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Value creation pedagogy across disciplines in higher education: Approaches and motivations

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A B S T R A C T

Value creation pedagogy (VCP) is a prominent approach in entrepreneurial education, defined as students learning through creating value for others. As higher education institutions (HEIs) strive to prepare students for global challenges like sustainability, inequality and employability, VCP offers a compelling approach linking academic learning to societal contribution. Most VCP research has focused on schools or student experiences rather than university educators. To explore how VCP is enacted in higher education and why, twelve diverse HEI cases in non-entrepreneurship settings were investigated, in which educators integrated VCP into courses or programmes. Cases in engineering, healthcare, pedagogy, business, humanities and natural sciences were identified through purposive sampling and examined via educator interviews. Findings revealed strong educator engagement and demonstrated how VCP supports educators and students to progress from problem ideation to real-world implementation. Varying notions of value emerged, shaping VCP practices and influencing the forms of value students create for others. Challenges also surfaced, highlighting educators' responses to emotional, institutional and pedagogical demands when adopting student value creation as a learning mechanism. While VCP can be introduced gradually, institutional support remains essential. This systematic cross-case study contributes new insights and practical recommendations for integrating VCP across diverse contexts in HEIs.

1. Introduction

In value creation pedagogy (VCP), students learn by using their knowledge and skills to create value for others beyond their group, class or educational institution (Lackéus et al., 2016, p. 790). This pedagogical approach broadens entrepreneurial education (EE) beyond entrepreneurship conceived solely as business creation (Hatt et al., 2024). VCP is widely considered a prominent pedagogical approach in EE due to its demonstrated impact on entrepreneurial competencies, student engagement and deep learning of core curricular knowledge and skills (Neergaard et al., 2020, p. 823). However, most studies on VCP focus on pre-university levels, examining its impact on students in compulsory and secondary education. As a result, there is limited research on VCP in higher education (HE), although interest has recently grown (Bell, 2022; Hatt et al., 2024; Hyldegård & Færgemann, 2022; Mukesh et al., 2024). Much of the existing literature takes a student-focused perspective. The role of educators,[1] including how they interpret and implement VCP across disciplines, remains underexplored. The increasing political emphasis on HE's societal impact further underscores the need for deeper insights into VCP practices in HE.

This study addresses these gaps through a multiple case study involving diverse HE institutions from different disciplines engaged

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[1] We use the term "educators" to mean the academic staff responsible for a course or programme (responsibles) at colleges and universities. Most of them will be both researching and teaching but some of the educators at universities and colleges mainly teach and conduct a bit of research/development work.

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in entrepreneurial teaching and learning. More specifically, it investigates what unfolds in practice when educators engage students in creating value for others as a formal part of a non-entrepreneurship higher education course or programme. The study is guided by the following research question: How do educators across disciplines approach, perceive and explain their work with value creation pedagogy in practice?

By viewing educators as experts in their own practice, we seek to generate a nuanced understanding of the often-hidden practices of VCP from the inside (Gherardi, 2012; Liuberté & Feuls, 2022). We also examine how educators translate core elements of VCP into entrepreneurial teaching across disciplinary and institutional contexts. In doing so, we aim to contribute insights relevant to educators, policymakers, HE administrators and researchers.

We examined twelve cases through semi-structured interviews with educators, seeking to identify what is unique in each VCP practice, while also exploring patterns across cases. These cases were characterised as 'non-entrepreneurship', meaning none focused primarily on entrepreneurship but rather represented various disciplinary approaches to entrepreneurial teaching and learning in engineering, healthcare, pedagogy, business, humanities and natural sciences.

The article proceeds as follows. We begin by reviewing the literature on VCP, action-based education and student interaction outside HEIs. Next, we outline the case study methodology. We then present and discuss our findings in relation to prior research. Finally, we identify key themes from the qualitative data analysis and conclude with implications for practice, research and policy.

2. Literature review

The phenomenon under investigation here encompasses students taking *action* to create value for people through *interactions* outside their higher education institution. Our literature review is therefore focused on extant work on value creation pedagogy, on action-based education and on external interactions outside the university.

2.1. Value creation pedagogy (VCP)

Value creation pedagogy (VCP) is a relatively new term emerging from research by multiple scholars in EE (Jones et al., 2020). At the same time, its foundational principles resonate with long-standing educational traditions such as apprenticeships and work-integrated learning. Defined as letting students learn through using knowledge and skills to create value for others (Lackéus et al., 2016, p. 790), the philosophical roots of VCP can be traced back to the artisan guilds of the Middle Ages. At that time, apprentices learned a profession by producing tangible value for real customers under the close supervision of a master (Richard, 2012). A more recent tradition is Celestine Freinet's pedagogy of work, defined in the 1930s as valorising and incorporating work into schooling (Carlin & Clendenin, 2019). A famous example was his practice of placing a printing press in the classroom; something which would help make students into journalists (Freinet, 1993). An operational definition of value creation pedagogy has been proposed as follows (Lackéus et al., 2016, p. 790): "[let] students learn by applying their existing and future competencies to create something preferably novel of value to at least one external stakeholder outside their group, class or school".

VCP has recently gained traction as a relevant, effective and maybe even hallmark pedagogy in EE, because of its documented effect on supporting the development of entrepreneurial competencies, increasing student engagement and developing non-entrepreneurship curricular knowledge, skills and competencies (Neergaard et al., 2020). Without being restricted to academic contexts, value creation has become an integral part of broad understandings of EE in such things as the definition of entrepreneurship and its education from the Danish Foundation for Entrepreneurship: "Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural or social" (Vestergaard et al., 2012, p. 11). The emphasis on multiple types of value, also found in den Ouden (2012) and in Lackéus (2018), ties in with Blenker et al. (2011, p. 421), stressing that EE should focus on "value creation in the broadest sense". Transferred to educators engaged in entrepreneurial teaching representing a broad spectrum of disciplines in HE, a key question is what type of values are created – why, how and for whom. In addition to creating economic value, students may create, say, social value (Korsgaard & Anderson, 2011), ecological value (Hindle, 2010), influence value (Fleck et al., 2022), enjoyment value (Lackéus, 2018), domestic value or inspirational value (Boltanski & Thévenot, 2006).

