



Expansive conceptualisation of the impact of continuous learning programmes: An analysis of research-based workshops in higher vocational education and training

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Abstract

Finnish higher education institutions offer continuous learning opportunities, including professional specialisation education programmes for the health and social sector. This article focuses on the conceptualisation of the impact of these programmes, which was the topic of discussion by education and working-life actors in research-based workshops. Drawing on the cultural-historical activity theory (CHAT) approach, the study seeks to answer the following research questions: What are the main themes through which the participants conceptualise the impact of education? How do the themes expand the conceptualisation of the impact of education? A qualitative study analysed data from the multi-professional discussions facilitated by researcher-developers in online workshops during the COVID-19 pandemic. The findings describe the impact-related discussion themes and analyse their expansive potential. Participants' discursive actions in research-based online workshops manifest expansive conceptualisation on multiple dimensions, but also reveal dilemmatic impact-related questions that reflect the underlying contradictions of continuous learning programmes in the health and social sector.

Keywords: dimensions of expansion, health and social care, impact of higher vocational education and training (HVET), professional specialisation education (PSE) programmes



Introduction

In higher education (HE) and vocational education and training (VET), the inter-linked learning contexts of education and work are currently being strengthened both in educational practice and in theory formation. Examining 'how education systems and institutions have met the challenge of including work experience in their study programmes' (Tynjälä, et al., 2022) implicates that the knowledge creation for educational and pedagogic practice should involve the parties of education and working life together. Research and development projects in HE and VET organisations are implemented by creating shared discussion forums for teachers, students, and working life mentors, who are affected by and who hopefully benefit from the knowledge creation of the projects (e.g., Vetoshkina et al., 2023). This article presents one such project by Finnish universities of applied sciences (UASs), which aimed to gain a better understanding of the impact of professional specialisation education (PSE) programmes targeted at continuous learning in working life.

Continuous learning in the health and social care sector is currently seen as an important aspect to increase the resilience of employees in the face of the upcoming challenges in care – technological development, the integration of separate service systems, and seeking solution to staff shortage, to name a few (e.g., Ahonen et al., 2023; Juvonen et al., 2022; Konttila et al., 2019). As the societal and political demand for continuous learning increases, the question of the impact of education programmes arises, making the need for research knowledge on the impact in Finnish higher vocational education and training (HVET) institutions acute (Aittola & Ursin, 2019). Assessing the impact of education is not a straightforward process; the criteria depend on the perspective adopted (Batterbury & Hill, 2005). This article explores the collective conceptualisation of the impact of PSE programmes in the health and social care (hereafter, 'impact of education') bringing together the perspectives of teachers, students, working-life actors, and researchers in a series of research-based workshops. The context of the study is the online workshops conducted during the COVID-19 restrictions. Previous research (Brown et al., 2022; Juvonen & Toiviainen, 2024; Sarantou et al., 2021) has shown that remote interaction between professionals can be productive in terms of participants' knowledge creation and learning. The researchers point out that this requires a good pedagogical quality of online working environments. In order to gain a deeper understanding of the productive potential of online workshops, we will focus on the moments of 'generative collaborative actions' (Damşa, 2014) identified in a previous study (Juvonen & Toiviainen, 2024).

Applying the CHAT approach (Engeström & Sannino, 2017; Gedera & Williams, 2015), we define the generative collaborative actions as the actions of expansive conceptualisation of the object of discussion (the impact of education).

Our approach is based on two propositions: first, in order to be relevant to educational practice, research-based knowledge should be thematised and contextualised by practitioners themselves in dialogue with researchers (Engeström et al., 2006; Juvonen & Toiviainen, 2024). Second, the collaboration between research and practice will serve the learning and development efforts of educational practitioners as far as it expands (widens) their insights into the topic under discussion, rather than reproduces what is generally known through educational research and policy (Engeström & Sannino, 2017).

The following sections present perspectives on the impact of education to provide context for the workshop discussions. This is followed by a section on the activity theoretical framework, in particular the meanings of *conceptualisation* (Engeström et al., 2006) and the *dimensions of expansion* (Toiviainen et al., 2022). Furthermore, the research questions, the project's development work and the role of research and researchers are presented, followed by the data and the method of analysis. The results describe the themes and their expansive potential as the outcome of the interpretative analysis of the workshop discussions. Finally, a discussion of the results and the conclusion close the article.

