

# SDGs in master's theses: a study of a Finnish University of Applied Sciences

SDGs in  
master's theses

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## Abstract

**Purpose** – Higher educational institutions, such as universities of applied sciences, have a significant role in promoting progress towards a sustainable future as defined by the United Nations (UN) sustainable development goals (SDGs). This paper aims to identify how the UN SDGs are featured in master's theses set in work–life contexts.

**Design/methodology/approach** – Using a descriptive review and content analysis, this study identified the number of SDGs appearing in 31 master's theses. Sustainable development (SD) and corporate social responsibility were reflected using the approaches and models in the literature. Finland's eight objectives for committing to SD were used to examine the commitments made by the business school of the university of applied sciences to achieve Agenda 2030.

**Findings** – Emphasising the value of higher education for SD, this study found that SDGs three, eight and 12 appeared most frequently in the theses. Sustainable and responsible dimensions reflected several issues concerning both the worlds of business and industry among the firms and organisations investigated by the master's degree students in the business school at the Jyväskylä University of Applied Sciences.

**Practical implications** – This research holds practical and pedagogical value, serving to encourage master's and PhD students to further explore research on SDGs and to shape public policy.

**Originality/value** – Sustainability was looked at in a new way as investigated by the theses. Ways to integrate the SDGs into management degree programmes and conduct research in the fields of business administration, tourism and hospitality management were identified.

**Keywords** CSR, Business school, ESD, Higher education, Master's theses, Sustainable development goals (SDGs), United Nations (UN), University of applied sciences

**Paper type** Research paper

## Introduction

Higher educational institutions (HEIs), such as universities of applied sciences, have a significant role to play in pursuing sustainability and implementing the United Nations (UN) sustainable development goals (SDGs) (Leal Filho, 2011; Leal Filho *et al.*, 2023a; UN, 2015).

Following the UN decade of education for sustainable development (ESD) (UNESCO, 2005/2014), the importance of ESD has been recognised globally. Many countries, such as Finland, are committed to implementing the SDGs (OKM, [Ministry of Education and Culture], 2021). The enactment of the 2030 Agenda for Sustainable Development (UN, 2015)



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marked a major change in priorities in the education field, as seen in the UNESCO World Programme of Action on ESD 2015-2019 (UNESCO, 2016). Given the current global challenges, ESD (UNESCO, 2018) and the Berlin Declaration on ESD (UNESCO, 2021) called for greater transformative learning and a “whole institution” approach to strategic planning and implementation for sustainable development (SD) as defined by UNESCO (2014) and Rieckmann (2018).

At the national level, Finland’s Sustainable Growth Programme for Higher Education (OKM, [Ministry of Education and Culture], 2021) seeks solutions through which higher education and research can contribute to strengthening the Finnish public economy and fuelling sustainable growth. Based on this background, Finnish Universities of Applied Sciences have committed to their sustainability and responsibility programmes to fulfil the UN’s SDGs pertaining to education by ensuring that all learners have the skills and knowledge required to advance sustainability (OKM, [Ministry of Education and Culture], 2021).

At the regional level, Jyväskylä University of Applied Sciences (JAMK) has committed to achieving carbon neutrality by 2030 as part of the SD and responsibility programme published by the Rectors’ Council of Universities of Applied Sciences (Arene, [The Rectors’ Conference of Finnish Universities of Applied Sciences], 2020), which strives for nature positivity together with other regional and educational institutions. Furthermore, JAMK involves its students in developing solutions that promote nature positivity on campus (JAMK, [Jyväskylä University of Applied Sciences], 2023a).

This study identifies how the UN SDGs are featured in master’s theses set in work–life contexts.

The role of universities of applied sciences as multidisciplinary HEIs highlights the connection to working life and regional development. This study emphasises business school under the JAMK and its students as valuable contributors to achieving the UN SDGs (Dias Galleli *et al.*, 2022; Hueske *et al.*, 2022; Kohl *et al.*, 2022). Prior research has stressed that business students are future leaders (Kolb *et al.*, 2017) and presumed their ability to integrate social, environmental and economic considerations into their future decision-making, directly influencing the promotion of SDGs in their work-related context. This study fills the research gap by placing master’s students at the forefront in promoting sustainability and responsibility to achieve UN SDGs in the business school and work–life contexts as future decision makers.

## Literature review

### *Education for sustainable development in higher educational institutions*

Education is widely recognised as a key driver of sustainability and change. Specifically, the fourth SDG aims to ensure inclusive and equitable quality education, and to promote lifelong learning opportunities for all (UN, 2020). ESD extends beyond SDG4 (quality education). It refers to a learning process designed to equip individuals with the skills to address major global challenges. This holistic approach focuses on empowering learners to act responsibly in achieving environmental, economic and social goals for both current and future generations, while respecting cultural diversity (Lazarov and Semenescu, 2022).