Why VCP triggers strong effects on students has been explained by seeing it as a deeply purposeful and others-orientated human activity (Lackéus, 2020). VCP goes beyond the common self-orientated achievement motivation described in self-determination theory (Ryan & Deci, 2000) and control-value theory (Pekrun, 2006). Instead, it produces its effects primarily through mechanisms described in belongingness and prosocial motivation theory (Fiske, 2008), stipulating that humans have a strong desire to experience the sense of meaningfulness inherent in helping others, at times doing "spectacular things for others" (Batson et al., 2008, p. 135). Meaningfulness is more prevalent in others-orientated activities than in self-orientated ones (Baumeister et al., 2013).

VCP is a challenging proposal for many educators and students. Complexity and difficulty increase when real-world stakeholders are involved in education (Bragelien & Voldsund, 2023; Mukesh et al., 2024; Ryan, 2012). For many educators, managing and assessing real-world learning processes and capturing the development of soft skills is difficult and time-consuming (Lackéus, 2022; Warhuus et al., 2018). VCP can also clash with educators' and students' expectations of traditional teaching, viewed as the acquisition of knowledge (Bell & Cui, 2023). Further, there is definitional disagreement among scholars on whether VCP includes students creating value primarily for *themselves* (Jones et al., 2020) or whether it is solely about students creating value for *others* (Lackéus, 2020). Adding to this confusion, there is an old Japanese learning tradition called value-creating pedagogy that emphasises happiness for students (Ikeda, 2010); this resembles VCP semantically but differs in practice.

Having outlined the conceptual core of VCP, we now turn to two established educational traditions; action-based learning and

student interaction outside HE institutions. These provide context for understanding the practical and theoretical foundations of VCP.

2.2. Action-based education

Researchers, educators and others have engaged with action-based education and related approaches for decades (cf. Heinonen, 2006). According to Naidu and Bedgood (2012, p. 76), the most important characteristic of action-based learning is that it "is orchestrated by some activity on the part of learners". The type of activity varies greatly, from gross motor activities to activities that are entirely intellectual. Learning activities can be individual or group-based. The overall belief is that we create the best conditions for learning when the learner is actively engaged in meaningful activities, which are then reflected upon critically (Naidu & Bedgood, 2012; Schön, 1987). In other words, agency is a central construct in this approach to learning (Lier, 2007). Several other models or theories may be seen as overlapping with action-based education, or as implementations of it. These include project-based learning, problem-based learning, experiential learning and enquiry-based learning (Larsen, 2025; Roberts, 2012; Zhang et al., 2022). Claimed advantages of action-based education include: stronger engagement with the learning process, leading to a deeper understanding and retention of the subject matter; and a more collaborative approach to learning (Naidu & Bedgood, 2012). The same authors also point to resource consumption as one of the main challenges of implementing the approach.

EE research sees action-based education and related models and theories as particularly relevant. From early in the 21st century, a synergistic relationship was established by such scholars as Heinonen (2006), who underlined that action-based learning had the potential to support students in developing entrepreneurial competencies. Rasmussen and Sørheim (2006) found that action-based EE can also contribute to regional economic development, through startup companies formed by students as a formal part of their education. However, there are many other ways to deliver action-based EE. Students can also be asked to brainstorm and pitch their own ideas (Neck et al., 2014), search for opportunities to solve problems (Thrane et al., 2016), write business plans (Jones & Penaluna, 2013) or apply entrepreneurial methods such as effectuation (Mansoori, 2018). Enumerating various practical activities is a typical way to define action-based EE (cf. Jones & Iredale, 2010). In this article, we focus on two specific activity types. These are in line with recommendations from an empirical study on VCP (Lackéus & Sävetun, 2019): (1) interaction with stakeholders outside the university and (2) attempts to create value for these stakeholders.

2.3. Student interaction outside educational institutions

Many different learning traditions emphasise student interactions that take place outside the educational institution and its premises. In work-integrated learning, students get to learn from authentic experiences at, or in close collaboration with, a workplace (Ferns et al., 2014). In apprenticeships, students are even paid a salary for the work they do as part of their training (Cedefop, 2018). In service-learning, the focus is on real-life situations in which learning and providing a service to society have equal emphasis (Furco, 1996; Salam et al., 2019). These traditions have a deeply intersubjective component in common; students interacting in a truly realistic and social way, often whilst deeply embedded within a community of practice in the world beyond their educational institution (Illeris, 2009; Lave & Wenger, 1991). Ultimately, students are educated for the world, not for the educational institutions, so it makes sense to let them learn alongside those who are embedded in the world (Biesta, 2021). Learning to live and work together with others, including being challenged by others, may even be what education is fundamentally all about (Biesta, 2002).

In EE, external stakeholder interaction takes many forms. Students are often asked to present and pitch their business ideas and mini-ventures to real-world investors and potential customers (Brentnall, 2023). Many entrepreneurial methods broadly applied in EE also include external interaction-centric recommendations around leaving the building (Blank & Dorf, 2012), engaging in co-creation experiments with external people (Sarasvathy & Dew, 2005) and trying to empathise with them (Brown, 2008). Thus, interpersonal interaction is central, not only to education but also to entrepreneurship (Sarasvathy & Venkataraman, 2011).

3. Methodology

In the present study, we were interested in understanding the value-creation practices in entrepreneurial teaching "from within" (Gherardi, 2012). Through the lens of HE educators as experts in their own practice, we wanted to gain insight into their approaches, perceptions and motivations across disciplines. To our knowledge, no earlier work of this kind has been done on VCP. Before presenting the research design, we will briefly introduce our practice-based approach.

Following the definition by Kemmis and Brennan (2014) (cf. Mahon et al., 2017, pp. 7–8) we understand a practice as "a socially established cooperative human activity involving utterances and forms of understandings (sayings), modes of action (doings) and ways in which people relate to one another and the world (relatings)". It encompasses the intention (aim) that motivates the practice, the actions undertaken in the conduct of a practice and what the actor aims to achieve through it. This study does not examine one specific VCP practice as such but explores VCP practices across a number of disciplines through HE educators' experiences, perceptions and motivations for practising a given set of activities. We employ a qualitative and inductive multiple case-study approach (Punia, 2021; Yin, 2003) to explore the unique "what", "how" and "why" of *each* case, whilst looking for any similarities and differences across cases. The purpose is not to prescribe how VCP *should* be practised but to explore what constitutes VCP practices by asking experienced practitioners. To keep a methodological sensibility towards the situated VCP practice in each case, we designed an interview study. This focused on what participants were doing physically and socially, how they were doing it, what they were saying and thinking about VCP in their specific context and how VCP was experienced in practice (the gains and constraints). While we were interested in HE educators' value creation perceptions, approaches and experiences, we were conscious that they could express and understand

"value", hence value creation, in many ways (Hyldegård & Færgemann, 2022). We acknowledge that by focusing on *educators'* practices in this study, we lose the transformative potential of students' experiences and perspectives on VCP in practice.

