



D.6.2 Working paper on personal and institutional factors and mechanisms influencing integration of school learning and WPL for agency development based on the empirical study



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Executive summary

The working paper helps to understand and make visible how members of the “Enhancing Research on the Integration of Formal Educational Programmes and Workplace Learning” project team understand personal and institutional factors and mechanisms influencing the integration of school learning and workplace learning (WPL) for agency development.

Relevant theoretical reviews and the reviews of empirical studies that have just been completed or are currently underway as part of the science work package have been summarised. Relevant studies of project members on vocational education are presented.

Introduction

The problem of integration of learning at school with learning in workplaces is treated as a **complex problem** which is therefore theorized and approached in the project as social ecology that enables to take into account the many interconnections, actions, relationships, feedback loops and environments and processes that are part of the social ecologies (Weaver-Hightower, 2008). Because social ecologies are self-adaptive through interdependencies, the actors have space to exercise agency to influence the whole system (Evans, 2019). As those ecologies can operate in ways that can limit actions and access for some groups (ibid.), our project has the potential to ascertain aspects that limit social inequality and increase social integration (Article 17 of Regulation (EU) No 2020/852). The project’s methodology derives from the main theoretical approaches of social ecology, student agency and individual learning paths (ILPs) addressing the elaboration and better understanding of the concepts and the effective implementation of the related research tools.

Accordingly, we collected the overview of our theoretical and empirical work on personal and institutional factors and mechanisms influencing the integration of school learning and WPL for agency development into this working paper (Deliverable 6.2 of the FEWL project). We will continue to develop relevant ideas and continue to analyse collected empirical data.

D 6.2 is structured in such a way that Chapters I and II present theoretical overviews and Chapter III presents an overview of the relevant empirical studies carried out with the participation of project team members. Further development of these theoretical views and empirical studies is ongoing and coherent and detailed reviews will be presented in forthcoming conferences and international peer-reviewed publications.

The further elaborated results of the working paper will be presented on the EARLI SIG 14 conference 'Learning On-the-Go: Understanding the Dynamics of Continuous Professional Development in a Tech-Driven World, 21th - 23th August 2024, Jyväskylä and EARLI SIG 10, 21, 24 conference Walking the Talk: Co-constructing the politics of meaning, diversity and learning 11th - 13th September 2024, Bari, and in academic publications (e.g. in special issue of the Social Sciences: Improving Integration of Formal Education and Work-Based Learning).

The text below is a working paper, and therefore, strict harmonisation of the text has not been intended. Thus, no thematic similarities have been extracted from the texts of the different authors, and the link between the different empirical studies has not yet been addressed. However, we have adhered to the principle that the authors of the different parts of the text of the working paper should be clearly distinguishable and the reference sources identifiable

I Chapter

Background of the problem - Integration Workplace Learning and School Learning for Agency Development

1.1. Conceptualising work in school and the workplace

School-work relations in school. Krista Loogma

At secondary education in school-based vocational education systems, such as in Estonia, the school - work relations are institutionalised as work practice in the authentic work environment. The work practice is obligatory in all VE curricula. However, depending on the type of curricula the amount of work practice can vary from 70% to 35% of the amount of the studies (in Estonian context). This kind of learning has been conceptualised rather differently, in terms such as work-based learning, workplace learning, apprenticeship learning etc. (for example Eraut, 2004, Cairns and Malloch, 2011, Gijbels, den Bossche, Donche, and de Groof, 2012 and others). Furthermore, the models, helping to conceptualise the integration and connectivity of learning in and between the two different institutional environments, bring up the factors that should be taken into account by both sides (for references see D6.1).

Understanding of work in (primary) school context. Kaidi Nurmik

Work is an activity which can be conceptualized as employment or activity that takes place in a specific place to produce for remuneration. However, for the twenty-first century, this conceptualization is too narrow and broadening aspects should be considered (Cairns & Malloch, 2010). Cairns & Malloch (2010) propose a broader understanding, defining work as *'an activity where individuals alone and together participate in productive activities aimed at completing tasks or achieving outcomes whether self-set or imposed by others, and which may or may not be remunerated'* (Cairns & Malloch, 2010). They also describe work as a process where individuals gain some satisfaction on completion which may or may not be recognized by others (Cairns and Malloch, 2006; in Cairns & Malloch, 2010).

Thomas (1999) characterizes work as achieving something, involving obligation or challenge, and requiring effort and persistence (in Cairns & Malloch, 2010). Thus, a broader range of activities (e.g. leisure time activities) correspond to these elements and greater recognition to the different activities that constitute people's work is needed (Noon and Blyton, 2002; in Cairns & Malloch, 2010). The concept of work should be understood as a more expansive activity encompassing a wide spectrum of social interactions and self-driven initiatives. (Cairns & Malloch, 2010). Cairns (2022) highlights that *'Work is now seen as shifting with more realisation of the necessary recognition of gig and precariat workers, as well as what was seen as unpaid work, variously described as 'informal work' and 'domestic work'.'*

At the same time, modern schools should prepare students for the uncertain future, encourage them to adopt a positive attitude towards working life and support students in learning competencies that can be applied regardless of context and discipline (Lonka & Lammasaari, 2018). According to Cairns and Malloch (2011), work is characterized as a deliberate and purposeful effort undertaken by an individual to address or respond to a challenge or issue in various contexts, with the aim of achieving a perceived productive outcome. Thus, students' participation in various activities such as leisure activities, training, and domestic work provide them with work-related experiences. These activities involve achievement, challenge, effort, and persistence, which are characteristic of the work (Thomas, 1999; in Cairns & Malloch, 2010). Moreover, participating in these activities involves learner agency as students take control of their learning and direct their own learning paths (Hase & Blaschke, 2022). These

work-related experiences should be involved in the formal school learning process to provide students with a more personalized learning experience. Learners' active participation in a rich learning environment and in real-world situations involve different social, technological and natural environments (Jackson & Barnett, 2020) that enables students to learn skills and knowledge that can be applied in different contexts (Lonka & Lammasaari, 2018).

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1.2 The problem of agency in the context of the education system and work experience. Maria Erss.

In the 21st century, the quickly changing nature of work and elevated expectations for the responsible civic activity of citizens in democratic societies requires education systems to develop a whole new set of (generic) competences in people throughout their life course. These competences are sometimes referred to as key or future competences (Council Recommendation... 2018; OECD 2019). Competences that are not tied to particular disciplinary knowledge but are transversal in nature are often seen as life skills. Among them, human agency is gaining importance in international and national education policies and research (OECD, 2019; Estonian Education Strategy 2021-2035).

As an essential capacity of humans for setting and achieving self-determined goals in life while applying a conscious deliberation process in regard to alternative choices (Emirbayer & Mische, 1998), agency requires foreseeing and taking responsibility for the consequences (OECD, 2019). This is in line with the notion of “responsibilisation” of citizens in governmentality literature which indicates a neoliberal change of discourse, sometimes referred to as “advanced liberalism” in Western welfare societies (Juhila, Raitakari & Hansen Löffstrand, 2017, 12). According to these authors, responsibilisation is closely related to autonomy and choice which is a prerequisite to making people active in their own government instead of being passive and dependent. “It is through making individual choices in their personal everyday lives and in various encounters with other people in workplaces, neighbourhoods, social and health services and so on, that individuals are seen to fulfil their national obligations” (Juhila et al. 2017, 13). The government’s intention thereby is to nudge people towards making responsible choices.

To expand the notion of individual agency and choice, OECD’s paper on student agency (2019) also includes the concept of co-agency as a form of collective agency and shared responsibility which is important to achieving bigger goals and tackling more complex problems. As Howard Gardener stresses, “the heightened sense of personal purpose” needs to be “wedded to goals that are appropriate to the broader society and can be publicly justified” (OECD, 2019). This type of agency is also important in work contexts where individual choices need to be aligned with the organisational goals and objectives.

There is a growing amount of research on the importance of agency of employees at workplace. Vähäsantanen and her colleagues (2018, 252) claim while referring to Harteis and Goller (2014); Lovett, Dempster, and Flückiger (2015); and Vähäsantanen (2015) that “without opportunities for professionals to exercise agency (manifested as active participation, making decisions and suggestions, and influencing) at work, the emergence of productive work practices, innovative solutions, and meaningful professional development might be threatened.” Therefore, it is necessary to create opportunities to both employees and trainees to enact agency which is seen as a prerequisite for learning at workplace (Vähäsantanen et al. 2017), although agency can also be seen as an outcome of learning (Tynjälä, 2013).

According to the ecological agency theory, agency is not a personality trait or inborn capacity that some humans possess and others do not. Instead, agency can be seen as an emergent phenomenon which can be achieved by combining individual efforts with available resources and contextual factors (Biesta and Tedder, 2007) such as ‘affordances and constraints of the environment’ (Priestley, Biesta and Robinson, 2015). Agency involves decision-making in any given moment which is connected to the cognitive processes related to the temporal dimensions of agency: iteration, projectivity and practical evaluation, also known as the chordal triad of agency (Emirbayer and Mische 1998). Each agentic decision is thus a product of one’s past experience, knowledge, values and attitudes while considering the future aspirations and present opportunities.

