



# **Strategic Leadership for Developing and Scaling Equitable Educational Products in Post-Secondary Education**

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## **ABSTRACT**

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The study aimed to investigate how leadership in post-secondary educational institutions impacts the development and scaling of equitable educational products. The research resulted in a model for strategic leaders to develop and scale equity-driven educational initiatives.

A qualitative method research was conducted using the data collected from interviews. The interview questions were developed based on the research aims and research questions. Participants included leaders and decision-makers from a higher institution who work with equitable educational projects. The theoretical chapter examined various theories related to the study's main concepts: strategic leadership, equity, and scalability. A combination of theories and frameworks was integrated to develop a comprehensive theoretical framework.

The results were analysed through the theoretical framework lens. The findings indicate that effective leadership and management practices in equity-driven educational institutions are fostered by inclusive, agile, and community-oriented leadership. Equity and scalability, even when discussed implicitly, are foundational to leadership meetings and decision-making processes. Digitalization emerged as a tool for scaling equitable solutions. It was indicated that financial sustainability paired with cultural challenges create barriers for developing and scaling equity-driven projects. Notably, local and global partnerships foster community development, openness and collaboration.

In conclusion, this research offers valuable insights for educational leaders on implementing impactful product development and scaling strategies. The recommendations are presented as a practical model to guide leaders in strategic decision-making. Future research is encouraged to further explore the impact of strategic leadership on the development and scaling of equitable educational products.

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Key words: strategy, leadership, educational product, equity, scalability, post-secondary education, higher education.

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**GLOSSARY or ABBREVIATIONS AND TERMS (choose one or other)**

TAMK	Tampere University of Applied Sciences
HE	Higher Education
HEIs	Higher Education Institutions
VUCA	Volatile, Uncertain, Complex, and Ambiguous
ESC	Education Scalability Checklist
AI	Artificial Intelligence
DEI	Diversity, Equity and Inclusion
ISAs	Income share agreements

## 1 INTRODUCTION

### 1.1 Research topic

This study aims to explore strategic leadership approaches that foster growth and scalability of equity-focused educational products in post-secondary education. In aspiration to reach equitable education, educational institutions often create equity-driven products which provide value to individuals and society as a whole. However, developing these products and scaling them is often found to be challenging. Leadership teams within educational institutions are the key drivers behind such initiatives as they are decision-makers in implementing various strategies that define the project's future.

In this study, equity-driven educational products refer to a variety of educational materials, including programs, courses, and resources, that are designed to be accessible and beneficial to all students, regardless of their financial situation, cultural background, or other personal circumstances. Scalability can play a crucial role in deepening the long-term impact of educational products. This thesis hypothesizes that certain strategic leadership approaches within educational institutions can enhance both the development and scalability of equitable educational products. As a case study, this thesis examines its commissioner CODE University of Applied Sciences' equity-driven project 'Hackathon'. Interviewing CODE's leadership team provides valuable insights into their views and approaches towards equitable product development and scalability.

Additionally, this report proposes a model of strategic leadership recommendations to guide the development and scaling of equity-driven educational products. This model can be used by any educational organization that aims to create equitable education. The literature review examines the concepts of strategic leadership, equitable educational products, and their scalability. It highlights the ambiguity of the above terms in the educational context and encourages readers to clarify and re-define them.

After analysing the methodological approach, the empirical part of the study explores the findings from interviews with CODE's leadership team. In conjunction with the theoretical framework, the interview results inform the design of the leadership model presented in this thesis.

## 1.2 Research questions

This report examines how educational leadership can support the development and scaling of equitable educational products in post-secondary education, addressing the growing needs for fair and inclusive education.

The objectives of this thesis are as follows:

- To explore strategic leadership approaches and their impact on developing and scaling equitable educational products.
- To understand how explicitly leadership teams focus on equity and scalability.
- To design a model for enables educational leaders to effectively plan and assess their leadership strategies, with a focus on projecting the future development of equity-driven educational products.

Therefore, the main research questions investigated in this thesis are:

- What is strategic leadership in the framework of equitable educational product development and scalability?
- How explicit are leadership discussions on equity and scalability?
- What strategic leadership model can support educational leaders in developing and scaling equitable educational products?

## 1.3 Research approach

This research employs a qualitative method, which allows for the exploration of phenomena while remaining open to new findings. A one-point-in-time approach is utilized, with each participant undergoing a single interview (Patton 2015, 255). Semi-structured interviews provide in-depth data for thematic analysis and conclusions, contributing to the development of the strategic leadership model development that this thesis is aimed to establish. Interview questions are designed based on the study's research aims, literature review and the theoretical framework chosen for this study. The key participants in this research are the leadership team at CODE University of Applied Sciences, selected for their equity-driven mindset and practices.

## 1.4 Case background

Recent global developments, including rapid digitalization, the COVID-19 pandemic, and the ongoing climate and environmental crises, have created significant challenges for the education sector, exacerbating existing gaps and inequalities (OECD, 2023). Thus, the topic of equity has taken a key role in education for all stakeholders (Sahlberg & Cobbold 2021). Leadership teams in educational institutions play a crucial role in creating and shaping the future of equitable educational. Effective leadership strategies are essential for advancing educational equity and ensuring access to education for all.

Developing equitable education leads to systemic change and improves education overall (Sahlberg 2021, 12-17). For systemic change, scalability strategies must be developed and implemented (Westley, Antadze, Riddell, Robinson, & Geobey 2014). Therefore, this study investigates strategic leadership in the context of equitable educational products. It further examines how certain strategic approaches can effectively scale equitable educational products, leading to broader and deeper systemic change.

The case study for this thesis originates from the CODE University of Applied Sciences (hereafter CODE). CODE's leadership strategies towards equitable product development and scalability are explored in this study. Established in 2017 in Berlin, Germany, CODE is a private, state-recognized university for digital product development. The concepts of project-based learning, curiosity exploration, defining one's own learning plan, and tackling real-world problems are at the core of CODE (CODE University of Applied Sciences n.d.). CODE declares that equity and internationalism are university's strong values. Therefore, CODE developed certain approaches to make its services accessible to a wide range of students from around the globe. Among these approaches are a range of scholarship programs and a deferred payment system that allows students to commence their studies without immediate financial burden, requiring payment only after graduation and subsequent employment. Additionally, CODE implemented designed to assist migrant pro professionals in securing internship placements in Germany.

The case study chosen for the purpose of this thesis is CODE's Hackathon which runs as Code+Design initiative. 'A multi-day hackathon' runs on monthly basis and is a fully funded camp to promote youth talent in digital design (Code+design n.d.). Hackathons started at the very beginning of CODE establishment in 2017 and continues to operate on regular basis. Students from all over the country are invited to participate in two-three days camps. with all expenses covered by CODE. CODE strives for engaging participants from various backgrounds to establish equitable access and a balanced student attendance. This case study was selected because it exemplifies the feasibility and necessity of fostering equitable education by creating a more equitable education by engaging students from diverse backgrounds.

According to correspondence with the organizers, the hackathons have been held in many cities around Germany. It takes place four times a year with attendance ranging from 20 to 100 students per time. More than 49 camps have been organized and held over the years, reaching more than 2500 overall participants. While the official name of the event is *CODE+design camp*, organizers and participants use the terms camps, *CODE+design initiative* (*CODE+design* in short) or *Hackathons*. For clarity purposes, the term *Hackathon* is used throughout this study.

## 2 THEORETICAL FRAMEWORK

Literature review is a compilation of relevant theories on the topic of this study. Reviewing, evaluating and analysing various theories lead to a clear understanding of practices in the field of interest. Additionally, literature review provides the basis for the theoretical framework and guides the study throughout the process of data collection and analysis, defining methodological approach.

This study's key concepts, *strategic leadership*, *equity in education* and *scalability in education*, and relevant theories are reviewed and discussed in this chapter. Notably, due to the multi-conceptual nature of this study, a limited number of prior research was identified. Therefore, the emphasis is put on reviewing various theories. The final synthesis serves as foundation to constructing the theoretical framework for this thesis.

### 2.1 Literature review

#### 2.1.1 Strategic leadership in education

Strategic leadership is essential for an educational institution's successful development (Davies & Davies 2006, 121). Although extensive research on strategic leadership is available, it has received relatively little focus within the context of educational leadership (Carvalho, Cabral, Verdasca & Alves 2021, 1).

Strategy and strategic leadership are viewed as a decision-making and a solution-seeking process in educational organizations (Eacott 2012, 4–5). Mintzberg (1994, 14) emphasizes that implementation makes strategies valuable. Moreover, Eacott (2008, 356) posits that strategy is a leadership act of selecting a course of actions within a specific setting and its implementation through management techniques.

Amidst various types and forms of leadership, strategic leadership does not claim to be a new separate type. Instead, strategic leadership is an essential part of any form of leadership (Davies & Davies 2006, 122).

Strategic leadership can vary in its focus, with some styles concentrating decision-making power in the hands of a single leader or a designated leadership team, while others adhere to a more distributed leadership framework that shares decision-making responsibilities across a wider group. According to Vera & Crossan (2004, 223), strategic leadership is about people at the top of the organization. Eacott (2012, 106) suggests that leaders are a selected group of people who have reached the highest ranks in an organization. Hidayah, Sule, Wirasasmita & Padmadisastra (2015, 1165) promote a broader view and posit a strategic leader as a visionary who makes transformations and utilizes resources, either at a top hierarchical position or across the whole organization.

Carvalho et al. (2021, 5) posit strategic leadership as a crucial aspect of leadership practices. Strategic leaders are united by a set of common features. According to Davies \* (2004, 14), strategic leaders possess a comprehensive understanding of their organization's current position and maintain a clear vision of the actions necessary to foster a more promising future, inspiring and equipping others to work towards the organization's vision. To accomplish their goals, strategic leaders strive for building their organization's strengths through their teams' active participation and growth (Davies \* 2004, 14).

Communication and dialogue are essential in the process of strategic leadership. Dialogue fosters participation in common meaning creation and contributes to professional growth of individuals and teams, as well as to effective change management practices (Interlead 2019). Interlead (2019) highlights that a dialogue is not a discussion, but a non-evaluative process resulting in team increased advocacy and engagement, among other benefits. Additionally, a dialogical approach in organizational culture fosters relationships of openness and trust (Interlead 2019). Doyle & Brady (2018, 309) assert that dialogue is a natural outcome of leadership for change and innovation, creating open space to find answers to emerging situations and questions. However, they emphasize that the quest is not for solutions but for new potential opportunities (Doyle & Brady 2018, 309). Monechi, Ruiz-Serrano, Tria & Loreto (2017, 3) highlight the 'adjacent possible' approach as a dynamic phenomenon which explores the area of the unknown located right next to the current position. Doyle & Brady (2018, 309) argue that a dialogical approach is essential in shaping the future,

emphasizing that an alternative or emergent leadership paradigm is a particularly suitable framework for this purpose.

Another common characteristic among strategic leaders is their adoption of a double-track method. This approach illustrates how strategy integrates leadership and management into a cohesive practice, highlighting the importance of both components in the strategic leadership processes (Davies \* 2004, 14). Doyle & Brady (2018) reinforce that leadership and management is a part of one whole leadership process when talking about strategy in higher educational institutions (HEIs).

Strategic leadership includes a range of processes. Davies \* (2004, 15) posits that strategic leadership conveys idea development, staff engagement and growth, communication, and execution processes. According to Carvalho et al. (2021, 2), strategic leadership as a combination of being a proactive change manager, planner and action-taker, as well as a strategic processes evaluator. Simultaneously, Hidayah et al. (2015, 1166) states that strategic leadership actions include vision and goal setting, leveraging and sustaining competencies, managing human resources, supporting organizational culture, upholding ethical standards and practicing a balanced approach to organizational oversight.

It is noteworthy that certain strategic leadership practices are consistently highlighted across the literature, while others appear only sporadically in specific studies (table 1). The same colour themes present a link between theories. As such, Davis's (2004) *staff engagement and growth* corresponds with Hidayah et al.'s (2015) *competences management and human assets management*. Similarly, Davis's (2004) *idea development* is aligned with Hidayah et al.'s (2015) *vision & goals* and Carvalho et al.'s (2021) *planner*. In contrast, *communication*, *ethical practices*, *organizational culture maintenance*, and *proactive change management* stand out as singular-case characteristics.

However, these practices warrant greater emphasis, given the unique characteristics of the educational field. Cooley, Seghers & Jenny (2021, 1) posit education as inherently unpredictable, people-focused, and intricate, underscoring the importance of these strategic leadership approaches. According

to Doyle & Brady (2018, 311), HEIs function in a complex and rapidly changing environment, namely, in VUCA (volatile, uncertain, complex, and ambiguous) world (Baran & Woznyj's 2021). Although these topics are not the primary focus of this study, they offer valuable insights into the topic of strategic leadership.

TABLE 1. Strategic leadership actions and processes according to Davies (2004), Carvalho et al. (2021) and Hidayah et al. (2015).

<b>Author &amp; Practice</b>	<b>Davies (2004)</b>	<b>Hidayah et al. (2015)</b>	<b>Carvalho et al. (2021)</b>
<b>Setting goals and plans</b>	Idea development	Vision & goals	Planner
<b>Team development and growth</b>	Staff engagement & growth	Competences management  Human assets management	–
<b>Evaluation practices</b>	–	Balanced approach to control	Evaluator
<b>Assertiveness</b>	Execution	–	Action taker
<b>Practices not represented widely in given literature</b>	<b>Communication</b>	<b>Ethical practices</b>  <b>Organizational culture maintenance</b>	<b>Proactive change manager</b>

While examining a leader's actions is important, it is equally necessary to explore the broader strategic context, including cultural, political and social dimensions (Carvalho et al. 2021, 5). In the recent years HEIs have moved towards a more self-accountable and organizational form of existence (Doyle & Brady 2018, 305). This approach has several advantages, such as educational institutions' autonomy to find relevant strategies for goals achievement (Carvalho et al. 2021, 8). However, several challenges accompany this approach. Evidence from critical literature shows that this rational approach leads to fostering managerialism,

academic capitalism and marketisation of higher education (Doyle & Brady 2018, 306).

In the chase for efficiency and short-term success, qualifications and learning outcomes have been prioritized in education (Biesta 2021, 8). In this respect education becomes a one-dimensional concept and results in increased pressure on students and educational institutions (Biesta 2015, 78). Moreover, it negatively impacts academic well-being and educational quality (Doyle & Brady 2018, 306).

Furthermore, Davies & Davies (2006, 136) assert that the demand to produce immediate outcomes in education heightens the necessity to construct strategic pathways that lead to longevity and prosperity of educational institutions. It is insufficient to merely develop educational institutions as they currently exist; ensuring the sustainability of these developments through strategic planning is essential (Davies \* 2004, 26).

Given the limitations of managerialism, the constantly evolving educational landscape, and the need for sustainable development in educational institutions, a more dynamic approach to leadership is recommended. Doyle & Brady (2018, 306) offer an alternative emergent leadership paradigm as an evolving process of development in educational institutions. As mentioned above, the emergent paradigm supports dialogical communication style (Doyle & Brady 2018, 309) and shifts focus from a leader's individual capacity to the organization's culture and dynamics, forming the institutional leadership culture. This leadership approach contrasts with a more traditional, rational paradigm. As Table 2 indicates, rational perspective is focused on corporate goals and image, having strategy in mind but not necessarily applying it (Doyle & Brady 2018, 312). Doyle & Brady 2018, 312) assert that emergent perspective offers a hands-on internally driven approach with the focus on continuous development and co-created change through diffused leadership, as well as individual and collective evolution.

TABLE 2. Rational and emergent leadership paradigms (Doyle & Brady 2018, 312, edited).

<b>Key points</b>	<b>Rational/planned perspective</b>	<b>Emergent perspective</b>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>• Strategy as intent</li> </ul>	<ul style="list-style-type: none"> <li>• Strategy as practice</li> </ul>
<b>Focus</b>	1 Corporate goals, reputation	2 Individual and collective identity evolution
<b>Leadership style</b>	<ul style="list-style-type: none"> <li>• Selected few leaders</li> </ul>	<ul style="list-style-type: none"> <li>• Diffused leadership</li> </ul>
<b>Leadership practices</b>	<ul style="list-style-type: none"> <li>• Delivery of pre-set strategic goals</li> <li>• Leader character is important</li> <li>• Exclusive leadership team development</li> </ul>	<ul style="list-style-type: none"> <li>• Change co-creation</li> <li>• Leadership processes are important</li> <li>• Leadership capacity development across the institution</li> </ul>

Emergent leadership approach is rooted in a constant change process of individuals, teams and the institution itself. It is a dynamic process with leadership distributed across the whole institution and team members evolving through everyday processes rather than a certain pre-determined training or other forms of professional development. In contrast to a rational paradigm, emergent leadership aligns with the complex and ever-changing nature of HEIs.

A study of Schophuizen, Kelly, Utama, Specht & Kalz (2023) examined how HEIs leaders in four Dutch universities made strategic choices for internal innovation development. The study shows various approaches to leading a higher educational institution and conclude that strategies fostering a unified commitment to responsibility, coupled with readiness for change, drive improvement and support organizations in achieving their goals (Schophuizen et al. 2023, 486). Table 3 indicates that in the case of university A, a balanced leadership approach to control resulted in co-creation of institutional strategy, as well as in emergence of an inside community with ambassadorship, simultaneously fostering outside collaboration. University B established iterative strategic practices, integrating all stakeholders from the initial stage. Leaders at University C set clear boundaries as the main decision-makers for any inside initiatives. University D's leadership facilitation style encourages innovation and project development at all levels, benefiting the whole organization.

TABLE 3. Case study in HEIs in the Netherlands (Schophuizen et al. 2023, 483–487).

University	Findings
University A	A combination of top-down and bottom-up approaches resulted in all stakeholders within the organization constructing the institution's strategy. Moreover, it led to the development of a strong community that enhanced collectivism and cooperation within and outside of the organization. The role of ambassadors emerged, rooted in the existing self-driven motivation, reaching out to various partners locally and abroad.
University B	An iterative process of strategy creation where levels of autonomy were adapted based on the stage. All stakeholders inside an organization were involved from an early stage, allowing for a smooth embrace of new practices.
University C	Leadership creates a strategic framework which is strongly embedded in the organizational culture as a boundary-keeper for the organization's clear focus. While the staff are free to create new ideas, scaling up is a purely top-down decision and process. Notably, the leaders consider the small size of their institution a barrier for bottom-up changes.
University D	A 'top-down facilitation' style of strategic leadership prevails, supporting the university staff in creation and development on all levels. This approach allows for all stakeholders' engagement in various innovations and projects, involves outside stakeholders and ultimately benefits development of the organization.

