakārtoti galvenie uzņēmuma vadīšanas principi.” | “Knowledge has been identified as intangible asset on which are dependant all organization management principles.” | aktīvs – asset | Equipollence | LV **aktīvs** here it is an accounting / intellectual-capital category (“intangible asset”); EN *asset* is often used with the sememes “property / financial item” or “valuable possession”. The overlap is “valuable resource”, but the dominant discourse-level sememe sets differ. | **SVV/MLVV**: aktīvs = uzņēmuma īpašums; nemateriāls aktīvs (zināšanas, intelektuālais kapitāls) | **OD/OED**: asset = property/financial asset; valuable resource/quality | “Knowledge is the company’s key **intangible (intellectual) asset/capital** …” |
| 3. | “Tūrisma uzņēmumu vadīšana un galamērķa mijiedarbība ir salīdzinoši maz pētīta tēma, īpaši tūrisma uzņēmuma produkta kontekstā.” | “The interaction between tourism destinations and tourism company management has been little researched, especially in the context of tourism product.” | mijiedarbība – interaction | Inclusion | In academic usage, LV *mijiedarbība* often denotes systemic, mutually conditioned interaction; EN *interaction* is broader (any mutual action/influence) and may lose the sememes of *systemicity* and *reciprocity*. | **LLVV**: mijiedarbība = savstarpēja iedarbība; (bieži sistēmiski saprasta) | **OD/OED**: interaction = reciprocal action/influence (plaši) | “The **systemic interdependence** between tourism-destination and tourism-company management …” |
| 4. | “Ir izstrādāta kultūras atšķirību līmeņos balstīta pieeja klientu segmentācijai un kanāliem…” | “Based on specific knowledge on end consumer, has been developed cultural differences awareness-based approach to client segmentation and channels…” | segmentācija – segmentation | Equipollence | The marketing seme “division into segments” overlaps, but here LV *segmentācija* is linked to cultural levels (a socio-cultural analytical dimension), whereas EN | **SVV/MLVV**: segmentācija = iedalīšana segmentos (tirgus/sociālā struktūra) | **OD/OED**: segmentation = division into segments (esp. marketing) | “a **culturally based customer-segmentation** approach/framework and channels …” |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | | | | | *segmentation* is most often understood as "market segmentation" without a necessary cultural-theoretical layer. | | | |
| 5. | "Savukārt globalizācijas un starptautiskās uzņēmējdarbības izpratne (Daniels, Radebaught, Sullivan, 2013) paredz, ka tūrisma, tāpat kā citi uzņēmumi attīsta savu starptautisko darbību, piedāvājot savus pakalpojumus dažādās valstīs." | "However, the understanding of globalization and international entrepreneurship (Daniels, Radebaught, Sullivan, 2013) foresees that tourism, same as other companies develop their international activities, offering their services in different countries." | uzņēmējdarbība – entrepreneurship | Inclusion | LV *uzņēmējdarbība* = business/economic activity in general; EN *entrepreneurship* more narrowly activates "entrepreneurial activity, start-ups, risk-taking". The translation therefore narrows the meaning. | **MLVV/LLVV**: uzņēmējdarbība = saimnieciska/komercdarbība peļņai | **OED/OD/OALD**: entrepreneurship = activity of entrepreneurs; setting up/running businesses (esp. new) | "... the understanding of globalization and **international business activity/operations** …" |
| 6. | "Starptautisko tūrismu veido tūristi, kuri šķērso valsts robežu un galamērķī pavada vismaz vienu nakti." | "International tourism consist of tourists which cross state border and spends in the destination at least one overnight." | nakts – overnight | Inclusion | LV *vienu nakti* = a one-night stay (a unit in tourism statistics); EN *one overnight* is imprecise/non-idiomatic here (*overnight* is primarily adjectival/adverbial). | (tūrisma konteksts) **SVV/MLVV**: nakts → nakšņošana; "viena nakts" kā uzturēšanās vienība | **OD/OALD**: overnight = during the night; for one night (adj./adv.); "overnight stay" kā frāze | "... spend at the destination **at least one night** / **at least one overnight stay**." |