Nevertheless, despite the overwhelming amount of literature that emphasises the positive nature and effect of agency on many important life outcomes such as well-being, student engagement and motivation (Reeve & Tseng, 2011; Vaughn et al. 2019), academic achievement through higher self-efficacy (Bandura 2006) and social mobility (Schoon and Cook, 2020), some studies highlight also the stress and insecurity that independent decision-making can involve when people do not wish to or are afraid of taking responsibility for their choices (Wahl, 2022). Although critical thinking, problem solving, and the capacity to make individual decisions as well as cooperating with others are valued by employers (The World Economic Forum, 2018), freedom of choice is not by all employees regarded as something

positive. Research on working-class employees points to their elevated stress level and association with negative emotions when having to make independent choices (Stephens et al. 2010). This may very well be linked to their experiences in the education system and previous work which did not promote learner agency.

However, there are ways how to overcome these insecurities. Vähäsantanen (2017) has found in her research that employees do not make suggestions for improving work practices “without having sufficient professional competencies and familiar relationships with other people.” Therefore, it is important to have less hierarchical relationships at workplace that would encourage freer exchange of thoughts. The same can be said about students in the classroom. It is difficult to develop agency without the presence of empowering, democratic relationships within society (Ratner, 2000) which makes agency a social and cultural phenomenon.

Recent research in the Estonian context has found significant differences in the perception of agency and autonomy of students in schools with Estonian and Russian instructional languages (Erss, 2023; Ots, 2023; Erss, Loogma & Jõgi, 2024). Students in schools with Estonian instructional language rated their agency as well as the perceived support from teachers to their agency higher than students in schools with Russian instructional language. This points to differences in the school culture and pedagogical approach which schools with different instructional languages display in Estonia. Clearly, student agency is not promoted to the same extent in schools with Russian instructional language as it is in schools with Estonian instructional language (Erss, 2023). The problem is connected with the different educational backgrounds and pedagogical beliefs of Russian-speaking teachers who were often educated in Russia instead of Estonia and feel due to their lack of Estonian skills isolated from the Estonian education system (Zaichenko, 2023).

Since student agency is also deemed to be an important predictor of social mobility and status attainment in adulthood (Schoon and Cook 2020), it is perhaps not surprising that there is a disproportionate amount of Russian speakers in blue-collar working-class professions in Estonia (Integration Monitoring of the Estonian Society 2020) and the salary of Russian speakers is on average lower than that of Estonian speakers in all categories of different education levels (Statistics Estonia 2022). Of course, part of the problem is their insufficient Estonian language skills which may also be a reason why Russian-speaking youth have less working experience compared to their Estonian-speaking peers. This along with the fact that work experience during secondary school is positively associated with student agency in school is an important finding of recent research on predictors of student agency in Estonia (Erss, Loogma & Jõgi, 2024).

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II Chapter

Policies and Mechanisms Influencing Integration of Workplace Learning and School Learning

2.1. The factors facilitating integration/connectivity of learning and work. Krista Loogma.

At the macro level, the national qualification system and occupational standards should serve as a most general mechanism ensuring the correspondence between education (skills provision) and labour market (skills demand side). However, in the circumstances, when movements in the labour market are very fast, formal education cannot provide the skills that could correspond to the fast changing demand and qualification standards appeared to be too rigid to respond to the changing circumstances, as we have seen during the CoVid crisis, for example (Loogma, 2020).

Therefore, the concept of skills formation system has received more attention in recent years, recognising that the lifelong learning (LLL) imperative emphasizes the individuals' permanent need for learning and updating their skills due to the continuously rising uncertainty and fast changes in the labour markets. The SFS, therefore, is seen as an adaptive system (ibid), complex set of institutions, such as governments, education and training (E&T) providers, labour markets, business communities, individuals and their complex relationships. (Schwalje 2011). This definition therefore, refers to the ecology embracing both - the lifelong perspective for skills development and at the same time, the skills and learning in formal education settings and work settings. (Loogma, 2020).

While E&T systems and government represent the skills supply side, the business communities and individuals as lifelong learners are seen as actors, generating demand for skills. At the individual level, skills and competences' development can be seen as lifelong continuing process, where foundation for formation of basic skills, such as numeracy, literacy, digital skills and many other key competences should be built up at the level of basic school (compulsory 9-grades basic school, age 7-16), and in the cases of some key competences even earlier, at kindergarten (ibid). Skill is treated in a broad sense in this text, not differentiating between competency and skill, using them interchangeably as both terms refer to the integrated ability or capacity of an agent to act appropriately in a given situation and both involve the application of knowledge, use of tools, cognitive and practical strategies and routines, and both imply beliefs, dispositions and values (e.g. attitudes). (OECD 2013: 19; Mulder, Gulikers, Biemans, & Wesselink, 2009).

By the classification of Skills formation systems (SFS) in Europe, Estonia's SFS belongs rather to the liberal or market model, which can be characterised by the rather large social inequalities in a country, low value-added industries, orientation of education to the immediate needs of employers. In this model, adult training is seen rather as the responsibility of private actors. (Saar, Roosalu, Roosmaa, Tamm and Vöörmann 2013). However, the skills formation in this model can lead to the process in skills formation, were the educational disadvantages in early years in education may carry through the formal education to adult education, manifesting itself in risk to become NEET youth, not completing compulsory/basic education, get often precarious employment, low participation rate in the formal and informal learning etc (Saar, Unt, Lindemann, Reiska, Tamm 2014).

Mechanism and factors that can support and facilitate the connectivity between school and work-related learning at the organisation level (meso level) is provided by Zitter, Beusaert, and Kyndt, (2020). They bring up 11 principles that both education and organisation stakeholders should take into account while designing the work based learning as a part of school curricula (p 230-236). The 11 principles are as follows:

- 1) Design in collaboration with labour market partners (see also Gijbels et al, 2021) model of integrating work into educ programmes. The agreements of: 1) specific competences to be learned; 2) ensuring that wpl can support defined competences 3) education and workplaces evaluation
- 2) The development of the common language to get mutual understanding what work based learning means and to conceptualise the frameworks of both sides.
- 3) Students' systematic preparation for work based learning, e.f introducing the specific program
- 4) To make the borders between educational and work contexts more ambiguous, with many meanings, e.g the circumstances at work can change and learning can happen also outside physical borders of the institutions, in the hybrid environments.
- 5) Providing supervision and instructions for learners, as well, perspectives for occupational development. Supervision should be guaranteed from both sides - from school and form workplace this way, that apprentice can live into the local community of practice. The relevant contract, establishing both sides' responsibilities should be signed.
- 6) Provide different work environments (e.g simulations, physical work, work with different clients etc)
- 7) Provide possibility to discover a professional/occupational culture at the workplace and take part of activities of the local professional community
- 8) Support mentorship at the workplace

- 9) To organise feedback and reflexive sessions with supervisors, mentors to support deeper understanding of the work processes
- 10) To ensure the proper quality of the supervision and the create the quality evaluation system (both summative and formative evaluation involved)
- 11) Common evaluation of learner's competences (both sides' supervisors, mentor, learner)
 - how the goals of the practical training are fulfilled

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2.2. Historical context of relationship of work and learning. Maria Erss

Freeing children from work for attending school

Historically, all societies used to teach their children early on proper work skills and habits because they were necessary for survival. In agrarian societies, children were seen as a necessary work force on the farm and in the household. This posed a major conflict of interest when formal schooling was made compulsory in most countries. In Prussia, the obligation of educating all children between 5 and 12 goes back to as far as 1717 when emperor Friedrich Wilhelm I made it compulsory. However, until 1918 it was not necessarily an obligation to

attend school, since children could also be taught at home if the parents, notably the father of the family who was officially held responsible for the education of his household, was able or willing to educate the children himself or find alternative providers. The obligation to attend school was only meant for the children of parents who could not or did not want to provide education on their own (Tenorth, 2014). This changed in 1919 when formal schooling was made compulsory for all children in Germany making Germany now one of the few countries in Europe where there is an obligation of attending school instead of obligation to be educated (Tenorth, 2014).

The justification for the state overrunning the wishes of parents in this case was given already in 1855 by Ludwig von Rönne, “The compulsion is notably not used against the not yet self-determined child but against his/her parents and guardians who out of stinginess or brutality are about to inflict enormous damage to the child. The state therefore merely acts as a protective guardian of the rightless and defenseless in order to give the child the opportunity to acquire at least the education that is essential for the development of mental powers and advancement in life. The child's own will, if it were capable of determination, could not reasonably be any other; the state supplements this.” (Tenorth, 2014).