HEIs, such as universities of applied sciences, are agents between science and society (Trechsel *et al.*, 2023) as they address economic, environmental and social dimensions of sustainability via their education, research, operations, community outreach and reporting (Gonzales-Torre and Suarez-Serrano, 2022). HEIs are locally rooted and globally connected, presenting substantial opportunities to contribute to SDGs. They do this by engaging with faculty and students, as well as their broader stakeholder community and alumni body

(Findler *et al.*, 2019) and by linking with their regional development (Leal Filho and Schwarz, 2008). Thus, HEIs, such as traditional academic universities and universities of applied sciences play various roles in their communities, not only educating professionals but also integrating them into the labour market through practical involvement in outreach, research and innovation activities. They also mobilise students for social intervention through fresh ideas and ESD projects (Fuchs *et al.*, 2023). Therefore, HEIs have a multifaceted mission that includes teaching, learning, research and social engagement. The successful integration of the SDGs into university education relies not only on effective teaching and learning guidelines but also on the implementation of policies and strategies involving both internal staff and external stakeholders (Leal Filho *et al.*, 2019a).

In this study, universities of applied sciences and academic universities can be examined in the context of ESD and SDGs, based on their societal mission. As Purcell *et al.* (2019, p. 1346) stated, “while comparison among universities is difficult, using the mission as a parameter is an established approach”. The focus of this study is not to compare universities, but rather to highlight certain characteristics of how ESD is implemented within the context of applied sciences and universities.

*Some contextual notes on implementation of education for sustainable development and sustainable development goals in universities of applied sciences and academic universities as higher educational institutions*

A broad spectrum of research emphasises that SD is perceived as a fourth mission for HEIs, given their contribution to sustainability transitions (Chankseliani and McCowan, 2021). According to research by Leal Filho and Schwarz (2008), universities of applied science structure and implement their sustainability actions differently, fulfilling their commitments based on their strategies, sustainability programmes, action plans and strategic strengths, all which form part of the sustainability transition. Notably, individual universities are at varying stages in their sustainability action (Puurula *et al.*, 2022). A recent cross-country study (Leal Filho *et al.*, 2023b) has shown that the current focus is on integrating the SDGs into the sustainability efforts of HEIs. One conclusion of this international study of 128 HEIs is the following: “[...] however, many of the sampled organizations confirmed that they consider sustainable development as a part of their institutional mission and as part of their vision and goals, many of them stated that the integration of the SDGs as part of their operations is not yet part of their regular routine” (Leal Filho *et al.*, 2023b, p. 573).

However, literature focusing on universities’ engagement with the SDGs’ is scarce (Leal Filho *et al.*, 2019a), and it is further limited when it comes to universities of applied sciences. There is little literature on the extent to which higher education institutions, such as universities of applied sciences, incorporate SDGs into their educational programmes (Lopez, 2022). In Finland, universities of applied sciences are committed to promoting sustainability through education by ensuring all graduates have at least a basic understanding of SD. Consequently, universities of applied sciences have pledged to incorporate education for SD into all bachelor’s degrees from 2022, and into all bachelor’s and master’s degrees from 2024 onwards (Arene, [The Rectors’ Conference of Finnish Universities of Applied Sciences], 2022).

Concerning this study, JAMK has, as part of its 2020-2030 strategy, committed to acting responsibly across all its activities, encompassing ecological, social, cultural and economic sustainability. JAMK is dedicated to the UN’s SDGs, with a particular focus on quality education (SDG4), decent work and economic growth (SDG8), sustainable industry, innovation and infrastructure (SDG9), climate action (SDG13) and partnership and cooperation (SDG17) (JAMK, [Jyväskylä University of Applied Sciences], 2023b). The value of this study lies in highlighting the role of SDGs in two master’s degree theses as a case

study of the efforts of a university of applied sciences school of business and its stakeholders to contribute responsibly to sustainability. Similarly, traditional academic universities in Finland, such as the University of Jyväskylä, are striving to achieve the UN's SDGs through their commitments to sustainability and responsibility. In its Annual Sustainability Report, SDGs3-4, SDGs7-9, SDGs10-15 and SDG17 were implemented and actioned. In the context of teaching, for example, SD studies are included in all degrees and continuous learning opportunities (JYU, [University of Jyväskylä], 2023).

The subject of SD is now a common feature in most university curricula, because knowledge on this topic is deemed essential for students (Leal Filho *et al.*, 2019b). However, the extent and method of teaching this subject vary significantly across different universities, and even within the same institution (Friman *et al.*, 2018). The curriculum of an HEI is a crucial tool for determining what is included in university courses and what students learn. It also serves to enhance students' skills and competences, as well as influence their attitudes and values (Friman *et al.*, 2018). Recently, Arene, [The Rectors' Conference of Finnish Universities of Applied Sciences] (2022) in Finland updated joint competences and established a national framework for students at universities of applied sciences, outlining the necessary competences for different fields of education, including SD. However, it remains the responsibility of each applied sciences university to incorporate these competences into their degree programme curricula. This study offers valuable insights for upcoming curriculum renewals as it relates to a case university of applied sciences school of business and its master's degree programmes.