Perspectives on the impact of education

Research has shown that the evaluation of the effectiveness of training programmes emphasises measurable learning outcomes, the transfer effect from training to work, and observable changes in work performance (Aittola & Ursin, 2019; Alemdag et al., 2020; Blume et al., 2010; Lee, 2011; Tremblay et al., 2017). Furthermore, research has targeted pedagogical solutions that integrate learning and working and emphasise feedback from students, research, training, and working life (Clark et al., 2015; Kallunki & Seppälä, 2016; Maassen et al., 2012; Rauhala & Urponen, 2019).

The impact of education is part of the broader field of quality assessment research (Räisänen & Rökköläinen, 2014; Sannikova et al., 2022). A study of Swedish higher vocational training (HVE) revealed a lack of definitions and criteria for quality and possibly occurring quality differences between educational providers (Littke & Thang, 2015). Furthermore, quality was related to the differences found in the commitment of education providers and working-life partners to HVE. Another analysis of Swedish vocational education and training (VET) (Tsagalidis & Terning, 2018) critically discusses the tendency to assess the value of students in terms of their ability to produce profit and return for entrepreneurs and shareholders. Tanggaard (2020) points out that assessment is not a neutral tool but has an impact on the learning processes being assessed. The impact of continuous learning opportunities can be scrutinised from the

perspective of individual learners, work organisations, and education providers (Blume et al., 2010; Juvonen & Toiviainen, 2024; Oosi et al., 2019).

The notion of impact is related to the motivation of employees to participate and willingness of employers to encourage study alongside work. Organisations are responsible for competence development to ensure qualified staff and, consequently, professional care for clients (Konttila et al., 2019; Mlambo et al., 2021; Pires, 2009). UASs and VET institutions have a central role in providing skilled workers for the labour market (Köpsén & Andersson, 2018; Teräs, 2017). They are expected to provide effective training in cooperation with actors from working life and research (e.g., Cronin, 2014; Köpsén & Andersson, 2018).

In Finland, following European recommendations (Carvalho et al., 2023), HVET institutions are responsible for quality assurance, continuous development and evaluation of the effectiveness of their education activities. A specific element of PSE programmes is their contractual agreement between higher education institutions and working life actors. The contractual process and the agreement form the basis for quality assurance. It is recommended that the school-work cooperation network participates in the monitoring, evaluation, and development of the training. Moreover, working-life representatives can participate in quality assurance and development (Kallunki & Seppälä, 2016).

Expansive conceptualisation as the means of learning

According to Engeström et al. (2006), people in today's world of work deal with complex concepts that are neither given nor stable but historically evolving as they are used and re-conceptualised in collective activities. Because of the variety of professional activities with different historical backgrounds, concepts are multivalent and often controversial (Engeström et al., 2006). The impact of PSE programmes is an example of a complex concept that needs to be jointly formulated by education providers, students, and working-life parties based on research-based knowledge. Applying the CHAT approach (Engeström & Sannino, 2017; Gedera & Williams, 2015), conceptualisation can be defined as the means of learning in the 'middle ground' between research knowledge offered for orientation (top-down) and professionals' own experiences of the meaning of the impact (bottom-up) (Engeström et al., 2006; cf. Vygotsky, 1987).

Engeström et al. (2006) point out that complex concepts are future-oriented, which means that they are developed to respond to the evolving needs of a given activity (here, the PSE). To be productive, research-based workshops would have to generate themes that expand the participants' current understanding of the impact of continuous learning programmes for the construction of future PSE. Pursuing the expansion of current understanding is defined in this study as the actions of 'expansive conceptualisation'. In order to specify the expansive

potential of the multifaceted discussion, the discursive data are analysed along several dimensions of expansion (Toiviainen et al., 2022). The analytical framework is presented in the methods.

The underlying theory of expansive learning (Engeström, 1987) is a dialectical theory positing that development and learning are energised by contradictions, ‘as historically evolving tensions that can be detected and dealt with in real activity systems’ (Engeström & Sannino, 2017, p. 106). The expansions analysed in this study can thus be conceptualised as ‘responses’ to developmental contradictions, but in the dialectical frame of reference, expansive solutions also give rise to new contradictions that evolve in the history of a given activity. Engeström and Sannino (2017) point out that contradictions manifest themselves in the form of conflicts, dilemmas, disturbances, and local innovations. In our data, we observe how workshop participants formulate dilemmas in relation to the expansive dimensions of the impact-related themes.

According to the theory of expansive learning (Engeström, 1987), learning and transformation of social practices can take place when the participants’ knowledge creation exceeds the given boundaries of activity and widens, expands, their understanding of the object and their definition of the whole activity system in which they participate. We suggest that the activity theoretical idea of following the object of shared activity (Foot, 2002) provides a fruitful starting point for studying the research-teaching collaboration.