In Estonia, the first schools for Estonian born peasants were established during the Swedish rule in the last quarter of the 17th century. Even before the first schools were opened, all peasants had to learn the catechism and the German upper-class Lutheran preachers went from house to house to check the knowledge of catechism of the young and old. However, the eagerness of Estonians to learn the basics of the Christian faith initially remained modest. Aleksander Elango reports in his booklet “About the history of Estonian school and educational thought” that it happened quite often that “the youngsters would run in the forest when they saw the preacher approaching who came to teach and test them” (1968, 13). In Saaremaa, the Swedish authorities started to fine the parents and families who would not allow their children and dayworkers to be tested. Those who refused to learn would even face public shaming at the pillory in front of the church congregation (Elango, 1968, 13).

At the end of the 19th century, when schools were made compulsory all over Estonia, there were children from poor families and girls who could only attend schools when their work as shepherds or babysitters was over. Some children were too poor to afford clothes and food to attend school. (Paert, 2017). Moreover, some farmers refused to send their children to school at busy work times. For example, in 1878 there were 20 children on the list of the village school of Juuru-Maidla but only 11 children showed up. When inquiries were made as to why the rest were missing, the farmers made excuses that their children were suffering from “eye problems” or “tooth aches” which lasted until the end of the school year (Tammar, 2021). The disobedient farmers were fined by the authorities of the Russian tsarist regime. Eventually, the sanctions were effective and the attendance of schools improved which means that children had to be freed from work during the compulsory education. However, that happened due to the coercion of the state, not always due to the eagerness of parents to educate their children.

Making education more relevant and engaging: **The birth of work school** One of the most significant German educational reformers and pedagogues of the 20th century was Georg Kerschensteiner (1854-1932) who counts as the founder of the vocational school. Kerschensteiner contrasted the new work school which is based on the independent work and activity of students and the practical experience of their life-world against the old-fashioned bookish school which was characterised by transmitting theoretical knowledge to passive students and rote-memorisation of the content. Kerschensteiner advocated school gardens and workshops where students could acquire practical skills which they would need in their future occupations. An important subject became homeland studies (in German “Heimatkunde”)

which included observations of nature near home. One of Kerschensteiners' core thesis was that children's intellectual interests could only be awoken through practical activity first. Another important principle was that children were to develop self-reflexion about their own work. According to Kerschensteiner, the ability for self-critique was an essential trait that would enable children to develop resilience and build character (Kerschensteiner, 1827).

Through work, children would develop important character strengths and moral virtues which were needed as responsible citizens in the society: diligence, conscientiousness, self-overcoming (in German "Selbstüberwindung") and devotion. Other important values were self-control, consideration of the interests of all and, particularly, the interests of the "fatherland", justice, responsibility and physical health (Saupe, 1927, 128-129). Therefore, work was seen above all, as a means of disciplining students and molding them into useful, well-behaved citizens which is in stark contrast to the modern individualistic concept of developing "competences" where character traits are hardly mentioned at all and education is seen in economic terms mainly as accumulation of individual capital or as investment in the future.

It is not surprising that Kerschensteiners' ideas were hugely popular in many European countries. In Estonia, the famous Estonian educator Johannes Käis was fascinated by Kerschensteiner's ideas and promoted them to Estonian teachers in his main work "The Basics and Ways of Teaching. The General Didactics" written in 1944 but due to the Soviet occupation only printed posthumously in 2018. However, already in 1925 the newspaper Sakala was introducing a publication "On the way to work school" addressing the teachers of the Võru teacher seminar. The publication and the newspaper article promoted Kerschensteiners' ideas of work school while lamenting that meanwhile the work school had already been more or less implemented in other European countries but in Estonia, it was still in its infancy (E.O. 1925, No. 148, December 19th).

Integrating work and general education during the Soviet period (1940-1991 in Estonia)

The main goal of education during the Soviet period was to reform the society through education into a socialistic society with suitable marxist-leninist beliefs and patriotic attitudes towards the Soviet Union but, with a few exceptions, Soviet educators did not have much original pedagogical thought to contribute on global scale. Mainly, they borrowed ideas from the educational innovators in the USA such as emphasis on technical education and connecting education even tighter to the needs and possibilities of work (Samoff, 1999). A correspondent of the Estonian newspaper "Socialist teacher" quoted Karl Marx and Vladimir Ilyich Lenin when saying that education in a socialist society had to be united with productive work (Semjonov, 1957, December 21). Moreover, the Constitution of the Soviet Union stated "Work is the obligation and matter of honour for every able citizen by the principle - "If anyone will not work, neither shall he eat!" With this biblical expression, work was used as means to cultivate necessary attitudes and values in Soviet citizens. The integration of education and work was also supposed to reflect the changes in technology and science, according to Lenin. As Semjonov explained in this newspaper article (1957), schools had to have laboratories and workshops where students could develop skills. Partnerships with local collective farms, sovhoses and industrial enterprises were forged to offer students opportunities to get some real life work experience. As exemplary schools that practiced education for work, some schools were mentioned where students had built greenhouses, workshops or even a whole new floor with several useful common rooms or a tractor station for the school - reflecting the ideal of integrating polytechnical vocational education with general education. In the same article the author chastised schools that did not use every chance to offer students opportunities to develop their work skills and to award students for their fine work (Semjonov 1957).

In Estonia, most people who were born before 1980s remember from their own childhood and school experiences how they were exposed to some form of Soviet work experience. However, many experienced rather monotonous and low-skilled work such as harvesting potatoes in a collective farm or wrapping candies in the chocolate factory, so it is questionable whether it actually helped to improve one's competencies in today's sense of employability. However, since the interpretation of what constituted "productive work" was left to individual teachers, it could occasionally also come to quite creative projects. For example, an Estonian language and literature teacher of the 7th Secondary School in Tallinn, offered the students in the 1960s the opportunity to develop their own school's newspaper (personal conversation).

It is a little paradoxical that the Soviet authorities relied on Karl Marx with their tight emphasis on uniting the education of working class early on with work since Marx had actually criticized the way education serves the interests of the ruling class,

"The ideas of the ruling class are in every epoch the ruling ideas, i.e. the class which is the ruling material force of society, is at the same time its ruling intellectual force. The class which has the means of material production at its disposal, has control at the same time over the means of mental production, so that thereby, generally speaking, the ideas of those who lack the means of mental production are subject to it. The ruling ideas are nothing more than the ideal expression of the dominant material relationships, the dominant material relationships grasped as ideas." (Marx, 1845).

The ruling class in the Soviet Union would be the communist elite who were interested in the rapid industrialization of the Soviet Union and increase in food production which needed masses of industrial workers and farmers. Marx and Engels also criticized in their Communist Manifesto the education of proletarian children both at home and in school while seeing working-class children as the most exploited group in the society,

"The bourgeois clap-trap about the family and education, about the hallowed co-relation of parents and child, becomes all the more disgusting, the more, by the action of Modern Industry, all the family ties among the proletarians are torn asunder, and their children transformed into simple articles of commerce and instruments of labour." (Marx & Engels, 1848).

This cynical view about the family served as an excuse in the Soviet Union for the state to take a bigger responsibility for raising children than their parents who were always working and often unavailable. On top of schooling, various free time activities were organised by schools and youth organizations during the Soviet period. One of them was the youth work camp ("malev" in Estonian) which served several purposes.

Youth work camp as a means to combine work, socialisation and leisure

The trigger for organising youth work camps was the shortage of agricultural workers in the Soviet Estonia of the 1950s and 1960s because many members of the rural population had moved to towns as a result of industrialization and urbanisation. The mechanisation of agriculture was slow resulting in a constant need for a large number of manual workers, especially in summer time, when extra seasonal workers were needed. First summer work campers were students from the University of Tartu who participated in 1956 in a work camp in Kasahstan working on a large agricultural project and earning money. By the 1960s local collective farms in Estonia started recruiting also underage school students (mainly aged 15-18 but later also aged 11-14) for the summer season and paid them handsomely. The organisers of the youth work camps worked under the supervision of the Soviet youth organisations which were branches of the Communist party (Malevkorraldaja käsiraamat).

From the beginning, the work camp also had educational and ideological purposes and it was more than work: leisure activities and socialisation were valued as well. A well-known Estonian politician and former youth work camp activist Edgar Savisaar wrote in 1980 about the purposes of this camp, “In a work camp, the young person became an active participant in the education process which created an opportunity to develop new social relationships in a team and conditions to develop self-awareness and self-education. The work team lived as a family where a month and a half living together created great emotional value. The youngsters learned to be mindful of others, take responsibility, pay attention to the work rules and take care of themselves. The value of the work camp was both in work and in leisure as well as being apart from parents. It was an opportunity for youngsters to challenge themselves, see the results of their work, understand its significance to the society and satisfy their need of socialization and independence” (Savisaar, 1980). Thus, youth work camps were seen as a kind of initiation rites to independent life where young people had to learn to balance independence with the norms and rules of communal living and working.