Interviews have been criticised for being less suitable than observations for exploring practices, as they only allow access to cognitive and retrospective interpretations of what people do, not the actual doings. That said, interviewing allows researchers to access the more tacit and hidden elements of practices (Liuberté & Feuls, 2022). Moreover, going beyond the instrumental use of interviews as conversation, they do offer a potential space for the co-creation of knowledge and collaborating to articulate the knowledge that is embedded in practices. In this study, each case represents a story of an experienced educator's VCP practice, including tacit and implicit knowledge and perspectives.

The VCP cases were carefully selected based on a purposive criterion sample (Nyimbili & Nyimbili, 2024, p. 97) of experienced peers from diverse Scandinavian HE institutions covering a broad range of topics in engineering, healthcare, pedagogy, business, humanities and natural sciences. The purpose of this sampling strategy was to maximise the variety in approaches across disciplines, as observed in our own contexts and which initially triggered our curiosity. By restricting our sample to more well-known and culturally similar Scandinavian institutions, we aimed to reduce the number of variables in this first exploration of VCP practices.

3.1. Data collection

In the autumn of 2023, we invited fifteen HE educators for a 1-h online interview. Thirteen of them accepted the invitation by signing a consent to participate. These informants were non-entrepreneurship educators engaged in entrepreneurial VCP teaching involving external stakeholders. The label "non-entrepreneurship" implies that none of these cases had entrepreneurship at the core of their teaching but rather employed an entrepreneurial pedagogy approach. This leans on a broader understanding of entrepreneur-*ial* education, compared to the narrower focus on entrepreneur-*ship* education, which relates solely to new venture creation and business development (Maaravi et al., 2020; van Gelderen, 2023). According to the broader definition, EE does not have to be about doing business; it can also cover personal development, agency, creativity, self-reliance, initiative-taking and action orientation. In other words, it can be about becoming more entrepreneurial (Blenker et al., 2012). In this study, we employ such a broad understanding by stressing the role of the external stakeholder when it comes to VCP. We thus focus on VCP defined as students learning by creating value *for others*.

The semi-structured interviews were supported by an interview guide addressing six issues associated with VCP: (1) the activities and 'doings' of VCP; (2) students' value-creation activities and examples; (3) perceived/experienced effects of VCP; (4) formative/summative assessment of VCP; (5) materials supporting/shaping VCP teaching; and (6) educator advice on VCP as a way to elicit positive/negative experiences. We listed details and keywords associated with each issue in the interview guide. This helped us control data collection amongst the authors, each of whom was responsible for three to five cases. The authors recorded and transcribed the interviews, after which a three-page description of each case was written using a template to ensure consistency. This was sent to the informants for checking and validation.

3.2. Data analysis

To get an overview of the case material and prepare for pattern identification, the authors summarised key data from each case interview and case description in a large table of 12 characteristics (including case focus, discipline, type of institution, values created, effects, organisation of course/programme, student responses/experiences, type of assessment and good advice). By categorising data in this way, we also started the data analysis. Each author then wrote a short description (10–15 sentences) of their cases, summarising them. The authors met in person for two days to analyse and discuss the data and any patterns emerging from it.

Overall, we used an inductive and interpretative analysis approach, guided by our RQ. We began the analysis by discussing our general impressions of the data quality and material, including its potential for comparing cases consistently and providing insights (Yin, 2003). This process reduced the number of cases to 12, as we agreed that one of them was inconsistent with our working definition of VCP. Two of the cases were based solely on simulated VCP but after some discussion, the authors decided to keep them as they offered new perspectives on how to get started with VCP.

The author team members read all the material carefully many times and coded it openly, albeit informed by their research interests (cf. Corbin & Strauss, 1990). We then initiated a deeper, iterative dialogue between the RQ, the case descriptions and the interview data. During the iterative dialogue, we discussed the validity of the emerging themes across the cases. All group discussions during the analysis were logged for further reflection and reporting. Finally, we sorted the cases according to the implied formal student workload (ECTS) and labelled them A-L.

4. Findings

An overview of the twelve cases, labelled as Cases A-L, is shown in Table I. Selected details of these cases appear below and will illustrate the rich empirical material collected. Longer descriptions are available from the corresponding author upon request.

4.1. The twelve cases in more depth

Two of the cases (A and D) are in engineering. In Case A, engineering students on a course in organisational development help healthcare professionals develop solutions to organisational problems impacting patients. The professionals first write a problem brief

Table 1
An overview of the twelve VCP cases with selected details.