Promoting sustainability in management education at HEIs is essential because future decision makers need to be able to respond effectively to global societal needs within organisations (Hueske *et al.*, 2022; Leal Filho *et al.*, 2019b). Based on prior literature on higher ESD, consider master's degree theses as learning spaces for achieving SDGs directly or indirectly in cooperation with firms, public organisations, and/or associations with which the HEIs are engaged (Winter *et al.*, 2015). As business school students come from different fields and industries, including the public sector, presumes their organisational contexts and work environments shaped their theses. Focusing on master's degree programmes, such as business administration (BA) (business and financial management) and hospitality management (tourism and hospitality management), helped the author identify how the SDGs were addressed in published master's degree theses conducted in varying work-related settings and how they contribute to knowledge of pursuing sustainability with stakeholders.

#### *Focusing on sustainable development goals and corporate social responsibility*

Theoretically, the goal of the SDGs (UN, 2015) is SD. In this study, the term SD is referred to a holistic approach as it links economic development, social inclusion and environmental sustainability (Sachs, 2015). By applying a theoretical lens and focusing on the SDGs (UN, 2015), the themes investigated in business school through master's degree theses published at the JAMK, school of business, from 2020 to 2022 were studied. The SDGs were applied as the main theory for review because they helped map themes and dimensions of SD and offered a holistic perspective on the material under review.

The Finland We Want by 2050 focuses on eight objectives for committing to SD including: equal prospects for well-being, a participatory society for citizens, sustainable work, sustainable local communities, a zero-carbon society, a resource-wise economy, life choices that respect nature's boundaries and decision-making that respects nature as one of the key tools in implementing Agenda 2030 for SD and its principles, and 17 objectives in Finland. To investigate how the business school succeeded in promoting the achievement of

Agenda 2030, SDGs featured in the theses using the framework of Finland's eight objectives committing to SD were also examined ([National report on the implementation of the Agenda for Sustainable Development Finland, 2016](#)).

Corporate social responsibility (CSR) was first established as a concept ([Carroll, 1999](#)) focusing on whether corporations should go beyond their own shareholders' value to support society's needs, or whether such effort was beyond corporations' responsibilities. CSR focuses on the environment, society, stakeholders, ethical behaviour and volunteering, whereas SD focuses on ethics, human rights, society, economy, environment and corporations ([Behringer and Szegedi, 2016](#)). The perspective of SDGs is far broader and more forward looking than that of individual corporations, and pursuing SDGs can make businesses both more socially responsible and sustainable, benefiting corporations directly and indirectly. Based on the triple bottom line theory of CSR, CSR is to consider a business model that embodies ethics by balancing economic interests, environmental needs and social expectations ([Shayan et al., 2022](#)).

This study focuses on 17 SDGs as a theoretical lens ([UN, 2015](#)) to map their appearance in published master's theses and sought to understand the literature on SD and CSR and their potential interconnectedness ([Arksey and O'Malley, 2005](#)). This study offers a new perspective on how the UN SDGs are featured in master's theses set in work–life contexts.

The research questions were as follows:

- Q1. How many SDGs appeared in the examined theses?
- Q2. How did the SDGs mentioned in the examined theses align with Finland's eight objectives committing to sustainable development?
- Q3. How did the dimensions of SD examined in these theses reflect the dimensions of CSR, if any?

## Materials and methods

### *Context and criteria for sampling*

The decision to select JAMK as an HEI was based on convenience sampling, with the aim of providing valuable information for educational development, particularly in refining curricula ([Patton, 2015](#)). A range of methods was used, adhering to a step-by-step research protocol, using various frameworks and applying specific sampling criteria, which are elaborated on below.

Several factors influenced the research strategy and methods chosen for this study, as well as the selection of Finnish language BA and tourism and hospitality management (THM) programmes as the study's focus group ([Patton, 2015](#)). Consequently, the colleague of the master's education department and the library information specialists at JAMK were consulted to agree on an appropriate sample for the study. The selected sample offered valuable insights for educational development, particularly in relation to upcoming curriculum renewals, because it also encompassed master's degree programmes.