| 7. | "Starptautiskā tūrisma uzņēmējdarbību raksturo arī vēl citi vadībzinātnes aspekti, tādi kā augsta nemateriālo aktīvu organizāciju vadīšana, | "International entrepreneurship is described also by further aspects of the management science, such as high intangible asset organization management, management of | aspekts – aspect | Equipollence | LV *aspekts* in academic register often means an analytical perspective/dimension; EN *aspect* is broader ("part/feature") and may | **LLVV**: aspekts = skatpunkts; analīzes griezums | **OD/OED**: aspect = a particular part/feature | "... further **analytical dimensions** of management science …" |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | pakalpojumu nozares uzņēmumu vadīšana un tūrisma nozares uzņēmumu darbību raksturojošie specifiskie aspekti.” | service industry companies and specific aspects exploring tourism company management.” | | | lose the methodological seme of “analytical dimension ”. | | | |
| 8. | “Nereti kultūras atšķirību izpratne un starpkultūru komunikācijas kompetence tiek uzskatīta par tūrisma uzņēmumu nemateriālo aktīvu.” | “Frequently the understanding of cultural differences and intercultural communication competences is considered as the intangible asset of the tourism companies.” | kompetence – competence(s) | Equipollence | LV *kompetence* here = a set of knowledge and skills (professional competence); EN *competence* may mean “ability/skill”, but also frequently used with “jurisdiction/authority” (especially in official/administrative usage). There is overlap, but EN has an additional institutional seme. | **SVV/MLVV**: kompetence = zināšanu/prasmju kopums; profesionālā spēja | **OD/OED**: competence = ability/skill; also legal/official authority | “... intercultural communication **competencies/skills** …” |
| 9. | “Tūrisma uzņēmumu partnerības attīstās, pilnveidojot uzņēmuma nemateriālos aktīvus…” | “Tourism company partnerships are developing, thus improving non-material assets of a company…” | nemateriāls – non-material | Privativity | – LV *nemateriāls* here is a terminologised accounting category (*intangible* assetsEN *non-material* is literal (“not physical”) and lacks the accounting/management terminological seme. | **SVV/MLVV**: nemateriālie aktīvi = intangible assets (zināšanas, intelektuālais īpašums u.c.) | **OD/OED**: non-material = not physical (vispārīgi) | “... improving the company’s **intangible assets** …” |
| 10. | “Ir izstrādāts starptautiska tūrisma uzņēmuma vadīšanas modelis, kurā | “A model of international tourism company management has been worked out, which | vērtības piedāvājums | Exclusion | LV *vērtības piedāvājums* is the marketing concept *value proposition*; EN | (mārketinga lietojums) **SVV/terminoloģ** | **OD/OED**: value added = increase in economic | “... creating the company’s **value proposition**.” |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | gala patērētāja kultūra un tās atšķirības identificētas kā uzņēmuma vadīšanai svarīgas zināšanas, kuras rada uzņēmuma vērtības piedāvājumu." | identifies end-consumer culture and its differences as knowledge important to the management of a company creating its value-added offer." | – value added offer | | *value added* denotes economic "added value", not a customer value promise. The required conceptual semes do not overlap. | **ija**: vērtības piedāvājums = klientam piedāvātā vērtība (value proposition) | value; surplus value | |
| 11. | "Ir izpētītas gala patērētāju kultūras atšķirības un to ietekme uz apmierinātību ar tūrisma uzņēmuma produktu…" | "Cultural differences of end-consumers and their impact on satisfaction with a product of a tourism company have been studied…" | produkts – product | Inclusion | LV *(tūrisma) produkts* often denotes a bundle of services/experiences; EN *product* is broader (a good or a service) and, without specification, may be interpreted too "commodity-like". EN is semantically broader, LV more specialised. | **SVV/terminoloģija**: tūrisma produkts = pakalpojumu/elementu kopums (bundle) | **OD/OED**: product = article or service for sale (broad) | "... satisfaction with the tourism company's **tourism product/service offering** …" |