Dismantling of youth work camps and their comeback since the late 1990s The youth work camps of the Soviet period disappeared with the collapse of the Soviet Union because large enterprises and collective farms that needed their work force ceased to exist. The only exception was the work camp in Pärnu county which managed to survive despite losing its initial numbers. Starting from the second half of the 1990s the work camps were revived but not as a central organisation anymore but rather as separate entities under the auspices of local administrations as seasonal youth projects. A few of the youth work camp organisations still exist as a full-year foundations which deal only with the organisation of youth work camps, organise gatherings and reunions and design and issue symbolic memorabilia and clothes. The contemporary youth work camp is seen as part of youth work and has educational purposes - to develop and prepare the youth for life. By providing young people with work experience and education, the youth work camps provide an unusual learning environment where youngsters can develop many specific and generic competences and discover through cooperative work new facets in their personality (Malevakorraldaja käsiraamat).

The popularity of the youth work camps has remained high, so that not every young person who would like to spend part of their summer in a work camp and earn some money, can find a place there. The newspaper headlines like “The Youth Work Camp Places Filled with Less than 10 Minutes” (Loonet, Postimees, May 3rd, 2012) are a testimony of that. Although the Estonian Education and Youth Office (Haridus- ja Noorteamet - HARNÕ) supports the organisers of youth work camps currently with 20% of the costs (HARNÕ 2023, Noortemalevate toetus), there are more applicants than places. In 2023 the main employers of young people in the work camps were, according to HARNÕ (Noortemalevate toetus, 2023), local administrations, schools, youth centres, and libraries. Young people between ages of 9-25 could work in playgrounds, different businesses, cafes, shops, agricultural enterprises, gas stations, supermarkets, food delivery businesses etc. 81% of the participants were between 13-16 years old.

The shortage of work opportunities for young people has something to do with the reluctance and difficulties of employers to hire underaged work force. The law and the Work Inspection (Tööinspektsioon, 2024) specify in Estonia what kind of work underaged children are allowed to do and for how long. For example, school-aged children in the age group of 7-12 can only work in the field of culture, arts, sports or advertising; 12-14-year olds and 15-16-year olds subject to compulsory schooling can only do easy work that does not require much physical or mental effort and 15-17-year olds can do all kinds of work that does not harm their health. However, underaged persons are not allowed to handle alcohol or tobacco products, including

selling them or being involved in serving clients these products. There are also restrictions to the work hours: 7-12-year olds can work maximum two hours per day and 12 hours during seven days period outside of school hours and 3 hours per day and 15 hours per week during school holidays. The same restrictions during school terms apply for students aged 13-14 but they can work longer during school holidays: up to 7 hours per day and 35 hours per week. 15-17-year olds can work eight hours per day and 40 hour per week if they are not subject to compulsory schooling. School-aged children are not allowed to work overtime, early in the morning before school, work between 10pm and 6am or more than half of the duration of the school holiday. Besides that, undraged persons can have a work contract only if their legal guardians agree with it (Tööinspektsioon, 2024).

All these restrictions along with the supervision duty and the varying levels of maturity and skills of underaged persons makes hiring them a risky business for many employers which is why it is more a social mission for employers and the local authorities than anything else. Therefore, it seems that government incentives are necessary to bridge the gap between the needs of the youth and employers.

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III Chapter

Empirical evidences on personal and institutional factors and mechanisms influencing integration of school learning and WPL for agency development.

3.1. Connectivity of Work and Learning in the Soviet period in Estonia: path dependent processes. Krista Loogma.

(based on the article: *Loogma, Krista; Ümarik, Meril; Sirk, Meidi; Liivik, Reeli (2019). How history matters: the emergence and persistence of structural conflict between academic and vocational education: The case of Post-Soviet Estonia. Journal of Educational Change, 20, 105–135. DOI: 10.1007/s10833-018-09336-w.*)

Right after the Soviet occupation in Estonia in 1940 the political regime changed into totalitarian and brought about deep principal changes in education. The ultimate declared aim of the Soviet educational ideology was to build up a specific kind of loyal “Soviet citizen”. Helping build up the society, based on communist ideals (Kuebart 1997) become coercively

the ultimate goal in all Soviet republics despite cultural differences. The educational strategy and guidelines for Republics how to govern and arrange the communist upbringing

were planned at the highest level of the Communist Party (CP). The extreme centralisation and ideologization of the content of education (particularly in social and humanities subjects) was implemented across the entire Soviet Union through full hierarchical control from the CP (Sirk 2005). The shifts in education policy originated mainly from the needs of the planned industrial economy, military technology and the declared principle of egalitarianism in education. The egalitarianism was based on the aim of the CP to develop a classless communist society by abolishing differences between the working class, peasants and intelligentsia (Loogma et al, 2019). For satisfying the need for qualified labour, the principle of “polytechnic” education (or production training) was implemented by integrating vocational training into basic and general education. The integration at the same time has an ideological purpose aiming to socialise students into workers, and therefore, diminish the differences between the intelligentsia and the working class. (ibid).

The needs of the economy were assured by the manpower planning system and apprenticeship system was a part of the planned economy, ensuring strong relations between vocational

schools and enterprises. Training places were ensured for apprentices in training companies which also provided financial support for the vocational schools. For graduates, the workplaces via a planned work assignment were assured (Loogma, 2004).

Therefore, the occupational profiles taught in VET schools were narrow as they correspond to the labour needs of a specific “support company” (Loogma et al, 2019). Inefficiency and low productivity were basic features of the socialist economic system, which included centrally-planned staff for enterprises, limited scope for the movement of employees between jobs, an ideology of zero unemployment, a prevailing paternalistic organisational culture that valued loyalty, administratively controlled unions with their main task of distributing goods and services (e.g. that were often not available in the very limited markets, such as cars, living spaces etc.) for the workers of an organisation (Loogma, 2004).

The declared dominant role of the working class in Soviet society led to the mass repressions against national intelligentsia and restriction of the access to higher education for the children of the intelligentsia. At the same time, children of the ruling class (workers and poor peasants) were strongly privileged. (Loogma et al, 2019). The rule of the working class considerably strengthened the ideological position of vocational education as an important education project for the working class (Loogma, 2004). After the 1970s this policy caused serious difficulties in competing with Western countries in science and technology and in the “arms race” period. The main education reforms in the Soviet period were related to political and ideological waves that have often been articulated as times of “frost and thaw” (e.g. Sirk 2007; Raudsepp 2005) and labelled according to the Secretary General of the communist party (CP). From the viewpoint of the transformative changes in education the following historical periods can be distinguished: “Stalin’s frost” (1944–1953), Khrushchev’s “thaw” (1953–1965), Brezhnev’s stagnation (1965–1985), Gorbatshev’s “Perestroika” (1985–1991). (Loogma et al, 2019). The political and ideological pressure on education led to a decrease in high quality pedagogical staff, as teachers were suppressed in economic and moral terms, struggling under strong ideological control and numerous social responsibilities. Teachers had to follow the new principles and ideas of communism as they had to educate a new type of person—the Soviet citizen (Sirk 2005; Raudsepp 2005). Because of rapid industrialisation there was a need to prepare a massive amount of people within a minimum period, the quality of VET was low (Ojasoo 2005).

From the viewpoint of integrating work and school learning and vocational and general education, the most important historical period of changes was related to Khrushchev’s education reform. The main reason for the reform was Soviet Union (SU) backwardness in the military technology race compared to the Western countries. Economic reform in the 1960s led to further industrialization followed by further centralization by Moscow and brought about massive urbanisation and immigration from other regions of SU (Loogma et al, 2019). Acknowledging the considerable gap between the quality of education and the increasing need for a qualified workforce, the communist party initiated remarkable educational reforms to increase the education level of the population (Raudsepp 2005). Khrushchev’s educational reforms were guided by decisions made at the communist party’s congresses in 1952 and 1961. The congresses emphasized two principal changes. *First*, polytechnization—the integration of vocational education/curricula into general education. The latter was foreseen to take place within 10 years (Nagel 2006). The polytechnic production training in the upper secondary general schools was introduced in 1959. Production training included theoretical and practical subjects in a narrowly specialised trade, and enterprises for practical training were assigned to the general secondary schools. Polytechnic production training (may cover 50-85% of the study

time ended with a qualification examination and resulted in decreasing proportion of academic subjects in general education (Raudsepp 2005; Sirk 2005). However, general education schools lacked the necessary capacity (facilities, teacher training etc.) to ensure the quality of production training. By 1965, polytechnic production training was replaced with a less ambitious polytechnic craft training programme, which only took place in school to provide simple work skills for students (Nagel 2006). From 1980, a second attempt was made to introduce the production training that had been abandoned in the middle of the 1960s, into the general education schools. To hasten the goal of compulsory secondary education, in the 1970s, a new type of VET—vocational secondary education was established, to enable young people to acquire a secondary education. All vocational schools were reorganised to provide 4-year study programmes (instead of 3-year programmes) where the general education subjects were integrated into vocational programmes (Helemäe et al. 2000, Ojasoo 2005). However, soon it became evident that many students entering secondary VET were not able to acquire both a secondary education and a vocational education. The dropout rate in the period 1970–1980 peaked at 25–30% (Helemäe et al. 2000). In response, programmes of 1–2 study years were reopened with the main focus on practical training (Ojasoo 2005). Despite the reorganisation, the modernisation of VET that took place in the 1970s and 1980s in Western countries was totally omitted in the Soviet Union (Grootings 1998) leading to lowering the quality of VET, and to the further differentiation of secondary education.