Case	Domain	Length	External stakeholders	Value creation for external stakeholders	Value created for them	Student effects	Contact mode	Assessment	Recommendations from teachers
A	Engineering	1 week, part of a 7.5 ECTS course	Healthcare professionals	Analyse and innovate around a real-world problem raised by healthcare professionals during a "kickstart case week"	Analysis, ideation and innovation	Motivation, seeing one's value add/ possible career	Teachers stage a matchmaking event	Oral presentations, individual reflection papers, case reports	Develop iteratively. Work in teacher teams. Secure extra funding
B	Nursing	2–3 weeks (nearly full-time)	Organisations not normally hiring nurses	Identify health-related challenges and develop solutions by applying design thinking and nursing competence	Possible new and better practices	Experiencing own abilities in new contexts	Students are responsible	No specific assessment of the activity	Try to facilitate activities outside the classroom. Practitioners often willing to contribute
C	Health	5 ECTS MA	Public and private health organisations by simulation	Develop sustainable start-up solutions to real-world challenges, bridging/spanning the health and the sports industry	Preparing student mindset for value creation and societal impacts	"Hands-on" experience; reflections on value propositions	Teacher is responsible (outreach activities)	Oral exam on value creation in theory and "practice" (fictive startup case)	Employ models and exercises; let students engage in experiential activities ("doings")
D	Engineering	5 ECTS BA-summer course (3 weeks)	Public and private organisations focusing on health	Identify non-ideal workflows, develop technical solutions to improve them and develop possible business models	Analysis of problems, possible solutions	Understanding of barriers to innovation	Students are responsible	Combination exam value creation influences the overall grade	VCP is time-consuming for teachers. Consider its cost/ benefit
E	Natural science & Biotechnology	7.5 ECTS MA (8 weeks)	Public and private organisations and stakeholders by complex game simulation	Develop a holistic student view on running a business and company. Contribute insights to invited stakeholders.	Agency preparation (recruitment); new stakeholder insights	"Hands-on" experience; changed view of doing business; reflection	Teacher is responsible (outreach activities)	Self-assessment of the value created during the course; reflections on learning outcome	Explicate "value" in course context; empower students to create tangible outcomes; invite "old" students (role-models); facilitate holistic learning experiences
F	Pedagogy	10 ECTS BA	Public and private organisations and stakeholders	Develop *and* implement social co-creation activities, e.g. having elderly care home residents and the local kindergarten spend a day with a farmer	Social innovation, harmony, joy	Full-blown experience of value creation; insights into social entrepreneurship; professional identity	Students are responsible	Oral exam: student presentations and feedback from supervisor	Clarify your approach to VCP: a foundational principle of the course or a set of goals
G	Literature studies	10 ECTS BA course	Mainly libraries (and other nonprofit organisations)	Help libraries and others to inform and inspire visitors to act on key societal challenges, such as climate change	2 levels: insights & prototypes and experiences	New view of knowledge, be in production mode	Teacher contacts one organisation	Not assessed (1st semester)	Keep an overview of the process. Enable students to maintain power and ownership
H	Aesthetics and culture	10 ECTS MA course	Cultural institutions and others	Perform ethnographic research to analyse organisational or product practices and suggest better ones	In some cases insights and solutions	Critical thinking and competent interventions	Students are responsible	Not assessed as such	Be prepared. Prepare students for unforeseen events

(*continued on next page*)

Table 1 (*continued*)

Case	Domain	Length	External stakeholders	Value creation for external stakeholders	Value created for them	Student effects	Contact mode	Assessment	Recommendations from teachers
I	Rhetoric	15 ECTS MA	Public organisations and stakeholders	Develop "discursive designs", devising innovative solutions to real communication challenges	Rhetoric consultancy; better communication via new professional insights	Collaboration, professional identity; societal impact and outreach	Teacher contacts 3–5 organisations	Individual oral exam (2 assignments)	Use "warm-up" mini-cases involving real external stakeholders
J	Humanities	20 ECTS MA course	Variety of organisations	Collect data to understand challenges and develop solutions and prototypes that activate core disciplinary knowledge	Data-backed insights, incl. tests and solutions	Seeing one's value added / future career	Teacher contacts 2–5 organisations	Portfolio exam including individual reflection on value creation	Balance expectations among students and organisations. Keep a student learning focus
K	Fine art (Music)	30 ECTS	Public and private organisations and stakeholders	New blended forms of audio experiences for citizens, e.g. a prerecorded nature guide for a Danish municipality	Social and cultural happiness, joy, harmony	New professional role as "value makers", partnership, co-creation, integrity, interdisciplinarity	Organisations contact teacher and student initiated	Oral exam, digital documentation and project report	Engage with cross-sectoral and external partners, but be patient, embrace an explorative approach
L	Business	180 ECTS BA programme	Private and public organisations	Propose, co-design and carry out a marketing event for an external organisation; a private business, sports club or public body	Raised customer awareness, increased sales	Motivation, practical skills, ability to apply theory	Both teachers and students contact various organisations	Micro-reflections in a digital tool, project plans	Start small and iterate. Work in teacher teams. Secure extra funding. Be an ambitious teacher

on a real-world challenge in their organisation. The engineering students then work intensively with this problem for a week. The healthcare professionals are then provided with the students' proposed solutions and try to implement them for a year. In Case D, biomedical engineering students initiate a summer university course by finding a partner in the healthcare industry who wants help identifying non-ideal workflows. The students then spend three weeks trying to develop technical solutions and accompanying business models. The students present their solutions first to their industry partner and then to a panel of would-be investors, thereby also learning about creating value for investors.

Two of the cases (B and C) are in healthcare education. In Case B, nursing students work for three weeks with organisations that do not employ nurses. The students identify health-related issues at the workplace and try to develop innovative solutions to them. Throughout the three weeks, the students work in a dedicated innovation space on campus, are given various process materials and are coached in design thinking by their educators. After three weeks, solutions are presented to the organisations and feedback is provided by their representatives and the educators. In Case C, sports students develop fictive startup proposals addressing real-world challenges in the sports industry. Students engage in hands-on activities, such as ideation workshops and business plan creation based on design thinking. Finally, they pitch their projects through video presentations and get feedback from peers and external industry experts.

One of the cases is in pedagogy. In Case F, education students are asked to explore, identify and create meaningful connections between people and thereby social value. This might take the form of an event involving local kindergartens, elderly care centers and farms. Empathy and a deep understanding of people are emphasised, aligning with principles of design thinking and social pedagogy. Sometimes, the students choose to continue their projects after the course.

One of the cases is in business. In Case L, students get to experience VCP as an integrated pedagogical approach over three years. In the first year, they are asked to propose, co-design and deliver a marketing event for an external organisation, such as a local business, a football club or a public body. In the second year, the students develop an event-based marketing strategy for an external organisation. In the third year, they work as interns for 3 months at an organisation.

Five cases (G, H, I, J and K) can be broadly categorised as in the humanities. In Case I, student teams on a rhetorics programme develop "discursive prototypes" for stakeholders representing innovative solutions to communicative challenges faced by practitioners. One student team helped street doctors improve their communication with patients. In Case G in literature studies, students help public libraries inform and inspire visitors to act upon key societal challenges such as climate change. Students create materials such as podcasts and prototypes, based on the literature they have read and present them to library employees and the general public. In Case H in aesthetics and culture, students perform ethnographic research analysing organisational practices, often at classical cultural institutions such as museums or theatres. They then suggest better practices. Presenting to partner institutions is not mandatory but many students choose to do so. In Case J, Master's students from many different humanities programmes apply their disciplinary knowledge and skills to create potential solutions to challenges encountered in public and private organisations. The students get a clearer view of the links between their competencies and the corporate world. In Case K, in fine arts and music, students use their artistic creation and composition skills to address broader societal challenges through interdisciplinary partnerships. Amongst other things, they have developed walking podcasts for municipalities and created educational workshops for marginalised communities.