| 12. | "Ir izstrādāts modelis, kurā atspoguļota atsevišķu pakalpojumu sniedzēju, kā arī cilvēkresursu vieta tūrisma uzņēmuma produkta izstrādē." | "A model, reflecting the place of providers of separate services and human resources in the development of a tourism company product, has been worked out." | vieta – place | Equipollence | LV *vieta* here means a functional role/position within a system; EN *place* may mean "position", but is often used with a spatial "location" seme. There is overlap, but with different dominance. | **LLVV/MLVV**: vieta = pozīcija; loma sistēmā | **OD/OED**: place = position; also location | "... the **role/position** of service providers and human resources …" |
| 13. | "Uzņēmuma vadīšanas kontekstu papildina raksturotā tūrisma galamērķa vieta tūrisma uzņēmumu darbībā." | "Finally, the importance of destination in the management context has been defined." | vieta – importance | Equipollence | LV *vieta* = "role/position" (structural status); EN *importance* = "significance/value". This changes the propositional | **LLVV/MLVV**: vieta = loma, pozīcija, iedalījums sistēmā | **OD/OED**: importance = significance, value | "Finally, the **role/position** of the destination in the management context has been defined." |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | | | | | meaning: "place/role" ≠ "importance". | | | |
| 14. | "Pētījuma ierobežojumi. Pētījuma apjoms un saturs nosaka vairākus ierobežojumus." | "Research limitations. Range and content of the research determines several research limitations." | apjoms – range | Privativity | LV *apjoms* = extent/size; EN *range* often means "range/variety" and may sound imprecise here. The intended meaning is *scope/extent*. | **MLVV/LLVV**: apjoms = lielums, apmērs, kopējais apmērs | **OD/OED**: range = scope; extent; also variety | "Research **scope/extent** and content determine several limitations." |
| 15. | Šādi pētījumi balstās pētāmo izlašu salīdzinājumā, nodrošinot iegūto rezultātu izmantošanas iespējamību." | "Such researches are based on comparison of different samples, providing opportunities to use research results." | izlase – sample | Inclusion | LV *izlase* in methodology is strictly a statistically selected sample; EN *sample* is broader (any representative subset), which weakens methodological precision. | **LLVV/MLVV**: izlase = statistiski atlasīta kopas daļa | **OD/OED**: sample = a small part representing the whole | "... comparison of **statistical samples** …" |
| 16. | Šādi pētījumi balstās pētāmo izlašu salīdzinājumā, nodrošinot iegūto rezultātu izmantošanas iespējamību." | "Such researches are based on comparison of different samples, providing opportunities to use research results." | pētījumi – researches | Exclusion (formally related, semantically divergent) | LV *pētījumi* is a normal plural of an abstract countable research project; EN *research* is an uncountable mass noun in academic usage. The plural form *researches* is used with a different sememe ("separate investigations as publications" or "market surveys"), not the generic scientific activity meant here. | pētījums – zinātniska izpēte; atsevišķs izpētes darbs (LLVV, MLVV | | "Such research is based on the comparison of different samples …" |
| 17. | "Pētījuma ietvaros nav pētīti atsevišķu valstu gala | "In the context of the particular research, end consumer | uzvedība – behaviour | Equipollence | LV *uzvedības paradumi* emphasise culturally | **SVV/MLVV**: uzvedība = | **OD/OED**: behaviour = the | "... consumer **behavioural** |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | patērētāju uzvedības paradumi…" | behaviour patterns in individual countries have not been explored, and the causes related to this behaviour have not been explained." | | | established behaviour patterns; EN *behaviour* may denote any behaviour (including psychological/biological), so without *patterns* the habitual/cultural component may be lost. | cilvēka rīcība sociālajā vidē; paradumi = ierasti modeļi | way one acts/conducts oneself | **patterns/habits** …" |