The *second* aim of Khrushchev's educational reforms was the transition to compulsory secondary education and to achieve massive upper secondary education at all costs under egalitarian principles. For that, a number of alternatives (e.g. distance learning, evening classes etc.) were created (Loogma et al, 2013) and enterprises were even obliged to send their workers without secondary education back to school (Helemäe et al. 2000; Raudsepp 2005). As a result, the number of people acquiring secondary education increased considerably by the end of the 1960s (Helemäe et al. 2000; Nagel 2006). From the end of 1960s with the aim to have better engineering staff to keep pace with Western countries' economic and technological modernisation, general education schools, providing special learning programmes (mainly foreign languages, maths and science subjects) were established with the right to practice a selective school admission policy for more talented children. This policy intervention provided impetus to emergence of so-called elite general secondary schools. (Loogma et al, 2019).

However, later, particularly in the subsequent stagnation period, it became obvious that the reforms, provided the basis for the differentiation of secondary education, and therefore, for educational selectivity and inequality despite the ideologically declared principle of equality. The secondary education was differentiated by the type of institution - elite schools, ordinary general secondary schools and vocational schools, referring to the quality of academic outcomes (Loogma et al, 2019). Thus, the selectivity of general education, having historical roots, continues today, manifesting itself in negative selection to vocational education which in turn, limits the access to higher education. (ibid).

3.2 Europeanisation of Estonian education policy. Krista Loogma.

(based on the article: [*Loogma, Krista \(2016\). Europeanization in VET policy as a process of reshaping the educational space. International Journal for Research in Vocational Education and Training, 3 \(1\), 16–28.*](#)

General education was one of the first areas in education where large scale fundamental changes took place in late 1980s and early 1990s when teachers' and educators' social movement initiated the process of transformation of national general education curricula to

humanistic and democratic values. The educational change process was a grass-root initiated social innovation, involving thousands of teachers and educators. (Loogma et al, 2013).

Even though the adjustment of VET schools to changing circumstances begun earlier, the state-led reform started about 10 years later, triggered by the dramatic changes in economy and labour market. After regaining independence in 1991, the Soviet VET system collapsed. However, at this time, the local VET actors lacked all the resources (expertise, finances, time) to build up the new VET system in the circumstances, when all other societal systems, particularly the economy and employment systems, were simultaneously going through rapid change (Loogma, 2004).

In the framework of Lisbon strategy, EU has seen vocational education rather instrumentally, as a support factor for economy. (Toots and Loogma, 2015). Estonia joined the Lisbon strategy before joining EU in 2000.

The reform in VET involved several stages and can be characterised Europeanization - as policy learning from EU, first and foremost from EU VET policies after the Lisbon strategy in 2000 (Loogma, 2016). Europeanization is defined as a process, encompassing the construction, diffusion and institutionalization of formal and informal rules, procedures, policy paradigms, styles, ways of “doing things” and shared beliefs and norms, which are first defined and consolidated in the making of EU decisions and then incorporated into the logic of domestic discourse, identities, political structures and public policies (Saurugger and Radaelli, 2008). Changes in the direction of the common EU goals are one indicator of Europeanization (Radaelli, 2008). Furthermore, the Open Method of Coordination (OMC) was launched by the EU as the principal governance tools to direct policy changes in the direction of the common Lisbon goals through deliberate policy learning and adapting guidelines and recommendations for member states, benchmarks, indicators, monitoring and multilevel steering – reporting, evaluations against the benchmarks, EU and national action plans among others (Radaelli, 2008).

The Europeanization in VET brought about two main consequences: ever growing standardization in education and as well, the considerable growth of institutions and bureaucracy mediating EU and national agencies.

The Qualification Framework and standards has seen by EU as the main macro-level policy tool to integrate and achieve correspondence between educational outcomes and labour market needs. The transition to 8-level EQF was completed by 2013 and for this time, other standardising policy tools, such as establishment of national curricula and outcome-based curricula in schools, professional standards etc introduced by EU.

While VET policy during and after the transition was directed by EU, the general education was in the competence of member states and thus, general (academic) education and VET were strategically separated and structural conflict between them after compulsory education persisted (Loogma et al, 2019). However, since Estonian Lifelong Learning Strategy (ELLS) in 2015 there were attempts made to integrate general, vocational and adult education into the common strategic framework (Loogma, 2016). Furthermore, one of the policy tools in the Estonian Education Strategy 2035 is to integrate general (academic) and vocational (work-related) education institutionally.

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3.3. Worrying about employability: European steering and changes in the Estonian national general education curricula. Maria Erss

Based on the book chapter: Erss, M. (2023). Curriculum development in Estonia: 30 years in the crosswinds of Europeanization and globalization. In P. P. Trifonasm S. Jagger (Eds.). *Handbook of Curriculum Theory and Research*, Springer.

Estonian national curriculum development for general education schools can be characterised through paradoxes in the last three decades. On the one hand, schools were given autonomy to develop their own school-based curricula with the curriculum reform of 1996 and the governance of schools was decentralized but a year later, the first standardized tests were introduced to increase the accountability of schools. The state exams reduced the autonomy of teachers in the core subjects considerably and made them skeptical in terms of the so-called “liberty” of developing school-based curricula (Erss, 2023).

Up to the 2000s the standardization happened only on the national level but the decision of Estonia to join the European Union (EU) in 2004 brought along the process of homogenization of education policies known as Europeanization of education (Loogma, 2014) which was motivated by the promise of free movement of workforce in Europe. The ambitions of the Lisbon strategy which stated as the goal of the EU to become the most competitive economy of the world concerned vocational and higher education most but are also visible in the curricula of the general education. General education curricula in Estonia were redesigned to accommodate the instrumental approach to education with clearly stated measurable learning outcomes which were stated as behavioural objectives to emphasize the activity of students (Erss, 2023).

Already since the 1996 version of the Estonian National Curriculum for Basic Schools and Gymnasia the term “competence” was introduced which is in line with the neoliberal view of education which sees education as a form of personal and national capital. The neoliberal doctrine was based on the belief that if schools and teachers were more tightly controlled, more focused on the needs of business and industry, more technically oriented, would put more stress on traditional values and work-place norms and dispositions „then the problems of achievement, of unemployment, of international competitiveness [...] and so on would largely disappear“ (Apple, 2001). The influence of the strategy of the economic growth “Europe 2020” is visible in the national curricula: i.e. the Estonian curriculum of 2011 states as cross-curricular themes “technology and innovation”, “lifelong learning and career planning” and “citizen activity and entrepreneurship”. Since the document of “Europe 2020” was developed during

the economic crisis of 2010, the worry about employability and the capacity of students to cope with technological change, the imperative of lifelong learning and the capacity to create jobs and innovate were particularly in focus (Erss, 2023).

Consequently, the political will favoured a rapprochement between school education and the world of work. This is visible in the fact that many schools offer entrepreneurship trainings involving developing student businesses as an elective course, encourage students in general education to develop career ideas by work shadowing, short internships or apprenticeships and invite guests representing various disciplines of work to schools or take field trips to workplaces. Furthermore, many upper secondary schools (gymnasia in Estonia) offer some kind of pre-vocational course as an elective to facilitate career choices (Erss, 2024).

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3.4. Teachers' perspectives about the relationship between learning and work in primary school

Abstract submitted for SIG 14 Conference in Jyväskylä. Anne-Mai Näkk & Inge Timoštšuk

Introduction

Contemporary challenges encompass a broad spectrum, with education confronting challenges aligned with the needs of the future (European Council, 2019; OECD, 2023). The demands of 21st-century skills are pervasive and intricately reflected in the curricula of many countries, where they are extensively and ambitiously framed. This phenomenon sets a challenge for teachers, requiring them to navigate the balance between meeting curricular objectives and students' individual needs. Teachers report that heightened expectations contribute to increased external stress (Timoštšuk et al., 2016). As integration of work and education starts from the primary years, our focus is on primary education. Moreover, it is known that teachers' context affects their perceptions (Hase & Blaschke, 2022). Therefore, our aim was to explore teachers' perceptions of the relationship between learning and work in teaching. Based on the aim, two research questions were set:

1) How do teachers perceive the relationship between students' learning and work experiences?

2) What kind of teaching practices do teachers use to integrate students' learning and work?

Methods

Thirteen primary school teachers participated in the study. The respondents were all women. The mean age was 40.2 years ($SD = 9.1$), and the mean teaching experience was 16.4 years ($SD = 9.7$).