Finally, one case is in natural sciences. In Case E, students in a biotechnology programme participate in a tightly controlled simulation whereby they get to lead a car manufacturing corporation. In this capacity, they can create value for the simulated corporation's shareholders, customers, industry partners and society at large. They develop innovative business strategies and solutions to various challenges and gain new insights and perspectives on the business world.

4.2. Common traits and variances

The rich data demonstrated both commonalities and variations across the twelve cases. All educators showed a strong motivation for action and value-creation-based teaching. They had all invested much time and effort in improving the content and format of their courses, through years of meticulous experimentation and by establishing many contacts with stakeholders outside their universities or colleges. Much time was also invested in student facilitation at individual, group and class level and in time-consuming examination formats. Most educators' development journeys were a "lone rider" experience driven by a single educator, or a small number of them. Apart from two cases (Cases C and E), all students worked with real-world external stakeholders. Educators included various materials to support the VCP process. Most of these materials, such as theories and frameworks, were not directly about VCP but supported the process in other ways. These included design thinking, how to work with live cases and materials on co-creation or team processes.

As shown in Table I, there was much variance in what, how and why the educators did what they did. This is further elaborated upon in Sections 4.2.1 to 4.2.4 below. First of all, the variance in ECTS and course length (from a week of teaching to a full three-year programme) created very different conditions for the kinds of value the students could create for others and how they did it. The value contributions also varied by discipline and type of stakeholder (corporations, SMEs, startups, public institutions and NGOs). When the students had a high degree of freedom to choose stakeholders, plan processes and prioritise values (as in Cases B, D, F & H), we could identify greater differences in their value contribution. On some courses, the students mainly provided new insights, knowledge, data or analysis to stakeholders (as in Case D). In others, students were expected to create prototypes (Case J), exhibitions (Case G) or a marketing event (Case L). As shown in Table I, a few stakeholders were recruited by the students themselves. In general, the stakeholders were recruited by the educators as a means of ensuring relevance and facilitating stakeholder contacts. In two cases (Cases C and E), the students worked with fictive stakeholders, hence, simulated value creation.

4.2.1. Reasons for educators, students and universities to apply VCP

From senior management to educators and students, multiple stakeholders can influence the decision to develop a VCP course. In Case K, the vice-chancellor played an active role in initiating VCP. In other cases, educators made the decision themselves (as in Case G) but students can also play an active role (Case L):

> *"There is an expectation (…) from the students' side. (…) The programme explanation in marketing of the programme promises hands-on experiences. Recruits students via word-of-mouth from former students. It's been like this for a long time, with the programme having practical, fun activities."*

Reasons for integrating VCP include preparing students to start businesses (Cases C and D); develop general skills and competencies (Case K); network with organisations (Case H); and bridge the gap between their own competencies and organisational needs (Case J). Educators also argued for higher quality learning (Case J) through action-orientated learning processes (cf. Kolb, 1984). In Case H, the educator aimed to create a context for developing students' agency by using emotional experiences.

4.2.2. Pedagogical setups and contact modes

We identified two courses (Cases C and E) in which students acquired core skills *for* value creation but did not engage in actual value creation. The rest of the courses can be labelled "education *through* value creation". VCP was integrated into disciplinary content in different ways. In Case G, disciplinary knowledge was introduced at the beginning of the course, followed by a value creation process. The courses in Cases B and J were organised according to a "just-in-time" principle, with theory, methods and tools introduced as needed.

Contact modes varied. In some cases, students contacted organisations themselves. This could be emotionally challenging but also developed general competencies like self-efficacy and initiative-taking. Not all students liked this process:

> *"The students are very divided. Some are a lot more interested in analysing cultural artefacts based on a lot of theory. Others really like courses like this, where there is a lot more focus on interacting with other people, creating something new and action orientation in general."*

If educators dealt with contacting external stakeholders, then their students could allocate more time to other parts of the project but missed out on a learning opportunity.

4.2.3. Assessment of student learning

In several cases, value creation was not formally assessed (as in Case H). However, value creation activities were still assessed formatively during the course or programme. The students were in these cases evaluated by peers, educators, stakeholders or a combination of these, typically through presentations or pitch sessions with feedback (such as Cases B and G). Some educators claimed that the perceived value created by students impacted their overall exam grade (Case D).

For courses with explicit assessment of value creation, we identified various formats. Assessment could be group-based or individual (Cases A and L), written (Case L) or oral exams (Case A), continuous (Cases J and L) or at the end of the term (Case F). Continuous assessment was relatively common, compared with the more usual setup at many HE institutions involving final exams. Typically, it was organised as portfolio assignments distributed over the semester (Case J). An educator in Case L stressed constructive alignment between learning and assessment as a key to a successful course (cf. Biggs & Tang, 2011):

> *"… make sure [value creation pedagogy] is woven and written into syllabi, so that it's part of the syllabus and so you don't think it should be done in addition or detached as an extra activity. It must be entered in learning objectives and examination forms, so it becomes constructively aligned."*

Our data did not suggest specific measures to ensure alignment between learning objectives and assessment, or concrete assessment frameworks.

4.2.4. Expertise illustrated by educators' advice to others

The participating educators shared their expertise by providing advice on how to get started with VCP and how to facilitate external stakeholder collaborations. They recommended starting small and iterating. This was due to the students' need to familiarise themselves with the approach (perhaps through a warm-up mini-case, as in Case I) and for educators themselves (Cases A and L). VCP is generally more time-consuming than traditional teaching approaches and hence, they recommended working in teaching teams and raising funding for any additional resources needed (Cases A and L). Network building was also highlighted as invaluable for educators. However, this was challenging and required patience (Cases B and K).

Further, the educators' advice focused on facilitation. Educators need to balance expectations among stakeholders and students (Cases E, F, H & J), keep an overview of the process (Case G), prioritise student learning (Case J) and secure student ownership over knowledge production (Case G). Educators need to be aware that activities outside the classroom might need facilitation (Case B). Conceptual models and practical exercises were important to allow students to engage in experiential activities (Case C). Engaging students from previous cohorts provides good role models (Case E).

5. Discussion

From our analysis of the VCP practices explored across the twelve cases, six interrelated themes emerged, which we discuss below.

