

BUEB

**WHAT MAKES ENTREPRENEURS OF THE FUTURE
ENTREPRENEURIAL?
COMPARISON OF FINNISH AND HUNGARIAN
ENTREPRENEURSHIP-RELATED MASTER'S DEGREE
PROGRAMMES SKILL CONTENTS**

Theses Booklet for Public Defence

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CONTENT

1.	Introduction.....	1
2.	Definitions and Theoretical Frameworks.....	3
3.	Research methodology.....	5
4.	Systematic Literature Review of Entrepreneurial Skills.....	6
5.	Integrative Literature Review of Future Skills	7
6.	Comparing the List of Entrepreneurial and Future Skills, and the Related Teaching Methods	8
7.	Results of Corpus-based Content Analysis.....	9
8.	Case Studies	10
8.1.	Case Study 1: Aalto University – Sustainable Entrepreneurship MSc.....	10
8.2	Case Study 2.: BUEB – Business Development MSc.....	12
8.3	Comparison of the Case Studies.....	14
9.	Discussion	16
10.	Theoretical Contributions.....	20
11.	Conclusion.....	22
12.	References	26
13.	Own Publications	31

1. INTRODUCTION

The main goal of the dissertation was to map the emergence of entrepreneurial and future skills in both literature and practice. To this end, I identified sub-goals and research questions (the sub-goals and research questions are listed in Table 1). First, I sought to answer the question of what the teachable entrepreneurial and future skills are. To answer this question, I used a systematic and an integrative literature review. My second question was which skills identified in the literature are present in the online communication of top higher education institutions (HEIs)? The related method was corpus analysis. The corpus consists of the online available English language programme descriptions of the top 100 HEIs by the ranking of Times Higher Education in 2019 (henceforth THE) (THE, 2019). Finally, the third question was about the skills that appear in the curricula of two master's programmes in entrepreneurship. For this purpose, my chosen method was case study: I examined the programmes of a Finnish and a Hungarian institution regarding skill content. Table 1 presents the summary of my goals, the research questions, and the related methods for each.

Table 1: Sub-goals, research questions, and methods of the dissertation (source: own compilation)

Sub-goals	Research questions	Methods
To compile lists of entrepreneurial and future skills from the literature	<p>RQ1: What are the entrepreneurial and future skills according to the literature?</p> <p>RQ1.1: What are the teachable entrepreneurial and future skills?</p> <p>RQ1.2: Which skills are also included in the list of entrepreneurial and future skills?</p>	Systematic and Integrative literature review
To map the representation of entrepreneurial and future skills in the online programme descriptions of the top 100 HEIs	RQ2: Which entrepreneurial and future skills are included in the online available English-language programme descriptions of the top 100 Higher Education Institutions?	Corpus-based content analysis (Presence of the list of entrepreneurial and future skills compiled from the literature in the corpus)
To examine which entrepreneurial and future skills are developed in the entrepreneurship master's programmes	<p>RQ3: Which entrepreneurial and future skills are reflected in the curricula of the two chosen master's programmes?</p> <p>RQ3.1: What similarities and differences can be found in the skills content of the two countries' master's programmes?</p> <p>RQ3.2: How do they ensure compliance with EU and other government regulations?</p>	Case study (study of a master's programme in entrepreneurship at a Finnish university in the top 100 and comparison with a similar programme at a Hungarian university)

Figure 1 presents the structure of the dissertation.

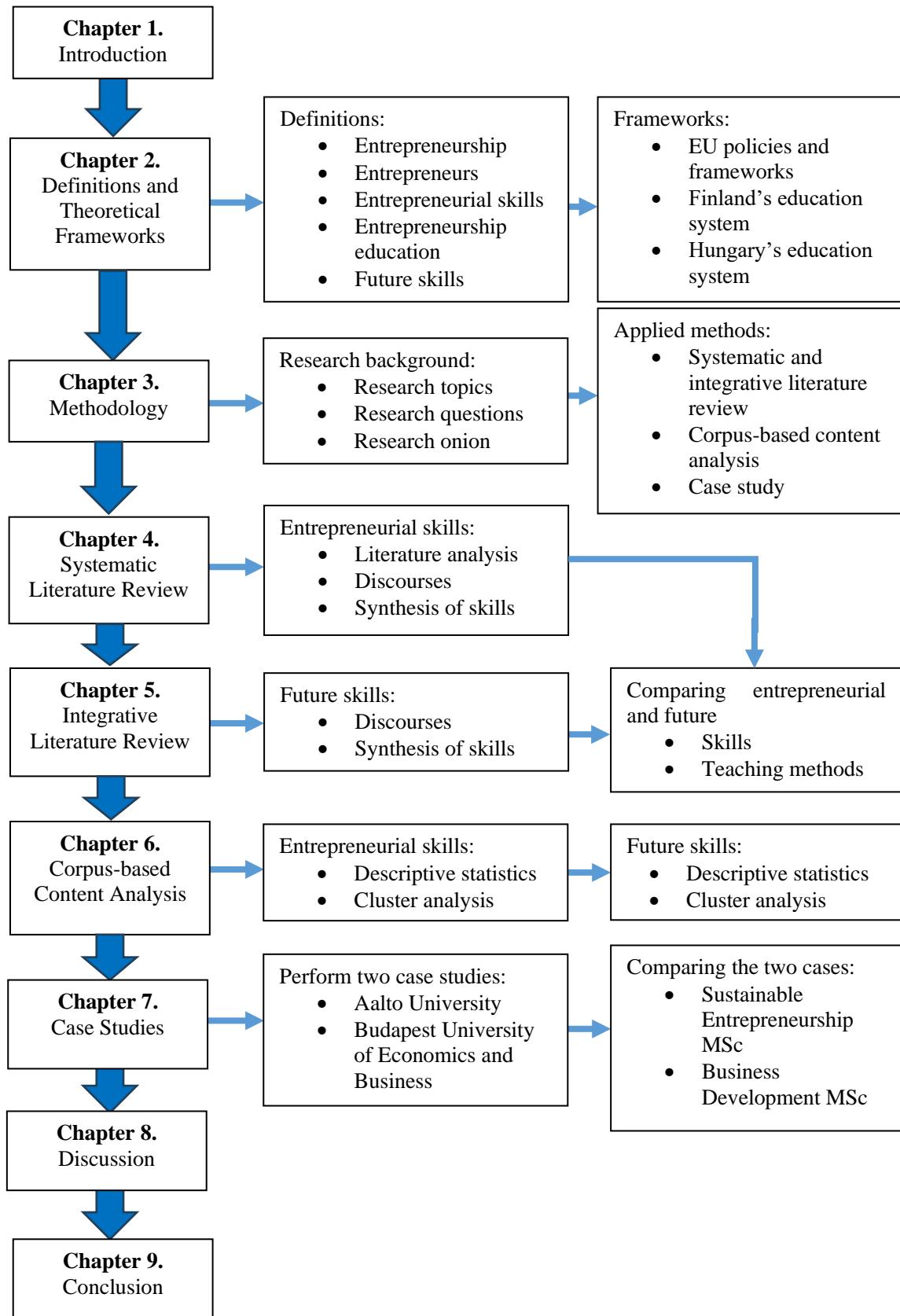


Figure 1: Structure of the dissertation (source: own compilation)