Data was collected through individual narrative interviews (Goodson & Sikes, 2001). It enables a comprehensive understanding of the teacher's professional context within the reality of their holistic functioning (Wengraf, 2001) and demonstrates how past experiences have contributed to the present and future (Creswell, 2012). The narratives focused on teachers' stories of becoming and being a teacher.

Content analysis (Schreier, 2014) was used to analyse the interviews. A coding frame was created with two key categories about students' learning and work: a) perceptions including the origins of the perceptions, and b) teaching practices. Then segments were found that were related to the categories and lastly, codes were defined.

Results

The most common understanding was that learning is students' work. A few elaborated by linking it to future career aspirations and believing that learning habits are the base for working habits. A few teachers expressed that students should be taught that the result of good work is a high grade.

Half related their understanding to their own positive experiences as a student, the other half to becoming a parent which made them understand children's development more deeply.

Most of the respondents spoke about supporting students' individual needs. Many found it important to support social-emotional development, to offer a variety of experiences in and out of school and to support student's development into an independent learner. One was hesitant and one focused on short-term achievements.

Discussion and conclusion

To conclude, teachers are concerned with supporting students' individual needs and social-emotional development. However, teachers did not highlight specific relations between students' learning and work. This result may be attributed to the narrative approach of the study. Nevertheless, our results indicate a need to establish stronger relations, both in pre- and in-service teacher training, with the context of students' work and professional development.

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3.5. Primary school teachers' practices and understandings in developing transversal skills: a multiple case study. Anne-Mai Näkk & Inge Timoštšuk (research in progress)

Abstract

The emphasis on transversal skills is widespread and has prompted a call at the European level to prioritise people's skills and lifelong learning to attain long-term and sustainable economic growth. Moreover, the development of such skills is reflected in the curricula of many countries. This situation presents a challenge in the daily work of teachers, as they are tasked with finding a balance between fulfilling curricular objectives and addressing students' individual needs. Therefore, some schools have decided to change their educational approach by adopting a fully subject-integrated instruction instead of traditional subject-based instruction. As the integration of education and skills that students need in their future work starts from the primary years, our focus is on primary education, and because agentic teachers are more likely to use or test different instructional solutions, we focus on agentic teachers. Thus, we employed a multiple case study approach, and our aim is to explore agentic primary school teachers' practices and understandings in developing transversal skills. Data collection is planned to take place from the end of March until the end of June 2024 and we will use school strategic documents, expert interviews with school leadership, lesson observations, photo documentation by teachers and semi-structured interviews with teachers. We expect to gain a deep insight into three or four teachers' teaching contexts, including their practices, significant learning moments and how they understand the development of transversal skills. Understanding these cases offers insight for effective integration of transversal skills in primary education for comprehensive student development.

Theoretical framework

The European Commission (2020) highlighted the need to invest and reevaluate strategies to enhance sustainable competitiveness, social fairness and resilience inclusively, emphasising the important role of transversal skills in meeting the demands of the 21-st century. Transversal skills are applicable across diverse contexts and occupations, such as collaborative work, self-management, and critical thinking, extend beyond specific subject or task boundaries (IBE, 2013). The development of these skills begins at the primary school level; thus schools and teachers should acknowledge their potential in investing in students' future. However, acknowledging such potential and considering the long-term goals can be difficult to teachers who are expected to find a balance in their everyday work between curricular objectives and students' current individual needs. It is known that teachers' context affects their perceptions

(Hase & Blaschke, 2022). Thus, teachers' agency rises to importance – agency can be seen as an individual's initiative to enhance their well-being by learning at work, it includes rational and intentional activities that are highly interdependent on social context (Eteläpelto et al., 2013). Therefore, our aim was to explore the understandings and practices of agentic primary school teachers in shaping supportive learning contexts and supporting the development of transversal skills. We set four research questions:

- 1) What are the strategic foundations of a school implementing general education principles to support teachers?
- 2) What are the characteristics of agentic teachers in such a school?
- 3) What are the teaching practices used by agentic teachers to foster a supportive learning context and the development of transversal skills?
- 4) What are teachers' understandings of fostering a supportive learning context and developing transversal skills?

Methodology

Participants

This study is based on one general education school in Estonia that was selected due to their subject-integrated instruction that is applied from Grade 1. Certain members of the school leadership and three to four primary school teachers will participate in this study.

Context

The school is placed near one of the largest cities in Estonia and its language of instruction is Estonian. It offers early childhood education and basic education (Grade 1 to 9). The academic year is divided into trimesters. This school follows the Estonian National curriculum for basic schools but because Estonian schools have the autonomy to choose their own educational and instructional approach, this school has chosen a fully subject-integrative instruction. Therefore, subjects are taught in a comprehensive manner in which a teacher's choices for instruction are critical as the curricular objects have to be met in a non-traditional way.

Materials

This study will be conducted in four stages.

Stage 1: document analysis will be conducted to identify the school's strategic foundations. Then, expert interviews will be conducted with some members of the school leadership to deeply explore the strategic foundations of the school and to identify agentic teachers.

Stage 2: the lessons of identified teachers will be observed by university teacher educators.

Stage 3: the teachers are asked to photograph learning situations that they perceive as meaningful when supporting transversal skills.

Stage 4: semi-structured individual interviews are conducted with the teachers regarding their understanding of supporting transversal skills and creating a supportive learning environment. Photographs will be used to help recall meaningful moments.

Data analyses

Documents and expert interviews will be analysed by qualitative content analysis (Schreier, 2014). Teachers' data will be analysed by each separate case. Observational data and semi-structured interviews will be analysed by thematic analysis to search for emerging themes (Braun & Clarke, 2006). Photographs will be used as a recall tool during the interviews.

Results

As data will be collected from the end of March until the end of June, the results cannot be presented yet. At the conference, we would first present stage 1 results since it is a vital phase before the multiple case study phase. Once data for the identified teachers has been gathered, each case will be presented separately based on the observations, photographs, and semi-structured interviews.

Discussion and conclusion

We selected one school that applies subject-integrated instruction as opposed to traditional subject-specific instruction. We first analysed the school's directive documents to explore their strategic foundations and principles. Based on these findings, we conducted expert interviews with some of the members of the school leadership team. These interviews allowed us to further explore the fundamentals of their instruction and their approach to teaching and learning but also how the school leadership empowers and supports their teachers in employing such instruction. Together with the members of the leadership team we identified agentic primary school teachers who are proactive and take initiative to maintain a high quality in their instruction. University teacher educators observed their lessons to understand teachers' approaches to creating a supportive learning environment and supporting transversal skills. After the observation period, teachers were asked to capture significant learning moments as photographs which would be used during individual semi-structured interviews.

Based on the cases, similarities and differences could be found as the social dynamics in each class are unique. The cases reveal how agentic teachers manage societal expectations and objectives of the curricula. It would also provide information on how they maintain their agency. For primary school teacher education these cases provide an opportunity to learn for beginning teachers who are interested in non-traditional instruction approaches.

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3.6. Integrating working life in classroom learning - the primary teacher perspective. Kaidi Nurmik & Inge Timoštšuk

Abstract submitted for SIG 14 Conference in Jyväskylä

Keywords: working life, learner agency, primary school, teachers' perceptions, ecological perspective

The ecological view of learning emphasises learners' active participation in a rich learning environment. Learning environments are shaped by teachers who enable learners to construct their knowledge and understanding in real-world situations and involve other social, technological and natural environments (Jackson & Barnett, 2020). Contemporary perspectives on learning and working acknowledge a more holistic view of learners and their lifelong learning (Malloch et al., 2022). Involving various environments, such as authentic working environments, contribute to richer learning experiences and the development of competencies and personal agency (*Working Paper*, 2023). For example, *Estonian Education Strategy 2021-2035* highlights the importance of integrating general education and working life. However, learning in general education schools tends to be subject-centred (Valk, 2019), and pedagogical practices involving authentic environments, such as subject integration or theme-based learning, are implemented rather inconsistently (Praxis & Centar, 2019). As children's first school experience starts with primary school, where a solid foundation for learning and whole-person development should be created (Lightfoot et al., 2013), it is necessary to learn which aspects of primary teachers' understandings and experiences support integrating working life and classroom learning and which do not. Primary teachers teach most subjects up to 4th or 6th grade; thus, it can be assumed that they can integrate subjects and authentic environments into the learning process more efficiently. We aimed to explore Estonian primary school teachers' understandings and experiences of integrating working life into the learning process. Specifically, we intended to answer two research questions: (1) How have teachers integrated working life into classroom learning? (2) What limitations do teachers perceive in integrating working life and classroom learning? Methodologically, we implemented an ecological approach, as it enabled us to examine learning, connections and meanings of contextual factors that may not be revealed in narrower approaches (Brown et al., 2013). More specifically, the policy ecology framework was applied (Weaver-Hightower, 2008). We conducted interviews with 20 primary school teachers. Preliminary analysis results indicated that teachers involve mostly their students' family members' working lives in the classroom learning. For example, parents conduct lessons or workshops related to their professions; parents' workplaces are also visited as part of the learning process. These results are consistent with previous results highlighting that primary school teachers see parents as significant cooperation partners in the learning context (manuscript, 2024). Further, teachers perceive the national curriculum and information about students' family members as prerequisites in integrating working life and classroom learning. However, integrating working environments from local communities into classroom learning is an opportunity that could be given more focus. This study was part of a larger study to illuminate the teachers' understanding of the factors shaping learner agency and preparedness for the next steps of education.