These represent key dimensions of *how* VCP is practised in higher education across diverse disciplinary contexts, including *what* they do and *why* it is done this way. The themes illuminate how VCP helps educators and their students shift from problem ideation to real-world implementation, how varying notions of value and values shape VCP practices and how educators respond to emotional, institutional and pedagogical challenges. We also discuss the role of simulated value creation, the importance of progression in pedagogical design and the broader implications for supporting educators and students engaged in this demanding but potentially transformative educational approach. Collectively, these themes open new research avenues into how educators can better support student value creation, real-world engagement and meaningful learning outcomes.

5.1. Moving from problem ideation to real-world implementation

Taken together, the twelve cases illustrate how VCP can help educators move from students generating ideas around problems to letting them implement real-world solutions that genuinely help others. At first glance, VCP might be perceived as being mainly about problem-solving. In many cases (Cases A, B & J), the students did create value based on identified *problems*. In a few cases (such as Cases G & K), the educator used the term *challenge* instead. Having problems or challenges as a starting point could be because many of the educators we interviewed based their work on either the Aarhus approach to entrepreneurial pedagogy, whereby understanding so-called disharmonies and anomalies is a foundational element (Thrane et al., 2016), or on design thinking, a problem-solving approach which recommends starting with user needs (Liedtka, 2018).

However, some of the VCP cases tell a different story. While all the educators say that their students create value for others, only in very few cases did students also implement real-world solutions with external stakeholders. Such implementation was mandatory in only three cases (Case F, K & L), even though it is arguably a good strategy for ensuring that students develop value creation competencies. As the educator in Case F states:

> *"That they experience the value they have co-created is extremely important. Unfortunately, it is often the implementation phase that is omitted in innovation and entrepreneurship courses, even though it is in that phase value is created. Instead of investing so much time in idea generation, we should rather train implementation"*

In several cases, students also engaged in what we call *semi-implementation;* developing prototypes with varying purposes and audiences. In Case G, prototypes were exhibited both to stakeholders and the public, indicating semi-implementation. In Cases B, D and I, prototypes supported feedback processes with partner organisations. While our data cannot confirm that real-world implementation leads to deeper subject understanding and developed value creation mindset (as inferred from Naidu & Bedgood, 2012), an implementation emphasis remains a promising finding here. It also aligns with calls from Rae (2014) to go beyond the traditional problem-orientated approach in EE and instead take a more opportunity-driven approach. Rae (2014) conceptualises entrepreneurship as an enacted opportunity, reinforcing the idea that opportunity-driven approaches inherently involve implementation. The above-mentioned VCP cases show how searching for opportunities to implement real-world solutions that create tangible value for others could be a promising starting point, one that contrasts with and complements the more common problem-based starting point. Thus, VCP may help educators and students move beyond traditional classroom-based problem ideation toward a potentially more impactful search for real-world implementation opportunities.

5.2. Value and values in VCP practice

The different notions of value expressed in the twelve cases were driven and regulated by a number of factors. The discipline and its underlying rationale, students' personal values and beliefs, as well as the complex contextual stakeholder landscape, all framed and shaped how VCP was practised. As demonstrated, the stakeholder complexity often implies a multi-layered perspective involving: society; public and private stakeholders and *their* associated actors; and target groups, such as end-users, customers, patients, citizens, marginalised groups or audiences. Understanding this multi-dimensionality of value creation in VCP is critical for both educators and students (cf. Lackéus, 2018). However, as some participants suggested and as supported by Hatt et al. (2024, p. 13), it is important to guide the students in translating what the concept of "value" may imply in their specific course or programme. This also represents a way to challenge and negotiate dominant ideas of value, whilst adding a sense that value creation for others is a meaningful practice.

The need for value sensemaking was most evident in the healthcare cases, embedded in a strong educational culture of work-integrated learning. These cases emphasised the importance of creating *new kinds of* value for other people. A nuanced perspective on value was further reflected by the wordings used in participants' descriptions and explanations of their 'doings' (such as teaching, exercises, materials used), or by the examples of student contributions. In contrast to the HE study by Hyldegård and Færgemann (2022), value and value creation were not met with resistance but often replaced by other words or fleshed out to embrace their meaning in the specific course context. In spite of the limited number of cases, the wide variation in value contributions offered indicates that value comes in many forms and expressions – from personal to stakeholder insights, from immaterial to material products (enjoyment vs a business plan), from changed mindset to innovation and from simulated to real value (cf. Davis, 2023; Lackéus, 2018). Time and the increasing societal need to convert education into value may have pushed the discussion of value in teaching and, hence, prepared the ground for VCP in HE.

5.3. Challenges for educators and students

This study has demonstrated many challenges in VCP that have previously been described in the literature. Educators struggled

with the added complexity, the extra time taken and the additional resources needed (cf. Lackéus, 2022; Mukesh et al., 2024). Students struggled with the emotional demands put on them when experiencing uncertainty and when interacting with unknown people in non-familiar contexts (cf. Bell, 2022). Both educators and students struggled to find those invaluable partners external to the educational institution. They also struggled with relating VCP to more traditional educational arrangements expected by the institutional system, and also to some degree expected by themselves (cf. Bell, 2022). Semantic challenges in adapting entrepreneurial practices to non-entrepreneurship contexts were again demonstrated (cf. Hatt et al., 2024; Lackéus, 2022), as well as challenges in assessing the students (cf. Warhuus et al., 2018).

A key question is how and why these particular educators managed to overcome the many challenges inherent in VCP. None of them were supported by a community of educators practising VCP. Only one of them experienced institutional pressure to apply VCP (Case K). Three of them had managed to get additional funding from the HEI or from an external entity, giving them access to more time and resources than usual (Cases A, B and L). An educator in Case L advised other educators to search for additional partners to help fund the added cost of VCP. But regardless of resources, VCP remains challenging. An educator in Case H explained:

> *"As an educator, try to play it cool in these kinds of uncertain processes. The only thing you know for sure: everything will not play out as you planned, no matter how much you plan. This is also important to explain to the students."*

5.4. An emotionally-charged pedagogy

Real-world entrepreneurship is an emotional roller-coaster, fraught with uncertainty, strong emotions and complexity (Cardon et al., 2009; Uy, 2009). Also, experiential EE, in which students start real businesses, has displayed similar patterns of emotionality (Williams Middleton & Donnellon, 2017). While the twelve cases reported here do not reach the same emotional intensity as real-world venture creation, similar patterns are still seen in terms of sources of emotionality. These include external collaboration, real-world value creation and feedback from external people and trigger both positive emotions (engagement, passion) and negative ones (worry, anxiety). This once again demonstrates that business venture creation might not be a requirement for impactful entrepreneurial pedagogy (cf. Lackéus, 2020; Mukesh et al., 2024).