Research questions

The purpose of the analysis of the multi-professional discussion in research-based workshops of the HVET is to explore the potential of *expansive conceptualisation* by the participants from education and working life who were engaged in the research-based knowledge creation exercise. The topic of discussion was the impact of continuous learning programmes, i.e., the professional specialisation education (PSE programmes), targeted at the health and social care sector. The research questions are:

1. What are the main themes through which participants conceptualise the impact of the education?
2. How do the themes expand the conceptualisation of the impact of education?

Methods

Research context and data

PSE programmes are implemented in various professional fields in Finland to promote continuous learning and provide research-based training for the needs of working life. The programmes have been organised by higher education institutions since 2016. One example of PSE is the programme called ‘Expertise in the digitalised health and social sector’ (30 credits), which can be studied in about one year alongside work. PSEs are based on bachelor level degrees and consist of both distance and contact studies (Ahonen et al., 2024; Rauhala & Urponen, 2019).

Those who complete the training should be able to analyse, evaluate, and develop the professional practice of their specialisation (Kallunki & Seppälä, 2016; Rauhala & Urponen, 2019). Training enhances specific professional competence, generic working life competence, and self-regulation competence (Ahonen et al., 2023; Kuoppamäki, 2008). Dialogue between employers, professionals, and educators is emphasised in the design of effective and qualified programmes based on the anticipation of the changes in working life (Clark et al., 2015).

The workshops analysed in this article are an example of connecting research and pedagogical activities in a specific project. The workshops were part of a wider project, SOTETIE (acronym coined in Finnish from Continuing education for social and health care professionals – the Road Map for Lifelong Learning), which focused on evaluating the impact of continuous learning programmes for work communities seen from the perspective of students (employees from work life), work communities and educators. The project coordinators invited participants who had personal experience of the PSE in the role of teacher, student or working life partner.

The workshops took place at two points in time, T₁ (May) and T₂ (June) (Figure 1). A selection of data from these workshops is presented below.

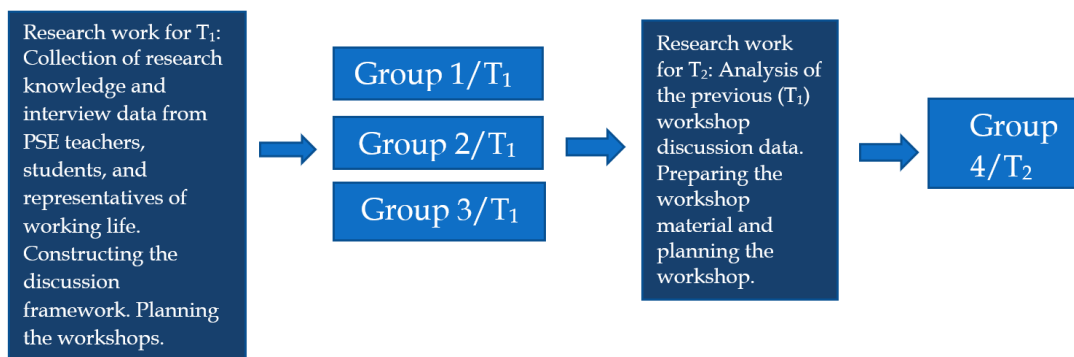


Figure 1. Design of the research-based workshops in May/T₁ and June/T₂ 2020.

The participants worked under the guidance of the workshop facilitators. The facilitators are referred to in this study as researcher-developers. They work at Laurea University of Applied Sciences and Lapland University of Applied Sciences and are responsible for the implementation of the project, data collection, data analysis, workshop planning, and implementation. As an introduction to the first workshops (T₁), the researcher-developers presented orienting material and thought-provoking ideas about the impact of education (Figure 1). They had reviewed literature on the impact of education and interviewed PSE students (15), their teachers (7), and work community mentors (2) to develop an understanding of the impact to be proactively built before, during, and after training. The introduction to the second workshop (T₂) was based on the analysis of the outcomes and highlights of the discussion in the first workshops (T₁). The presentations by the researcher-developers guided the small groups to the discussion, providing ideas for, but not fully defining, the themes discussed (Braun & Clarke, 2019). The definition of the impact-related themes answered the first research question.