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Integrating working life and students' work-related experiences in classroom learning - the primary teacher perspective. Kaidi Nurmik & Inge Timoštšuk

Abstract proposal for Social Studies special issue

Keywords: working life, work-related experiences, learner agency, primary school, teachers' perceptions, ecological perspective

Modern schools should prepare students for the uncertain future, encourage them to adopt a positive attitude towards working life and support students in learning competencies that can be applied regardless of context and discipline (Lonka & Lammasaari, 2018). At the same time, the concept of work has broadened and is not only seen as paid employment that takes place in a specific place. Cairns and Malloch (2010, p 6) concluded that work needs 'to be conceived of as a broader-based activity across a very wide range of ambits of social interaction and self-motivated action.' Thus, students participate in various activities that provide them with work-related experiences, for example, leisure activities, training, and domestic work. These activities involve achievement, challenge, effort, and persistence, which are characteristic of the work (Thomas, 1999; in Cairns & Malloch, 2010). Moreover, participating in these activities involves learner agency as students take control of their learning and direct their own learning paths (Hase & Blaschke, 2022). We argue that these work-related experiences should be involved in the formal school learning process to provide students with a more personalized learning experience. It is also in line with the ecological view of learning that emphasizes

learners' active participation in a rich learning environment that are shaped by teachers who enable learners to construct their knowledge and understanding in real-world situations and involve different social, technological and natural environments (Jackson & Barnett, 2020). However, learning in general education schools tends to be subject-centred, and pedagogical practices involving authentic environments, such as subject integration or theme-based learning, are implemented rather inconsistently (Praxis & Centar, 2019). Our study aims to explore primary teachers' perceptions of students' work-related experiences and the involvement of working life in the learning process to support learner agency, broaden students' understanding of work, and prepare them for future working life. We implemented an ecological approach to examine learning to reveal relevant contextual factors (Brown et al., 2013). More specifically, we applied the policy ecology framework proposed by Weaver-Hightower (2008). We interviewed 20 Estonian primary school teachers to explore their understanding and experiences of integrating working life and students' work-related experiences into the learning process. We intended to answer three research questions: (1) How have teachers integrated working life into classroom learning? (2) How do teachers perceive students' work-related experiences? (3) What limitations do teachers perceive in integrating work-related experiences, working life and classroom learning? Results indicated that teachers involve mostly their students' family members' working lives in the classroom learning. However, the full potential of families' working life has not been realized, as involving parents' working life in learning is rather random and depends on particular teacher activities. Some teachers described cooperation with local businesses, but primarily teachers did not recognize (local communities) work-places as opportunities to enrich learning. Also, students' out-of-school activities are usually not purposefully involved in the learning process, and their work-related experiences are not taken into account. Our results show that teachers need more support in understanding the meaning of work, and more attention should be paid to noticing and considering students' work-related experiences and involving working life in the learning process.

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3.7. Widening the learning context and highlighting work related topics

“We’ll Be Back by Christmas” – Developing Historical Empathy During a Museum Activity.

Uppin, H., & Timoštšuk, I. (2019). “We’ll Be Back by Christmas” – Developing Historical Empathy During a Museum Activity. *Journal of Museum Education*, 44(3), 310–324. <https://doi.org/10.1080/10598650.2019.1612660>

Historical empathy is crucial for understanding history. However, there are no clear guidelines for museum educators to back up their actions accordingly. This case study describes an activity developed in the Estonian Maritime Museum (Seaplane Harbour permanent exhibition) for secondary students using a historical empathy framework. The aim of the activity, “We’ll be back by Christmas” was to enact the experiences of Baltic refugees of 1944 and broaden students’ understanding about WWII events. Students and teachers were observed and interviewed. **Students had vivid memories of their museum visit three months after their visit; they demonstrated that they were able to see beyond modern viewpoints and explain the actions through the eyes of historical refugees, and they felt motivated by learning in the museum. The key element for developing historical empathy in the museum seems to be meaningful collaboration with classroom teachers,** as there is not enough time during a visit to cover the content deeply enough. We conclude that the historical empathy framework can help museum educators focus programming and enhance collaboration with classroom teachers.

P.S. The learning activity described also involved talking about professions and work-skills as a way to make a “new life” for oneself in a novel situation.

Teaching in a natural history museum: what can we learn from Estonian elementary school teachers?

Uppin, H., & Timoštšuk, I. (2022). Teaching in a natural history museum: what can we learn from Estonian elementary school teachers? *Cultural Studies of Science Education*, 17, 1159–1192. <https://doi.org/10.1007/s11422-022-10138-z>

Natural history museums are great places for learning new concepts and enhancing social skills and motivation. However, it is often difficult for teachers to make full use of the museum as a learning environment. Some teachers seem to be more successful than others in crossing the boundaries—they enjoy and value field trips and advocate for them in the teaching community. Such teachers are a valuable source of information on how to overcome factors that hinder field trips and support meaning-making in the museum. This study explored the practices of eight Estonian elementary school teachers who create, conduct, and analyse

learning activities at a natural history museum without the direct help of museum educators. All participants frequently and willingly teach across different learning environments. A qualitative multiple case study strategy was used. The teachers were interviewed and learning activities were observed. Field notes, interview transcripts, lesson plans, and thick descriptions of observations were analysed. The participating teachers valued learning across different learning environments and were skilful in overcoming most problems connected to field trips. Teachers demonstrated supportive relationships with their students, which seemed pivotal in facilitating engagement. Estonian elementary teachers seem to have more autonomy in their teaching practices compared with their colleagues from other countries. However, participants struggled to use hands-on and interactive exhibits. **This study highlighted the need for more collaboration between museum educators and Estonian elementary school teachers, especially in order to create more individualized and problem-solving oriented learning tasks.**

P.S. This research highlights the beliefs and practices of primary teachers who already highly value teaching in out-of-classroom settings - they also stress the importance of learning taking place “everywhere” and “widering students' horizons”.

Learning to Teach in Out-of-University and Out-of-School Environments in Primary Teacher Education in Estonia, Finland, and Sweden.

Uppin, H., Norrman, K., Näkk, A.-M., Areskoug, L., Timoštšuk, I., Corner, S., & Löfström, E. (2023). Learning to Teach in Out-of-University and Out-of-School Environments in Primary Teacher Education in Estonia, Finland, and Sweden. *Center for Educational Policy Studies Journal*. <https://doi.org/10.26529/cepsj.1564>

Learning in diverse settings during pre-service teacher training equips future primary teachers with the knowledge and skills to teach in authentic learning environments later in their work lives. This experience helps to meet the varying needs of their future students who have increasingly diverse cultural and socio-economic backgrounds with varying levels of access to learning and knowledge. During their university studies, pre-service teachers need to recognise the value of out-of-school environments, reinforce awareness in practice, and reflect on experiences to deepen pedagogical thinking about learning environments. This multiple case study describes the common practices in the pre-service training of primary teachers at Tallinn University, University of Helsinki and Uppsala University concerning teaching in out-of-classroom learning environments. Our aim was to explore the ways that the three universities support pre-service primary teachers in using out-of-school learning environments in their future practice. We intended to identify practices regarding our respective national curricula and university courses for pre-service primary teachers. We have three main suggestions for teacher educators regarding learning to teach in diverse environments: **enable meaningful and reflective practical tasks in out-of-university learning environments for pre-service teachers; ensure the sustainability of external partnerships by stating collaborative practices in course programmes while leaving flexibility in the details; and reflect on professional networking across the boundaries of institutions.**

P.S. This research highlights the importance of reflecting upon using different learning environments as a way to meaningfully incorporate out-of-school learning environments into teaching practice (in contrast to “doing what has been always done”) - especially during pre-service teacher training.

“They were surprised that such jobs even exist...” Supporting students’ career awareness during learning activities at museums and science centres

Abstract proposal for Social Studies special issue. Helene Uppin and Inge Timoštšuk

Keywords: career awareness, learning ecology, formal education, boundary crossing, situated cognition

A diverse learning context influences students’ career awareness and future career choices, including importantly home and school. However, boundary crossing, such as participating in curricula-related learning activities at museums, galleries, and science centres during formal education, can unveil novel career trajectories and create a diverse learning ecology for the learner which supports learning, adaptability and well-being of the student in the long run. Yet, it is unclear how educators of out-of-school learning environments (OSLE) address students’ career awareness.