At the beginning of my dissertation, it was important to clarify my research philosophy on which the research is based. The four paradigms described in the Burrell and Morgan (1979) matrix show the perspectives from which our social and organisational world can be viewed. In the functionalist paradigm, the researcher formulates rational explanations and suggestions for improvement in relation to the current system. As a result, the researcher can provide rational and operationally sound answers to real problems in real organisations. In my dissertation, this is the philosophy I had in mind. Saunders et al. (2016) described five paradigms in which research can be interpreted. Of these, the positivism paradigm is the one that best characterises the philosophy of my research for my dissertation. Next to positivism, pragmatism can also fit the research because of the application of mixed methodology. Mixed methodology is typically used during pragmatist research. In the case of pragmatism, the emphasis is on practical solutions and outcomes. This approach is required during testing how the entrepreneurial and future skills appear in the practice (Saunders et al., 2016).

2. DEFINITIONS AND THEORETICAL FRAMEWORKS

This chapter explored how different studies interpret the definitions of entrepreneurship, entrepreneurial skills, and future skills. Additionally, it presents the role of entrepreneurship education and the relevant policies and frameworks. It also introduces the specifics of the Finnish and Hungarian education systems in general and in connection with the university programmes. This chapter provides clarity on the definitions I used throughout the dissertation.

Entrepreneurship: Entrepreneurship is an innovative process where individuals (entrepreneurs) can create social values and generate economic growth by making use of their new ideas, skills, and abilities to exploit their market and business opportunities and so develop their enterprises.

Entrepreneurs: Entrepreneurs are individual innovators who use their skills, take risks, and seek opportunities during their activities to create new businesses and organise processes in order to develop products, thereby creating values and contributing to economic growth.

Entrepreneurial skills: Entrepreneurial skills are the skills which:

- are necessary to develop a network (know-who) and learn new practices at the level of entrepreneurs;

- are essential for successful business, human, and financial management, and organisational development at the level of enterprises (know-how);
- can contribute to the increase of employability at the level of the economy

Entrepreneurship education: Entrepreneurship education fosters entrepreneurial careers by equipping students with business knowledge and developing the skills and attitudes they need to initiate and sustain their enterprises.

Future skills: During the dissertation, I interpret future skills as Ehlers and Eigbrecht (2024): „*future Skills can be defined as competencies that enable individuals to solve complex problems in a self-organised manner in highly demanding contexts*” (Ehlers & Eigbrecht, 2024, p. 26). I used the criteria of Kirchherr et al. (2018), by which I exclude the industry or subject-specific skills.

As can be seen from the above-presented definitions, entrepreneurship has a major role in economic development. Furthermore, in the past few years, they have become a key driver of employment and economic growth (Acs et al., 2005). The latest statistic from the European Union also emphasises the importance of the topic as the number of enterprises is growing year by year. The European Union has issued several publications which aim to boost the content of entrepreneurship-related programmes and emphasise the role of entrepreneurship education. The European Commission Action Plan 2020 highlighted that investing in entrepreneurship education is vital to achieve the proposed culture change objectives. Next to the positive effect on culture, entrepreneurship education can promote an entrepreneurial mindset too (Kuratko, 2005) and can also foster students to start their businesses (Imreh-Tóth et al., 2012).

Within the broad palette of entrepreneurship education, universities play a crucial role in several aspects, but one of the most important is to prepare students for the future (Cekule et al., 2023). HEIs provide a skilled labour force that can satisfy the changing demand of the labour market in the current knowledge-based economy (Enders, 2010).

I introduced two countries’ – Finland’s and Hungary’s – entrepreneurship education-related attributes, which can provide insight into the practical implications of the presented plans and frameworks within the European Union, and the theories identified in the literature.

3. RESEARCH METHODOLOGY

In this chapter, I described the research methodology in detail. I introduced the research topic and research questions and presented an overview of the methodological approach of the dissertation using the research onion (Saunders et al., 2016). Then, I described in detail each of the methods used, and finally, I illustrated the interrelationship between the different parts of the research. Table 2 summarises the research questions, expected results, the steps of the research, and the applied methods.

Phase and topic	Research questions and sub-questions	Expected results	Steps of research	Applied research methods
I.	<p>RQ1: What are the entrepreneurial and future skills according to the literature?</p> <p>RQ1.1: What are the teachable entrepreneurial and future skills?</p> <p>RQ1.2: Which skills are also included in the list of entrepreneurial and future skills?</p>	<ol style="list-style-type: none"> 1. Lists of entrepreneurial and future skills 2. Lists of teachable entrepreneurial and future skills 3. Lists of common entrepreneurial and future skills 	<ol style="list-style-type: none"> 1. Systematic review of literature on entrepreneurship 2. Integrative review of literature on future skills 3. Making lists based on the entrepreneurial and future skills mentioned 4. Indicate the skills mentioned as teachable in the lists 5. Compare lists and identify overlaps 	Systematic literature review Integrative literature review
	<p>RQ2: Which entrepreneurial and future skills are included in the online available English-language programme descriptions of the top 100 Higher Education Institutions?</p>	<ol style="list-style-type: none"> 1. Collecting the most frequently mentioned entrepreneurial and future skills by the top 100 institutions from the corpus 2. Clustering top 100 universities according to skill usage patterns 	<ol style="list-style-type: none"> 1. Description of the corpus collection steps 2. General introduction to the corpus 3. Quantitative corpus analysis (cluster analysis) 	Corpus-based content analysis
III.	<p>RQ3: Which entrepreneurial and future skills are reflected in the curricula of the two chosen master's programmes?</p> <p>RQ3.1: What similarities and differences can be found in the skills content of the two countries' master's programmes?</p> <p>RQ3.2: How do they ensure compliance with EU and other government regulations?</p>	<ol style="list-style-type: none"> 1. Collect skills from online materials and curricula 2. Comparison of skills in online materials and curricula with the list of skills composed based on the systematic and integrative literature review 3. Identification of skills in governmental and EU expectations in online materials and curricula 	<ol style="list-style-type: none"> 1. Presentation of the legal and regulatory environment 2. Introduction to the selected institutions 3. Description of selected master's programmes 4. Analysis of relevant materials and documents in terms of entrepreneurial and future skills content 5. Comparison of identified entrepreneurial and future skills for the two countries 6. Comparison of identified entrepreneurial and future skills with the expectations of EU and other government regulations 	Case study