Three regional workshops were conducted using video conference software application (Zoom), with a total of five small groups, from which three small groups were selected for analysis based on the data saturation principle (cf. Juvonen & Toiviainen, 2024). In June/T₂, the workshop brought together participants across the regions to form a single small group, with members from the previous groups in May/ T₁. The total number of participants in the three small groups in T₁ was 15, and the working time for the conceptualisation task was 20–31 minutes. The small group in T₂ consisted of seven participants working for 71 minutes. The group discussions were audio-recorded and transcribed verbatim.

There are two reasons for including data from two points in time (i.e., T₁ and T₂): (a) to cover the entire research-based development process described (Figure 1), and (b) to verify that the themes identified in the T₁ discussion data are relevant in the T₂ discussion (not excluding the possibility of new themes in T₂). As no significant changes are expected to have occurred over a period of 25 days, no systematic comparison is made between T₁ and T₂.

Research method

The unit of data in the following analysis is a *speaking turn*. The unit consists of an entire spoken comment by one participant, preceded and followed by a comment by another participant. Speaking turns are treated as discursive actions that construct the discussion (Stasser & Taylor, 1991). An example of a speaking turn is given below (Phase 3). The analysis was conducted in three phases.

Phase 1: Selection of data

The current analysis was preceded by a study (Juvonen & Toiviainen, 2024), in which the data from the May/T₁ small group discussion were categorised into the types of productive interactions (Damşa, 2014), ranging from ‘creating awareness’ and ‘knowledge sharing’ to ‘creation of shared understanding’ and the ‘generative collaborative actions’. The last category describes the discursive actions for generating new ideas and offering innovative solutions. The generative collaborative actions in the T₁ data were interpreted as signalling the possibility of expansive conceptualisation of the impact of education. In Phase 1 of this study, we selected these speaking turns and extended the data to include similar speaking turns from T₂ that were interpreted as generative collaborative actions (excluding other categories). The number of the speaking turns identified as generative collaborative actions was 24 in T₁ and 24 in T₂ (48 in total).

Phase 2: Thematic analysis

The second phase answered the first research question. A thematic analysis was carried out by interpreting the content of the 48 speaking turns selected in phase 1. Phase 2 followed the basic procedure of thematic analysis (Braun & Clarke, 2006, 2019). The themes were identified based on our understanding of the impact of education (see discussion in ‘Perspectives on the impact of education’). Five themes were defined from the thematic analysis (Table 1).

Table 1. Thematic analysis. Five themes, key words, and the number of speaking turns.

Themes	Key words (examples)	Speaking turns (N)
Theme 1: motivational basis regulates the scope of impact	Inter-individual motivation, commitment to work, education costs, more responsibility, incentives	6
Theme 2: collective competence as a basis for impact	Knowledge implementation, sharing, work community’s training, competence envoy	17
Theme 3: work community’s resources for utilising impact	Allocation and division of resources, reduction of hierarchy, new work practices, coordination, support from management, work culture	9
Theme 4: education provider responsible for impact evaluation	Evaluation, cyclic, continuum, equal dialogue, make visible, the voice of working life	8
Theme 5: societal significance and impact for clients	Better services, societal goals, benefits, cost effectiveness, across unit boundaries	8
Total		48

Phase 3: Analysis of dimensions of expansion

The third phase answered the second research question. A theory-driven content analysis of each theme applied the framework of the dimensions of expansion based on the theory of expansive learning (Engeström, 1987). As only the speaking turns in the 'innovative' category of generative collaborative actions were included in the analysis, the final aim was to explore their expansive potential in depth. The framework of the dimensions of expansion has been proposed as a means to analyse the learning spaces of professionals in global work (Toiviainen et al., 2022). In a significantly different learning context, these dimensions will be applied heuristically, recognising that definitions are context-specific and that only some of the dimensions listed may be identified in our data. The general description of the six dimensions of expansion is as follows (Toiviainen, et al., 2022).

1. Social-spatial dimension: expansion of collaborative relationships, crossing boundaries of experience, expertise and physical space, and networking to solve problems and create knowledge.
2. Material-instrumental dimension: expansion in terms of designing and redesigning, implementing and developing tools and infrastructures of work that can be shared in community.
3. Moral-ethical dimension: expansion in terms of responsibility and consideration of consequences; who is affected or should be affected?
4. Political-economic dimension: expansion towards fair workplace practices; equality in social, economic, educational and welfare aspects of work.
5. Personal-professional dimension: expansion of capacities, resources, professional fields of activity, life choices.
6. Temporal-developmental dimension: experiences and learning efforts of the professional shaped by turning points on several dimensions; reflection on the contradictions and expansions in the past, present, and future developments.