To summarize, the reviewed literature characterizes strategic leadership as an amalgamation of leadership diffusion levels, the attributes and actions of strategic leaders, the integration of leadership and management processes, and the broader contextual factors in which it operates. While there are many aspects of strategic leadership, the key points are highlighted in Figure 1.

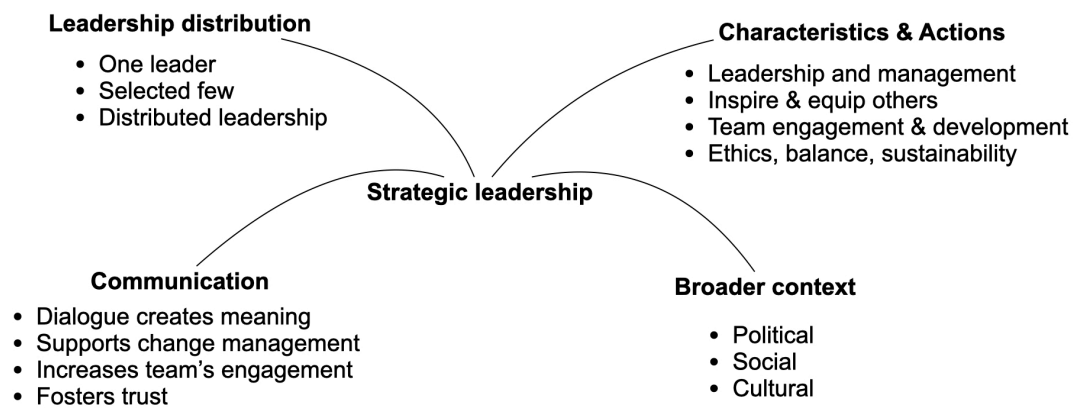


FIGURE1. Strategic leadership literature review summary.

### 2.1.2 Equity in education

Education is a basic human right (United Nations n.d.; Chien & Huebler 2018). Willems (2011, 1306) presents equity as a 'philosophical perspective' of fundamental human rights. Equitable education has become the main objective of educational systems (Simon, Malgorzata & Beatriz 2007, 3). Sahlberg (2021, 13) states that increased inequalities in education make the education system less equitable. Simon et al. (2007, 3) see the need to address equity on the education system level, as well as on the level of educational practices and resources. According to Wang (2023), higher education systems should always aim for achieving equity as it is one of its core policy pillars, alongside access and quality.

To achieve a high-quality education system Sahlberg (2022, 5) suggests that smarter investments in equity should be made. A lot is at stake when equity is not prioritized. Equity in education aims to ensure that everyone can acquire a broad range of skills and achieve personal fulfillment, while being able to overcome challenges that might be related to personal circumstances and backgrounds (Simon et al. 2007, 26). Equity is linked to all aspects of students' experience in education, from participation to completion (Willems 2010).

Secada (1994, 29) emphasizes that equity is a constantly evolving concept. Gause (2011, 9) states that distributing resources based on people's needs, regardless of their demographic differences or variations in personal circumstances, helps to achieve equity. Achieving equity necessitates identifying and prioritizing individuals who require additional support to attain outcomes comparable to others, which may result in different treatment in the short term (Willems 2010). This paradoxical perspective reinforces the idea that an unequal approach based on need is, in fact, an embodiment of equity.

Defining equity in education is a challenging task as it is a qualitative notion (Secada 1989, 23) that has rarely been precisely described (Sahlberg 2022, 5). A simple version of definition of equity, according to Ainscow et al. (2012, 2), is fairness. However, it is hard to define what *fair* is. Ainscow et al. (2012, 2) note that when discussions of equity often intersect with other concepts, such as inclusion and gender equality, among others. Secada (1994, 31) highlights that the human pursuit of fairness serves as a motivator in addressing issues of equity.

Unterhalter (2009) remarks that *equity* and *equality* concepts are interchangeably used in the academic literature, with *equity* being perceived as equality put into action. The two terms are not contrasted but are rather merged into the notion of achieving 'fairness in distribution' (Unterhalter 2009, 416). Secada (1989, 23) opposes such a merge, stating that the two concepts are different in nature, as equality is a quantitative concept, and equity is a qualitative notion related to justice. Simon et al. (2007, 29) present justice and fairness as the core of both equity and equality with *equity* being a broader concept than equality as it stands for "equality of opportunity" and "equivalent treatment". Concurrently, Parveen & Awan (2019) conclude that equality is necessary for equity to succeed.

Ainscow et al. (2012, 2) posit that cultural contexts have an impact on the definition and issues of equity as in various contexts the notion of fairness would heavily depend on their local contexts. He highlights, however, that profound similarities between various contexts help educators start a dialogue on the notion of equity (Ainscow et al. 2012, 2).

The challenge in defining equity, according to Sahlberg (2022, 5), lies in the lack of specificity regarding its meaning. This ambiguity can lead to consequences such as inconsistent viewpoints, unrealistic benchmarks and unsuitable tracking modes, and ultimately to lack of accountability for growing inequities (Sahlberg 2022, 5). Smith (2017, 15) supports the idea that without a shared notion of equity, engaging in 'professional dialogue' and making a difference in education for all students is rather challenging. Therefore, to ensure agency towards a more equitable education, a precise and commonly accepted definition of the concept is needed (Sahlberg 2022, 5).

Sahlberg (2022, 6) asserts the necessity to considering both individual and social perspectives when defining equity. Sahlberg & Cobbold (2021) propose to refer to equity as 'equity in outcomes' by combining the question of education access and educational outcomes and creating a 'dual equity objective'. As shown in Figure 2, according to Sahlberg & Cobbold (2021), the individual aspect is about providing adequate and non-discriminatory education which equips all children to lead a full social life as adults. Education in this context is titled as 'adequate education'. The social aspect includes similar outcomes for all among diverse social setting, which are a result of equal distribution of resources and conditions for equal learning outcomes. Social equity is possible when equity of outcomes is achieved (Sahlberg & Cobbold, 2021).

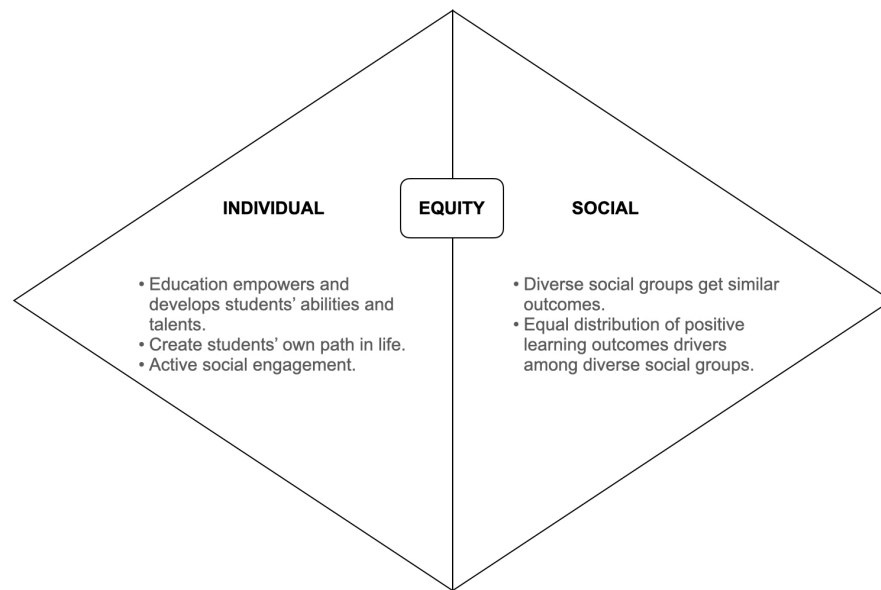


FIGURE 2. Individual and social aspects of equity, using the original work of Sahlberg (2022, 6, edited).

This 'dual goal of equity' works for everyone as it maintains the high-level of education for all and ensures a fair distribution of benefits that equity provides for all social groups (Sahlberg 2022, 6).

A more equitable education is possible with a combined effort of all stakeholders, which also includes policymakers (Sahlberg 2022, 7). Moreover, it is important that both parents and government representatives have a clear view on the concept of equity and its vital role in accessible and top-tier education (Sahlberg 2021, 12).

Wang (2023) emphasizes that to achieve equity it is essential to have a balanced student representation, which includes diverse backgrounds and characteristics that range from physical and mental to gender and ethnic, as well as social and economic.

Looking at root causes of inequities helps to develop this topic further. A framework offered by Ainscow et al. (2012, 6) helps find root causes of inequities through within-school, between-school and beyond-school approaches (Figure 3). Ainscow et al. (2012, 6) suggests that within-school inequities refer to the school operations and practices. Between-schools inequities zoom out to a

bigger picture and consider a local school educational system as a whole. As the name suggests, beyond-school inequities sprout from social-economic contexts that schools exist in. These contexts are ultimately the cause of all inequities. Ainscow et al. (2012, 152) proposes taking a combined approach by improving both individual schools and the bigger system in order to achieve equity in education.

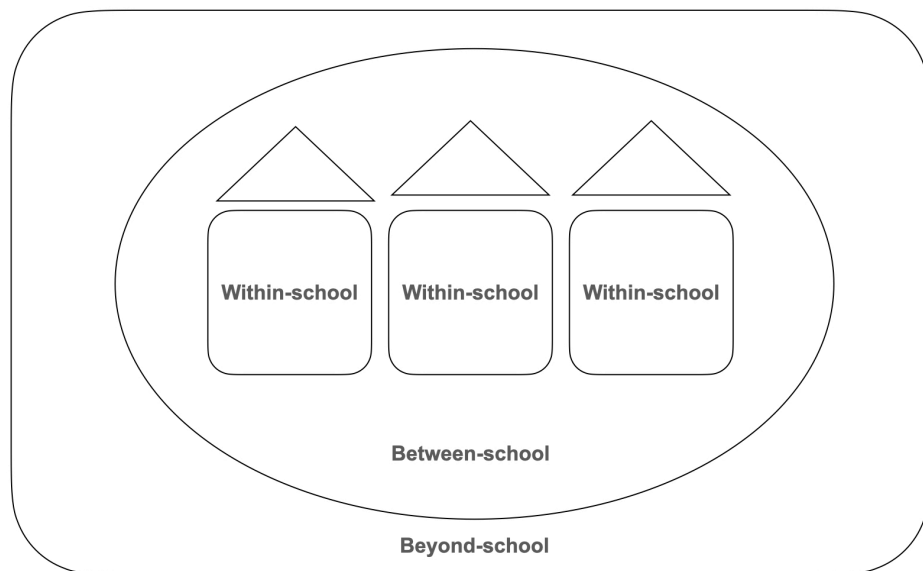


FIGURE 3. Inequalities' root causes framework (Ainscow et al. 2012, 6, edited).

Therefore, the 'ecology of equity' proposed by Ainscow et al. (2016, 162) posits that equity of students' learning experiences and results is influenced not only by school's internal practices, but by a complex network of interconnected processes that stretch beyond the school environment.

Furthermore, Darling-Hammond (2024) offers an in-depth look at the bigger picture, examining equity and inequity structures through the 'anatomy of inequality' and 'anatomy of equity' models, as con-jointly shown in Figure 4. In his model, Darling-Hammond (2024) places poverty and segregation at the bottom of the pyramid. On top of that goes an unequal resources distribution, followed by poor dissemination of high-level professional educators. The following levels of the pyramid are directly linked to the teachers' level of professionalism, impacting the quality of curriculum and creating dysfunctional schools. Darling-Hammond (2024) argues that inadequately prepared teachers can foster an environment of students' discrimination, exclusion, low socio-

emotional understanding, leading to heightened stress and anxiety due to social identity threats. This model underscores an essential aspect of equity that may not be readily evident: the professionalism and distribution of teaching staff.

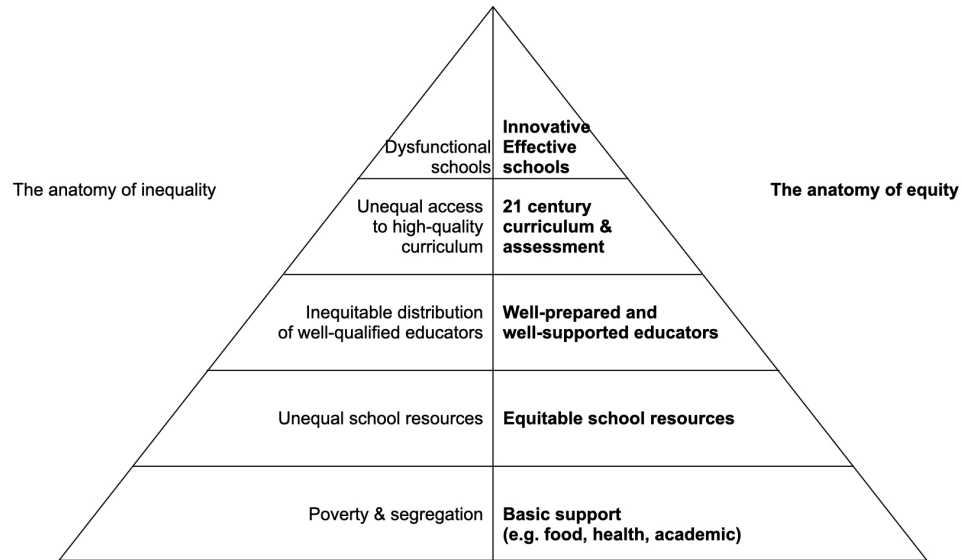


FIGURE 4. The anatomy of inequality and equity (Daring-Hammond 2024, edited).

For further exploration of equity and inequity, specific questions can be considered (Ainscow et al. 2012, 8). As Ainscow et al. (2012, 8) state, three themes stand out when it comes to understanding and evaluating equity. First theme focuses on how and why the resources and opportunities are distributed. Second theme discusses how the students are treated and whether they are all equally respected and acknowledged. Third one focuses on the power distribution and whether students have a decision-making ability to pursue their dreams and goals (Figure 5).

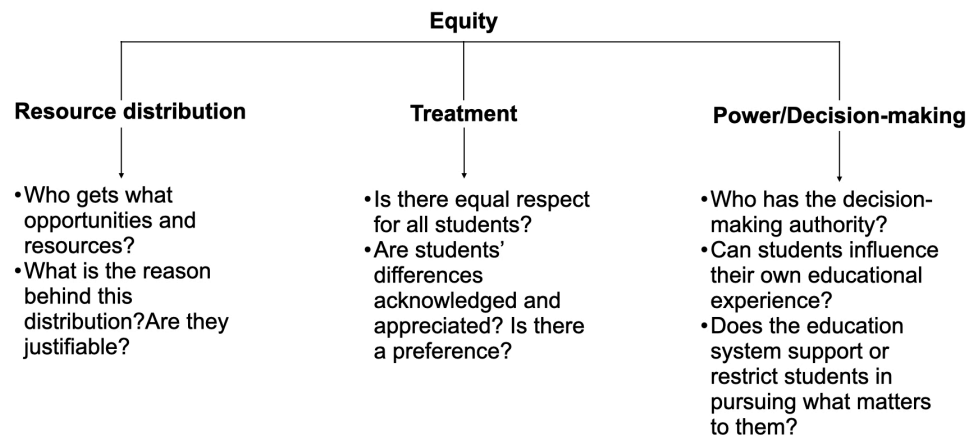


FIGURE 5. How to understand and evaluate equity (Ainscow et al. 2012, 8, edited).

Smith (2017) supports the idea that equity should not be an abstract thought-process but the core of every leadership decision. Moreover, Smith (2017, 3) argues that equity is by default the very nature of all educational leadership decisions.

The equity-driven leadership taxonomy is proposed by Smith (2017) to ensure equitable education for all within an educational institution. Smith's taxonomy assesses how schools follow equitable practices in a 'school-wide' approach (Smith 2017, 26). As shown in Figure 6, according to Smith (2017, 8-9) each level is a stepping stone for the next one, progressing from the value of measurement to the value of outcomes. It starts with the *physical level* based on physical characteristics and moves up to social-emotional aspect of education and the whole-child approach. The next stage is about *learning opportunities* provided by schools for all students, based on their needs. *Instructional excellence* is crucial for high-quality education, and this level is focused on the learning environment. Lastly, on top of the pyramid there is the *student empowerment* with students having the power of their own learning and future overall.

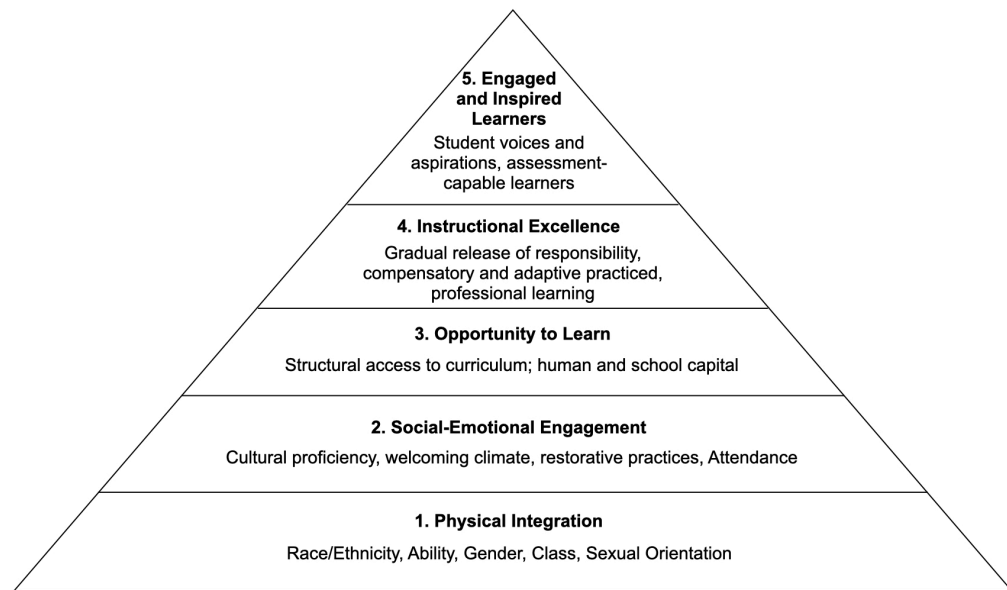


FIGURE 6. Equity taxonomy in equity-driven leadership (Smith 2017, 9, edited).

It might seem like equity in education benefits a certain part of society. However, equity is directly related to quality of outcomes for students, thus, achieving equity doesn't only help disadvantaged students, but it benefits the society overall (Sahlberg 2021, 12). Ainscow et al. (2012, 150) reinforce that fostering educational equity goes hand in hand with fostering fairer society. High standard of education will not be compromised in the pursuit of equity, and humanity should not settle for the inequalities that exist now (Sahlberg 2021, 17). This realization by all stakeholders in the society can help achieve equitable education. Ainscow et al. (2012, 149) highlight that a key factor to collective action coordination towards equity is the 'equity-focused local leadership'.