VCP transforms both teaching and learning into emotionally charged labour (cf. Hochschild, 1983). Such emotionally charged experiences require strong student scaffolding. When students struggle with the uncertainty of open-ended processes, educators must allocate more time to support them (as in Cases A, B, J, K and L). Many different supporting models for VCP (often drawn from design literature) are mentioned by the educators studied. Also mentioned are Kolb's learning cycle (1984), the Business Model Canvas and literature from Danish and Swedish EE researchers (cf. Thrane et al., 2016; Lackéus, 2018). However, there is no sign of a common signature pedagogy among these educators, that is, a characteristic form of teaching VCP (cf. Jones, 2019). Thus, more support (and shared support) is needed for the educators, preferably tailored to different non-entrepreneurship contexts and to VCP. An educator in Case C remarked:

> *"I'm still struggling to find the right pedagogical form to support this part of my teaching."*

5.5. VCP as simulation

Two of the cases (C and E) involved students creating value for a virtual external stakeholder, thus calling into question the role of simulated VCP. Is value creation for a virtual or fictive external stakeholder a case of VCP? This almost philosophical question was extensively discussed among the authors. Business simulations have been used in education for over 50 years to provide a more authentic and work-related learning experience for students (Barnaby et al., 2021). But are simulated customers and business owners real enough for a course to be categorised as VCP?

According to the respondents, the simulation approach to VCP contributed to a more nuanced student mindset in terms of professional identity and personal learning. As such, one may argue that VCP by simulation has the potential to nurture a "value creation for others" mindset; a widely recognised student asset (Costin et al., 2018). Further, it may be a way to save time and reduce practical

Table 2
VCP characteristics of the 12 HE cases.

	VCP by simulation	VCP by real
Stakeholder engagement	Low	High
Who engages/invents stakeholders	Teacher/student (fictive case)	Teacher/student
Purpose	Simulated value creation for self/others	Value creation for self/others
Benefits	Safe space (low risks), training/nurturing value-creation mindset and skills	First-hand experience of value creation
Shortcomings	No hands-on experience, contextual learning is limited	Time-consuming
Validation of value creation	Formative validation and feedback	Formative/summative validation and feedback
Practice reflections (Schön, 1987)	Reflections *on* simulated practice	Reflections *on* and *in* practice
VCP relevance	A stepping stone (progression) and preparation for practical value creation	Learning effects from contributing value in practice

constraints when a course is short. However, entrepreneurial teaching by simulation still implies careful planning to ensure integration of the course learning philosophy and support students' learning outcomes (Tunstall & Lynch, 2024). Simulated VCP does not embed students in a social community of practice (Lave & Wenger, 1991) but it can still allow them to develop a value-creating mindset. Recent research also shows how generative AI can increase the perceived feeling of social connection for students, as they interact with humanlike conversational agents (Ericsson et al., 2024).

Looking at the VCP practices across the twelve cases, they all contributed value to real or simulated others, meaning that the differing intensity and commitment did not prevent students from developing knowledge, skills and a sensitivity towards value creation. One reason might be that the external stakeholder perspective was at the core in all cases, in contrast to the VCP spectrum by Jones et al. (2020, p. 106), which favours students' personal learning and agency development for future value exchange. To summarise, Table II shows some characteristics of high and low stakeholder engagement, which could be further developed in future research.

5.6. *Progression: introducing VCP little by little, course by course*

Progression within and across courses could be a way to mitigate the challenges found in many of the twelve cases. In this context, patiently and progressively introducing changes involves moving gradually from a traditional to a more active and value-creation-orientated learning experience and can span many different types of steps that trigger complexity and engagement. Given that VCP can be a time-consuming, challenging and sometimes even scary practice for both students and educators, such progression is arguably needed to cope with higher uncertainty levels and lower process control. One of the educators expresses this need for patience:

> "*To strive for innovative potential and value creation generally implies an interest in the unknown-unknown and new dialogues and relations between people, fields or practices. To some people, educators, this explorative approach and reaching out to new fields may appear too fluffy and difficult, resulting in resistance. However, the deeper qualities and outcome of collaborating with other fields take longer to notice, so be patient and consistent with the process of opening up to new fields.*"

Progression has previously been raised by EE scholars as an important parameter (Blenker et al., 2011, p. 421), describing "facilitating entrepreneurship as an everyday practice", a methodology that can be applied early and broadly in any course or programme, as opposed to "creating new ventures", which could be applied in later stages (as in entrepreneurship programmes). In a progression model created by Rasmussen and Moberg (2016), students of all age levels gradually develop competencies in four areas: action; creativity; relation to the surrounding world; and attitudes. Lackéus (2022) presents a progression model with teaching dimensions in VCP that increase both educator complexity and student impact. These include value type, team size, duration and psychological distance to the value recipient.