Each speaking turn was interpreted as expressing one dimension. The following speaking turn illustrates the analysis steps 1–3. It provides an example of a generative collaborative action (putting forward ideas) that addresses Theme 1 (motivation basis regulates the scope of impact), interpreted to manifest the social-spatial dimension of expansion (*more than one person; the whole work community*). Key words and expressions illustrating each theme are bolded in the data excerpts (see key word examples also in Table 1):

This would certainly be an ideal situation if the workers were **motivated** and the management were **motivated**, in good cooperation. [...] And [ideally] **more than one person** from the working community would be willing to participate, or the **whole working community would be involved in a meaningful way**, using such

forms of learning that are meaningful. I think it creates a good spirit of cooperation, or am I optimistic? (Excerpt 1; Participant 10/T₁)

The presentation of the results, summarised in the tables, describes the themes, interprets the dimensions of expansion, and identifies the dilemmas that emerged. The results are presented in a data-driven manner. The theoretical elaboration follows in the discussion.

Research ethics

This research ensured that the participants gave informed consent. In transcribing the data, any directly or indirectly identifiable information was removed to ensure privacy and data protection. In the data examples, speakers are pseudonymised as 'participants' and numbered 1–15. The first and the second authors held the position of researcher-developers in the project analysed. The following is reported bearing in mind that such pedagogical experiments require long-term commitment and are usually researched by the workshop facilitators themselves (e.g., Brown et al., 2022; Sarantou et al., 2021). Aware of their dual role, the researcher-developers collectively reflected on their actions throughout the project (Lichtman, 2017). They collected a systematic corpus of data without leaving any observations unnoticed. The research was conducted under the supervision of the external researcher, the third author.

Results

The research findings describe the five themes that emerged in the workshop discussions and interpret their expansive dimensions and emerging dilemmas. Thus, the analysis answers both research questions. In the following sections, the term 'training' is used to refer to working-life education activities.

Theme 1: Motivational basis regulates the scope of impact

Motivational basis of training was discussed in relation to the impact of education. Motivation can stem from an employee's personal goals of professional growth or from an expected added value to the work community and employer. The claims for the cost distribution of PSE may depend on the educational needs emphasised and whether these are related to personal career development or the capacity building of work communities. Those employees who pay for their training are not necessarily driven by the aim to impact the work community unless compensated via salaries. If the employer bears the costs, the organisation may expect an observable impact in turn. In addition to perspectives of individual and work community, the discussion expanded the

theme social-spatially to cover regional needs for continuous learning programmes (Table 2).

The distribution of costs should be politically and economically fair, considering that resources for capacity building are not equally available across geographic areas in Finland. After completion, trainees could share their knowledge in the role of in-house trainers. This would be a personal-professional expansion increasing a worker’s recognition in health and social care communities. It would strengthen commitment and bring value to the work community and employers’ investment, as described in the following excerpt:

The employer could think that, since the worker [has been] in training, they might be given **responsibility** to act as a kind of consultant or trainer at the workplace because this would also **improve the work-related well-being and responsibility** of a worker. It may also **enhance commitment** to work in the future – as we just discussed how the worker [trainee] would get motivated and committed to the workplace so that **training would not go to waste from the employer’s and organisation’s points of view**. (Excerpt 2; Participant 8/T₂)

Table 2. Summary of Theme 1.

Theme of impact	Conceptualisation	Expansive development/dimensions
1. Motivational basis regulates the scope of impact	Economic and other incentives are involved in the motivation basis of studies. Motives may be based on employee’s personal goals and on value to the work community and employer. The cost distribution of PSE depends on motives emphasised and, thus, on the impact pursued; whether personal career development, the capacity building of work communities, or the development of regional competence networks.	<p>social-spatial: motivational basis expanded socially from individual to inter-individual and community-based and spatially from workplaces to regional competence networks.</p> <p>material-instrumental: from separated learning assignments and course materials to learning infrastructures for sharing training outcomes at workplaces.</p> <p>personal-professional: expanding motivational basis from capacity building in isolated training to new professional fields of activity by earning new responsibility at work.</p> <p>political-economic: motivational basis expanded from narrow cost-benefit policies to welfare aspects and equitable incentives.</p> <p>DILEMMA Multiple layers of motives from individual to regional networks are difficult to bring together and solution is easily reduced to the distribution of costs of education.</p>

Theme 2: Collective competence as a basis for impact

The speaking turns of both the teachers and the working-life participants strongly advocated for the collective aspect of competence development and knowledge transfer (Excerpt 3). It is mainly supervisors' responsibility to be aware of the existing and future competence requirements in work communities and connect individual and inter-individual training needs to the activity as a whole. Involving stakeholders from the working life in planning would ensure that training has an impact on the skills needed.