This study primarily aimed to identify the representation of the UN's SDGs in master's theses within work–life contexts. A secondary focus was the availability of information on SD and CSR as essential knowledge related to SDGs within university settings. Consequently, BA and THM master's theses were selected to provide an overview of how sustainability and responsibility were conceptualised and implemented. This selection also aimed to illustrate how master's students applied their learned skills and competences on sustainability and responsibility within their work–life settings, because one objective of master's theses is to demonstrate student competences and their application in diverse work–life environments. The

data collected offered faculty members insight into real work–life problems addressed in the BA and THM master’s theses, thereby encouraging both the academic community and its stakeholders to participate in sustainability efforts and enhance contributions towards environmental, social and economic sustainability (Frizon and Eugenio, 2022). As such, the selection of master’s theses constituted a further convenience sample.

Master’s theses are often student-selected and tailored to the educational objectives of their degree programmes. Both SD and CSR are incorporated into BA and THM curricula, because knowledge of SD is crucial for both master’s programmes in the context of the responsible management (RM) teaching course, which adheres to the principles for RM education (PRME, 2023), a common practice in management education programmes. However, the RM course is only compulsory in THM degree studies and is optional in BA degree programmes. Recent examples of this include global research on master’s degree programmes (Lopez, 2022) and degree theses related to SDGs (Sánchez-Carracedo *et al.*, 2021).

This study was conducted a systemised literature review (Fink, 2005, *p.* 54) by applying elements of the descriptive review process (Xiao and Watson, 2019) to provide an overview of the master’s degree theses published during the review period at the JAMK, School of Business. To identify features of SD in theses conducted in work–life contexts, this study examined how the SDGs appeared in different sections of the master’s theses. The stepwise procedure is robust and repeatable and can be used to replicate this study (Borrego *et al.*, 2014).

#### *Selection of master’s degree theses*

Three criteria were used to select the master’s theses (Arksey and O’Malley, 2005). The theses had to have been accepted for publication after receiving a grade, which was confirmed by the Board of Master’s Thesis Committee members of the JAMK, accessible to all in the Theseus service (Theseus, [Theseus service], 2023) (most theses were written in Finnish, and only abstracts were written in English) and set in the context of higher education – as part of a master’s education programme at the JAMK, School of Business. Accordingly, 431 master’s theses published at the JAMK between 2020 and 2022 (until April 22 2022) were examined. Of these, 84 related to the main criteria (search string), SD and were published at the JAMK, school of business. They were accessed from the Theseus service open collection (Theseus, [Theseus service], 2023) between 2020 and 2022 (until 22 April 2022).

Theseus service search filters and search strings “\*” and Boolean logic via the connectors “OR” and “AND” (Fink, 2005), such as sustainable AND development\* OR climat\* AND sustainable\* AND food\*; sustainable\* AND tourism and keywords such as “sustainable development”, “sustainable wellbeing”, “responsible enterprise”, “sustainable responsibility”, “sustainable management”, “sustainable development”, “sustainability”, “corporate sustainability”, “corporate responsibility” were used. These keywords were searched in the abstract and subject line of the theses, individually and in combination. The date of each search, the Theseus service searched, the coverage of the theses for the Theseus service explored and the number of theses found were recorded. After conducting this search, 39 theses in the fields of BA, tourism and hospitality management were identified. After reading the full text of the 39 theses, eight were excluded as they were only slightly connected to the SD literature, creating a final sample of 31 theses. For quality assessment, an information specialist cross-checked the search protocol and arrived at the same results. The theses selection process followed the standard approach described in the Prisma guidelines (Page and Moher, 2017).

#### *Coding of theses*

The theses ( $n = 31$ ) were first read for a deeper understanding of the data under investigation. The theses’ key information based on the author’s interpretation was recorded

(Arksey and O' Malley, 2005). During the full-text analysis, five areas were identified: author name, publication year, title/topic and study purpose, methods used, findings and issues and themes found in the data; referring to the SDGs as mentioned. Subsequently, a broad conceptualisation of SDGs that comprises 17 different goals was used (Kubiszewski *et al.*, 2022) to interpret which themes in master's theses referred to the specific SDGs in the 31 theses (see Table 1a and Table 1b in Online Supplementary Material 1). Accordingly, the coding scheme also includes the number of observations.

The frequency of SDGs occurring in the 31 theses was summed to calculate their appearance in line with the definition of Finland's objectives for committing to SD (National report on the implementation of the 2030 - Agenda for Sustainable Development Finland, 2016). Data-driven content analysis, as used in management and entrepreneurship studies (Rousseau *et al.*, 2008), and theory-led lenses (SD as a theoretical lens) (UN, 2015), were used for content analysis. A coding scheme was developed based on the social, economic and environmental dimensions of the literature on SD. The appearance of these dimensions was identified in the study data (see Table 2 in Online Supplementary Material 2).

In the final phase of this study, the CSR model (Carroll, 1999) was applied to reflect on the content analysis (see Table 2 in Online Supplementary Material 2) by asking how the dimensions of SD examined in the theses reflected CSR dimensions as studied in specific business contexts (see Table 3 in Online Supplementary Material 3).