Ainscow (2016, 171) suggests that leadership teams can achieve educational equity by building a culture of trust, collaboration and mutual support among all stakeholders. 'Strengthening social capital' must be motivated by a shared vision of leadership imbedded in the idea that 'poverty need not mean destiny' (Ainscow 2016, 171).

To summarise, as Figure 7 indicates, equity in education is a complex concept which can be viewed as an attempt to achieve a fairer society where everyone is prepared to take an active part. While approaching equity requires a deeper analysis of various areas of education and life, it is a path worth taking as it yields

wide-scale benefits for the whole society. Achieving equity requires work on all fronts by all stakeholders. Equity-focused leadership practices on personal, institutional and governmental levels can ensure that equitable educational outcomes are achieved for all.

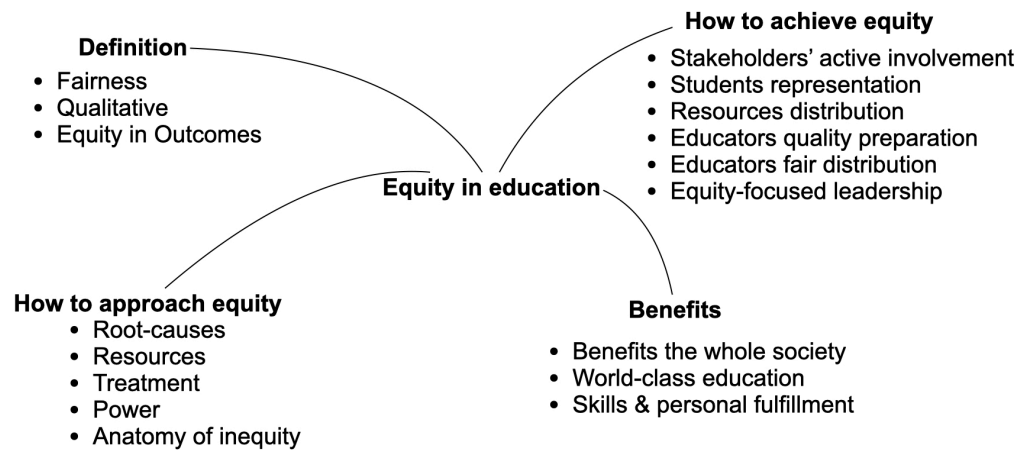


FIGURE 7. Equity in education literature review summary.

### 2.1.3 Scalability in education

There is extensive research on scalability as a concept, however, there has been limited exploration into the scalability in the educational setting. Cooley et al. (2021, 1) state that there are plenty of impact-driven educational projects, but few manage to grow or even survive. Therefore, it is crucial for an educational organization to be able to identify whether a project is potentially scalable and sustainable (Cooley et al. 2021, 1). However, Clarke et al. (2006, 27) highlight the absence of a standardized method to measure scalability in education.

There is no unified approach to the topic of scalability. A few different views exist on what scalability in the educational context stands for. One definition of scaling in education supports the idea of adapting a product that has been successful in one area to be effectively utilized in various other settings (Clarke, Dede, Ketelhut & Nelson 2006, 27). However, due to impossibility of success replication of a

certain educational experience in two different instances, 'one-size fits all' approach does not work in the complex field of education (Clarke et al. 2006, 27).

Scaling goes beyond reaching "larger numbers", according to VVOB (n.d., 9). Scaling is about making impact in the education system through changing the way the system works in the first place (VVOB n.d., 9). Cohen-Vogel, Century & Sherer (2022, 1) argue that scaling in today's society means much more than increasing students' numbers and financial gains. They suggest that those who have been left out in the history of society must be prioritized, helping achieve equity in outcomes (Cohen-Vogel et al. 2022, 1). Therefore, going beyond merely reaching a bigger number of students or a financial gain is necessary to achieve scalability, focusing on fostering collective sense of ownership in the community while entailing fundamental system change. One of the key points suggested by Cohen-Vogel et al. (2022, 1) is that scaling strategies focused on 'accessibility and affordability' for all stakeholders.

Kasch, van Rosmalen & Kalz (2017) argue that *scaling* often represents the quantitative measurement of education, which can include student number or number of courses, among other. Therefore, they introduce the notion of *educational scalability* which considers the complexity of education and focuses on quality maintenance despite increasing student or course numbers (Kasch et al. 2017).

Kasch et al. (2017) use the Iron Triangle to indicate a balanced approach to quantitative and qualitative aspects of scalability. As shown in Figure 8, the Iron Triangle has three sides, with *quality* standing for the level of education provided, *costs* refer to the size of the class, and *scale* is about the proportion of students to each teacher. While Kasch et al. (2017) posit that the three aspects cannot be optimized simultaneously, technology can improve the triangle and help achieve 'wider access, higher quality and lower cost'. Clarke et al. (2006, 28) supports technology involvement as a means to bridge the gap between scalability and individual students' needs.

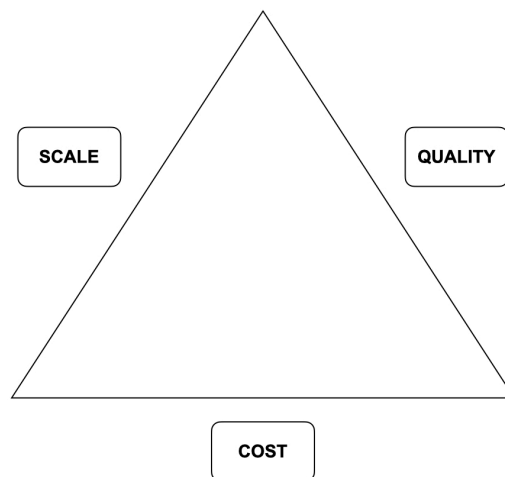


FIGURE 8. The Iron Triangle (Kasch et al. 2017, edited).

Westley, Antadze, Riddell, Robinson & Geobey (2014) consider scalability as a concept that forks into two stages: scaling out and scaling up. When scaling out more people and a larger geographical area are reached through product replication and distribution (Westley et al. 2014).

Following scaling out, scaling up addresses institutional or system changes, focusing on the roots of an issue that an organization is aiming to solve (Westley et al. 2014). Challenging the system allows for a bigger impact and requires emergent strategies to be in place. (Westley et al. 2014).

Westley et al. (2014) highlight that certain initiatives are not meant to be scaled when their goals are reached on the local levels. However, in this case the bigger system is not challenged.

While there's a distinct difference between scaling out and scaling up, one rarely exists without the other. As posed by Westley et al. (2014) and presented in Figure 9, scaling out is a necessary first step to accumulate profound knowledge, gather feedback and establish a product in the market, before scaling up. As a result, pitfalls that were hard to notice before might appear and serve as an improvement point for the product and the organization (Westley et al. 2014).

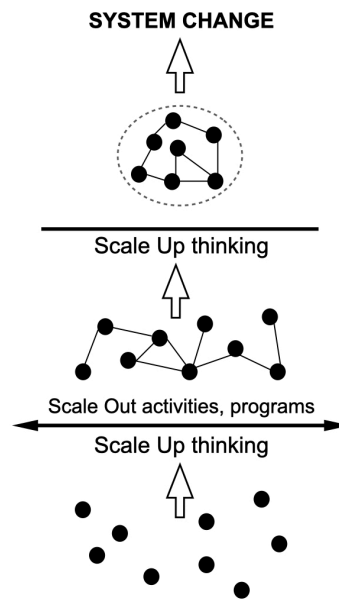


FIGURE 9. The process of scaling up (Westley et al. 2014, 255, edited).

Kasch et al. (2017) state that pedagogical benefits of scaling in the education field are rarely prioritized, giving in to the economic achievements. Westley et al. (2014) highlight that novice strategies and practices must be implemented to achieve bigger impact. Undertaking this path of development, organizations are bound by exploring the undiscovered, which can be described as Monechi et al.'s (2017, 3) 'adjacent possible'.

In their study, Westley et al. (2014) present practices of five non-profit organizations on their scaling journey. Their findings present various types of skills needed for a successful scale up. Westley et al. (2014, 254–255) highlight the following skills:

- political skills for strategic networking with the policy sector representatives;
- cultural awareness and interpersonal skills as the basis for partnership building;
- resources management skillset, as well as strategic skills for further provision of such resources.

They conclude that organizations need to build this skillset, use it wisely and interchangeably, in order to have a solid foundation for scaling up (Westley et al. 2014, 256).

The Education Scalability Checklist (ESC) was designed to help educational organizations and all involved stakeholders identify the difficulty level of scaling an educational initiative (Cooley et al. 2021, 1). Cooley et al. (2021, 1) emphasize that this tool should be used consistently throughout a prolonged period to ensure appropriate updates and changes are made in the scaling process in timely manner. Moreover, the best usage of ESC would be on annual basis alongside the regular planning and budgeting sessions, with a purpose to include scalability activities into the 'annual operational plans and budgets' (VVOB n.d.).

According to correspondence with the authors, there is no systematically tracked data on the ESC application. However, it is known that VVOB consistently uses the checklist across projects internally and externally, and the Global School Leaders organization which provides school leadership development programs also trained some of its members using the ESC. The authors confirm that in their own experience, the use of ESC has had a positive impact on scalability which resulted in consequent adjustments to their interventions in a number of cases.

The ESC has a practical focus and supports all stakeholders involved in the project in formulating clear and realistic scaling strategies. The checklist is aimed at identifying potential challenges, helping organizations to be one step ahead.

Precisely, VVOB (n.d.) states that ESC is an Excel tool that helps to understand whether scaling a project will be simple or complicated; helps to spot project growth areas, as well as limiting ones; create concrete strategies to make it easier for the project to grow successfully; and keep track on how the project expands over time, adjusting to new realities.

While the ESC consists of a few important steps such as prior preparation, individual and group work, action plan writing, and progress tracking (VVOB n.d.), for the purpose of this study the key questions from the framework are viewed to create common themes. This study does not aim to review the entire framework. Instead, it focuses on utilizing its core elements.

Table 3 indicates the ESC questions and areas of consideration. They start with strategy and credibility of the project, while also considering support that the

project is offered, as well as how much change it will bring to the existing education system and practices. The questions of positioning, transferring, adoptability, and the financial sustainability of the initiative are also taken into account. Therefore, the key dominating themes in the ESC are:

1. Strategy and credibility
2. Support system
3. Positioning and adoptability
4. Financial sustainability

TABLE 3. Education Scalability Checklist themes and questions (VVOB n.d., edited)

<b>Themes</b>	<b>Checklist Question (VVOB n.d., 16–23)</b>	<b>Details (VVOB n.d., 16–23)</b>
<b>Strategy &amp; credibility</b>	A. How convincing is the scaling strategy?	<ul style="list-style-type: none"> <li>• Strategy plan:               <ol style="list-style-type: none"> <li>1. What exactly is being scaled?</li> <li>2. What's the target scope of scaling and its benefits?</li> <li>3. Who will oversee scaling up and delivery?</li> <li>4. What are scaling stages and timeline?</li> <li>5. Who will be in charge of scaling funding and ongoing funding?</li> <li>6. Homogeneousness of the project</li> </ol> </li> </ul>
	B. Is the initiative credible?	<ul style="list-style-type: none"> <li>• Evidence that supports the project in another context</li> <li>• Evidence from external evaluators</li> <li>• Visible impact</li> </ul>
<b>Support System</b>	C. How strong is the support for the initiative and	<ul style="list-style-type: none"> <li>• Change is long waited for</li> <li>• Alignment with national policy agenda</li> </ul>

	the change it entails?	<ul style="list-style-type: none"> <li>• Influential individual &amp; institutional support</li> <li>• Strong leadership coalition</li> <li>• Educational systems stakeholders' support</li> <li>• Limited opposition</li> </ul>
<b>Positioning and adoptability</b>	D. Does the initiative have relative advantage over the current state of affairs and alternative solutions?	<ul style="list-style-type: none"> <li>• Adequate current solutions</li> <li>• Evident superior effectiveness</li> </ul>
	E. How easy is the initiative to transfer and adopt by the education system, particularly for the adopting government institutions?	<ul style="list-style-type: none"> <li>• Infrastructure and human resources are in place</li> <li>• Minor adjustments in the educational system expected</li> <li>• Consistency level with policy, regulations, existing educational system structure</li> <li>• Level of structure: roles, processes, practices, deliverables, etc.</li> <li>• Project complexity &amp; integration into existing educational system</li> <li>• Project monitoring and quality maintenance resources</li> <li>• Piloting and testing on limited scale</li> </ul>
	F. How good is the fit between the initiative and the education system, particularly the	<ul style="list-style-type: none"> <li>• Strong collaboration between originating organization (OO), intermediary organization (IO) &amp; adopting organization (AO)</li> <li>• AO has operational capacity &amp; financing to implement at scale</li> </ul>

	adopting government institutions?	<ul style="list-style-type: none"> <li>• Similar scaling experience of AO</li> <li>• AO with strong network &amp; credibility</li> <li>• Alignment with AO's leadership team, organizational norms &amp; incentives</li> </ul>
<b>Financial sustainability</b>	G. Is there a sustainable source of funding?	<ul style="list-style-type: none"> <li>• Lower costs</li> <li>• Clear, predictable, justifiable budget implications</li> <li>• Small and easily mobilized funds</li> <li>• Cost integrated into existing budgets</li> </ul>

As the checklist does not consider the 'desirability or appropriateness of scaling', Cooley et al. (2021, 2) advice to use it alongside other tools upon need.

Basuel, Carter-Rau, Wyss, Elliott, Olsen, Olsen, Rodriguez's (2024, 6) state that during scaling, equity is often viewed as something to balance against quality, instead of being recognized as a key factor that strengthens quality, sustainability, and overall impact. However, this societal perception of equity presents a challenge to scaling processes and the system change, and significantly more attention should be paid to equity when scaling to improve the quality of education for all (Basuel et al. 2024, 6).

As concluded in Figure 10, scaling is a complex process in the educational context as developing and measuring both qualitative and quantitative aspects of education is challenging. Educational scalability prioritizes educational quality over other aspects. Scaling out to reach a wider audience is a necessary step towards scaling up and impacting the whole system. While no standardized method to measure scalability in education exists, the Education Scalability Checklist can be used to track the progress of a project development to increase the chances of a successful project scaling. In doing that, leadership needs to discover new practices and ideas. It is paramount that the goal of educational scalability is to improve education for all students, and not to gain profit as it could happen in non-education contexts. However, financial sustainability is an important aspect of ensuring viability of an educational initiative.

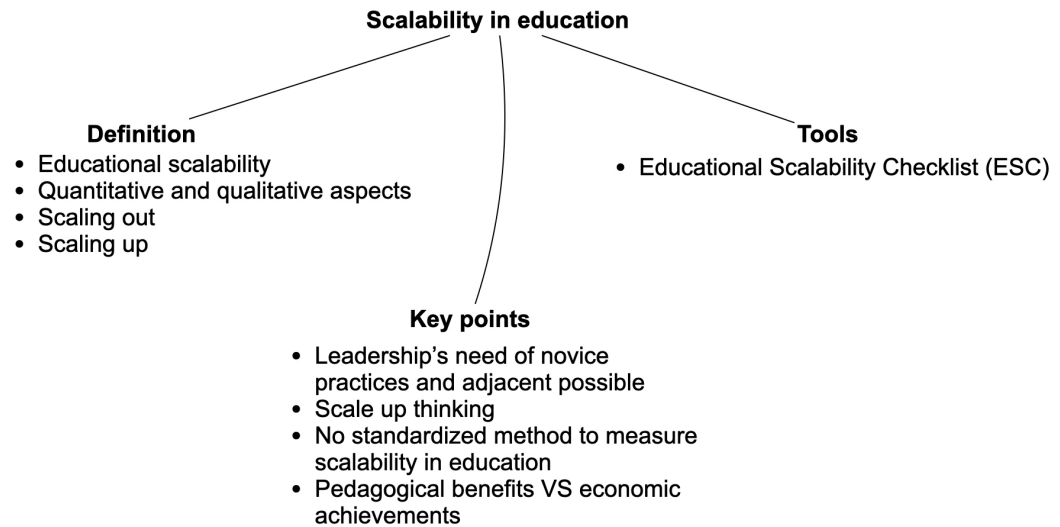


FIGURE 10. Scalability in education literature review summary.

## 2.2 Synthesis of theories

The objective of this study is to find out how leadership at educational institutions can strategically develop and scale equity-driven educational products. To do that, it is paramount to understand what strategic leadership in the context of educational equity and scalability is, and how it impacts development and scalability of equitable educational products.

Considering the multi-concepts approach in this thesis, a sequence of steps was taken to design the theoretical framework of this study. First, the theoretical literature analysis was conducted (Appendix 1). Then, the key thematic areas were outlined as summarized in Table 4 and described as follows.

### **Strategic leadership as part of any leadership style and a combination of leadership and management.**

Strategic leadership is powerful approach to building more equitable education, ensuring scalability and sustainability of educational products. Strategic leadership is a part of all leadership styles and covers all areas of leadership and management as one process (Davies \* 2004, Doyle & Brady 2018, Hidayah et al. 2015). This double-track approach of combining leadership and management

under one practice, as proposed by Davies \* (2004), is relevant to this study. It allows for a more in-depth exploration of leadership strategies and practices within an educational institution.

### **Emergent leadership: co-creation of change and exploration of adjacent possible**

This study adheres to a notion of emergent leadership by Doyle & Brady's (2018), which implies diffused or distributed leadership style. Therefore, a non-elitist view on leadership is undertaken. The constantly changing environment that educational institutions exist in (Baran & Woznyj 2021, Cooley et al. 2021, Doyle & Brady 2018) supports that leadership is as an emergent and flexible process.

### **Individual and collective growth through shared vision**

Emergent leadership places emphasis on leadership across the whole organization and co-creation of change within the organization.

### **Equity in outcomes**

Sahlberg's (2022) 'equity in outcomes' is the most relevant concept to this study due to its emphasis on every student achieving similar educational outcomes called 'dual outcomes', from individual and social perspectives, benefiting society as a whole.

### **Broader context**

Looking at the broader system that incorporates cultural, political, social aspects (Carvalho et al. 2021), as well as the broader educational system (Ainscow et al. 2012, 6) is essential when discussing strategic leadership in the context of equitable educational products development and scaling.

### **Educational Scalability and ESC categories: strategy & credibility, support system, positioning and adoptability, financial sustainability.**

In this thesis scalability is understood as educational scalability which encompasses both quantitative and qualitative aspects as defined by Kasch et al. (2017). Westley et al.'s (2014) concept of scaling up to consider problems and their solutions through a systems lens is also central to this study. ESC is used as a key tool to drive the research on the topic within this thesis framework.

TABLE 4. Key thematic areas in the literature review.