Table 3. Summary of Theme 2.

Theme of impact	Conceptualisation	Expansive development/dimensions
2. Collective competence as a basis for impact	Supervisors at workplaces must be aware of competence requirements and connect individual and inter-individual training needs to bring impact to work community. Incorporating working-life parties into the educational planning of programmes ensure better definition of competence needs. New study tools and practices for collective competence building were suggested.	<p>personal-professional: from personal training to collective professional competence development managed by workplace supervisors.</p> <p>social-spatial: from academic planning within educational institutions to crossing the school-work boundaries for impactful co-planning with work organisations.</p> <p>material-instrumental: from individual schoolwork to tools and methods engaging the work community and providing instruments for collective competence development (similar idea to Theme 1 on motivational basis).</p>
		<p>DILEMMA How is individual competence turning into collective competence? Who decides the competence development needs?</p>

Collective competence as the basis for the impact of training dominated the discussion in both workshops (T₁ and T₂), and ideas regarding how individual workers' professional development could be expanded to support workplaces were proposed. Tools and practices for collective competence building were

suggested, indicating a material-instrumental expansion of the impact in this context. The use of annual worker-supervisor development dialogues to link workers' and community's needs and making the study materials of training available to the whole community were among the ideas. The trainee could work as a competence envoy, transmitting the latest knowledge to the workplace. This idea - one trainee training others - was questioned based on the profitability loss caused by a potential decrease in the number of students attending training (Table 3).

It should be ensured that it is the **competence of the work community and not one person** being behind it. And what is this competence - is it some kind of individual knowledge, or is it more **knowledge related to the [community's] activity**? (Excerpt 3; Participant 4/T₂)

Theme 3: Work community's resources for utilising impact

The lack of time and human resources in development work were discussed in the T₁ workshops. The participants linked the issue to prioritisation, which may be hampered by management practices, top-down organisational culture, and general attitudes towards employee-led change efforts in workplaces. They called for a dialogue between management and operational work. Two speaking turns referred to learning from existing models and best practices; one about multi-professional work teams imported from the United Kingdom, the other about mutual visits to peers' workplaces. Once again, a special role was suggested as the resource to increase the impact of training - a worker who mediates employee initiatives to management, facilitates development initiatives, and motivates the work community to participate in the process.

Workplaces have to **have structures** in day, week, and month that allow this to happen. You can't just assume that individual employees will develop in their own **time** and maybe even with their own **money**, but development is **part of the job**. There could be **meetings to discuss professional literature**, something like weekly development meetings. The **client can also be involved** at this point. (Excerpt 4; Participant 2/T₁)

The theme of resources was not addressed in the June/T₂ workshop discussion. It is possible that researcher-developers' material was focused on other themes that occupied the participants' working time.

Table 4. Summary of Theme 3.

Theme of impact	Conceptualisation	Expansive development/dimensions
3. Work community's resources for utilising impact	Lack of time and human resources in health and social care, also management practices, top-down organisational culture, and general attitudes towards development work may limit resources. Dialogue in work organisations, learning from others' good practices, an employee's developer role would provide resources for utilising impact of training outcomes.	<p>material-instrumental: expanding from the limits of given resources to creative solutions and learning from best practices and infrastructures developed in workplaces.</p> <p>temporal-developmental: expansion means that learning and development are integrated into, not separated from, daily work hours.</p> <p>political-economical: expansion from hierarchical top-down resource management to the acknowledgement of employees' voices for fair allocation of development resources.</p>
		<p>DILEMMA Resources to realise the impact of education compete with rather than support the investments to basic care work.</p>

Theme 4: Education provider responsible for impact evaluation

Participants discussed evaluation as a means of demonstrating the impact of PSE programmes. According to the UAS representatives, it is the role of the UAS as an education provider to be concerned about the outcomes of the programmes and to be responsible of the continuous evaluation and the development of evaluation tools. Evaluation in dialogue with working life was emphasised and linked to the future planning of PSE. Former students could give feedback on how the training has benefited them and their working community. The training organisation can collect development stories to showcase the programmes. The ideas of the evaluation process, which would serve working life, funders, and organisers' programme planning, can be interpreted as a temporal-developmental expansion from a retrospective to a proactive approach to impact; cyclical rather than linear or retrospective (Table 5).