## Analysis and results

### *How many theses dealt with the sustainable development goals?*

Data gathered from the theses ( $n = 31$ ) were extracted into multiple Excel spreadsheets with basic publication information such as author name, publication year, title, research methods used, results/conclusions drawn, themes identified and SDGs mentioned (see Table 1a and Table 1b in Online Supplementary Material 1). Emergent coding, which uses data to be coded to create a coding scheme (Denzin, 1989), was conducted. SD dimensions were used as a lens for coding the themes identified in the theses (see Table 2 in Online Supplementary Material 2). Subsequently, the frequency counts of the theses referring to the SDGs were summed (Figure 1). SDGs are described and defined in Table 1c in Online Supplementary Material 1.

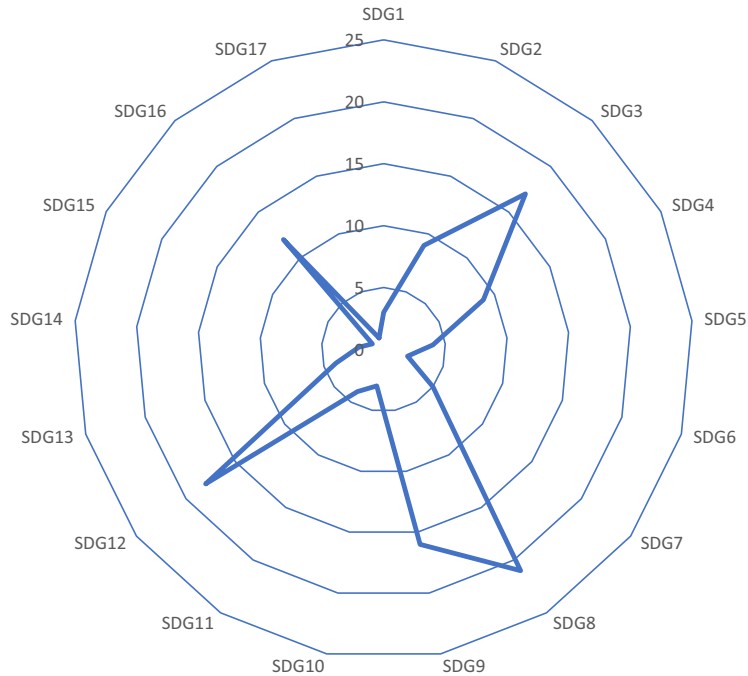
Figure 1 shows that SDG 8 "Decent Work and Economic Growth" ( $n = 21$ ) appeared most often, followed by SDG 9 "Industry, Innovation and Infrastructure" ( $n = 16$ ), SDG 12 "Responsible consumption and production" ( $n = 18$ ), SDG 3 "Good health and Well-being" ( $n = 17$ ) and SDG 16 "Peace, justice, and strong institutions" ( $n = 12$ ).

Each of the following were mentioned less than ten times: SDG 1 "No poverty" ( $n = 3$ ); SDG 2 "Zero Hunger" (9); SDG 4 "Quality Education" ( $n = 9$ ); SDG 5 "Gender Equality" ( $n = 4$ ); SDG 6 "Clean Water and Sanitation" ( $n = 2$ ); SDG 7 "Affordable and Clean Energy" ( $n = 7$ ); SDG 10 "Reduced Inequalities" ( $n = 3$ ); SDG 11 "Sustainable Cities and Communities" ( $n = 4$ ); SDG 13 "Climate action" ( $n = 4$ ); SDG 14 "Life below water" ( $n = 2$ ); SDG 15 "Life on Land" ( $n = 1$ ); SDG 17 "Partnerships for the Goals" ( $n = 1$ ). Figure S2 in Online Supplementary\_material\_4 reports a similar profile in the appearance of SDGs between BA ( $n = 5$ ) and THM ( $n = 26$ ) theses. The most significant difference was found in SDG16.

### *How were the sustainable development goals studied in the theses connected to Finland's eight objectives for committing to sustainable development?*

This study sought a deeper understanding of how the SDGs found in the theses were connected to Finland's eight objectives for committing to SD (National report on the implementation of the 2030 Agenda for Sustainable Development Finland (2016, p. 28) Figure 2 shows how Finland constructed these objectives to achieve the 17 SDGs.

Total number of theses in which the SDGs were mentioned



**Figure 1.**  
Total frequencies of  
theses in which the  
SDGs were  
mentioned

Source: Author's own creation

In [Figure 3](#), the appearance count of SDGs found in the theses were summed based on the operationalisation of the eight objectives of society's commitment as described in [Figure 2](#).

Notably, one SDG might be counted in more than one of the eight objectives.