Table 2: Summary of the dissertation's methodology (source: own compilation)

4. SYSTEMATIC LITERATURE REVIEW OF ENTREPRENEURIAL SKILLS

During the systematic literature review, I investigated the content of 49 articles which were published between 2015-2024 and selected through a rigorous process. My aim was to discover the main discourses on the topic and collect the mentioned entrepreneurial skills.

Based on my literature review, the discourses in the literature could be organized around four main topics: (1) Entrepreneurs' Effects on the World; (2) Entrepreneurial Skills and Their Effects; (3) Other Relevant Areas; (4) Entrepreneurial Skills in Education. During the review, I collected the skills which were marked as teachable by the authors.

The most mentioned skills in the articles were risk management, creativity, innovation, providing a practice-based response to problems, opportunity management, and effective verbal and nonverbal communication.

At the end of the entrepreneurial skills- related literature review, I was able to create my own synthesised skill list. The list contained 89 entrepreneurial skills, which could be organised into eight categories: (1) Management; (2) Thinking; (3) Learning; (4) Problem-solving; (5) Communication; (6) Social; (7) Technical; (8) Innovation. The management skills category contains all skills, that are essential to control the enterprise's processes (e.g., planning, risk management, decision-making, etc.). Thinking skills are the skills that help to see things from different points of view, for example, a decision can be made more carefully as many approaches were investigated during the process (e.g., creative thinking, critical thinking). Learning skills provide entrepreneurs the tools for achieving lifelong learning goals, so they can learn from their mistakes and pick up the required knowledge of a new area if necessary. Problem-solving skills help to find an effective solution in a very short time. Communication skills are necessary to communicate ideas or opinions and negotiate with others. Social skills mean the network all around the entrepreneur, and the collaboration with others. Technical skills help entrepreneurs use digital tools during their work and understand their operations. Innovation skills are required to come up with creative and innovative ideas and realise them.

5. INTEGRATIVE LITERATURE REVIEW OF FUTURE SKILLS

The topic of future skills is more diverse than entrepreneurial skills due to several possible viewpoints from which the future can be observed, for example, the discourses could depend on which segment of the economy the focus is on or what the type of job is (intellectual or physical). As a result, during the future skills literature review, these approaches are not separated from each other, and they are introduced as the authors interpret the future. As a result, diverging topics emerged in the literature, however, it could be organised into three categories: (1) Challenges and Influencing Factors (which make the future skills determination process difficult); (2) The Actors of Future Skills in HEIs; (3) Future Skill Development. Finally, I presented four ways of synthesising the future skills list and then introduced our own categorisation.

Sakamoto (2019) claimed in her research that the future labour market will be fluid, uncertain, and unforeseeable. It will demand individuals who are resilient and able to adapt to new situations. The academic and policy-oriented literature identifies several drivers influencing the future jobs' skills requirements from which I presented eight (e.g., demographic changes, technological changes, globalization). Anticipating and continuously monitoring the presented influencing factors of future skills are extremely important for several actors at global, national, and organisational levels. Four actors of future skills in HEIs were mentioned in the literature: Universities, Students, Governments and (international) organisations, and Employers. The actors have expectations toward HEIs, and these expectations can influence how HEIs perform their daily activities and their plans. Due to this, expectations have a crucial role in future studies, as they are a determining element of future orientation (Novaky et al., 1994). During the review, I also collected the future skills, which were marked as teachable by the authors.

Based on the future skills-related literature, there is no consensus on the elements of future skills. I decided to apply the list of Bakshi et al. (2017) during the current research as they made a difference between skills, abilities and personality traits in their study, so I had the chance to focus only on future skills. As the future skill list is not synthesized by the researchers, Gábor Király, Márton Rakovics and I created our own synthesis during one of our previous projects (Szendrei-Pál et al., 2021). We categorized the 34 future skills of Bakshi et al. (2017) into seven groups: (1) Management; (2) Learning; (3) Technological; (4) Social; (5) Operational; (6) Problem-solving; (7) Analytical.

6. COMPARING THE LIST OF ENTREPRENEURIAL AND FUTURE SKILLS, AND THE RELATED TEACHING METHODS

The list of synthesized entrepreneurial skills contains eight skill groups, and the synthesised list of future skills contains seven groups in which there are five similar categories: Management, Learning, Problem-solving, Social, and Technological skills groups. It seems like skills in these categories will be important in the future and also important for present entrepreneurs. Table 3 shows similar entrepreneurial and future skills.

Table 3: Similarities between entrepreneurial and future skills (source: own compilation based on the literature review)

Skill group	Entrepreneurial skills	Future skills
Management	Time management	Time management
	Judgement & decision-making	Judgement & decision-making
	Resource organisation	Management of Financial resources Management of material resources Management of personnel resources
	Leadership	Coordination Instructing
Learning	Active learning	Active learning
	Learning to learn	Learning strategies
Problem-solving	Complex problem-solving	Complex problem-solving
	Critical thinking	Critical thinking
	Troubleshooting	Troubleshooting
Social	Negotiation	Negotiation
	Persuasiveness	Persuasion
	Effective verbal communication	Speaking
	Effective nonverbal communication	Writing

In connection with the teaching methods, there are six that can foster the development of both types of skills. Table 4 introduces teaching methods for entrepreneurial and future skills which were mentioned in the literature.