From the **perspective of the educational organisation**, [the evaluation process is] a kind of **continuum**... In **planning** new education, **involving** former students and [through them a link to] working life, so that it would be more **cyclical**. Instead of just starting again after [the end of the previous] training, it would sort of **continue**. (Excerpt 6; Participant 6/T₂)

Table 5. Summary of Theme 4.

Theme of impact	Conceptualisation	Expansive development/dimensions
4. Education provider responsible for impact evaluation	UASs are responsible for evaluation and development of evaluation tools. Evaluation in dialogue with working life would be important. Former students can be involved in impact evaluation. Evaluation is used for future planning of PSE.	temporal-developmental: expanding the concept of evaluation from retrospective, after-training activity to proactive evaluation in planning future training. political-economical: expanding perspective from educational and economic accountability of educator to shared impact evaluation with work life actors for the benefit of all.
		DILEMMA No dilemmas formulated by professionals in workshop discussion.

Theme 5: Societal significance and impact for clients

Participants recognised that the impact of training should be considered beyond the boundaries of the work community, through the organisation and more widely in the society and in the delivery of timely services to clients. In the health and social care sector, responding to societal needs through training is challenging because needs are difficult to define. In Finland, the prolonged reform process forced the developers to pause their work while awaiting the outcome of the reform, which was unfavourable for planning individual courses with high impact content. Another dilemma discussed was that long training courses often do not lead to a degree that would serve as a form of societal recognition of education (Table 6).

Often the work of developing and reviewing effectiveness is focused on a single department or unit where the work is done... But the effectiveness should be looked at **beyond the boundaries of the unit**, more broadly throughout the organisation, and also at **societal effectiveness**, what it can produce, and what is needed at the moment. We should look **beyond the area** in which we operate [...]. Effectiveness should also be examined **at the level of society and from the client's point of view**. (Excerpt 7; Participant 7/T₁)

Table 6. Summary of Theme 5.

Theme of impact	Conceptualisation	Expansive development/dimensions
5. Societal significance and impact for clients	The impact of training should be examined beyond the boundaries of the work community in relation to society and clients.	<p>social-spatial: the perspective on impact expanded from (intra)organisational to societal needs of expertise and from workers' training to client services.</p> <p>personal-professional: expanding worker's individual personal-professional goals to embrace the goals of producing good services to the clients.</p>
		<p>DILEMMAS</p> <p>Uncertainties in the health and social sectors make it difficult to plan effective training.</p> <p>The PSE studies are still weakly recognised in society.</p>

Discussion and conclusion

This study contributed to the knowledge of research-teaching collaboration in HVET by analysing the 'expansive conceptualisation' by the practitioners of education and work life in research-based development workshops. The workshops were part of the national project targeting the impact of PSE programmes. The integration of research and practice-based knowledge is needed to find the way to prove the effectiveness of continuous learning while guiding the educational planning and research of the UASs (Rauhala & Urponen, 2019). Following the object of activity (Engeström, 1987; Foot, 2002), in this case the conceptualisation of the impact of continuous learning programmes, we focused

on the impact-related expansions and the dilemmas in the workshop discussion. The analysis revealed five themes of impact, which the participants developed and further expanded on multiple dimensions through the actions of expansive conceptualisation (Toiviainen et al., 2022). In the framework chosen the dimensions of expansion helped in specifying the participants' ideas of the impact of education as generated in the workshops. The 'moral-ethical' dimension was not recognised in this data, but it would be interesting to analyse related to the equal access to impactful work-life education and continuous learning (Mackaway et al., 2024). In the following, the theme-specific expansions (tables 2–6) will be synthesised with a selective reference to single dimensions.

The motivational basis regulating the scope of impact (theme 1) addressed individual and collective motives, incentives, and outcomes related to continuous learning. The scope of impact was expanded social-spatially to cover individual, work community, and regional needs. Different levels of work-related learning have been discussed in the former research recognising the socio-cultural links between employee learning and work community learning (Mlambo et al., 2021; Pires, 2009). Joynes et al. (2017) suggest that technology used in work practices can support informal learning, not only for individuals, but also for teams and organisations. Nevertheless, integrating the motivational bases across levels was challenging for the participants. The dilemma concerned the costs of the education, whether it was the employee's own investment or employer's, which determined the scope of impact. The costs emphasise the political-economic dimension at the expense of personal-professional and material-instrumental dimensions of motivational basis. Expanding the latter would enhance a better integration of PSE studies in the work and workplaces (cf. Tynjälä et al., 2022).