The frequencies of the SDGs mentioned in the theses were added and calculated according to the framework of Finland's objectives committing to SD to determine how they were anchored to the eight objectives. As seen from [Figure 3](#), some SDGs were mentioned multiple times in Finland's objectives. For example, SDG 8 ("Decent Work and Economic Growth") was mentioned in equal prospects for well-being, sustainable employment, a resource-wise economy and lifestyles respectful of the carrying capacity of nature.

The highest appearance counts of SDGs in theses that constructed Finland's objectives for committing to SD were: "Equal prospects for well-being" ( $n = 79$ ), "Sustainable employment" ( $n = 76$ ) and "Lifestyles respectful of the carrying capacity of nature" ( $n = 64$ ). Although "Resource-wise economy" ( $n = 53$ ), "Decision-making respectful of nature" ( $n = 51$ ) and "Sustainable society and local communities" ( $n = 41$ ) performed well, they had significantly lower counts than did the first three objectives. Objectives such as "A carbon-neutral society" ( $n = 36$ ) and "A participatory society for citizens" ( $n = 24$ ) scored weakly in our data.

It was interesting to explore in depth which of the SDGs appeared most frequently in the objectives "Equal prospects for well-being" ( $n = 79$ ), "Sustainable employment" ( $n = 76$ ) and "Lifestyles respectful of the carrying capacity of nature" ( $n = 64$ ). Therefore, the data of (see [Table 1a](#) and [Table 1b](#) in [Online Supplementary Material 1](#)) total frequencies of SDGs mentioned in the theses were revisited and the following was found:

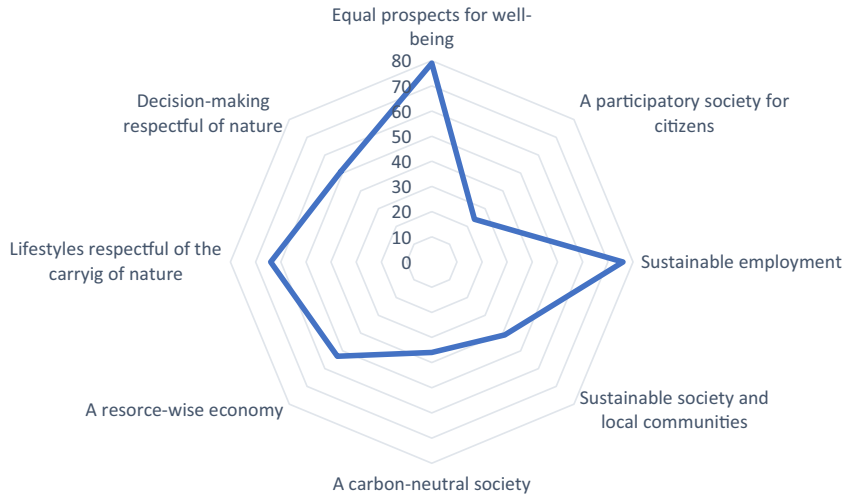




**Source:** National report on the implementation of the 2030 Agenda for Sustainable Development Finland 2016, p. 28

**Figure 2.**  
Finland's  
implementation of the  
SDGs

### How SDGs found in theses appeared in Finland's Objectives committing to SD



**Figure 3.** SDGs found in theses anchored to Finland's objectives committing to sustainable development

**Source:** Author's own creation

- *Equal prospects for well-being:* Five of the nine SDGs appeared most frequently, such as SDG 4 ( $n = 9$ ), SDG 2 ( $n = 9$ ), SDG 3 ( $n = 15$ ), SDG 8 ( $n = 21$ ) and SDG 16 ( $n = 12$ ).
- *Sustainable employment:* Covered six SDGs of which five appeared most frequently, such as SDG 8 ( $n = 21$ ), SDG 4 ( $n = 9$ ), SDG 9 ( $n = 16$ ), SDG 12 ( $n = 18$ ) and SDG 16 ( $n = 12$ ).
- *Lifestyles respectful of the carrying capacity of nature:* Covered five SDGs of which four appeared most frequently, such as SDG 8 ( $n = 21$ ), SDG 4 ( $n = 9$ ), SDG 9 ( $n = 16$ ) and SDG 12 ( $n = 18$ ).

Based on the examination of these three Objectives, SDG8, SDG9 and SDG12 were the most frequently mentioned.

#### *How do the dimensions of sustainable development examined in the theses' themes reflect the five dimensions of corporate social responsibility?*

The CSR model was used to revisit the content analysis. The aim was to find out how the social, economic and ecological dimensions in the theses' themes reflect the CSR dimensions as they were examined in the contexts of the theses. Table 3 (see Online Supplementary Material 3) shows that social, economic and ecological dimensions of SD reflect four out of the five dimensions of CSR.