| 18. | "Pētījuma ietvaros nav pētīti atsevišķu valstu gala patērētāju uzvedības paradumi un skaidroti ar uzvedību saistītie cēloņi…" | "In the context of particular research has not been explored end consumer behaviour and have not been explained causes of end consumer behaviour…" | cēlonis – cause | Privativity | LV *cēloņi* in academic style often means causal factors within a system; EN *cause* can also activate a "blame/responsibility" nuance, hence *causal factors/drivers* is more precise. | **LLVV/MLVV**: cēlonis = parādības rašanās pamats; iemesls | **OD/OED**: cause = a thing that gives rise to an action/phenomenon; also reason/blame (contextual) | "... the **causal factors/drivers** of consumer behaviour …" |
| 19. | "Pētījuma rezultāti ir iegūti, pētot 12 dažādu valstu gala patērētāju kultūras atšķirības…" | "Research results have been acquired researching 12 different country end consumer cultural differences…" | iegūti – acquired | Privativity | LV *iegūti* (in research) = obtained/derived through analysis; EN *acquired* often activates transactional/possession or learning meanings, which are inappropriate here. | **LLVV/MLVV**: iegūt = panākt/saņemt (t.sk. pētījuma rezultātā) | **OD/OED**: acquire = obtain/buy/get; learn | "Research results were **obtained/derived** by examining …" |
| 20. | "Pētījumā iegūto kvantitatīvo datu apstrādei izmantotas matemātiskās statistikas metodes…" | "Quantitative data has been processed using mathematical statistics methods…" | apstrāde – processed | Inclusion | LV *datu apstrāde* methodologically = statistical analysis; EN *processed* is too general and lacks methodological precision for academic style. | **LLVV/MLVV**: apstrādāt datus = veikt analīzi/operācijas ar datiem; (akadēmiskā lietojumā) | **OD/OED**: process = perform operations on; treat/handle | "... the quantitative data were **statistically analysed** using methods of mathematical statistics …" |

| No. | LV | EN | False-friend pair | Schatte/Lipczuk type | Semantic mismatch | LV sememes (dictionaries) | EN sememes (dictionaries) | Correct rendering (suggested) |
|---|---|---|---|---|---|---|---|---|
| | | | | | – | statistiski analizēt | | |
| 21. | "Izstrādātā modeļa aprobācijai veikta fokusgrupas diskusija." | "Approbation of author's developed business model has been effected using focus group discussion." | aprobācija – approbation | Exclusion | V denotes *validation/testing*; EN denotes *approval*. | **MLVV/LLVV**: aprobācija = izmēģināšana/pārbaude (derīguma noteikšanai) | **OED/OD/OALD**: approbation = approval; official approval | "The model was **validated/tested** through a focus-group discussion." |

## Annex IV

## Abbreviations and acronyms

| | |
|---|---|
| AIMRaD | Abstract, Introduction, Methods, Results, and Discussion |
| C.A.R.S. | The Creating a Research Space [C.A.R.S.] Model developed by John Swales |
| CLARIN | Common Language Resources and Technology Infrastructure |
| EAP | English for Academic Purposes |
| EN | English |
| ENRESSH | European Network for Research Evaluation in The Social Sciences and the Humanities |
| ERIC | European Research Infrastructure Consortium |
| ESP | English for Specific Purposes |
| FOS | OECD Revised Field of Science and Technology Classification in the Frascati Manual |
| IMRaD | Introduction – Method – Results – and – Discussion |
| KIAP | The Project "Cultural Identity in Academic Prose" |
| L1 | An individual's first language, which they learned as a child |
| L2 | A second language that a person may learn |
| LingPro | Darmstadt Technical University Project "Linguistic Profiles of Interdisciplinary Registers" |
| LSP | Language for Specific Purposes |
| LV | Latvian |
| MS | management science |
| RA | research article |
| SL | source language in translation |
| ST | source text in translation |
| TJNK | The Committee for Public Information |
| TL | Target language in translation |
| TT | Target text in translation |
| ZIVS project | The Project "Language and Structure of Latvian Scientific Texts" |



**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.