Thematic areas from literature review	Author(s)
<b>Strategic leadership as part of any leadership style and a combination of leadership and management.</b>	Davies & Davies (2006), Davies * (2004), Doyle & Brady (2018)
<b>Emergent leadership: co-creation of change and exploration of adjacent possible</b>	Doyle & Brady (2018), Westley et al. (2014), Monechi et al. (2017)
<b>Individual and collective growth through shared vision</b>	Doyle & Brady (2018), Ainscow et al. (2012), Ainscow (2016)
<b>Equity in outcomes</b>	Sahlberg & Cobbold (2021)
<b>Broader context matters</b>	Carvalho et al. (2021), Ainscow et al. (2012), Sahlberg (2022), Darling-Hammond (2024)
<b>Educational Scalability and ESC categories:</b> <ul style="list-style-type: none"> <li>• <b>Strategy &amp; credibility</b></li> <li>• <b>Support System</b></li> <li>• <b>Positioning and adoptability</b></li> <li>• <b>Financial sustainability</b></li> </ul>	VVOB (n.d.), Cooley et al. (2021)

Finally, a theoretical framework was compiled and presented in the form of a Venn diagram (Figure 11). By combining key elements of the concepts *equity* and *scalability* in education, a common area was created for *strategic leadership* in the framework of equity and scalability. Considering the limited number of practical case studies in the field of equity and scalability focused educational leadership, Smith's Taxonomy (2017) and the Educational Scalability Framework (2021) were utilized to add practical aspects to the framework and to assist in further investigation of this study.

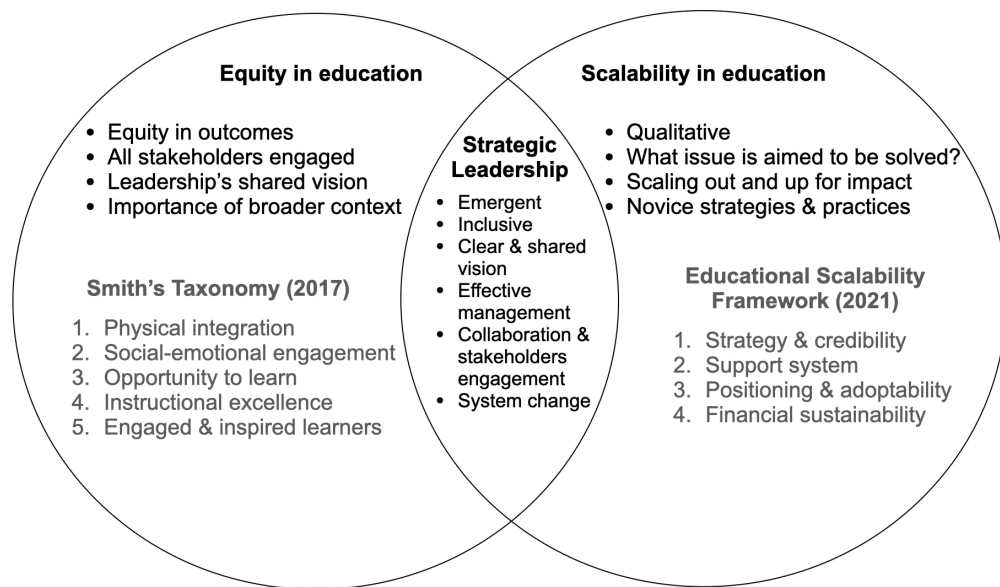


FIGURE 11. Theoretical framework.

In conclusion, the theoretical framework in this study presents the strategic leadership in the concept of equity and scalability as follows (Figure11).

- **Emergent.** It must be flexible, adaptable to constant change, open to learn and grow from the unexpected.
- **Inclusive.** Regardless of circumstance, leadership makes decision-making processes as open as possible, listening to various perspectives and contributing to a trustworthy organizational culture.
- **Clear and shared vision.** Everyone in an educational institution shares a clear vision of where they are moving and what goals the organization aims to achieve.
- **Effective management.** An organization's vision and goals must be supported by practical actions towards achieving them, ensuring that the organization is moving in the right direction, and pivoting in case changes need to be made to improve a situation.
- **Collaboration and stakeholders' engagement.** A bigger outreach is necessary to grow and bring positive changes to the society. Community development is paramount to ensuring that all stakeholders are heard, and their voices are integrated into an organization's plans, goals and actions.
- **System change.** While all the above points do not always lead to system change at equity-driven organizations, impacting society and improving the existing system to a certain extend tends to be a part of the growth and development process.

### 3 METHODOLOGY

This chapter outlines research design strategy and methodology, focuses on describing instruments for data collection methods and analysis, alongside the limitations of the study and its ethical considerations.

#### 3.1 Methodological approach

The themes of educational leadership, equity and scalability presented in this study are entangled under one umbrella. The goal of this work is to take a closer look at leadership approaches and their impacts on the development and scalability of equity-driven educational products among the leadership team of CODE University of Applied Sciences in Berlin, Germany.

Moilanen et al. (2022) asserts that methods serve as instruments to uncover information that facilitates decision-making processes. Quantitative method research is focused on measurement or 'experimental manipulation' of data (Creswell & Creswell 2022, 157). With survey as a tool to categorize a study group and examine the relationship between different study variables, experiments present a more in-depth level of causal connections (Creswell & Creswell 2022, 158). Mixed method research can help represent numbers alongside the voices of participants, while using evidence to back up quantifiable data (Creswell & Creswell 2022, 231). Moreover, Creswell & Creswell (2022, 227–231) argue that incorporating two types of data provides a more in-depth understanding of an issue and opens a wide range of opportunities for impactful development. However, both approaches might have generalized results which are limited to certain circumstances, demographics and contexts (Creswell & Creswell 2022, 185).

The nature of this study is exploratory, investigating how leadership approaches and practices impact development of equity-driven projects in education, building upon the findings. Moreover, the leadership team at CODE is rather small. Therefore, standardized measurements and pre-established expected questions and answers of quantitative research would not help achieve this thesis' goal (Patton 2015, 22). Qualitative methods, on the other hand, as Patton (2015, 22)

argues, do not constrain the study and focus on the depth and detail of a few people's sharing, while simultaneously 'reducing generalizability'. Instead of looking at the quantifiable aspects such as number of equity-based programs at CODE or number of students that attended the programs, understanding the qualitative data such as what drives the leadership team to initiate and maintain such programs and how they do it, meets the goals of this study (Patton 2015, 176). The objectives and context of this thesis suggest that a qualitative method is the most appropriate approach for this study (Figure 14).

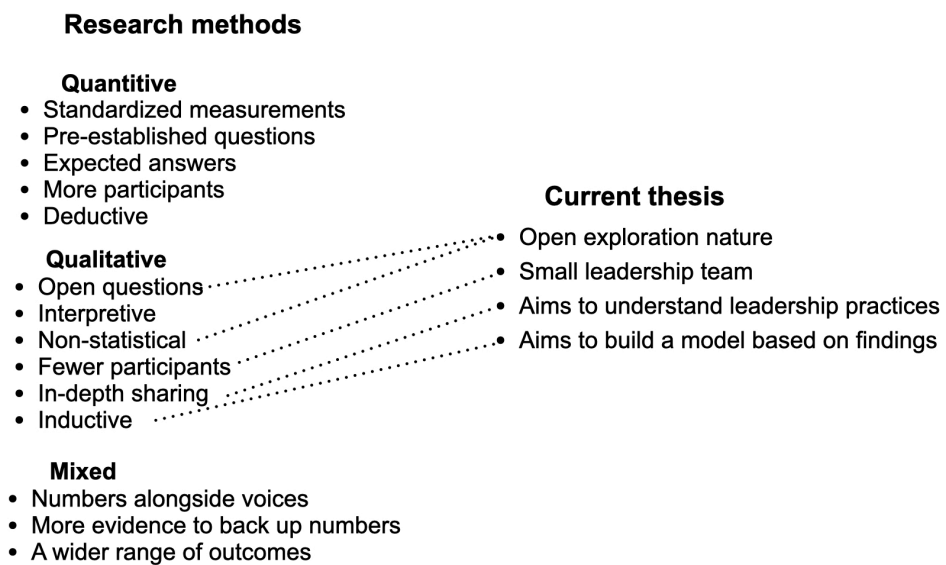


FIGURE 14. Research methods selection in this study based on the thesis context and aims.

From ontology and epistemology perspectives, qualitative research method views people as 'meaning-making beings' that exist in a specific context (Cohen, Manion & Morrison 2017, 288), contributing to the very nature of this formative study. Moreover, as educational institutions exist a fast-changing environment, labelled by Baran & Woznyj (2021) as the VUCA world, it becomes increasingly important to rely on evidence-based practices, which are much needed in the current turbulent political climate (Patton 2015, 177). Furthermore, Patton (2015, 248) highlights that applied research illuminates a societal issue or challenge in pursuit of solutions.

Mackey & Gass (2022) state that qualitative research is interpretive and non-statistical. Qualitative methods provide the researcher with the flexibility to explore participants' initial responses further, such as by asking follow-up questions like "why" or "how" (Mack, Woodsong, Macqueen, Guest & Namey 2005, 4).

Like every research method, qualitative approach has its drawbacks. Ochieng (2009, 17) raises concerns about the ambiguity of language and the inability to generalize the findings to a larger population due to the absence of statistical data.

While qualitative research methods vary from observations to case studies and document analysis (Bakhshi, Weisi & Yousofi 2022, 1058), interview method was chosen for this thesis. Open-ended questions are at the core of the interviews and provide data about experiences, views, and emotions of interviewees towards a certain topic (Patton 2015, 14).

Patton (2015, 58) highlights the empathetic neutrality aspect of qualitative research, which guarantees credibility of the research, while establishing 'interpersonal interactions' with the participants. He suggests that neutrality is about staying open to the emergence of new perspectives throughout the research process, without taking sides or looking to prove a particular point, avoiding any sort of data manipulation (Patton 2015, 58–59). To succeed in qualitative research through achieving empathetic neutrality, reflective mindfulness needs to be adopted by the researcher, which ultimately leads to self-awareness (Patton 2015, 70).

The method to select interview participants was purposeful sampling as it allows for a profound understanding of the topic (Patton 2015, 52). According to Patton (2015, 52), insights that help learn about the central topic of this research come from the 'information-rich case', which in this study is the CODE leadership team.

Considering the evident limitations of artificial intelligence (AI), ChatGPT-4 and Microsoft Copilot were effective in providing guidance throughout the literature search, as well as in improving wording clarity and facilitating brainstorming.

Another AI tool AssemblyAI was used for conducting audio-to-text transcription. In each instance of using AI tools, the generated results were critically and carefully assessed to verify the accuracy of information. Multiple times false information provided by AI was detected, which ultimately led to new insights for further research.

The interviews were conducted via an online videoconferencing platform Zoom due to its convenience for the interviewees. The interviews had 30-minutes time limitations, according to the scheduling pre-arrangement. However, one interviewee was available for a longer period and the interview lasted 60 minutes. The interviews were recorded using Zoom recording function. During the interviews narrative data was gathered in the form of notes to help probe the interview question during the interviewing process, as well as for post-interview reflection. After conducting the interviews, the most prevalent terms and phrases were highlighted (Appendix 2), and certain patterns were established. Finally, the notes and their analysis were compared with the theoretical framework (Figure 11) to check for matching patterns and potential new findings that might not be represented in the framework. This process facilitated the preparation for the next step: data analysis.

### **3.2 Research participants**

Accessing interviewees was done with the support of the main person who initiated the commissioning partnership for this thesis. That person agreed to provide potential interviewees' contact data and supported in sending an email to all of them with a request to participate in this study. As mentioned above, the purposeful-sampling selection of the participants was conducted based on their profound experience, as well as their availability. Participants acted as leaders and were responsible for decision-makers in the organization. Four decision-makers were approached, and two responded to the email, expressing their interest in participating in the research. The other two potential interviewees did not respond to the invitation email. Moilanen et al. (2022) assert that the volume of material does not compensate for the quality of the analysis of the interview material does not substitute for the depth of the analysis of the interview content.

Therefore, the interview number was not as important as the quality of the interviews that were possible to take place.

### 3.3 Data collection: Interviews

Interviews are windows to people's worlds, opening the view on their perceptions and experiences of (Patton 2015, 442). Semi-structured interview approach best meets the needs of these research.

A typology of interviews suggested by Guest, Namey & Mitchell (2013, 4) represents the dynamics of an interview. As Figure 12 indicates, semi-structured interviews represent a balanced approach and take the central position on the x axis (Guest et al. 2013, 4). Semi-structured interviews provide freedom to pivot and adapt based on the context (Mackey & Gass 2022). Moilanen, Ritalahti & Ojasalo (2022) call these interviews 'themed interviews' and highlight that they do not have a full outcome envisioned in advance, therefore meaning-creation prevails.

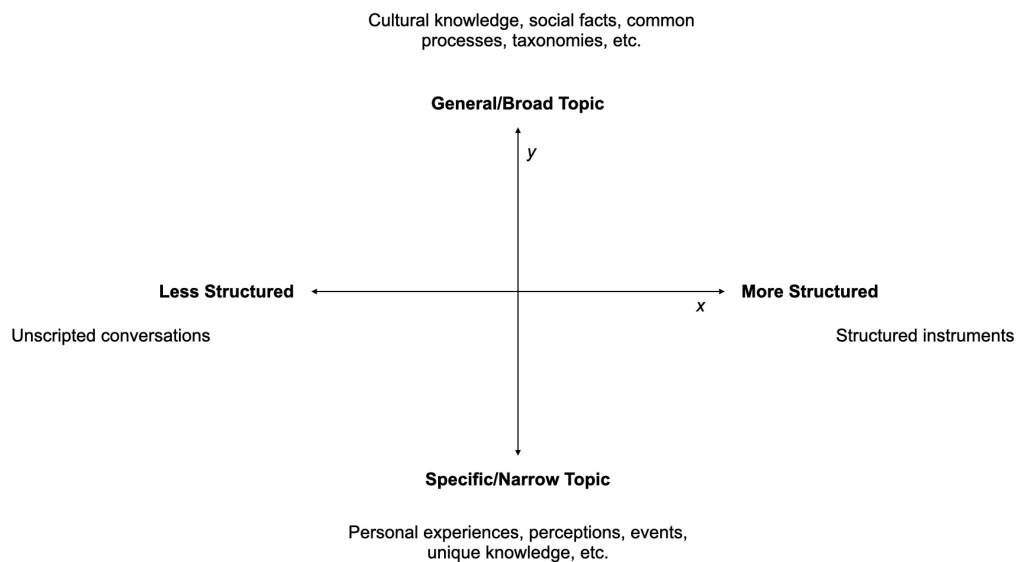


Figure 12. General Interview Typology (Guest et al. 2013, 4, edited).

A successful interview is a two ways road which sparks new insights and reflections for both interviewer and interviewee (Patton 2015, 466–494).

Patton (2015, 467) proposes that a successful facilitation of an interview includes the following:

1. Being aware of the information the interviewer wants to get.
2. Asking targeted questions.
3. Listening carefully to evaluate the response.
4. Providing suitable and timely feedback to the interviewee, including words of support and gratitude.

There are certain benefits and drawbacks to using interviews as a research tool. According to Mackey & Gass (2022), the benefits of interviews include seeing a side of the interviewee that was not assumed before by the interviewer, as well as being flexible and adaptive with the conversation flow along the way. Patton (2015, 180) suggests that qualitative data highlights diverse outcomes and recognizes common themes in the outcomes. Hall & Rist (1999) state, however, that subjective and selective approaches of the interviewees are their weaknesses (Mackey & Gass 2022). Another issue highlighted by Mackey & Gass (2022) is the 'halo effect' which happens when an interviewer's questions and cues might impact the answers of the interviewees, changing them to meet the perceived expectations of the interviewer.

The interview location is of importance as it contributes to the interviewee's feeling of safety and comfort. In this research, an online interview proved to be the best option for the interviewee as they are used to working dynamically across the country and could join the interview from any location of their choosing.

In planning the interview questions, it is useful to pay attention to the types of answers an interviewer aims to get. The Matrix of Question Options by Patton (2015, 445) presents six types of the potential answers: behaviours/experiences, opinions/values, feelings/emotions, knowledge, sensory and background. Guest et al. (2013, 4) highlight four foci which are opinions, experiences, knowledge, and attitudes.

The process of writing this thesis' interviews questions is based on both Patton's (2015, 445) and Guest et al.'s (2013, 4) research data types. Table 5 indicates

the first step in the interview questions development process, in which interview content was developed based on this thesis' key research questions. Then the type of data necessary to obtain the required answers was determined. This method enabled the interviewer to recognize when responses aligned with the thesis research questions. If the answers were not aligned, a follow-up question would be posed to guide the interviewee in providing the type of data being sought. For example, if the question was aimed at collecting experiential data, and the interviewee gives an opinion-based answer, then a clarifying follow-up question would be asked to help the interviewee speak about their experience.

TABLE 5. Interview questions development process. Adapted from Guest et al.'s (2013, 20).

<b>Key research questions</b>	<b>Interview content</b>	<b>Types of data for needed answers</b>
What is strategic leadership in the framework of equitable educational product development and scalability?	<ol style="list-style-type: none"> <li>1. Knowledge of importance of equitable products. Experience in dealing with equitable products.</li> <li>2. Experience with growing and scaling equitable educational products.</li> <li>3. Their attitude towards equity and scalability.</li> <li>4. Experience in how they lead decision-making processes.</li> <li>5. Attitudes towards developing and growing equitable products.</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge.</li> <li>2. Experience.</li> <li>3. Opinion &amp; attitude.</li> <li>4. Experience.</li> <li>5. Attitude.</li> </ol>
How intentional are the leadership with their strategic approaches in equity and scalability?	<ol style="list-style-type: none"> <li>1. Knowledge about the importance of strategy.</li> <li>2. Opinions about and attitude towards the value of strategy and its impact</li> </ol>	<ol style="list-style-type: none"> <li>1. Knowledge.</li> <li>2. Opinions.</li> <li>3. Experience Attitude.</li> </ol>

	<p>on organization's educational products.</p> <p>3. Experience of choosing the right strategy to grow an educational product.</p>	
<p>What kind of strategic leadership helps develop and scale equitable educational products?</p>	<p>1. Experience with leading and scaling equitable educational products.</p> <p>2. Opinions on attitudes and approaches needed to lead and scale equitable educational products.</p> <p>3. Knowledge about and attitude towards whether it's worth developing and scaling equitable products in education.</p>	<p>1. Experience.</p> <p>2. Opinions.</p> <p>3. Knowledge.</p> <p>4. Attitude.</p>

A rather long list of interview questions was developed as a result of this work process. However, following Patton's (2015, 253) suggestion that "less is more", only six key questions were selected for the interview (Table 6). This helped to ensure an in-depth discussion that would lead to obtaining the qualitative data this research is aimed at. These questions were used merely as a guide for an emergent conversation, a starting point to discovering new the unexplored (Patton 2015, 253). Therefore, the questions were adapted, and the sequence might have been changed along the way of the interview, allowing space for the adjacent possible (Monechi et al. 2017, 3).