Table 4: Entrepreneurial and future skills teaching techniques (source: own compilation)

Entrepreneurial skills teaching techniques	Future skills teaching techniques
International internship	International studies
	International mobility
Successful entrepreneurial role models	Applied learning experience
Signature pedagogies	Active learning experience
	Skill-based trainings
Flipped Classroom	
Debates	Discussions
Simulations	Putting students to real-world situations

7. RESULTS OF CORPUS-BASED CONTENT ANALYSIS

The goal of this part is to discover the top 100 business and management related universities' communication about entrepreneurial skills and future skills by the ranking of Times Higher Education in 2019 (THE, 2019)

Based on the results of clustering the top 100 universities by entrepreneurial skills, two groups appeared. One smaller group with 14 institutions, and one larger group with 86 institutions. The first group contains skills from the innovation skill group in the largest proportion (57,4%), so they are the Innovator universities. The second group contained managerial related entrepreneurial skills the most (46,8%), they are the Manager universities. Based on the ranking, there is not such a difference between the two groups. In case of the Innovators, the average rank is 58, and in the case of the Managers it is 50,1. Regarding the geography, 42,9% of the Innovators are from North America, other 42,9% are from Western Europe, and the remaining 14,3% are from East Asia. There are no universities from Australia in this group. 44,2% of the Manager universities are North Americans, 30,2% are Western Europeans, 18,6% are East Asians and the remaining 7% are Australians.

The analysis of future skills on the corpus identified four clusters, which have different skill distributions compared to the general proportions. The first cluster's name is the Social group, because these universities' programme descriptions refer to social skills the most. The second cluster contains the Solvers. These institutions' texts contain twice ratio of problem-solving skills references than the average. The members of the third cluster were emphasized management skills the most, so their name is the Managers. Finally, the Tech universities can be the fourth cluster. Their programme descriptions contained technology related skills in the highest proportion relative to others. The universities which are in the Social or Solver groups have a significantly better average rank than institutions of the other two groups. Based on the results, higher proportion of social or problem-solving skills involvement in the texts is related to better rankings. Regarding the geographical data, all four clusters appeared in the text of universities from Australia and North America. The texts of universities from Western Europe contain many technological skills and it presents even greater differences between the ratio of clusters to one another. In the case of the remaining two skills groups in the region the problem-solving skills are more emphasized than social skills. In East Asia, only technological and management skills appeared in the texts, and there is no other kind of skills mentioned in the programme descriptions.

8. CASE STUDIES

In this part of the dissertation, I introduced two case studies: Aalto University's Sustainable Entrepreneurship MSc programme and BUEB's Business Development MSc programme. At the end of the chapter, I compared the two cases based on their main attributes (e.g., skill content of the programmes, legal environment, etc.).

8.1. Case Study 1: Aalto University – Sustainable Entrepreneurship MSc

First, I introduced the Aalto University: I summarised the institutions' history, values, and international ranking. After that, I presented the details of the Sustainable Entrepreneurship MSc programme design and the main attributes of the programme. Then, I analysed the skill content and applied teaching methods which I could identify in the online available materials. Finally, I also compared the results of the corpus analysis with the case study's results. During the case study, I introduced the interview results, which I performed with Tamara Galkina, the leader and one of the founders of the programme.

The Aalto University is in Finland, Espoo, Otaniemi, and it was established in 2010, as the result of the merge of the Helsinki School of Economics, Helsinki University of Technology, and the University of Art and Design Helsinki. Aalto has 6 schools: Science, Engineering, Electrical Engineering, Chemical engineering, Business, and Art, Design and Architecture. The purpose of the university is to shape a sustainable future. Aalto's mission is "*We spark the game changers of tomorrow*". The values are responsibility, courage, and collaboration. They also highlight in their introduction that "*We shape a sustainable future – Aalto University is where science and art meet technology and business*". (www.aalto.fi, n.d-1)

The Sustainable Entrepreneurship MSc was launched first in September 2024. The length of the programme is two years, and the courses are in English. On the website, they summarise the goal of the programme in the next few sentences: "*This programme brings students of diverse backgrounds together to take concrete steps towards understanding and tackling modern sustainability challenges. Graduates from this programme will possess skills enabling entrepreneurship across a wide range of contexts, including corporations, startups and policymaking. Are you up for it?*" (www.aalto.fi, n.d.-3). Next to this, the programme aims to develop the next generation of sustainable leaders, who can make positive social and environmental impact. They motivate students to become a solution to the world's most pressing problems with the help of the knowledge and skills they learn and gain during the

programme (www.aalto.fi, n.d.-3). 58 students applied to the programme in 2024 from which 16 students were accepted (www.aalto.fi, n.d.-4).

Table 5 was prepared based on the content of the interview, the programme description on the website, and the YouTube webinar about the programme.

Table 5: Skill content and applied teaching methods of Aalto Sustainable Entrepreneurship MSc (source: own compilation)

Skill type based on the literature	Skills mentioned in the online materials	Referred teaching method in the online materials	Teaching method type based on the literature
Entrepreneurial skills	<ul style="list-style-type: none"> • Learning through experience • Assessing business opportunities 	<ul style="list-style-type: none"> • Successful entrepreneurial role models • E-learning programmes (Online courses) • Case studies • Guest presentation (foreign & national) 	Entrepreneurial skills-related teaching methods
Entrepreneurial & Future skills	<ul style="list-style-type: none"> • Critical thinking • Communication • Collaboration • (Real-world) Complex problem-solving • Leadership • Teamwork • Innovation 	<ul style="list-style-type: none"> • International studies • International internship • Putting students to real-world situations • Active learning experience • Individual projects/task solving 	Entrepreneurial and future skills-related teaching methods
Future skills	<ul style="list-style-type: none"> • Interdisciplinary approach to global issues • Encouragement to work/study abroad • Develop intercultural communication • Integrative learning • Appreciation of diverse perspectives • Understand and act on issues of universal significance in today's interconnected world 	<ul style="list-style-type: none"> • Applied learning experience • Collaborative learning experience 	Future skills-related teaching methods
Not specified skills	<ul style="list-style-type: none"> • Project management • Sustainable leadership and thinking 	<ul style="list-style-type: none"> • Teamwork & challenge-based learning • Interactive lectures • Peers from professional backgrounds & different cultures 	Not specified teaching methods

8.2 Case Study 2.: BUEB – Business Development MSc

First, I introduced the legal context of BUEB, in which it has to operate. After that, I summarised the history and the main attributes of the programme. Then, I presented the skill content and applied teaching methods which I could identify in the online available materials, and I also compared the case study's results with the corpus-based content analysis results. During the case study, I introduced the interview results, which I performed with Prof. Dr. Balázs Heidrich, one of the founders of the programme.