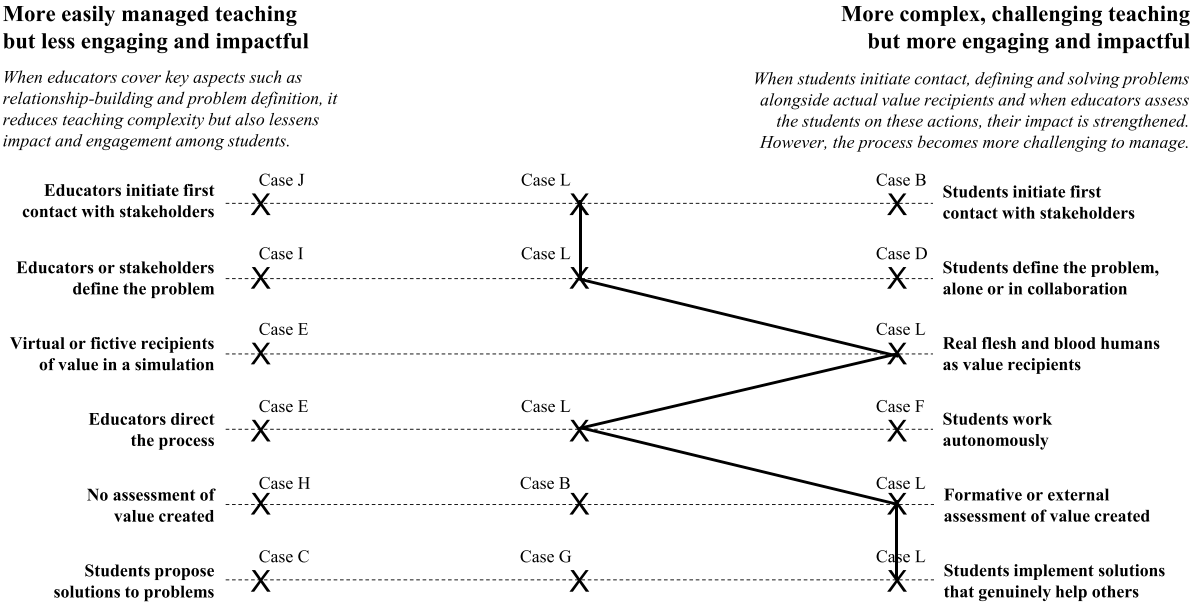

Figure 1. A decision instrument for teaching value creation for others in higher education. Cases exemplify the complex decisions educators must take in six key pedagogical design dimensions. Case L is used here to illustrate a decision profile.

Fig. 1. A decision instrument for teaching value creation for others in higher education. Cases exemplify the complex decisions educators must take in six key pedagogical design dimensions. Case L is used here to illustrate a decision profile.

In the twelve cases investigated here, six additional progression dimensions surfaced that we cannot find described in previous literature on progression in EE. These six dimensions are: (1) who initiates contact with external stakeholders; (2) who defines the problem to focus on in a value creation process; (3) how real or simulated is the value recipient; (4) who directs the process; (5) how is the value creation process assessed; and (6) how much are the students challenged to implement a solution that creates genuine value (see Fig. I). Maximising a dimension is not necessarily better, since teaching feasibility competes against student impact. A seemingly good pedagogical idea risks becoming too complex to be feasible for many educators. Fig. I can support educators in key decisions as they start up VCP activities. It can provide answers to key questions on what to prioritise early and what to delay until their novel course design has matured.

5.7. Limitations and implications for future research

Some limitations of the exploratory multiple case-study approach should be mentioned. Firstly, we identified the cases through purposive sampling. This means that many other cases may be relevant outside the Scandinavian sample, adding to or changing the picture drawn in this study. Further, the cases only cover a small spectrum of all academic disciplines in HE. The invited cases also represent an uneven distribution between teaching levels (BA versus MA) and institutions (universities versus colleges and liberal arts courses). Secondly, we collected the data on VCP practice at a specific point in time and through educators' self-reported experiences and reflections on 'what', 'how' and 'why'. A longitudinal approach, including class observations of interventions, would have contributed a more detailed picture of VCP practices. This is a suggestion for future research. Thirdly, the lens chosen to look for VCP practices in HE may have excluded other relevant aspects and perspectives.

That said, we do articulate a number of implications for *educators* based on our findings. Educators interested in adopting VCP in search of deeper student learning and a more relevant educational experience need to prepare for a multi-year, iterative and challenging journey. Students may need to be given more emotional support than usual, especially when interacting with external people. Educators and study boards also need to factor in a more progressive VCP journey, designing progression into the student experience, on both the course and programme levels. One approach which is absent but could be promising is non-entrepreneurship VCP simulations, perhaps powered by artificial intelligence. Educators may also investigate more tailored assessment techniques that support students' learning journeys formatively, whilst providing access to a better contextualised semantic toolbox to help students make better sense of the VCP experience.

Implications for *policymakers and HE managers* include a need for educator support, preferably from a community of VCP practitioners that spans institutional borders. This helps VCP educators to exchange experiences, approaches, conceptual VCP models, assessment techniques and observations of effects. Additional funding is also helpful, perhaps even necessary, at least in the two or three-year build-up phase. Institutional support or even pressure on educators to apply VCP in their teaching may also be considered, since very few educators will adopt VCP on their own initiative. Such measures could be worthwhile, given the reasons mentioned by educators for adopting VCP despite significant challenges.

Implications for *research* include more investigations aimed at establishing, if possible, more robust patterns in VCP-based teaching in HE, potentially leading to an established signature VCP pedagogy. However, given the stark differences between different disciplinary contexts, it is also imperative to further investigate how VCP can be differently implemented in different disciplines. How to succeed with VCP in disciplines such as engineering, healthcare, pedagogy, business, humanities and natural sciences is still an open question.

6. Conclusions

The participating HE educators use VCP in many different ways and for many different reasons. Pedagogical setups, support materials and assessment practices varied substantially. However, we also found a few similarities across the cases, such as VCP being a time-consuming and challenging "lone-rider" journey of pedagogical development. Students created many kinds of value, in varying ways and for a broad plethora of external stakeholders. In doing so, they experienced many emotional highs and lows, triggered by the unpredictable interplay between applied disciplinary knowledge and the feedback received from the simulated or real stakeholders for whom they tried to create value. The many variations disclosed by educators in the twelve cases allowed us to synthesise two frameworks (Table II and Fig. I) for how VCP can be varied and adjusted to different contexts and at different developmental stages of VCP implementation.

While we have uncovered a broad range of new and quite heterogeneous answers to our research question, we are nevertheless left with an equally wide array of new questions. It is evident that little is known about how educators can apply a VCP approach in various non-entrepreneurship disciplines at HE institutions. For example, how can engineering educators apply VCP that allows for the implementation of solutions or pursuit of opportunities? How can healthcare students be invited to create *novel* kinds of value for stakeholders they already create value for in their education? How can educators in various disciplines design their teaching in ways that take progression more into account? What didactic support models work in which contexts and why is this the case? What models are yet to be developed and where should we start in our endeavours to design them?

Our investigations have also demonstrated many findings from earlier levels of education. Many of the challenges that primary and secondary school educators are faced with when applying VCP also applied to the HE educators in this study. Moreover, many of the interesting and sought-after effects evidenced in previous research on primary and secondary school levels also seemed to be present among these HE educators. Research on VCP is just getting started. If future research can help educators and students cope with their practical challenges in VCP and help policymakers and HE managers in their efforts to support educators and students, we may be in for

an interesting journey of pedagogical progress in higher education. However, as demonstrated here, much contextualisation and many progression designs and disciplinary modifications are needed.

CRediT authorship contribution statement

Martin Lackéus: Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Jette Seiden Hyldegård:** Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Helle Meibom Færgemann:** Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

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Data availability

Data will be made available on request.

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