TABLE 6. Final interview questions.

#	Question
1	Thank you so much for the time you devote to this meeting and for agreeing to join this interview. Please tell me a bit more about your important work.

2	Can you tell me about your experience as (position)? / Can you tell me a little bit about what it's like to work in your job? / What is your experience being a leader in an educational institution CODE like?
3	I am interested in the topic of equity and scalability in education. In my opinion your organization is a good example because you run a few equity-driven initiatives. I am very interested to learn what you can tell me about these topics.
4	In your leadership team meetings, do you discuss these questions (equity, scalability) openly or is it implicit?
5	I'd like to know a little bit about how your management meetings or team meetings happen. What happens in a typical leadership meeting that you lead?
6	<p>What is your experience with leading equity-driven projects/programs...</p> <ul style="list-style-type: none"> <li>• And what's your experience with scaling equity-driven projects like the Hackathon?</li> <li>• Hackathon: would you be able to repeat the same initiative on a bigger scale next year?</li> <li>• In your opinion, how equitable is the Hackathon project? What would you change, if anything?</li> <li>• How scalable is Hackathon? How would it be possible to repeat it on a bigger scale? If hackathon would be held in five European countries instead of one, how would you conduct/lead/manage it?</li> <li>• Are there any lessons learnt from the past academic year of the Hackathon project that will help you make it better/cheaper/attract more young people who need more educational support?</li> </ul>

Using specific terms can either enhance or stagnate the interview process, therefore the language units that are closest to the interviewee work best in the interviews (Patton 2015, 454). Additionally, a few 'reexperience' or simulation questions were asked in the interview, allowing the interviewer to place themselves in the interviewee's context and observe a situation (Patton 2015, 459).

### **3.4 Ethical considerations**

This study adhered to ethical considerations throughout the entire process, closely following the ethical guidelines established by the Finnish National Board on Research Integrity TENK (n.d.).

Participation in the research was completely voluntary, and withdrawal was possible at any stage of the process. All participants were informed about the study's purpose, the ethical considerations and data privacy measures, alongside with the confidentiality assurances (Patton 2015, 499). Each interviewee gave their informed consent for research participation and data collection activities (Mack et al. 2005, 10). Adding to Patton's (2015, 499) recommendations, as Mack et al. (2005, 10) suggest, participants were also informed about the expectations, including the minimum time commitment required, the absence of risks, and their right to contact the researcher at any point with any concerns.

Moreover, participants were asked for permission to use an AI tool to transcribe the interviews. As mentioned in Section 3.1, AssemblyAI was chosen for this purpose due to its adherence to high ethical standards in data usage, setting it apart from other AI tools.

### **3.5 Thematic data analysis**

The purpose of this chapter is to understand the leadership mindset by diving into the commissioner organization's world and learning about their practices and approaches towards developing and scaling equity-driven educational products. Cohen et al. (2017, 643) argues that there is no one particular or right way for data analysis and display in qualitative research. Moilanen et al. (2022) poses that different methods are suitable for data analysis of in-depth interview with fewer than five participants where open-ended questions are used, as compared to structured interviews, where statistical tools such as Excel prove to be efficient. Emerging from open discussions, inductive analysis chosen for this study allows new unforeseen dimensions to appear in the analysis process, forming 'a new whole' (Patton 2015, 64–66).

Once the interviews were conducted, the data analysis process started with creating transcripts of the conversations and reading through them multiple times, looking at how it might connect with or add to the theoretical framework. Words and syntax bared crucial importance to this study and therefore the interview was transcribed literarily (Moilanen et al. 2022) with the help of an Artificial Intelligence (AI) tool AssemblyAI. The final transcript was thoroughly proofread to ensure accuracy and reliability. Specific themes emerged throughout the analysis based on the common features of both interviews (Moilanen et al. 2022).

Patton (2015, 471) suggests that data interpretation and analysis is about understanding the meaning behind people's words, identifying patterns and linking statements from different sources to finally synthesize the findings. In this analysis, data was typified in order to arrange themes according to their similarity, while being open to finding outliers to ensure the full picture of the data is being presented, as posed by Moilanen et al. (2022).

Moilanen et al.'s (2022) general model of qualitative research highlights the key steps in qualitative data analysis (Figure13). The first step in the process involves data collection and preparation, making data accessible and ready for analysis, normally through digitalization. In the reduction stage of data analysis, there are a few methods for managing data, such as reducing it to themes or views, clustering it by similarities or differences, or abstracting it into general concepts and building broader ideas. The next step involved patterns and themes identification. In the interpretation phase, new insights are uncovered, with the focus on how this information can be applied in the future, forming the basis for drawing conclusions and making recommendations. Critical examination of all stages ensures integrity of the analysis.

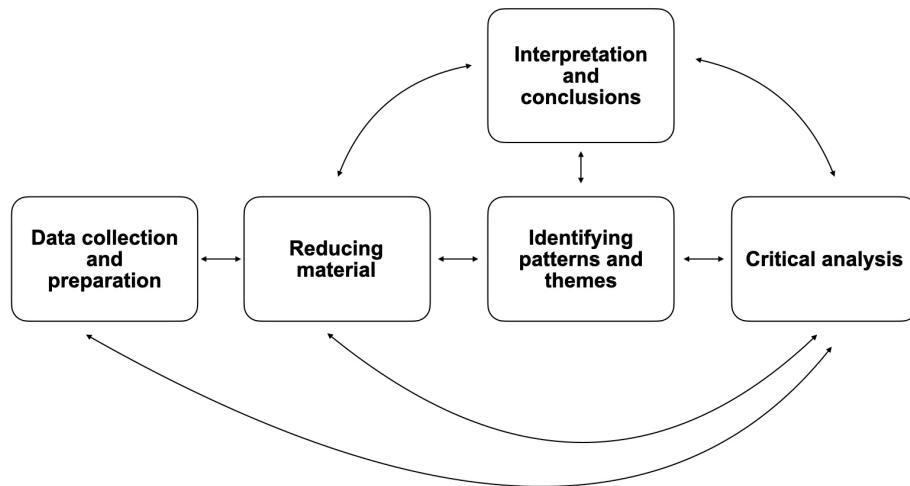


FIGURE 13. General model of qualitative research (Moilanen et al. 2022, edited).

Similarly to Moilanen et al. (2022), Gläser & Laudel (2013, 7–9) proposes that the first steps in data analysis are intertwined and represent identifying relevant information in respect to the research questions and assigning it to suitable categories. They suggest easing the complexity of data and boiling it down to ‘pattern recognition’, which heavily depends on the creative abilities of the researcher (Gläser & Laudel 2013, 7–10). Braun & Clarke (2022, 57) argue that data analysis through coding goes beyond condensing data into smaller representative pieces of information and involves thorough analysis leading to a certain interpretation. Themes, on the other hand, are never developed but rather created, based on a bigger picture, as well as the researcher’s overall knowledge and expertise (Braun & Clarke 2022, 57).

Thematic data analysis method was conducted in this study. Guest, MacQueen & Namey (2012, 11) assert that thematic analysis is the best tool to reveal complex layers through researcher’s in-depth engagement and data inference as it looks past straightforward word counts to uncover underlying meanings. As with any qualitative method, thematic analysis has its limitations, particularly regarding subjectivity and the risk of researcher bias. To mitigate these issues, Guest et al. (2012, pp. 11–13) emphasize that codes and themes extracted from the data must accurately reflect the original text, enhancing the reliability and validity of the findings.

While outlining stages of data analysis is paramount, Braun, Clarke & Hayfield (2022, 432) suggest that the practical journey of thematic analysis reflections and thoughtful evaluations should also be reported by the researcher. Therefore, such an analysis is presented below.

The theoretical framework was used for the first step of data analysis. Considering that this study is focused on the concepts of leadership, equity and scalability, data analysis process started with these concepts in mind. As Figure 14 shows, a variety of topics was identified for each concept as a precedent to further coding process. These topics were constructed based on a few practices, such as a follow-up transcribed data coding process, as well as an immediate post-interviews notes registry. Importantly, they were guided by the theoretical basis presented in this thesis. This approach ensures a balance of a freshly perceived content used to seek implicit meaning focused on complete neutrality (Patton 2015, 58–59) and theoretical concepts and framework. Moreover, having conducted two interviews out of the four that were initially planned for, enabled a more profound data analysis and implicit meaning seeking.

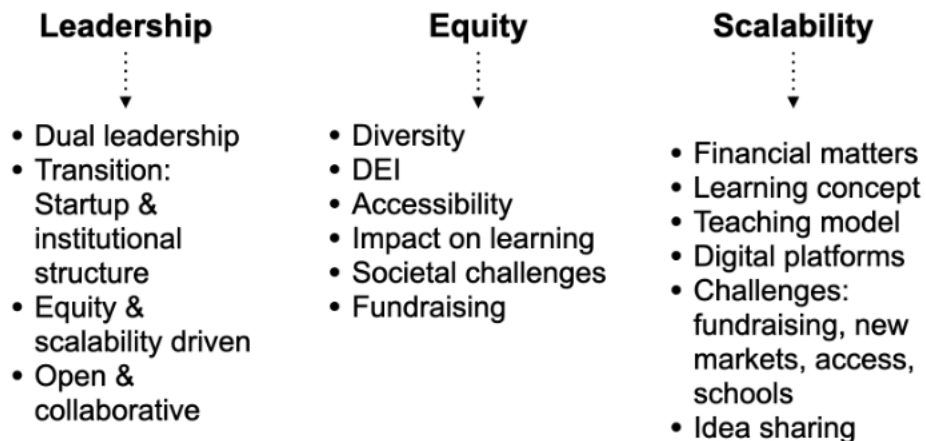


FIGURE14. Key topics developed during the first stage of the coding process.

The next step in the data analysis process was to construct the key themes across the topics. What seemed to be fitting into one category took a turn into developing a new theme. For example, the topics *learning concept* and *teaching model* initially fit the scalability category. However, as the data was analysed it

became evident that these topics go beyond the concept of scalability and create a separate category *Educational Models*. This decision allowed to highlight certain issues that otherwise would have been lost. Figure 15 showcases how some topics were put into already existing themes from the theoretical framework and how other were used to construct new themes.

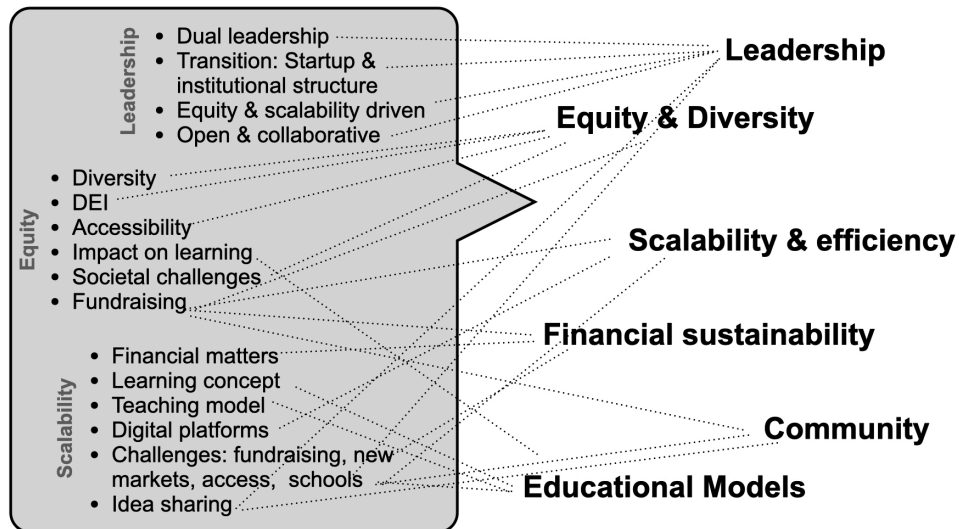


Figure 15. The data analysis process of constructing key themes.

To summarize, the key developed themes are presented in Figure 16. They are leadership, equity and diversity, scalability and efficiency, financial sustainability, community and educational models. The process of identifying the themes is in Appendix 3.



Figure 16. Key themes constructed in the data analysis process.

### 3.5.1 Interviews

This chapter presents the key themes identified through the data analysis process, including leadership, equity and diversity, scalability and efficiency, financial sustainability, community, and educational models. These themes were constructed to capture core insights relevant to the study's objectives. Table 7 provides an overview of these themes and their defining aspects, with a detailed explanation of each theme following below.

TABLE 7. Key themes and their description identified in the data.

Theme	Description
Leadership	<ul style="list-style-type: none"> <li>• <b>Strategic leadership:</b> in all leadership</li> <li>• <b>Dual leadership:</b> leadership and management</li> <li>• <b>Leadership meetings:</b> leadership-focused and operations-focused</li> <li>• <b>Inclusive leadership:</b> inclusive decision-making practices with multiple perspectives from all stakeholders</li> <li>• <b>Implicit focus on equity and scalability</b></li> <li>• <b>Entrepreneurship and institutional structure:</b> entrepreneurial and institutional, balancing innovation and regulation</li> </ul>
Equity and diversity	<ul style="list-style-type: none"> <li>• <b>Diversity, DEI (diversity, equity, inclusion) and accessibility:</b> concept definitions</li> <li>• <b>Re-assessing is key</b> to impact-driven projects</li> <li>• <b>International outreach</b> to reach diversity and equity</li> <li>• <b>'Mentors as role models'</b> to motivate students</li> <li>• <b>Cultural challenges</b> for recruiting diverse students</li> <li>• <b>New locations</b> challenges for recruiting diverse students</li> </ul>
Scalability and efficiency	<ul style="list-style-type: none"> <li>• <b>Digital platforms</b> standardize administrative and academic practices while allowing the flexibility of alterations across multiple locations at a time</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Franchising</b> as a way to multiply educational practices in multiple location</li> <li>• <b>Efficiency:</b> blueprint practices and documentation</li> <li>• <b>Intentional planning</b> for the project development</li> </ul>
Financial sustainability	<ul style="list-style-type: none"> <li>• <b>Financial sustainability</b> helps keep the right focus</li> <li>• <b>Securing sustainable funding</b> is a priority</li> <li>• <b>Impact agreements</b> as a long-term partnership for financial sustainability</li> </ul>
Community	<ul style="list-style-type: none"> <li>• <b>Openness</b> to share leads to local and global partnership</li> <li>• <b>A different way of scaling</b> that prioritizes pedagogics over financial gain</li> </ul>
Educational Models	<ul style="list-style-type: none"> <li>• <b>Self-efficacy</b> as a learning concept</li> <li>• <b>Coaching and mentoring</b> provide a unique support system for the students but make it hard to replicate such practices at scale</li> <li>• <b>Learning environments</b> and high-quality education</li> </ul>

**Strategic leadership** is at the core of all leadership processes. It is stated by Davies & Davies (2006, 122) and supported by the research findings.

*“It should be really about achieving the common goals, the goals that we set forth, and also finding the best way to achieve these goals.”*

*“But the management part in my case is to really make sure that we are all aligned, we know our goals and we, in quarterly stages, also review how do we make progress on these goals.”*

**Dual leadership** is a combination of leadership and management practices. Leadership as a visionary and inspirational element goes alongside managerial responsibilities to ensure that appropriate actions and strategy are taken to reach the set goals. These two parts and roles are inevitably intertwined and support each other in any leadership process.

*“Well, in the end, the leadership part ties into the management part, in the sense that as a leader, you give direction where the university is heading. And ideally you also give a vision and a mission and also some goals that people know what we want to achieve in one year's time, in three years time or five years time. And that also should also be reflected in a university development plan. So usually universities have that kind of stuff, and then the management part is really to follow up on it, to make sure that these are not simple words, because then that happens very often, that they're set forth, but then they are not followed upon. But the management part in my case is to really make sure that we are all aligned, we know our goals and we, in quarterly stages, also review how do we make progress on these goals.”*

**Leadership meetings** align with the dual leadership model described above, as they are divided into two distinct types: leadership-focused and operations-focused meetings.

Topics such as university goals, students' goals, employees' satisfaction are discussed at leadership-focused meetings, which take place once or twice a year.

*“It's really about setting the goals for the university and then we talk about, okay, what are our goals for, for our student development, student body development, what do we, what programs do we want to introduce? What do we want to change? How do we do marketing and branding and all that kind of stuff. So anything that relates to what's the customer. At the same time, we're talking about employees, employee satisfaction and also academic, the faculty, academic quality, quality assurance, that kind of stuff.”*

At the operation-focused meetings budgets, statistics, teachers' performance, and any topics related to operations are discussed. These meetings occur at least once per quarter or semester.

*“You know, it's really about budgetary stuff... It's like nitty gritty things at times because we are a very small university, so you are dealing with, oh, there is a group of students who wants to do a study trip to a company in Belgium. Do we support that financially or how do we support that? How can we help them? That kind of stuff. So it can become very small. On the other hand, it's also about how do we improve when we set for, when we set the goals that we want to become, our net promoter score needs to increase and we need to also look at how do our teachers perform? Where do we need to make changes in the modules or with the teachers that we are using? Are they the right, are there the right teachers for the right subjects, that kind of stuff.”*

**Inclusive leadership** and openness are foundational to every meeting. Diverse stakeholder participation, including students, is not only valued but aimed at to ensure a positive development for the educational institution.

*“We never had any vote on anything. So it was always a discussion and some sort of mutual agreement on who's responsible to make that decision, or we made it all together. And we also try to have a very inclusive approach when it comes to making decisions together with our team.”*

*“My fundamental approach to this, to leading people, is to make sure that it's not about your taste also. It's really about what does. What do the people want that we work for? What do the students want, what's best for them. And that makes a successful university, at least.”*

**Implicit focus on equity and scalability** is an acquired practice. In the beginning of their journey, CODE discussed equity and scalability explicitly and intentionally. Naturally, these topics took an implicit role, eventually becoming the cornerstone of every meeting.

*“Some of the topics we've discussed very explicitly, some. We came to a conclusion at some point and then basically stopped talking*

*about it. So we always had discussion about equity, about diversity, and about making sure that code is as accessible as possible for anyone. That has various implications, not just the financial ones, where we say, you need to have a solution for tuition fees.”*

*“It’s again, operational stuff, but it centres around equity and scalability most of the times.”*

**Entrepreneurship and institutional structure** is a unique nature of CODE. It is transitioning from one stage to the other, striving to balance its free-spirited and ‘chaotic’ nature and the new form of structure that helps the organization grow, mature and potentially prepare for scaling up. According to Westley et al. (2014, 256) this is an inevitable step to transition an organization to the next level as it outgrows a certain leadership style and demands a more structured form of operations. However, it might also mean that the powerful connection and inspiration of the original founder might be lost. At CODE it is seen as a positive development that contributes to the university’s growth.