BUEB is located in Hungary, Budapest, and it has three faculties: the Faculty of Commerce, Hospitality and Tourism, the Faculty of International Management and Business, and the Faculty of Finance and Accountancy. The legal predecessor of BUEB was Budapest Business School, which was established in 2000. Despite that, the history of the university is longer than 160 years thanks to the legal continuity of other predecessor institutions. BUEB is the biggest business university in Hungary as the number of its students is about 20.000. Based on the website, the reason behind the university's popularity is its programme structure, which is experience-based and practice-oriented. The university tailored its programmes to the market needs and considers sustainability, internationalisation and business-friendly approaches during its activities. (www.uni-bge.hu, n.d.-1). In the report of the Hungarian Accreditation Committee (henceforth HAC), it is highlighted, that BUEB traditionally has strong relationships with companies (www.mab.hu, 2024).

The Business Development MSc was launched first in 2015. Since then, more than 300 students' application have been accepted. The length of the programme is two years, and the form of the programme is part-time, which means students have to attend classes only two times per week (Fridays and Saturdays). There are no specializations within the programme. Based on the programme description on the website, students who accomplish the programme will be able to start their own businesses. The main modules of the programmes are knowledge of economics and social sciences, general professional knowledge, and other areas of professional knowledge. (www.uni-bge.hu, n.d.-5)

After collecting all information about the programme from the websites and orders, I analysed the content of the 28 course descriptions from skills content and teaching methods points of views. Table 6 summarises the skills and the applied teaching methods that I could identify in the online available course descriptions.

Table 6: Skill content of BUEB's Business Development MSc programme based on the publicly available online content of the official website of BUEB (source: own compilation)

Skill type based on the papers	Skills mentioned in the online materials	Referred teaching method in the online materials	Teaching method based on the papers
Entrepreneurial skills	<ul style="list-style-type: none"> • Business management • Creativity • Foresight • Finding Information • Originality thinking • Planning • Perceiving business opportunities • Proactivity • Networking • Self-confidence • Learning through experience • Uncertainty management • Learn from mistake • Risk management • Strategic skills • Work under stress • Identify problem 	<ul style="list-style-type: none"> • Guest presentation • Case studies • Indoor & Outdoor trainings • Simulations 	Entrepreneurial skills-related teaching methods
Entrepreneurial & Future skills	<ul style="list-style-type: none"> • Judgement and Decision-making • Communication • Negotiation • (Real world) Complex problem-solving • Resource management • Critical thinking • Digital competencies • Persuasiveness • Social awareness • Collaboration • Innovation • Teamwork • System thinking • Leadership 	<ul style="list-style-type: none"> • Active learning experience (through simulations) • Individual projects/task solving • Putting students to real-world situations • Applied learning experience • Collaborative learning experience 	Entrepreneurial and future skills-related teaching methods
Not specified skills	<ul style="list-style-type: none"> • Professional knowledge • Create strategy • Efficient working • Orientation toward development (own and others as well) • Advising • Internationalisation • Processing information • Process management • Project management • Presentation skills • Responsibility 	<ul style="list-style-type: none"> • Teamwork & challenge-based learning • Frontal teaching (by professionals) • Interactive lectures • Innovation mapping • Involving latest research results 	Not specified teaching methods

8.3 Comparison of the Case Studies

In this part of the dissertation, I compared the content of the two programmes from several aspects (e.g., skill content, applied teaching methods, etc.). Table 7 summarises the main points of the case studies which guided the process of the comparison.

Table 7: Comparing the results of the Finnish and Hungarian case studies about the MSc programmes (source: own compilation)

Aalto University	Aspects	BUEB
Sustainable Entrepreneurship	Name of the MSc programme	Business Development
2 years	Length of the programme	2 Years
Full-time	Study schedule	Part-time
English	Language of the programme	Hungarian
2	Number of specializations	0
Available	Personalized curriculum	Not available
10	Number of obligatory courses	22
Determined by the programme developers (within Aalto)	Learning outcomes	Determined by the government
No	Audit of the programme quality by external authority?	Yes (HAC)
different background different countries different cultures	They wait students with/from...	different generations different entrepreneurial experiences different age groups
Anyone can join independently of what kind of degree they have	Student's former studies	Only some kind of degrees are accepted, others can individually request the acceptance of their credits
Not available	Detailed courses' descriptions on the website	Available
4	Number of referred stakeholders	5
Technological	Future skill cluster	Social/Manager
Innovator	Entrepreneurial skill cluster	Manager
17	Total number of identified skills	42
3	Number of identified entrepreneurial skills	17
6	Number of identified entrepreneurial & future skills	14
6	Number of identified future skills	0
14	Number of identified teaching methods	13

The determination process of the learning outcomes is different in the case of both countries. In Finland, the universities can determine what and how they would like to achieve at the end of the programme. In Hungary, the universities must consider the content of the training and outcome requirements issued by the government. In Hungary, the HAC regularly monitors the institutions, whether they operate in accordance with the legal system or not. There is no such committee in Finland, which means Finnish Universities have greater freedom and flexibility during the programme design and programme operation than Hungarian HEIs.

During the Finnish case study, 17 skills and 14 teaching methods were identified, and in case of the Hungarian MSc programme, the investigated documents contained 42 skills and 13 teaching methods. I draw attention to the differences between the programme structures. The Finnish programme is more flexible and contains numerous elective courses, so students can develop more skills, however, the developed skills depend on the students' choices (which and how many courses they choose during their studies). As a result, the online programme description contains fewer skills because it considers only the obligatory courses' skill content. In the case of the Business Development programme, the programme structure and the training and outcome requirements are fixed, so I could identify several skills during the analysis.

In connection with the results of corpus-based content analysis, it can be seen that the two universities do not belong to the same clusters neither in the case of entrepreneurial skills nor in case of the future skills. Several aspects can be the reason behind it, for example, the different legal environment and the stakeholders' diverging expectations, and most importantly, that BUEB was "*manually*" added to the clusters based on only one programme description.