SD reflects *social responsibility*, such as sustainable well-being and livelihood of citizens and employees, but also fair recruitment process as well as improving employment and responding to labour shortage. It also includes enhancing good governance and responsible communication within and between people, businesses and society. *The economic and stakeholder dimensions* shed light on "responsibility" and "resilience" perspectives implying

context-specific issues, such as firms' need to develop their businesses and industries to discover new business directions for survival and growth. *Environmental responsibility* paves the way for globally prominent issues, such as taking care of ecosystem functionality, trying to stop the reduction of biodiversity and destruction of ecosystem services by continuously enhancing ecosystem thinking in the service industry and within its environment. Volunteerism did not appear in this analysis in any manner. This may have been the result of data misinterpretation, a fault in data gathering or because the theses' themes were not related to volunteerism.

## Discussion

### *How many theses dealt with the sustainable development goals?*

Students of HEIs are powerful stakeholders as they transform their learning through their master's theses. Considering the impact of universities on fostering SD (Findler *et al.*, 2019; Leal Filho, 2011), this study contributes to commitments to integrate SD in master's education studies in case business school (Kolb *et al.*, 2017) by assessing master's students' SD competencies delivered via theses contexts (Dias Galleli *et al.*, 2022; Talley and Hull, 2023), and benefiting from CSR and SDG tools and frameworks in master's theses.

Only one thesis (Kauppi, 2021, see Table 1a in Online Supplementary Material 1) studied SD as a phenomenon and focused on all 17 SDGs in the city context. Furthermore, this study revealed that SDG 8 "Decent Work and Economic Growth", SDG 12 "Responsible Consumption and Production" and SDG 3 "Good Health and Well-Being" appeared more often in theses reflecting social and economic dimensions of sustainability. Considering phenomenon through the contextual lens, as Watson (2013) suggests, more opportunities to observe the sustainability phenomenon in a new way considering theses studied were given in their specific contexts, such as the food industry, tourism sector, cleaning sector, nursing, hotel and restaurants, education exportation, catering, banking and investing, supply chains, network, services cities, municipalities and associations.

The SDGs featured in BA and THM degree programmes master's theses contribute to HEIs, because their effect on SD, in terms of educational and research activities and key stakeholders such as students, is evident in the diverse contexts explored in these theses. This provides academia with valuable insights into the "lessons learned" about sustainability and SDGs in the context of management education at a university of applied sciences school of business (Figueiró and Raufflet, 2015).

When comparing the results with global studies, it was found that SDG11 and SDG13 are most frequently addressed in higher education worldwide (Leal Filho *et al.*, 2019a). While some authors have found that SDG12 is explicitly covered in only one MOOC in Nordic countries (Hueske *et al.*, 2022), studies of Portuguese public HEIs and a private German business school show that SDG12 is a central focus (Aleixo *et al.*, 2020). Furthermore, a Canadian study emphasised the importance of SDG13 (Brugmann *et al.*, 2019).

### *How are the sustainable development goals mentioned in the theses connected to Finland's eight objectives for committing to sustainable development?*

The results contribute to the ongoing sustainability and responsibility debate highlighting some evidence of JAMK and its business school's engagement in promoting SD with its stakeholders to support the achievement of Agenda 2030 (Kohl *et al.*, 2022; Leal Filho *et al.*, 2018). Countries are committed to achieving the goals and targets under the SDGs in their individual contexts (Leal Filho *et al.*, 2023b). At the national level, the study investigated how the business school succeeded in promoting the achievement of Agenda 2030 by examining SDGs mentioned in theses using the framework of Finland's eight objectives for committing to

SD (National report on the implementation of the 2030 Agenda for Sustainable Development Finland, 2016).

The results show that JAMK and its business school are both working towards achieving Finland's commitment to Agenda 2030 as well as pursuing ESD and quality education. Considering the national framework used, SDG 8 appeared multiple times. SDGs should be considered indispensable pieces in a large and complex puzzle (Rieckmann, 2018) reflecting Finnish national policy choices for promoting the achievement of Agenda 2030.

By fulfilling its mission, the university of applied science enhances research on sustainable strategies in specific HEIs. This contribution is notable at a national level (Farinha *et al.*, 2019; Ramiso *et al.*, 2019) and extends to delivering knowledge and innovation in local and global contexts (Leal Filho and Schwarz, 2008). The acquisition of sustainable competences in training professionals, particularly in management education programmes, aligns with the SDGs featured in this study, effectively responding to the needs of the business and society (Trechsel *et al.*, 2023).

This study revealed that the execution of its mission by the school of business at JAMK significantly affects SD by offering substantial opportunities to deliver SDGs within a broader community of stakeholders and alumni, particularly in the context of many reviewed master's theses environments (Findler *et al.*, 2019). This study also showed that there are different ways of integrating and implementing sustainability at HEIs.