*“At some point, talking about becoming more efficient, you need to establish certain structures and decision-making processes that are not going to be questioned or discussed all the time.”*

*“I think that’s why I think it’s a healthy decision to say the founders are taking a step back now. Other people are in charge to take CODE to the next step of being a more efficient, more structured, and maybe more scalable organization than it has been in the past, because I think it’s hard to imagine someone who can do both things, like authentically be the part of the whole founding setup thing, but also being part of the growing, more efficient part of the organization development.”*

**Diversity, DEI (diversity, equity, inclusion) and accessibility** were highlighted by the interviewees and used as synonyms to equity (Appendix 2). While equity is viewed as a complex concept, one of its facets is having educational access for people with various backgrounds into the education system.

*“The equity part is really about allowing people from various backgrounds into the university. Right. So, it's essentially also about diversity.”*

**Re-assessing is key** to the equity journey. Equity was not initially in the plans of the Hackathon program. It gained momentum once a good turnout was achieved, and the leadership team realized that a homogenous group of students was joining the camp. That's when the quest for equity and diversity began at CODE.

*“For the first three to four years, we didn't really care too much about diversity and equity. We just were happy for every participant who showed up. And then at some point we started looking at the participants and realized, oh, we're only reaching a certain target group, and it's not the one that actually needs this experience the most. So that's when we started to think about how we can change our approach.”*

**International outreach** enables CODE to foster an equitable and diverse learning environment by actively recruiting students from around the world. As an English-speaking institution, CODE can attract a broad range of potential students, expanding access to quality education across diverse cultural and geographical backgrounds.

*“We are an English-speaking universities and we are naturally also reaching out to internationals from all over the place, you know, from Afghanistan, from Sudan, from Paraguay, all these places where there are.”*

**Mentors as role models** approach might help achieve diversity and equity at the Hackathons. This approach can encourage students who are typically underrepresented to envision a positive future for themselves by seeing an example right in front of their eyes.

*“We try to recruit students from diverse backgrounds as coaches, so our participants have someone they can relate to, which might help*

*them also overcome their fear of not fitting in, not really being part of the community there, and maybe also discovering some role models that they might, that might motivate them to rethink their career choices, ideas, whatever it is.”*

**Cultural challenges** can stagnate equitable access to Hackathons. For instance, students and their families failed to see value in investing time and effort into attending a Hackathon camp. Additional issues that emerged included students' fear of failure and low self-esteem, particularly among those who would benefit most from the Hackathons.

*“So, I think that the problem is not money because nobody has to pay to attend these camps. It's rather that convincing people that it's a good idea to invest their time and actually attend again requires them to have some idea about how this might positively impact their future.”*

**New locations** might pose new challenges in inviting diverse students who would benefit most from the camp. Reaching out to these students requires preparation.

*“If we just show up in the city and use certain channels to announce that we're there and that it's for free and we take care of everything, we end up with 80% participants from academically educated parents who go to the German gymnasium who are not really (the targeted participants).”*

**Digital platforms** play crucial role in scaling. Scalability is regarded as a financial matter, as well as a quantifiable matter where the size of a class or a group of students advances or stagnates scaling.

*“Because the scalability part is something that is more of a financial question in a way, or commercial question, how to make universities commercially sustainable.”*

*“Scalability is a broad field. Size matters most here.”*

However, the narrative shifts with the topic of digitalization. The words *virtual*, *online* and *self-study* prevailed when the interviewees talked about scalability.

*“So, if you're operating on a multi campus business model, scalability goes beyond your classroom. If you use also technology, you know you can connect people with one another.”*

A digital platform would serve as a base for connecting, networking, resource sharing, while also offering education on-site. Moreover, if there are any changes made in the program, they would immediately appear on the digital platform, allowing all locations to adjust accordingly.

*“...different entities that need to learn from each other, be connected to each other, share resources with each other, I think that would be a very interesting next step to take.”*

**Franchising** is one of the ways to scale a digitalized educational product. Whilst this is just one of the possible scaling options, it was highlighted by an interviewee as a potentially viable one.

*“The setup for franchising, it would shift the focus more towards a digital platform that would connect all these local networks, local entities, which we currently have in a certain way.”*

**Efficiency** through blueprinting and documenting organizational and academic processes supports transitioning to a digital platform. A structured approach is needed to increase chances of successful scaling. However, it might contradict the ‘chaotic co-creation’ culture which is typical of a start-up organization. CODE’s current mixed approach mentioned above presents both benefits and challenges to its further development.

*“So that's kind of the two opposites that I see. This chaotic co-creation that we have at CODE University somehow still going on with a very strong student body that wants to be involved and wants*

*to be able to challenge things and change things; and also faculty who like to be involved in all these discussions. And on the other hand, that I see that the successful scaling educational models are the ones who have at their core, a very structured approach that is not to be questioned by anyone who wants to be part of that, part of the company.”*

Currently, there exists a blueprint on how the Hackathon project is run which helps to replicate the practical aspects.

*“And with our Hackathons, with the code and design hackathons, we at some point invited researchers from a German university to do an evaluation about the impact of the learning experience, especially with regards to self-efficacy, expectation and media competency - it's a blueprint that we can use for every camp.”*

As of 2024, Hackathons are run in one area of Germany where the project is evaluated and tested to create a polished model that can serve to run the project in multiple locations.

*“And for us, for the CODE and design camps, yes, we want to grow it across other regions in Germany, but we're using what we do in this one area of Germany also as a testbed. We're refining our learning model, and then once we're clear on how this runs, then we bring it across Germany.”*

**Intentional planning** and strategizing support a project's growth and development. In light of the dual leadership model and the blend of a start-up and institutional structures, the interviewees highlighted that there is a strategy in place on how to guide Hackathon's growth and development.

*“We do have a specific plan. The current project is funded by a third party, by a foundation, and that is set to expire in two years' time. And during this period, we are working on a model that we will then*

*use in other cities, or we use it on our own. So it's happening as we speak, you know?"*

**Financial sustainability** helps focus on the most important aspects of educational products. Fundraising for equitable projects like Hackathon takes too much effort, with little time left for executing or improving the project.

*"If you spend 80% of your time fundraising and only 20% executing the idea, it feels like a huge mismatch."*

*"And then we need to find solutions to how can we make it possible that these people study at code. Sometimes it's also about awarding scholarships or different payment plans, etcetera."*

**Securing sustainable funding** is the foundation of any project's long-term growth. Income share agreements (ISAs) through a partnership helped CODE finance most of the students' fees for their bachelor's programs. Students whose studies were financed this way, would pay their fees only after they get employed upon the study completion. It is a long-term investment of the partnering organization. However, due to certain regulations, such financial support options could be offered only to certain applicants. Leadership at CODE decided to offer students their own form of income share agreements, investing in their own students' future.

*"And of course, we also discussed the financial aspects of accessibility and equity. As I said, with our partnership, with our possibility, or with our opportunity to offer income share agreements ourselves, that has been going on over and over again."*

**Impact investments** might be a long-term solution for impact-driven educational products. Undoubtedly, for a start-up organization like CODE, long-term investments are financially unsustainable. But at CODE they are determined to find a sustainable solution and potentially have an 'impact investment' to support all students.

*“So we desperately want a solution. We're also working towards a long-term solution where we basically create a funding or an investment vehicle to collect money, investments from people, and then basically invest the money in student contracts. So create our own vehicle where we say it's a great way to invest money if you're not looking for short term revenue, but long term. And if you also want to have some sort of impact investment, where you know that your money is not only creating great returns on investment, but also doing something good for the society, but that's a long-term project.”*

*“So now we currently do not have this opportunity to include people from their different backgrounds. But going forward, we will again have this opportunity because we're working hard on it. And it's also important for the mix, for the culture of code to have people of various backgrounds interacting with each other.”*

**Openness** to share its practices and approaches has made CODE a welcoming destination for visitors from the educational sector, both nationally and internationally. This approach leads to creating local and global communities and partnerships.

*“So, we never really tried to protect some sort of business secrets from anyone. That was our way of hoping, of trying to contribute to an idea spreading rather than our own business model scaling.”*

**A different way of scaling** is indicated by the interviewee. The leadership team from another university visited CODE and observed their practices. Then they went back and reorganized a faculty at their university, making the shift to sustainability, transformation and project-based learning. Such openness represents a particular culture of CODE, signifying the importance of sharing, community-building, networking and contributing to the educational field development on a bigger scale. Seeing how their idea is implemented in another educational institution is one of the ways of scaling for CODE at this stage, supporting the pedagogical value in scaling over economic gain.

*“And they came visiting CODE, the president and her staff, quite a few people made the trip to Berlin, spent two days with us and then went back to their university and transformed one of the faculties to a rather modern (one). They call it ‘sts’ school, school of sustainability, transformation and something else. And they approached it with the idea of a project-based learning concept that's quite similar to what we have implemented. So, we see some of the impact we had by just sharing our idea and helping people see how we're doing things, but that's basically the only way we could talk about scaling our idea so far.”*

**Self-efficacy** is the foundation of a learning model at CODE. Self-efficacy stands for living a self-determined life, challenging ideas, shaping growth mindset, enabling and equipping students to form their own future and positively impact the world.

*“(It) is basically the idea that I believe in my own ability to influence future events, to determine the outcome of future events that are somehow related to me, which means I feel like I'm living a self-determined life, I'm making bolder choices when it comes to taking on challenges.”*

*“The main goal of a true education, is that it allows students to experience themselves in a way that shapes a certain mindset, a mindset that is determined by this idea of growth as compared to a fixed mindset and is determined by this idea of self-determination and self-efficacy.”*

The learning concept at CODE is based on the idea of self-study and awareness of making choices for the future.

*“So with code university and with other projects before and since, I'm trying to set up different learning environments that will provide students of all ages with a learning experience that help them*

*experience something like self-determination and self-efficacy, rather than just being lectured and being expected to learn something by heart and then reproduce some factual knowledge they gained. That's the biggest example of what would be code university, where we had a chance to start from scratch and really think about a learning concept that would help students take charge of their learning experience and feel responsibility for the direction their own learning experience takes. And in projects, be able to choose topics they care about, determine their own learning goals, and eventually experience the self-efficacy. This idea that you have, what it takes to make a difference in the world."*

**Coaching and mentoring** is at the core of teaching at CODE. While learning is self-study driven, teachers act as coaches who guide students through their learning paths. This arrangement opens a unique curiosity-driven learning mindset; however, it also makes it harder to scale such a program.

*"The teaching model also drives scalability. Which is opposite to the teaching style in CODE where teachers are coaches and mentors. In theory it could also scale because there are self-driven students who like being independent and thus can help scale. But in reality, they are a minority, and most students need teachers there, present, active, to rely on them. Students need coaches to interact."*

*"So, essentially it's much more of self-study driven, our learning concept."*

**The learning environment** plays a crucial role in fostering equitable education, where every student can thrive. Having people from a variety of backgrounds contributes to highly driven learning experience, which is especially valued at CODE. Therefore, better learning outcomes are achieved in a more diverse group of learners, contributing to high-quality education. Therefore, equity for outcomes is prioritized.

*“And if you have people who come from backgrounds where money is more of a scarcity, then sometimes you also find higher driven people. You know, that people are a bit, still more hungrier than the other ones. And this is for a university like code, where it's really about getting things done, working on your project, developing a great idea and bringing it to life. This is the type of students that you want. You want hungry students.”*

Moreover, **learning environments** are formed by various factors. Students' motivation to attend Hackathons should be based on pure willingness and desire to learn. To attract such participants to the Hackathons, CODE used to cooperate with schools. However, this approach presents its own challenges. Students who are invited to join Hackathons by school representatives do not always meet the requirements stated above and might not want to develop the skills that Hackathons has to offer. Currently, CODE is in the process of finding their own way of recruiting students for Hackathons without relying on schools.

*“If you recruit a whole classroom, basically you end up with people, again who don't really want to be there. We don't want to work too close with schools who have these people as their students. How do we do that? Now we have to find the sweet spot, and that's actually something we are only doing for this year now.”*

## 5 RESEARCH RESULTS

This chapter presents research findings based on the interview data outlined above. Additionally, it presents the strategic leadership model and strategic recommendations for educational leaders.

### 5.1 Findings

The key finding of this study is the identification of strategic leadership elements essential for promoting equity and scalability. The elements are as follows: leadership culture, leadership discussions on equity and scalability, equity and diversity in leadership, scalability and efficiency in leadership, financial sustainability, Partnerships and community, non-school partnerships, scalability forms. They are discussed in detail below.

**Leadership culture** is imbedded in every organization. The research findings indicate that leadership for equity and scalability is strategic by nature. This finding corroborates the theoretical framework, drawing on literature review, Smith's Taxonomy (2017) and the Educational Scalability Framework (2021), highlighting that intentional actions are essential for scaling and advancing to the next level and underscoring the importance of deliberate strategic planning and execution by decision-makers to achieve sustainable scalability.

Leadership is agile and inclusive. It is flexible enough to pivot and grow while incorporating equitable and aware practices into their progress. It fosters inclusive decision-making, based on diverse perspectives. This finding corroborates Doyle & Brady's (2018, 307) emergent leadership style, which adapts to an ever-changing educational environment presented by Cooley et al. (2021, 1) Doyle & Brady (2018, 311) and Baran & Woznyj's (2021), as well as to Carvalho et al.'s (2021, 2) concept of proactive change management. Moreover, it highlights an organization's journey outlined by Monechi et al.'s (2017, 3) as growing through the 'adjacent possible' exploration.

Findings show that leadership is about focusing on both leadership and management practices, supporting the dual leadership theories outlined by Davies \* (2004), Doyle & Brady (2018) and Hidayah et al. (2015). The dual approach ensures that an organization is moving in the right direction and increases the chances of reaching the set goals.

It is indicated in the findings that leadership is collaborative, dialogical and open, creating a trust environment in an educational institution, corroborating Interlead's (2019) dialogical approach to foster relationships of openness, as well as Ainscow's (2016, 171) theory on how mutual support and cooperation with inside and outside stakeholders is a stepping stone to equitable education.

**Leadership discussions** on equity and scalability take place in impact-driven organizations in various forms. The findings indicate that equity and scalability are discussed implicitly, forming a foundation for all leadership discussions and practices, corroborating Smith's (2017) theory that equity is the core of all educational leadership decisions. Notably, this finding suggests that explicit emphasis on equity and scalability may not always be required to make progress in these areas. However, it is essential that the leadership team maintains alignment on these concepts and on the practical steps needed to achieve the established goals.

**Equity and diversity in leadership** decision-making processes consists of a few elements. Findings indicate that leadership for equity requires building strategies for recruiting diverse and underrepresented participants to equity-driven projects like Hackathons, supporting Willems's (2010) and Wang's (2023) theories of having a balanced students' representation, and the importance of prioritizing those who need more help, so they could achieve similar outcomes to everyone else.

Moreover, a unified understanding of equity is required. The terms *diversity*, *DEI* and *accessibility* were used by the interviewees to describe *equity*, highlighting Sahlberg's (2022, 5) point on the need to have a shared view on the concept. However, the variety of terms used by the interviewees indicates the importance of localizing and contextualising each case to its unique environment, allowing

for a more diverse terms utilization, and corroborating Ainscow et al.'s (2012, 2) position.

Furthermore, findings indicate societal challenges, such as students' lack of long-term vision for time and resources investment into education, combined with self-esteem challenges. These issues are rooted in what Darling-Hammond (2024) presents as the 'anatomy of inequality' shown in Figure 4 in chapter 2.1.2. A bigger perspective should be considered when discussing these challenges and responsibility should not fall on individual shoulders alone. Equity-driven organizations find ways to educate the society about the benefits equitable projects hold for the students' future.

The findings highlight the need for a comprehensive support system that addresses students' financial, emotional, and societal needs and challenges. Interviewees suggested that an essential component of this system could involve hiring relatable professionals who can guide and motivate students from similar backgrounds.

**Scalability and efficiency in leadership** are complex. The findings suggest that the development of digital platforms enables the replication of effective practices, corroborating Kasch et al.'s (2017) and Clarke et al.'s (2006, 28) theories that technology can help improve education, making it more accessible and individualized.

Interviewees highlight a potential franchising direction to scale their educational programs. Documenting educational and administrative practices makes digital platforms creation feasible and fosters scaling while maintaining the educational institution's quality standards. This result supports Kasch et al.'s (2017) emphasis on the importance of educational quality in digitalization processes.

Moreover, findings indicate that digitalization and scalability are linked to increased efficiency, identifying *efficiency* as a positive concept. However, this contradicts the theories which state that efficiency can have drawbacks. For example, it can lead to increased pressure to produce immediate results as outlined in Davies & Davies's (2006, 136) theory and increase learners' and

educators' pressure to perform for outcomes, as introduced by Biesta (2015, 78) and Biesta (2021, 8). Unhealthy efficiency levels can result in lower academic well-being and quality levels (Doyle & Brady 2018, 306). Strategic leadership is key to ensuring educational quality and sustainability of educational institutions (Davies \* 2004, 26; Davies & Davies 2006, 136).

**Financial sustainability** is a vital component of every organization. The findings indicate that existing financing models are insufficient and short-sighted. Financial challenges can stagnate education-for-equity pursuits as too much effort is devoted to financial questions, leaving no room to focus on the matters that support projects' development and implementation. Inevitably, providing a financial solution to students for whom study fees is a burden is one goal and challenges simultaneously. Interviewees highlighted their dedication to finding a sustainable financial model which can help with scholarships and flexible payment plans.

Therefore, it is evident that planning for financial sustainability should be one of the leadership's key priorities, corroborating VVOB's (n.d.) and Cooley et al.'s (2021) ESC framework's financial sustainability category which highlights the importance of strategic financial health of an organization throughout the whole scaling journey.

Interviewees suggested creating 'impact investment' model that can support financial needs of students, emphasizing the concept of *impact* and how investors can see find value in investing for impact reasons in addition to financial prospects. This finding reinforces Kasch et al.'s (2017) theory on the importance of prioritizing pedagogical benefits over economic achievements.

**Partnerships and community** development are indispensable parts of any organization's growth. The findings highlight the importance of strategic partnerships building, locally and globally, to attract underrepresented students and to build a strong multi-stakeholder support system. This finding reinforced Sahlberg's (2022, 7) theory that uniting multiple stakeholders contributes to creating a more equitable education.

Building a digital platform was mentioned by an interviewee as a way to not just prepare for scaling but also to share ideas and practices exchange and contribute to quality education. It connects to Ainscow's (2016, 171) theory of building collaborations and support between all stakeholders, creating shared vision for equitable education.