To sum up, there are several similarities between the two programmes, for example, from skill content and applied teaching methods approaches. I could identify differences between the two programmes from some aspects (e.g., external audit, language of programme, students' background, etc.). The results highlighted that the Finnish Sustainable Entrepreneurship MSc is more flexible than the Hungarian Business Development programme. However, it seems like - based on the online materials analysed - more diverse skills can be developed during the Hungarian programme. Despite the differences, both programmes apply methods and approaches that help them to be competitive and unique in the market.

9. DISCUSSION

I investigated HEIs' online communication of the programme descriptions and its entrepreneurial and future skill content, and to that I applied mixed methodologies. On the one hand, I used qualitative methodologies (systematic and integrative literature review, case studies), on the other hand, I applied quantitative methodology (corpus-based content analysis). I followed the principles of pragmatism as I applied mixed method complex methodology and a deductive approach. I also relied on the positivism paradigm's principles, as I observed measurable and observable phenomena (HEIs' online available programme descriptions skill content), and I was not personally involved in the subject. I selected BUEB because of the personal connection, but previously I never had any discussions with teachers or other actors of the university related to the Business Development MSc programme, so I could observe it as an external, independent actor. I also presented the phenomena as they are, and I was emotionally detached from the research. In the following I summarize the answers to my research questions.

RQ1: What are the entrepreneurial and future skills according to the literature?

RQ1.1: What are the teachable entrepreneurial and future skills?

RQ1.2: Which skills are also included in the list of entrepreneurial and future skills?

In order to answer the questions, I performed a systematic literature review (in the case of entrepreneurial skills) and an integrative literature review (in the case of future skills). Finally, I have successfully created two synthesised skill lists: one for the entrepreneurial and one for the future skills. While reading the literature, I have collected the teachable entrepreneurial and future skills too. At the end of the literature review part, I compared the two synthesised and teachable skill lists, and I identified the similarities between them (Table 3). I concluded that the lists have 15 common elements (e.g., Time management, Active learning, Negotiation) which indicates that entrepreneurs should always be ready for the changes and thus be prepared for the future, too. Based on that, I suggested that there is a strong connection between the entrepreneurial and future skills. Some of the papers also highlighted the connection between the two themes, for example: (1) Obschonka (2016) said in his research that entrepreneurial skills are so important in the economy that they could be called skills of the 21st century, (2) Fleaca (2017) highlighted, that complex problem-solving and critical thinking skills (which are part of the entrepreneurial and future skill lists) help the entrepreneurs to notice currently

existing or newly appeared problems of society (3) Bejinaru (2018) claimed, that complex problem-solving has a key role when a new situation happens, and (4) Vega-Gómez et al. (2020) stated, that entrepreneurial skills are important during forecasting changes, which could result in fast adaptation to a new situation. To sum up, future orientation is essential in the currently existing enterprises, and reverse, entrepreneurial approach will become more important in the future.

RQ2: Which entrepreneurial and future skills are included in the online available English-language programme descriptions of the top 100 higher education institutions?

The results of corpus-based content analysis showed that the top 100 business and management-related universities regularly mentioned entrepreneurial and future skills in their programme descriptions. Based on their skill usage, they could be put into clusters, and it made possible to analyse the online communication of the top institutions. The universities' distribution between the clusters (by ranking and location) could help to understand the different usage of skills in HEIs online communications about their programmes. During the analyses I focused on the appearance of skill groups rather than the individual skills occurrences. As a result, I could identify two entrepreneurial skills cluster and four future skills clusters.

This result indicates that the skills which are the focus of the research are also reflected in the programme descriptions, regardless of the type of programme. The reason behind this could be that these are important for everyone, and as Bejinaru (2018) stated, entrepreneurial skills can be called generic skills. Additionally, the list of Bakhshi et al. (2016) contained non-professional-related future skills, which can explain why several future skills appeared in the programme descriptions. Next to these, Bauman and Lucy (2021) highlighted that entrepreneurs must adapt to the changes, and so must HEIs. That is another possible explanation for why the programme descriptions contain several future skills.

RQ3: Which entrepreneurial and future skills are reflected in the curricula of the two chosen master's programmes?

RQ3.1: What similarities and differences can be found in the skills content of the two countries' master's programmes?

RQ3.2: How do they ensure compliance with EU and other government regulations?

I studied the Sustainable Entrepreneurship Master's degree programme of Aalto University and BUEB's Business Development MSc programme. Table 5 and Table 6 present the skill content of the online available materials in both cases. As a result, I could identify eight similar entrepreneurial and/or future skills (e.g., learning through experience, perceiving business opportunities, leadership, critical thinking, communication, collaboration, teamwork, (real-world) complex problem-solving), which are integrated into the online available descriptions and documents of both universities.

The literature mentions several teachable entrepreneurial and future skills which appeared in the curricula of the investigated programmes. For example, Peschl et al. (2021) highlighted the learning through experience entrepreneurial skill, Bates, (2024) and The Conference Board of Canada (2014) mentioned problem-solving and teamwork skills as teachable future skills. However, there were teachable entrepreneurial and future skills which were not mentioned in the programme descriptions of the investigated MSc programmes (e.g., creativity with limited resources entrepreneurial skill (Peschl et al., 2021); Develop community future skill (Moore, 2016).

Despite the many common points in the programmes, the legal environment and the way in which the programmes are structured are completely different.

The dissertation aimed to find the connection between the teachable future skills and entrepreneurial skills based on the research results of case studies. Figure 2 presents the teachable entrepreneurial and future skills and their involvement in the investigated MSc programmes.