*How do the sustainable development dimensions in the theses reflect the corporate social responsibility dimensions?*

This study suggests that SD and CSR are overlapping and complementary regarding the business contexts of the studied theses. Firms need to function in a manner responsive and sensitive to the needs of their communities. A surprising finding was that voluntary actions, as they are understood in the literature, did not appear as such in this study, although it can be argued that they were intertwined with other dimensions.

This study proposes that by integrating PRME principles (PRME, 2023) and sustainable competences more deeply into the management education curricula at the school of business, future students, such as those in BA and THM, can be better equipped and motivated as future decision makers within their organisations to address global societal needs. This can further advance SD transitions (Hueske *et al.*, 2022), whether in the context of master's theses or workplace settings.

## Conclusion

This study has revealed how SDGs were featured in master's theses' contexts as reflecting various industries, such as food, hospitality and tourism, and their corporate contributions to SD. As the findings show, only one thesis studied SD as a phenomenon and focused on all 17 SDGs in the city context. The findings of this study revealed that SD and CSR reflected in the theses' contexts were complementary and overlapped. This makes sense as it is widely known that SDGs are holistic, interconnected and help corporations achieve CSR goals.

Finland's eight objectives for committing to SDGs offered a framework to investigate how the SDGs found in the theses appeared in the attainment of the SDGs for Agenda 2030, and how JAMK and its business school have succeeded in working towards achieving Agenda 2030. However, more concrete initiatives, engagement and encouragement are needed to promote SD curriculum in master's degree business programmes.

This study offers an overview for management education of work-life problems addressed in the BA and THM master's theses. It encourages both the academic community

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and its various stakeholders to participate in sustainability efforts, thereby enhancing contributions towards environmental, social and economic sustainability.

### **Limitations**

This study is not without limitations. This study was limited to the theses published at one university of applied sciences and its business school. The sample is small, and the geographical limitation may cause bias even though students come from all over the country. As master's theses are not peer-reviewed, the quality cannot be validated. Moreover, focusing only on theses from the business school may not provide a generalisable sample regarding the representation of SD in published master theses. This study was conducted by a single author, who consulted numerous experts during the research process. However, the research may still exhibit bias, owing to the author's influence on planning and conducting the study, particularly considering the use of a convenience sampling strategy.

A significant limitation of this study relates to the variation in chosen topics for master's theses between BA and tourism and hospitality management (THM) degree programmes, particularly concerning CSR and ESG reporting. This variation may have influenced the number of SDGs featured in some theses studied here, and consequently, the study's results.

Moreover, students independently select their topics for their master's theses. The diversity of these topics can be viewed as a strength, because it allows students to apply their skills to their professional contexts, rather than being directed to write their theses on specific topics or from perspectives of responsibility and sustainability determined by the degree programme coordinators or thesis supervisors.

The topics of BA theses, which are often studied in the context of banks, investors, cities and international supply chains, may reflect more SD strategies and CSR than those in THM theses. THM theses tend to focus more on industries such as hotels, restaurants, cleaning services, school catering services, travel agencies, hospital catering and cleaning services, municipalities, associations and local educational institutions. The companies examined in these student theses may report on their responsibility and sustainability in different ways, depending on their governance structures and stakeholder interests. This could be reflected in their reporting implementation (i.e. what they have done for sustainability) or their reporting performance (i.e. focusing on financials), as dictated by national laws and government regulations.

### **Implications for practice and further research**

This study showed how insights from the literature on SD, HEIs and theses can be drawn out using different frameworks, models and contexts. Most master's theses reviewed used qualitative methods (thematic interviews, observation, documentary text, company reports) and mixed methods approaches but some applied development methods. The integration of SD in educational programmes is promising given its contextual and work-life relevance as it combines social, economic, ecological, historical and cultural perspectives.

Participation in national and international networks and societies presents a significant opportunity for faculty members. As active contributors, they can influence policy-making by developing and innovating tools, programmes, follow-ups and frameworks that cater to educational objectives and the needs of stakeholders.

The suggestions outlined here necessitate responsible and active implementation by all participants, particularly at the university level. While strategic planning is beneficial, the presence of responsible governing structures and effective management is even more critical for successful implementation. Understanding how each of us can action these tasks and

achieve them is crucial, notwithstanding the potential discouragement from resource constraints and accountability issues.

In conclusion, this study recommends future research to more systematically examine how master's degree students self-assess the competences gained through their work-related master's thesis projects. It also suggests investigating how successfully universities of applied sciences have implemented their action plans in line with their mission and selected SDGs, as part of their commitment to the Agenda 2030 government commitments. Additionally, it proposes conducting cross-country studies, not for the purpose of comparing results *per se*, but to share best practices in teaching methods as it relates to competences for SDGs among HEIs and influence policymakers' sustainability efforts towards SDGs.

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#### **Supplementary material**

The supplementary material for this article can be found online.

#### **About the author**

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