The findings indicate the need to establish partnerships with various organizations to support diverse students' recruitment. In the past such partnerships with schools did not result in bringing in the students who would benefit most from equitable projects, new approaches need to be explored.

Regular engagement with all stakeholders to maintain a culture of support and collaboration is about being open to network building and involving all stakeholders for further growth, reinforces Ainscow's theory (2016, 171). The Education Scalability Checklist (VVOB n.d., 16–23) presents this point as the 'support system' category. Moreover, this approach increases chances of policy advocacy to support sustainable scalability leading to equitable education for all. Therefore, Westley et al.'s (2014, 254–255) theory on strategic leadership skills that contribute to strategic networking with policy sector stakeholders and partnership building is reinforced.

**System change** does not necessarily represent an explicit standalone goal. While the theoretical framework highlights system changes as a one of the key aspects of strategic leadership for developing and scaling equitable product development, the data indicates that system change is an overarching goal of all scaling practices. It is discussed implicitly alongside equity and scalability by the decision makers. Moreover, it highlights that equitable education leads to a better society, corroborating Sahlberg's (2021, 12) and Ainscow et al.'s (2012, 150) argument that equity creates a better society through better education.

**Non-school partnerships** can enhance targeted students' recruitment and students' learning outcomes. The findings suggest that previous methods of recruiting students through schools and hosting Hackathons on school premises often resulted in participants feeling obligated to attend, rather than being intrinsically motivated. This shift in motivation significantly influences learning

outcomes for all participants, detracting from equitable education instead of promoting it. Therefore, students' learning outcomes are affected by various factors, including the strategic selection of partners and the locations of projects, such as Hackathons in this case.

**Scalability forms** can vary depending on the stage an organization is at. One of the ways CODE shares ideas and practices is through network and community building, remaining open to visitors who may apply these concepts in other educational institutions. The interviewee highlights that this could be considered as one of the scaling ways for their organization. This prompts a consideration of the traditional understanding of scaling a project and whether conventional notions of scalability are necessary for fostering societal change.

## 5.2 Strategic leadership model

The findings reveal specific practices that educational leaders implement when managing development and scaling of equity-driven projects. These practices not only contribute to the theoretical framework discussed in Section 2.2 but also help lay the groundwork for a strategic leadership model. This model can guide higher education institutions in developing and scaling equitable educational products.

To develop the strategic leadership model, the research findings were integrated with the theoretical framework (Figure 17). The findings presented in section 5.1 are positioned within the quadrants, each indicating proximity to a specific strategic leadership quality from the theoretical framework, which is displayed outside the quadrant. This allocation visually represents the dynamic integration of theory and practice, as the framework and findings mutually reinforce each other. In essence, the findings illuminate the theoretical framework, adding practical dimensions that contribute to a comprehensive, actionable model. As Figure 17 shows, system change is implicitly located at the background of the scaling-for-equity process.

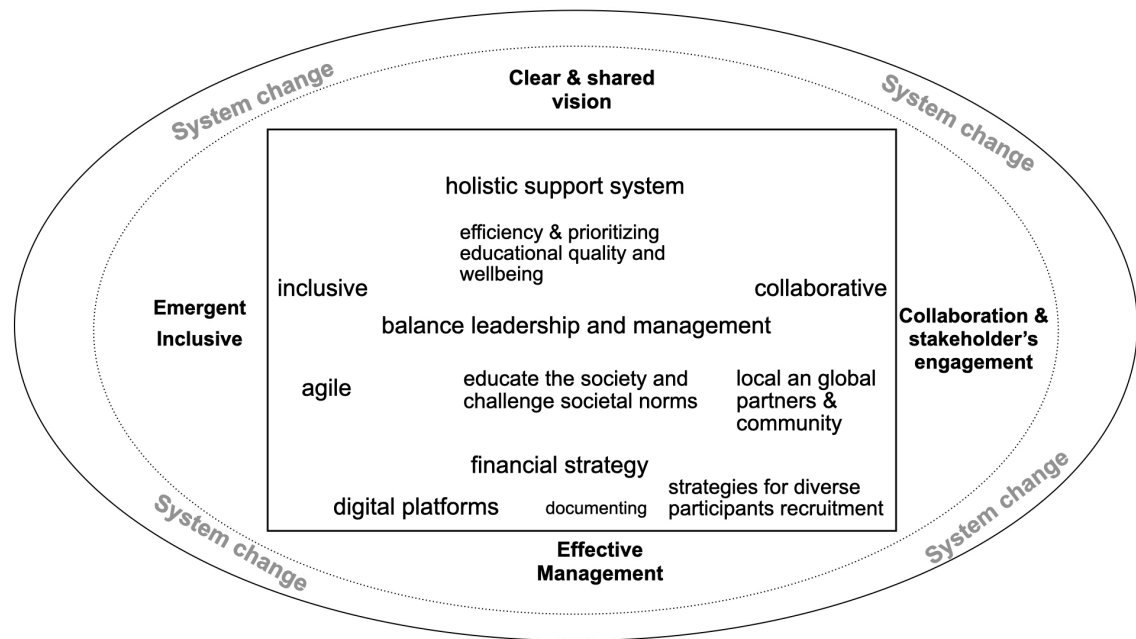


FIGURE 17. Research findings and the theoretical framework integration.

Following the integration process, the strategic leadership model for developing and scaling equitable educational products was constructed. It is depicted as a circular diagram, with key strategies representing the leadership practices essential for advancing equitable educational product development (Figure 18). The following leadership strategies comprise the strategic leadership model:

- **Leadership culture.** Fostering an agile, inclusive and trust-based leadership culture to navigate the unpredictable and ever-changing educational landscape. Concurrently, leading and setting goals should be balanced out by managing and ensuring the organization is moving in the right direction.
- **Equity-focused strategies.** Prioritizing a clear shared understanding of equity within an organization; defining and following strategies to attract students who would benefit most from an educational program. Educating society on the value of education and creating a system to overcome barriers for underrepresented students.
- **Scalability and efficiency** enhance the impact of equity-focused educational products. Strategies for digitalization might include digital platform development, practices recordings, evaluation metrics, franchising. Increased efficiency has both benefits and drawbacks. The

priority should be to stay aware of maintaining educational quality and prioritizing students' and educators' wellbeing.

- **Financial sustainability** strategies should be employed at all stages of educational product development. Strategic recourses leveraging and impact-driven financial partnerships make equitable educational initiatives viable.
- **Community.** Developing community and strategic partnerships through local idea dissemination and societal awareness building, as well as global community for new insights and sharing.
- **Assessment and pivoting.** Continuously re-assessing the scalability journey and adjusting leadership approaches alongside with practical steps whenever necessary.



FIGURE 18. Strategic leadership model for developing and scaling equitable educational products.

### 5.3 Strategic recommendations for educational leaders

Developed based on the theoretical framework and research findings, the strategic leadership model aims to assist educational leaders in designing and scaling equitable educational products. The following recommendations are designed to facilitate educational leadership teams in effective planning,

execution and timely assessment of their strategies, ultimately contributing to high-quality equitable education for all.

- **Develop leadership culture.** Include leadership practices that align with equitable values, such as being agile, inclusive and community oriented.
- **Balance out.** Balance out leadership and management approaches to ensure that plans and goals are re-visited, updated and achieved.
- **Address equity.** Establish what equity means for your organization, clarifying its role and significance in your organization's mission. Identify targeted strategies for recruiting students who will benefit most from your program, ensuring access for underrepresented populations. Support students holistically, addressing both financial needs and emotional well-being. Raise awareness within society about broader benefits of equitable education.
- **Address scalability.** Define steps and best practices for developing programs that can grow sustainably, reaching larger audience while maintaining quality and equity. This can be done through leveraging digitalization and streamlining academic and administrative processes, establishing success metrics to track progress to ensure equitable access. Pay extra attention to drawbacks of efficiency, to quality and pedagogical benefits, as well as stakeholder' wellbeing.
- **Build financial security.** Approach this crucial issue strategically by identifying the most suitable financial model for your organization or project. It might be impact-driven financing where funding organizations or key investors are motivated not only by profit but also by the social or environmental impact they help generate.
- **Create external partnerships.** Foster both local and global partnerships to exchange ideas and best practices. Openness not only strengthens community ties but also has a broader societal impact, ultimately contributing to the goal of providing high-quality education for all.
- **Adapt to your context.** Remain flexible and adapt the model to suit the specific context and various settings within it. As the scaling process progresses, leverage this flexibility and adjust the model to meet unique needs of students, educators, organizations, or different geographical locations.

- **Review and adjust.** Regularly review and adjust your model throughout the development and implementation of an equity-focused initiative. Combine this model with other frameworks that help address specific areas of focus at various stages of the scaling process.

A list of questions was developed to assist educational leaders in the model's practical application (Table 8). These questions are intended as flexible prompts and can be used creatively, either individually or in teams, to encourage dialogue and ongoing improvement.

TABLE 8. Question list for practical application of the model.

Theme	Question
Leadership culture	<ol style="list-style-type: none"> <li>1. How easy is it for the team/organization to adapt to sudden changes? Do processes and practices get updated to improve the workflow and results on regular basis?</li> <li>2. Are all team members or decision-makers heard and listened to when leadership teams make a decision?</li> </ol>
Equity	<ol style="list-style-type: none"> <li>3. What definition of equity is prevalent in your team and organization? Does it reflect the organization's values? If not, what definition could be adopted that would represent conceptual alignment and reflect organizational values?</li> <li>4. What system is in place to attract targeted and/or underrepresented students? What measurements indicate that this system or approach works well, if any?</li> <li>5. What initiatives are in place to educate the society on the value of education and the value of investing time into participating in educational projects? What results do these initiatives show? If there is no such initiative, what can be created and when?</li> </ol>
Scalability	<ol style="list-style-type: none"> <li>6. What strategies for scaling are in place? Is there any indication of a) how hard/easy scaling is projected to be; b) success of the current scaling efforts, if any (e.g.</li> </ol>

	<p>measurement, feedback, etc.)? If not, what can be done about it?</p> <p>7. How is quality maintained during scaling processes in your organization? What frameworks are used, if any? Are there any measurements in place?</p> <p>8. How is wellbeing addressed within your organization when efficiency is highly valued? How is wellbeing addressed in educational projects?</p>
Finance	<p>9. What are the current funding sources for equitable projects? Are the current funding partners solely profit-driven or also impact-driven? Is the funding long-term or short-term (how long will the funding last)?</p> <p>10. Are there any potential impact-driven financial partners?</p> <p>11. What strategy is there in place for securing long-term financial partnerships?</p>
Community	<p>12. How open is your organization to sharing and exchanging practices and ideas with others?</p> <p>13. Is your organization building a community of like-minded people? If yes, is it on the local or global level? How does it happen? What strategy is in place for the community growth and development?</p>
Assessment and pivoting	<p>14. How often does the leadership team review and re-evaluate ongoing projects? How does the evaluation happen? What areas for improvement are there to ensure high quality revision of the projects?</p>

It is recommended that this model be reviewed regularly, using the questions provided or other customized approaches, to evaluate and adjust leadership actions and decisions as needed. As noted earlier, additional frameworks are also recommended to complement the proposed strategic leadership model.

## 6 DISCUSSION AND CONCLUSIONS

This study explored how strategic leadership impacts development and scaling of equitable educational products. Through the main research question *What is strategic leadership in the framework of equitable educational product development and scalability?* To aid in finding the answers to the key question, additional questions were posed: *How explicit are leadership discussions on equity and scalability?* and *What strategic leadership model can support educational leaders in developing and scaling equitable educational products?* Qualitative research was conducted to answer these questions. The findings discussed above serve as a foundation to the answers below.

### 1. *How explicit are leadership discussions on equity and scalability?*

At the initial stages of establishing equity-driven organizations, leadership discussions around equity and scalability are typically explicit and deliberate. However, as the organization grows and operational complexity increases, it is common for these discussions to become more implicit. Equity and scalability are often considered in broader conversations on funding and strategy rather than being addressed as standalone topics. Despite this shift, both principles remain fundamental.

### 2. *What strategic leadership model can support educational leaders in developing and scaling equitable educational products?*

The dynamic strategic leadership model, as presented in section 5.2, can support educational leaders in developing and scaling equity-driven educational products. This model is based on regular re-evaluation of the educational products, ensuring that all its key elements are addressed at all stages. By doing so, all the key elements including leadership culture, leadership and management, equity and diversity, scalability and efficiency, financial sustainability, and partnership and community, are strengthened and reinforced for a long-term sustainability of a project. This model is flexible and easy to use as a team activity or individual reflection. The model's practical recommendations and questions are outlined in section 5.3 for further application of the model.

3. *What is strategic leadership in the framework of equitable educational product development and scalability?*

Drawing on the concepts of strategic leadership, equity, and scalability, along with findings from qualitative research, a strategic leadership model was developed to address this question. According to this model, the primary outcome of the research, strategic leadership in the context of equity and scalability is defined as:

- Agile, inclusive and community oriented.
- Communication-based, dialogical.
- Specific in defining concepts.
- Focused on equity values.
- Focused on educational scalability.
- Focused on strategizing, planning, execution, and re-assessment.
- Motivated by quality and well-being of all stakeholders.
- Financial sustainability-seeking.
- Community-driven.
- Re-evaluating, adjusting, and improving on regular basis.

In conclusion, strategic leadership extends beyond a set of qualities. It encompasses culture, values, strategic vision, planning, execution, flexibility, and a commitment to learning and sharing. It is a blend of structured processes and agility. Rather than a fixed concept or a list of characteristics, strategic leadership is best understood as an evolving process that adapts and progresses toward the goal of equitable education for all.

### **6.1 Limitations of the study**

Research validity is a crucial factor in any study. Several limitations should be considered when interpreting this study's results. Out of them is that only half of the initially small leadership team responded to the participation interview. This made up a small sample of participants. Considering the busy schedules of leaders in start-up organizations, time constraints are a challenge. Nevertheless,

the interviewees' diverse roles and responsibilities offered a broader perspective on issues of equity and scalability in post-secondary education.

Another limiting factor is that research participants work at a private stake-recognized higher educational institution in Berlin, Germany, creating a specific niche and limitations. Cultural limitations might also be present.

While qualitative methods and thematic analysis have limitations, as discussed above, researcher bias is a notable concern. As Guest et al. (2012) emphasize, researcher bias should be minimized, though it might not be possible to entirely eliminate it. Additionally, interviewees' possible bias needs to be noted.

The theoretical framework was partially built on Smith's Taxonomy (2017) and Educational Scalability Framework (2021), limiting the frameworks' value and reducing their practical applications in evaluating study results. It is hoped that the frameworks will be explored and applied in further research studies, along with other similar frameworks.

## **6.2 Future Research**

Limited prior studies exist in the intersection of strategic leadership, equity and scalability, creating a research gap. Further research should focus on a larger sampling number and include other research methods, such as quantitative or mixed methods. A larger body of sampling with more time allowance for the empirical research could provide more in-depth findings and broader application of results.

Due to the time and resources constraints of this study, a practical application of the strategic educational model was not conducted. However, future evaluations of the model could lead to updates and developments, enhancing its practical applicability.

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## APPENDICES

## Appendix 1. Theoretical framework's thematic areas

Theoretical framework's thematic areas outlined in the literature review. It serves as foundation for the theoretical framework development presented in the form of the Venn diagram in this thesis. The colourful coding creates visual representation of the connecting themes among the three key concepts of this study.

- Light green colour for leadership alignment
- Dark green for all stakeholders' engagement
- Purple for the importance of a broader picture
- Dark red for the purpose and values in education
- Blue for the emergent and ever-changing nature of education

<b>Strategic Leadership</b>	<b>Equity in education</b>	<b>Scalability in education</b>
Emergent leadership and co-creation of change (Doyle & Brady 2018)	Equity is the foundation of all educational leadership decisions (Smith 2017)	Educational scalability with quantitative and qualitative aspects (Kasch et al. 2017)
Individual and collective growth at the core of strategic leadership (Doyle & Brady 2018)	All stakeholders' active engagement to achieve equitable education (Sahlberg 2022)	Adjacent possible as a result of novice strategies for deeper impact (Westley et al. 2014)
Adjacent possible and dialogical approach to leadership and change - an alternative or emergent paradigm of leadership (Doyle & Brady 2018)	Equity is equity in outcomes (Sahlberg & Cobbold 2021)	Education Scalability Checklist (ESC) for identifying educational initiative's scaling difficulty level (Cooley et al. 2021)

<p>Leadership and management as one (Davies * 2004, Doyle &amp; Brady 2018)</p>	<p>'Equity-focused leadership' and shared vision on equity (Ainscow et al. 2012, Ainscow 2016)</p>	<p>Pedagogical benefits of scaling in the education field (Kasch et al. 2017)</p>
	<p>Students' empowerment and decision-making ability on top of the equity-driven leadership taxonomy (Smith 2017)</p>	<p>Scaling out for larger outreach and scaling up for system change are both vital for the scaling process (Westley et al. 2014)</p>
<p>Broader context of strategy is crucial to consider: cultural, political, social (Carvalho et al. 2021)</p>	<p>Resources distribution, treatment of students, power distribution (Ainscow et al. 2012)</p>	<p>No standardized method to measure scalability in education (Clarke et al. 2006)</p>
	<p>Within-school, between-school and beyond-school root causes of inequities (Ainscow et al. 2012)</p>	
	<p>Equity fosters fairer society and top-level education (Ainscow et al. 2012, Sahlberg 2021)</p>	
	<p>Equity requires short-term different treatment to achieve similar outcomes to others (Willems 2010)</p>	
	<p>Lack of high-level professional educators and inequitable distribution of such contributes to inequities in education (Darling-Hammond 2024)</p>	

## Appendix 2. Prevalent terms and phrases used by interviewees

Terms used by interviewee 1	Terms used by interviewee 2
<ul style="list-style-type: none"> <li>• Self-efficacy</li> <li>• Accessibility, access to...</li> <li>• Diversity</li> <li>• Equity</li> <li>• Impact</li> <li>• Inclusive</li> <li>• Innovate, innovation</li> <li>• Cultural constraints</li> <li>• Quality</li> <li>• Complexity</li> <li>• Open, openness</li> <li>• Change</li> <li>• Learn</li> </ul>	<ul style="list-style-type: none"> <li>• Duo leadership (leadership &amp; management)</li> <li>• Leadership</li> <li>• Management</li> <li>• Diversity</li> <li>• DEI (diversity, equity, inclusion)</li> <li>• Finance/financial</li> <li>• Driven</li> <li>• Hungry (for learning)</li> <li>• Getting things done</li> <li>• Scalability</li> <li>• Size</li> <li>• Teachers, coaches, mentors</li> <li>• Goals</li> <li>• Empower</li> <li>• Test</li> <li>• Fail</li> <li>• “Academic thinking is done once”</li> <li>• “Scale effects”</li> </ul>