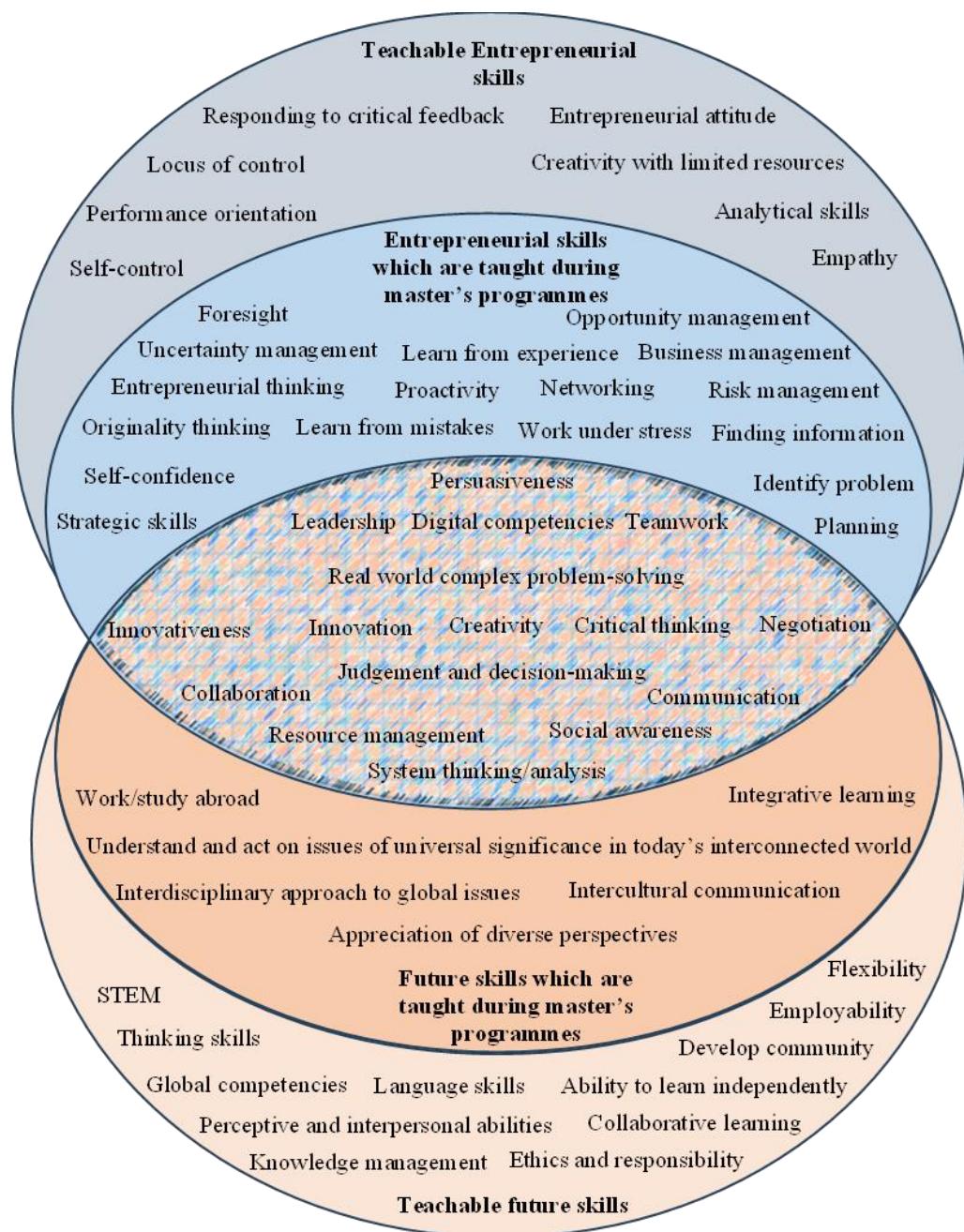


Figure 2: Teachable entrepreneurial and future skills and their involvement into the investigated MSc programmes (source: own compilation)

Compliance with government regulations is easy to observe in the case of BUEB, as in Hungary an order determines the range of skills to be achieved through master's programmes. Based on the data analysis, I identified all the mandatory skills listed in relation with the Business Development Master's programme.

Based on the results of the case studies, both universities are able to prepare future entrepreneurs as both investigated programmes involve a wide range of entrepreneurial and future skills. They

apply several teaching methods (e.g., failing forward, successful entrepreneurial role model, learning through failures, etc.), which help students understand what it means to be an entrepreneur. As a result, students will be prepared for the application of their knowledge in practice, and next to this, they will also be able to adapt to the challenges of the future. Additionally, they can make a positive impact on the economy and society.

Based on the results of the cases, I summarise the **best practices** I identified during the analyses.

- (1) The detailed course descriptions of BUEB give students the opportunity to gain a deeper understanding of the programme.
- (2) Thanks to the rigorous admissions process, BUEB can filter out students who do not fit the programme profile.
- (3) At BUEB master courses are often taught by external lecturers and professionals with entrepreneurial background rather than by staff.
- (4) One of the programme's strengths of the programme of BUEB is its precisely defined focus, which enables it to produce students with relevant skills for the Hungarian market.
- (5) Aalto's programme is an English language programme, which enables students to develop their skills and knowledge in an intercultural learning environment.
- (6) The master programme of Aalto is full-time, therefore gives students more time to develop their skills and do not have to split their time and attention between work and studies.
- (7) Sustainability objectives are strongly reflected in Aalto's programme, which is in line with the content of several international standards.
- (8) Both institutions are open to students from non-economic backgrounds, creating a diverse student community.
- (9) In addition, both institutions put particular emphasis on providing practice-oriented training.

10. THEORETICAL CONTRIBUTIONS

In the following section, I summarise the **dissertation's theoretical contributions**.

(1) New Definitions

There are several entrepreneurship-related definitions in the literature, and there is no consensus among them. As a result of my theoretical work, I developed complex and up-to-date, new

definitions for entrepreneurship, entrepreneurs, entrepreneurial skills, and entrepreneurship education based on the review of previously existing definitions.

(2) Synthesised Entrepreneurial and Future Skill Lists

I identified several possible ways of skill synthesis; however, the most up-to-date list was from 2020 in case of entrepreneurial skills, and 2023 in case of future skill. During the synthesis, I applied a different approach than previous studies (in the case of entrepreneurial skills: Bacigalupo et al., 2016; González-López et al., 2020; Gieure et al., 2020; in the case of future skills: Ehlers & Kellermann, 2019; Ehlers, 2020; Kotsiou et al., 2022; Brasse et al., 2023) which helped me to create skill groups which enabled me to compare entrepreneurial and future skills to each other.