Collective competence as the basis for impact (theme 2) of the work-related learning programmes was emphasised in the project and mediated by the researcher-developers to the workshop discussion. Expansive ideas for improving collective competence building through PSE were developed, such as strengthening the co-planning with workplaces (social-spatial expansion) and opening the study materials to the work community (material-instrumental expansion). At the same time, transformation of a trainee's individual learning outcomes into collective competence posed a dilemma, that can be seen as the problem of knowledge transfer at the interfaces of vocational schools and working life. Researchers of activity theory have presented the concept of 'developmental transfer' in the boundary zone of school and work, which calls for the creation of knowledge through collective activities in the boundaries of multiple organisations (Garraway & Winberg, 2020; Konkola et al., 2007; McMillan, 2009; Tuomi-Gröhn & Engeström, 2003). The pedagogically challenging boundary between school and work, which creates complexity in the

work of VET teachers, has been analysed in previous studies (Enochsson et al., 2020; Köpsén & Andersson, 2018).

The resources of the work community to utilise impact (theme 3) triggered discussion about the allocation of time, organisational culture, and managerial values towards workplace learning activities. Focusing on the work of nurses, the review by Mlambo et al. (2021) confirms that continuing professional development (CPD) requires resourcing to make learning opportunities accessible, relevant, and properly funded. The message is addressed to organisations, nurses, policy makers, and education providers. Our study further specifies that resources for impactful CPD may spring from learning from others' material-instrumental solutions and from giving voice to employees' ideas. Better temporal-developmental integration of work, development, and learning might help the management to see investments to education as reasonable investments to good care work. Smith and Billett (2006) point out that employers' readiness to invest in training is shaped by local factors, policy traditions, and histories and, thus, unique to each country and usually deeply rooted in local tradition and culture.

The responsibility of education providers to evaluate impact (theme 4) was clearly emphasised by teachers. An evaluation model was envisioned by expanding the evaluation social-spatially to include students and working-life partners and temporal-developmentally by understanding evaluation as cyclical – i.e., not as the culmination of educational courses, but as the starting point for planning new ones. There is a need to develop evaluation methods with different approaches, that take into account the changing learning needs of different parties (Räsänen & Rökköläinen, 2014). No dilemmas were formulated regarding the responsibility for evaluation. We see that it is a dilemma for the HVET institutions to be responsible for impact evaluation, while the quality strongly depends on the motivation and commitment of all parties, including workplaces, to the training (Littke & Thang, 2015).

The last theme (theme 5) discussed the societal significance of PSE programmes and the impact on clients. This signals a social-spatial expansion to consider impact from a broad perspective beyond the immediate context of education and work. Personal-professionally, participants expanded the idea of individual competence building to have a positive impact on patient care. To date, the research evidence to support the link between CPD and improved quality of care is limited (Mlambo et al., 2021). Impact at the societal level appeared to be dilemmatic to influence through the institutional means available to professionals (Batterbury & Hill, 2005).

The findings shed light on the conceptualisation of the impact of the continuous learning programmes and demonstrated the possibility of productive knowledge creation in and through development projects. This was found to be

the case even in online workshops under the pandemic restrictions when the researcher-developers had to pay special attention to pedagogical facilitation in order to mediate the research-based material into the discussion.

This study has some limitations. First, because the analysis is framed around the actions of the participants, the links between the contributions of the researcher-developers and the expansive actions of the participants cannot be identified. Nevertheless, the approach built on an ongoing dialogue maintained by the researcher-developers in their dual roles as knowledge producers and workshop facilitators. Second, this study followed a short period of a larger project and selected four small groups from many in the regionally scattered workshops. A larger sample might have revealed new themes and insights into the dimensions of expansion, thereby broadening the understanding of the impact of education in this particular context. Finally, the framework of dimensions of expansion was applied to a specific cultural-historical context of health and social care education in Finland. Future workers, their educators, and researchers of care services are faced with the challenge of continuous learning, and in public discussions this is linked to concerns about the survival of the welfare state. The dimensions of expansion have been interpreted from this perspective.

Given the topicality of knowledge creation at the intersection of research, education, and working life, there is a need for further investigation of the outcomes of the collaboration fostered in the projects of HVET institutions. This study identified five themes for conceptualising the impact of continuing learning programmes. The research-based workshops were productive in bringing together experts from different fields and providing a space for them to discuss complex issues that require different perspectives to find solutions. We see a lot of expansive potential residing in the collaborative knowledge creation between the HVET teaching, research, and working life.

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Conflict of interest

The authors declare no conflicts of interest.

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