## Appendix 3. Coding process using thematic analysis

Extracts from the interviews	Topics identified in the extracts
<b>Leadership</b>	
<p><i>“Well, in the end, the leadership part ties into the management part, in the sense that as a leader, you give direction where the university is heading. And ideally you also give a vision and a mission and also some goals that people know what we want to achieve in one year’s time, in three years time or five years time. And that also should also be reflected in a university development plan. So usually you universities have that kind of stuff, and then the management part is really to follow up on it, to make sure that these are not simple words, because then that happens very often, that they’re set forth, but then they are not followed upon. But the management part in my case is to really make sure that we are all aligned, we know our goals and we, in quarterly stages, also review how do we make progress on these goals.”</i></p>	<p><b>Dual Leadership</b></p>
<p><i>“It’s really about setting the goals for the university and then we talk about, okay, what are our goals for, for our student development, student body development, what do we, what programs do we want to introduce? What do we want to change? How do we do marketing and branding and all that kind of stuff. So anything that relates to what’s the customer. At the same time we’re talking about employees, employee satisfaction and also academic, the faculty, academic quality, quality assurance, that kind of stuff.”</i></p> <p><i>“And it’s really more about operational stuff. You know, it’s really about budgetary stuff... It’s like nitty gritty things at times because we are a very small university, so you are dealing with, oh, there is a group of students who wants to do a study trip to a company in Belgium. Do we support that financially or how do we support that? How can we help them? That kind of stuff. So it can become very small. On the other hand, it’s also about how do we improve when we set for, when we set the goals that we want to become, our net promoter score needs to increase and we need to also look at how do our teachers perform? Where do we need to make changes in the modules or with the teachers that we are using? Are they the right, are there the right teachers for the right subjects, that kind of stuff.”</i></p>	<p><b>Two types of leadership meetings: leadership &amp; operational</b></p>
<p><i>“We never had any vote on anything. So it was always a discussion and some sort of mutual agreement on who’s responsible to make that decision, or we made it all together. And we also try to have a very inclusive approach when it comes to making decisions together with our team.”</i></p>	<p><b>Inclusive leadership</b></p>

<p><i>“My fundamental approach to this, to leading people, is to make sure that it's not about your taste also. It's really about what does. What do the people want that we work for? What do the students want, what's best for them. And that makes a successful university, at least.”</i></p>	
<p><i>“Some of the topics we've discussed very explicitly, some. We came to a conclusion at some point and then basically stopped talking about it. So we always had discussion about equity, about diversity, and about making sure that code is as accessible as possible for anyone. That has various implications, not just the financial ones, where we say, you need to have a solution for tuition fees.”</i></p> <p><i>“It's again, operational stuff, but I. It centers around equity and scalability most of the times.”</i></p>	<p><b>Implicit discussion of equity and scalability</b></p>
<p>“Even more, to complicate things even more is if you are in university, you have to have some sort of structured decision-making processes on the academic side that you have to adhere to, because in a state recognized university, the leadership meeting does not really exist as a function. What you have is an academic senate, and that's the highest organization within the company or within the university decision making body. So you also have to figure out how to align with the academic structure as a state university.”</p> <p>“That's kind of the duality that code always had being a startup with this startup, typical open discussion, at some point, some decision making, and on the other hand, being a university with this rather democratic approach, bottom-up approach, where you have a representation of professors and students in the academic.”</p> <p>“I think that's also, that also relates quite well to the whole question of efficiency and scalability, is that in the beginning we were of course, in a startup founding mode where everyone was involved in kind of every discussion because there were only a few people around. So, it was just a very natural thing just to be at the same table discussing everything altogether. Then there were some functional differentiations saying, hey, you're more responsible for marketing, you're more responsible for financial part and for the academic part. I mean, that's when we also established these roles. Hey, I'm the president, you are the chancellor, you are the COO, or whatever. But it didn't really change the way we had leadership meetings. We never had any vote on anything. So it was always a discussion and some sort of mutual agreement on who's responsible to make that decision, or we made it all together. And we also try to have a</p>	<p><b>Transitioning from startup to institutional structure</b></p>

<p>very inclusive approach when it comes to making decisions together with our team. So, it rarely happened that we as the leadership team just made a decision and let everyone know. It was usually, hey, that's an issue. Then we started reaching out to other people, collecting opinions and perspectives, and at some point, we said, hey, we heard you, and that's how we're going to do it.”</p> <p><i>“So that's kind of the two opposites that I see. This chaotic co creation that we have at code University somehow still going on with a very strong student body that wants to be involved and wants to be able to challenge things and change things, and also faculty who like to be involved in all these discussions. And on the other hand, that I see that the successful scaling educational models are the ones who have at their core, a very structured approach that is not to be questioned by anyone who wants to be part of that, part of the company.”</i></p> <p>“We need to be more efficient, more much clearer about who makes which decisions and at what point. We can't spend too much time on certain decisions. So, I think, and that's also maybe the different mindset you need in the beginning, I think you need to have this founder's mindset, get everyone on the table, get everyone involved. But at some point, talking about becoming more efficient, you need to establish certain structures and decision-making processes that are not going to be questions or discussed all the time.”</p> <p>“I think that's why I think it's a healthy decision to say the founders are taking a step back now. Other people are in charge to take code to the next step of being a more efficient, more structured, and maybe more scalable organization than it has been in the past, because I think it's hard to imagine someone who can do both things, like authentically be the part of the whole founding setup thing, but also being part of the growing, more efficient part of the organization development.”</p>	
<p><i>So it's really also about testing, failing and striving for the best idea.”</i></p>	<p><b>Agility</b></p>
<p><b>Equity</b></p>	
<p><i>“The equity part is really about allowing people from various backgrounds into the university. Right. So, it's essentially also about diversity.”</i></p> <p><i>“But to be honest, for the first three to four years, we didn't really care too much about diversity and equity. We just were happy for every participant who showed up. And then at some point we started looking at the participants and realized, oh, we're only reaching a certain target group,</i></p>	<p><b>Equity as DEI</b></p>

<p><i>and it's not the one that actually needs this experience the most. So that's when we started to think about how we can change our approach. That's when we established a partnership with the foundation, who deliberately said, hey, one of our reasons, one of our foundational strategies is to help people from underprivileged backgrounds. So that's going to be one part of your mission. The whole curiosity driven, self-directed learning approach relies on people just being there on their own free will, motivated to learn something."</i></p>	
<p><i>"And if you have people who come from backgrounds where money is more of a scarcity, then sometimes you also find higher driven people. You know, that people are a bit, still more hungrier than the other ones. And this is for a university like code, where it's really about getting things done, working on your project, developing a great idea and bringing it to life. This is the type of students that you want. You want hungry students."</i></p> <p><i>"We try to recruit students from diverse backgrounds as coaches, so our participants have someone they can relate to, which might help them also overcome their fear of not fitting in, not really being part of the community there, and maybe also discovering some role models that they might, that might motivate them to rethink their career choices, ideas, whatever it is."</i></p>	<p><b>How equity &amp; diversity impact learning and how to achieve it</b></p>
<p>"So, I think there the problem is not money because nobody has to pay to attend these camps. It's rather that convincing people that it's a good idea to invest their time and actually attend again requires them to have some idea about how this might positively impact their future. So, it already requires a certain mindset and a certain confidence to say, I don't know anything about computers, but I'm going to go there and I'm sure I'm going to succeed and I'm going to have a great time. If you have any sense of self doubt, you might shy away from that saying, well, if I don't know anything about computers, I shouldn't be there because I'm not going to understand the thing. Other people might make fun of me. Whatever it is that keeps you away from these kinds of offerings, even if they're it, I think, has already to do with your current state of confidence and your current state of self-determination and self-efficacy expectation. So, it's hard to reach out to those who haven't really been able to grow their own confidence in exploring new things, following their own curiosity, and being exposed to topics they know nothing about, because they tend to be even more afraid of failure."</p> <p>"If we just show up in the city and use certain channels to announce that we're there and that it's for free and we take care of everything, we end up</p>	<p><b>Cultural challenges</b></p>

<p>with 80% participants from academically educated parents who go to the German gymnasium who are not really (the targeted participants)."</p>	
<b>Scalability</b>	
<p><i>"Because the scalability part is something that is more of a financial question in a way, or commercial question, how to make universities commercially sustainable."</i></p> <p><i>"Scalability is a broad field. Size matters most here."</i></p> <p><i>"So, if you're operating on a multi campus business model, scalability goes beyond your classroom. If you use also technology, you know you can connect people with one another."</i></p> <p><i>"This creates a lot of work and not necessarily doesn't really feel like it's scalable, because it's very local all the time."</i></p> <p><i>"The setup for franchising, it would shift the focus more towards a digital platform that would connect all these local networks, local entities, which we currently have in a certain way."</i></p> <p><i>"...different entities that need to learn from each other, be connected to each other, share resources with each other, I think that would be a very interesting next step to take."</i></p>	<p><b>Digitalization and franchising model</b></p> <p><b>New markets: running Hackathons locally creates a roadblock to scaling</b></p>
<p><i>"So that's kind of the two opposites that I see. This chaotic co-creation that we have at CODE University somehow still going on with a very strong student body that wants to be involved and wants to be able to challenge things and change things; and also faculty who like to be involved in all these discussions. And on the other hand, that I see that the successful scaling educational models are the ones who have at their core, a very structured approach that is not to be questioned by anyone who wants to be part of that, part of the company."</i></p> <p><i>"And with our Hackathons, with the code and design hackathons, we at some point invited researchers from a German university to do an evaluation about the impact of the learning experience, especially with regards to self-efficacy, expectation and media competency - it's a blueprint that we can use for every camp."</i></p> <p><i>"And for us, for the code and design camps, yes, we want to grow it across other regions in Germany, but we're using what we do in this one area of Germany also as a testbed. We're refining our learning model, and then once we're clear on how this runs, then we bring it across Germany."</i></p>	<p><b>Documenting processes, testing for future replication</b></p>

<p><i>“We do have a specific plan. The current project is funded by a third party, by a foundation, and that is set to expire in two years' time. And during this period, we are working on a model that we will then use in other cities, or we use it on our own. So it's happening as we speak, you know?”</i></p>	
<b>Financial Sustainability</b>	
<p><i>“If you spend 80% of your time fundraising and only 20% executing the idea, it feels like a huge mismatch.”</i></p>	<b>Challenges in securing funding</b>
<p><i>“We have the option of student loans in Germany as well, and I think they've worked for quite a while when we had this low interest, this period of low interest rates, but now they're becoming excessively expensive just because their interest rate is based on the overall interest rate. And this is just, I think, too high for many students now to really be an option for someone who's not financially well off. And that's the target group you have to face.”</i></p> <p><i>“And then we need to find solutions to how can we make it possible that these people study at code. Sometimes it's also about awarding scholarships or different payment plans, etcetera.”</i></p> <p><i>“And of course, we also discussed the financial aspects of accessibility and equity. As I said, with our partnership, with our possibility, or with our opportunity to offer income share agreements ourselves, that has been going on over and over again. We discussed alternatives. We also looked at the student loan markets, as I said, which tended to be a good deal, but then again also only accessible for EU students or for international students from certain countries. So that's also a limitation, I think, that goes with that. So we never really found the perfect solution.”</i></p> <p><i>“I think everyone intellectually can agree that investing in your own education is a good investment, but if you are struggling financially right now, it feels like an even bigger challenge to invest in something where the outcome might be five or ten years into the future. That's also kind of a luxurious position to be in, to say, hey, I don't need that money right now. I'm sure it'll pay off eventually. But it's not going to pay off next year or the next couple of months. So I think that's another issue. And we haven't really found scalable ways of allowing all students, regardless of their financial background, to have access to private education institutions.”</i></p>	<b>Partnerships for financial support for bachelor's studies</b>

*“And unfortunately, financially speaking, we reached a point where we couldn't afford to do that anymore. Because even if you know or have trust in the fact that you're going to get the money eventually, you have to have enough cash flow, just pay the rent, pay the bills, pay your employees. And if you reach a point where that becomes critical, you can't really, you can't really afford to offer income share agreements where you don't have a partner that's financing them. And so these two limitations are what we're facing with right now. Our partner, Charles AG, has stopped giving out new contracts because they not able to finance their endeavour on the capital market right now to reasonable costs. Which means that the cost associated with an income share agreement for the student becomes too high to actually be able to offer that with good conscience. And on the other hand, we don't have superfluous cash flow that would allow us to hand out these pay later agreements, these income share agreements ourselves. That's the situation we're stuck with right now. So we desperately want a solution. We're also working towards a long term solution where we basically create a funding or an investment vehicle to collect money, investments from people, and then basically invest the money in student contracts. So create our own vehicle where we say it's a great way to invest money if you're not looking for short term revenue, but long term. And if you also want to have some sort of impact investment, where you know that your money is not only creating great returns on investment, but also doing something good for the society, but that's a long term project.”*

*“And that obviously has also a financial side to it because you give students the opportunity to study for free for some time and then you are relying on them paying back the tuition fee. This is this income share agreement model and this is what, this was the only way it was possible to study at code if you do not have the proper financial means to do that. But we stopped doing that.”*

*“So now we currently do not have this opportunity to include people from their different backgrounds. But going forward, we will again have this opportunity because we're working hard on it. And it's also important for the mix, for the culture of code to have people of various backgrounds interacting with each other.”*

<b>Community</b>	
<p><i>“We are an English-speaking university, and we are naturally also reaching out to internationals from all over the place, you know, from Afghanistan, from Sudan, from Paraguay, all these places where there are. Where you find also people who are fit for the study program but who may not have the money to study.”</i></p> <p><i>“I mean, we never stopped inviting other educational institutions or representatives, educators, professors over. We had people spending days, weeks, even months being part of our team because they wanted to learn more about our learning concepts and our approach. We had visitors from state universities, private universities, national, international, basically every other week. We just recently had the educational minister of Rwanda visiting code and we had delegations from Finland, from Denmark, from the US, from parts of Germany, Switzerland, Austria. So, people were curious, and we were always open about what we're doing and how we're doing things.”</i></p> <p><i>“So, we never really tried to protect some sort of business secrets from anyone. That was our way of hoping, of trying to contribute to an idea spreading rather than our own business model scaling.”</i></p> <p><i>“And they came visiting CODE, the president and her staff, quite a few people made the trip to Berlin, spent two days with us and then went back to their university and transformed one of the faculties to a rather modern (one). They call it ‘sts’ school, school of sustainability, transformation and something else. And they approached it with the idea of a project-based learning concept that's quite similar to what we have implemented. So, we see some of the impact we had by just sharing our idea and helping people see how we're doing things, but that's basically the only way we could talk about scaling our idea so far.”</i></p>	<p><b>Openness to share, collaborate and support</b></p>
<b>Educational Models</b>	
<p><i>“Well, I mean, I somehow got infected by the idea that education, and especially higher education, can be somehow different and provide students with a different learning experience. Back in the days when I</i></p>	<p><b>Learning concept – self-efficacy</b></p>

*myself studied at a rather unusual university and had the opportunity to experience something like that. And ever since, I was wondering how can we still continue with a very traditional lecture based, input-based system where we all can see that we need something different in our society? "So with code university and with other projects before and since, I'm trying to set up different learning environments that will provide students of all ages with a learning experience that help them experience something like self-determination and self-efficacy, rather than just being lectured and being expected to learn something by heart and then reproduce some factual knowledge they gained. That's the biggest example of what would be code university, where we had a chance to start from scratch and really think about a learning concept that would help students take charge of their learning experience and feel responsibility for the direction their own learning experience takes. And in projects, be able to choose topics they care about, determine their own learning goals, and eventually experience the self-efficacy. This idea that you have, what it takes to make a difference in the world."*

*"So what I realized when thinking about learning and learning experiences and also trying to understand what kind of happens when we learn. The best description I found is from a french neuroscientist who basically describes learning as having an inner model of the world that we continue to build and refine based on the experiences we make. And whenever we experience something that confirms our inner model of the world, so basically confirms our expectations that we have based on this inner model, then nothing happens. But whenever we are confronted with a different outcome that we did not expect, something that surprises us, something we're not able to predict, based on this inner model, we have two choices. We can either ignore what happened, or we can adapt our inner model of the world, which basically is learning. Learning means experiencing something we haven't expected and then adjusting our inner model of the world. And for me, the most important and overlooked thing about these learning experiences is that we're not only shaping the model of the world, but we're also shaping a model of ourselves with every learning experience. So every learning experience tells us about something about ourselves, and it either confirms what we already think, or it challenges us to rethink how we see ourselves. And if you have this picture, then the next question would be, what kind of inner model of yourself? What kind of mindset or perspective on yourself and your connection to the world do we want our students to have? And for me, that's definitely something that is mainly determined by what Carol drag would call a growth mindset. But even more than that, what what I called a high self-efficacy expectation, which is*

<p><i>basically the idea that I believe in my own ability to influence future events, to determine the outcome of future events that are somehow related to me, which means I feel like I'm living a self-determined life, I'm making bolder choices when it comes to taking on challenges. I'm more likely to become an entrepreneur or to really seek out challenges that I can use to grow where I can fail productively by learning about my boundaries and how to expand them, how to grow out of them. And so, for me, that's the main idea, or the main goal of a true education, is that it allows students to experience themselves in a way that shapes a certain mindset, a mindset that is determined by this idea of growth as compared to a fixed mindset, and is determined by this idea of self-determination and self-efficacy."</i></p>	
<p><i>"Well, the code style is very, because code. Code professors don't consider themselves as teachers or lecturers. They consider themselves as coaches and mentors of students so that they, and in theory this can also scale because it also puts a lot of responsibility to the student. So that they say, we say the student essentially takes care of his or her learning and the professor just checks in with them and helps them find the right learning path.</i></p> <p><i>"So, essentially it's much more of self-study driven, our learning concept." So in theory there is also a scalable part to it because you could, if you have like 100 students and they are all on their own and you're in the end only coaching, mentoring whoever needs it, which can be five or ten, then you still have a huge scale effect. But the reality here is that it's more the minority of students who are these self driven, independent, highly organized students who do not want the professor as a close coach or close mentor. So the majority really wants the professor and is looking for the input from the professor. And that's also why they attend a university and why they attend a community driven or onsite driven university because they want this kind of interaction with the professor and with their fellow students. And then you don't have a scale model because then you really need to closely interact with your students and there are very limited skill effects."</i></p> <p><i>"If you recruit a whole classroom, basically you end up with people, again who don't really want to be there."</i></p> <p><i>"We don't want to work too close with schools who have these people as their students. How do we do that? Now we have to find the sweet spot, and that's actually something we are only doing for this year now."</i></p>	<p><b>Teaching model – coaching, mentorship.</b></p> <p><b>Learning outcomes</b></p>