(3) Teachable Entrepreneurial and Future Skill Lists (*in theory and practice*)

I could not identify any lists in the investigated papers that summarise the teachable entrepreneurial and future skills. As a result, I collected each skill, that was marked as teachable in the literature, and I created the list of teachable entrepreneurial skills and the list of teachable future skills. I had the chance to observe the skill content of two university master's degree programmes in detail. Finally, I could create a list showing the skills' appearances in the practice and can be indeed integrated into HEIs curricula (Figure 2)

I could identify several connections between the results of the literature review and the results of the corpus analyses and case studies. Bazkiae et al. (2020) states that universities have a crucial role in creating an entrepreneurial mindset. As can be seen in the results of the corpus-based content analyses, the top 100 business and management-related universities apply several entrepreneurial skills in their online programme descriptions. It indicates that teaching entrepreneurial skills is not only relevant for entrepreneurs, but for other professions as well (as for example Prüfer & Prüfer, 2019 and Bejinaru, 2018 highlighted in 4.3 Sub-chapter). Both Aalto and BUEB MSc programmes foster the development of an entrepreneurial mindset. Furthermore, as Vivekananth et al. (2023) stated, university studies could positively influence students' entrepreneurial intentions, as they can practice entrepreneurship. Both investigated HEIs curriculum involved several teaching methods which provide opportunities to students to practice entrepreneurship and develop their entrepreneurial skills.

(4) Methodological contributions

The combination of methods could be a methodological contribution, as there was no previous research which would apply the same combination of methodology as I applied during the dissertation. As can be seen, occurrences of skills can be effectively discovered and collected from the literature, and the in-depth analyses of the online available materials skill content can become clearer through combining these methods. This way could be effectively used in other areas as well to identify the connection between the theory and the practice.

The fifth and final goal of the dissertation was to develop my research skills. Writing the dissertation was a great adventure for me, and I learned a lot during the process. I can say that the experiences I gained will help me to become a better researcher in the future.

To sum up the results, the involvement of both entrepreneurial and future skills development in higher education is crucial from all stakeholders' viewpoints. Additionally, several segments of the world (e.g., economy, society, etc.) can be developed through educating entrepreneurs in a practice-oriented way.

11. CONCLUSION

In my dissertation I applied a functionalist research philosophy, which helped me to perform the analyses and observe the results objectively. In the following, I offer some possible implications of my research results, introduce the limitations and suggest some further future research opportunities. In the following I present the **implications** of the dissertation.

- (1) The results can be useful for HEIs planning to settle a new entrepreneurship-related master's degree programme or HEIs who already have a programme like that. They can consider the content of synthesised and teachable skill lists, which can serve as a checklist, and see whether their curriculum contains the skills.
- (2) If a HEI would like to update its curriculum with future skills, it can also use the teachable future skill list and decide which skills fit their programme the most and then integrate it into the programme. The two case studies serve as examples and contain several best practices on how to design and update an entrepreneurial-related master's programme. Furthermore, with the help of the entrepreneurial and future skills clusters, HEIs can check which skills' involvement is the most popular in their region. They could increase their competitiveness if they integrate similar skills like top HEIs in their region into their programmes.

- (3) This research aims to raise the attention of stakeholders to their roles in higher education, by which they can make an impact on the curriculum content due to their expectations. The direct involvement of stakeholders in the curriculum development and update could be a great opportunity for universities and stakeholders. From the university side, mapping the expectations would require less time and effort, so the changes could be integrated faster into the programmes. From stakeholders' viewpoint, their expectations could be communicated directly to the universities so they can feel the programmes are more up-to-date and relevant.
- (4) Students who would like to become future entrepreneurs can consider their education-related choices more consciously as they can check the entrepreneurial and future skill content of the programmes with the help of the presented skill lists.
- (5) Universities that involve future skills into their programmes have a great responsibility and challenging task, as the future is uncertain, and the required skills are depending on the future changes in the labour market and in the economy. Universities must follow the trends and must indicate fast changes in the curricula to remain competitive in the market and preserve the value of university degrees.
- (6) I can suggest the methodology of the dissertation for researchers, who are planning to perform similar in-depth analysis like me. Applying these methods in the same order as I did can contribute to the effective examination of skills (or other phenomena) appearances in different documents and materials.

In the following I present the **limitations** of the dissertation.

- (1) During the literature review, I selected the systematic literature review methodology for entrepreneurial skills, and integrative methodology literature review for future skills. Due to the different methodologies used in this research, there could be gaps in the exploration of the relationship between entrepreneurship and future skills.
- (2) Only texts from the institution's official website were collected for the corpus analysis. The content of downloadable materials or links to external websites were not involved in the corpus. Furthermore, descriptions of all types and levels of programmes (e.g. bachelor's, master's, doctoral, executive, etc.) are included in the texts. The disadvantage of this method is that the texts do not focus specifically on entrepreneurship programmes, so they show the general representation of skills in online communication. Additionally, the corpus

was created in 2019, however, the universities' programme descriptions could have changed a lot since then, so an update is required. The skills were investigated in groups, so the research cannot discover the frequency of individual appearances.

(3) During the case studies, I had the chance to investigate the programmes' contents in detail. The disadvantage is that collecting and analysing the materials is very time-consuming, so I only conducted the study on a small sample. For this reason, it is not possible to generalise the result for the whole population, however, the best practices can be useful for HEIs. Additionally, because of the language limitations, I could not observe the content of materials written in Finnish.

(4) All courses' descriptions were available on the website of BUEB, in contrast, Aalto's website did not contain any of these. This could be the reason behind the large difference in the number of skills involved. In the case of Aalto Universities' Sustainable Entrepreneurship MSc programme, it is important to mention that the programme was launched in September 2024, so it is possible that further information and details will be added to the website later. Furthermore, there is no experience related to how the Sustainable Entrepreneurship MSc's curriculum and the teaching methods work in practice. A follow-up is required on the programme once the programme leaders have collected some experiences (e.g., after 2 semesters).

I would like to make some comments about **future directions** of the research.

(1) Related to future skills further literature review is required to create a more detailed list. Due to this, a more complex comparison of entrepreneurial and future skills lists could be made.

(2) Regarding the changes in the mentioned skills in the curricula of the top 100 business and management-related universities it would be possible to investigate it with the help of a new corpus. As a result, new trends can be discovered in the entrepreneurial and future skills usage in HEI's online communication. Additionally, collecting only the texts of entrepreneurship-related programmes would result in a more precise picture of the top universities' entrepreneurial and future skills usage in the online programme descriptions. Moreover, involving equal number of samples from each region or focusing only on the European HEIs' website could also help to discover regional differences and specialities.

(3) The list of teachable entrepreneurial and future skills could also be extended. As can be seen, there are skills that have appeared in the practice (during the case studies) but are not included in the list of teachable skills compiled from the literature (e.g., persuasiveness). Further theoretical and practical research would be needed to create a credible and detailed list of teachable skills.

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¹ My name has changed from Eszter Szendrei-Pál to Eszter Knúlné Pál on 01 March 2024.

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