Our aim was to explore how OSLE educators perceive the connection between curricula-related learning at OSLE-s with students’ career awareness and how supporting career awareness relates to OSLE educators’ perceptions of successful learning activities in general. The qualitative data is drawn from two datasets: 27 OSLE educators from outstanding OSLE-s chosen by purposeful sampling participated in focus group interviews about their practice (2020), and 43 OSLE educators participated in written interviews focusing on career awareness education (2024). Qualitative content analysis was used to find meaningful patterns from the dataset.

Most of the respondents had not previously conceptualized their career-related practice. Nevertheless, participants shared various specific examples of supporting career awareness: raising awareness about career paths related to their institutions, encouraging children to explore their individual strengths and interests, helping to connect theoretical knowledge with authentic work-related learning activities, etc. Moreover, we conclude that learning in OSLE-s supports the goals of sustainability competencies of the European Sustainability Competence framework GreenComp (Bianchi et al, 2022) by preparing students to flexibly manage unforeseen future situations.

Bianchi, G., Pisiotis, U., Cabrera Toimetajad, M., Punie, Y., & Bacigalupo, M. (2022). *GreenComp Euroopa kestlikkusosalaste pädevuste raamistik*. <https://doi.org/10.2760/71066>

Highlights

- 1) Career awareness is seldom explicitly conceptualized by educators at out-of-school learning environments (OSLE) such as museums.
- 2) OSLE educators support career awareness by introducing inspiring role-models and novel careers
- 3) OSLE educators value learning activities that resemble or introduce the work of professionals in their fields.
- 4) Learning at OSLE-s supports sustainability competencies such as ‘embracing complexity’ and ‘acting for sustainability’.

Museum and science centre educators' perceptions of addressing students' career awareness Helene Uppin and Inge Timoštšuk

EARLI (SIG 10, 21 & 25) Septmeber, Bari - Co-constructing the politics of meaning, diversity and learning Abstract proposal.

Keywords: life-long learning, boundary activity, boundary crossing, career awareness, boundary object

A wide range of contexts affect students' career awareness, most prominently home and school. Participating in curricula-related learning activities at museums, science centres and other out-of-school learning environments (OSLE) during formal education can introduce new career trajectories too. However, students' access to OSLE's is uneven and all school teachers do not value learning at OSLE-s nor consider it an integral part of formal education, resulting in an experience gap. Yet, it is unclear how OSLE educators address students' career awareness.

Our aim was to explore how OSLE educators perceive the connection between their curricula-related learning activities and students' career awareness; and to find out what influences their collaboration with school teachers in this context. 27 OSLE educators participated in focus group interviews (2020), and 43 OSLE educators participated in written interviews (2024). Qualitative content analysis was used to find meaningful patterns from the dataset.

We found that OSLE educators generally do not explicitly conceptualise career awareness. However, they support it during learning activities: introduce career paths and offer authentic work-related learning tasks connected to their respective fields, encourage children to explore their strengths and interests, etc. However, the nature of collaboration with school teachers is seldom personal, specific or student-centred, and is often solely mediated by funding schemes, the national curriculum and/or marketing materials. Thus, the potential of collaboratively addressing the societal expectations connected to students' career-awareness has not been fully realised due to the lack of meaningful collaboration between school teachers and OSLE educators.

Supporting students' career choices during learning activities at museums and science centres

Uppin, H. & Timoštšuk, I. (2024), *Conference abstract proposal for Jyväskylä*

Keywords: learning environments, boundary practice, career choice

Schoolteachers and parents play an important role in shaping future education paths and career trajectories of children. For example, children with higher socio-economic status are more likely to reach higher education than their counterparts with lower socio-economic status (Pöder et al., 2023), belonging to a specific minority or gender group can also limit perceived educational or career options (Faitar & Faitar, 2013). However, considering that 'learning rests on interpretations of the lived-in-world' (Seddon, 2022), it is important to keep in mind that a wide range of other 'contexts' can and do influence or inspire children. For example, participating in learning activities that take place in out-of-school learning environments (OSLE), such as field trips to museums, galleries, and science centres, can have a positive influence on students learning motivation (Greene et al., 2014), introduce them to their communities' learning resources (Nabors et al., 2009), and inspire future careers in science (Flemming, 2023). Moreover, educators of OSLE's value life-long learning in a broad sense (Tran & King, 2007). On the hand, curriculum-related learning activities at OSLE's are

boundary practices and their results depend on the collaboration of on-site educators and schoolteachers. Yet, it is unclear whether or how educators of OSLEs introduce specific career options or support concrete career-related competencies during learning activities.

The aim of this research was to explore how on-site educators perceive supporting students' career choices at museums and science centres; and to find out how career choices are addressed during learning activities. 43 educators from OSLE-s were interviewed. Qualitative content analysis was used to find meaningful patterns from the dataset.

Most participants feel that their practice can have a positive effect on students' future career-choices. They stated that participating in learning activities at OSLE-s rises awareness of different fields of research and related career paths (especially those, but not limited to careers available at their OSLE, e.g. historians at a museum), encourages children to explore novel ideas and educational paths in an unbiased context, and helps to connect theoretical or superficial knowledge about their fields with authentic activities and examples. Most participants made specific examples of career-related activities from their work experience, ranging from discussing practical implications of their field of research (e.g. environmental protection) and possibilities to contribute (e.g. related educational programs), sharing personal career paths, introducing influential scientists, to designing practical tasks mirroring the work of professionals from their field. A smaller number of educators, mostly those with more working experience, gave examples of systematic support to career development – whether during explicitly designed learning activities or by leading larger career-related events and programs for youth.

All in all, educators at OSLE's should be considered important partners in introducing future educational and career-related choices to children. However, many of the respondents had not previously conceptualized their practice using the lens of future careers. Thus, in the future career- and educational choices could be more explicitly discussed and reflected upon in the context of curriculum-related learning activities at OSLE-s.

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3.8 Practices on the integration of workplace learning into upper secondary education

Authors: **Birgit Peterson and Krista Loogma**, *Conference abstract for EARLI SIG14 2024*

Multiple new cooperation forms to integrate workplace learning and school education have been developed during the recent years by Estonian employers and general education schools, likely to improve the general competencies of the students. However, the educational purpose and effectiveness of the various initiatives in the context of the development of the general competencies according to the curriculum are unknown. The main aim of the research is to explore what kind of pedagogy is applied in Estonian general education schools for integrating formal educational programmes and workplace learning in the development of general competencies of the students. The research question focused on the current survey is following: What is the practice (including pedagogy, cooperation forms, reasons for integration, learning aims, division of responsibility) of integrating school-based- and workplace learning in Estonian upper secondary schools, and what is the experience and needs of employers there? The theoretical framework is based on the Integrative Pedagogy Model (Tynjälä, 2008, Tynjälä et al, 2021) and the definition of Key Competences for Lifelong Learning. The empirical study will be based on individual and focus group interviews, which are being conducted with upper secondary teachers, head teachers, and employers. In the research, phenomenological approach and inductive content analysis method is used to analyse the current practices. As the result of the survey, the clusters of the forms of integration and their organization, learning aims and pedagogy implemented will be detected at schools and the experiences and needs of employers will be clarified.

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Practices on Integration of Workplace Learning into Upper Secondary Education

Abstract for Special Issue. Authors: **Birgit Peterson, Krista Loogma and Maret Aasa**

Multiple new cooperation forms to integrate workplace learning (WPL) and school education have been developed during the recent years by Estonian employers, general education schools and other stakeholders, likely to improve the general competencies of the students. However, the educational purpose and effectiveness of the various initiatives in the context of the development of the general competencies according to the curriculum are unknown. The main aim of the research is to explore what kind of practices are applied in Estonian general education schools for integrating formal education and WPL in the development of general competencies of the students. The research question focused on the current survey is the

following: What is the practice (including pedagogy, cooperation forms, purpose, learning aims, division of responsibility) of integrating school-based and workplace learning in Estonian upper secondary schools, and what is the experience and needs of employers there? The theoretical framework is based on the Integrative Pedagogy Model (Tynjälä, 2008, Tynjälä et al, 2021) and the definition of Key Competences for Lifelong Learning. The empirical study will be based on individual and focus group interviews, which are conducted with upper secondary teachers, head teachers, representatives of external WPL integration initiatives and employers. In the research, phenomenological approach and inductive content analysis method is used to analyse the current practices. As the result of the survey, the clusters of the forms of integration and their organization, learning aims and pedagogy implemented at schools will be detected and the experiences and needs of employers will be clarified. The preliminary results of the survey show that some schools have established different forms for integrating WPL into upper secondary school studies, e.g. through practical work, short-term internship programmes, job-shadowing, voluntary work as part of school exams. The purpose and learning aims of the practices vary. Practices aim to raise the career awareness of students, develop their values as a citizen, enable to make connections between theoretical knowledge and real-life situations, develop their key competences. Besides the school practices, also external initiatives for integrating WPL are implemented for various reasons, e.g. to develop career education and to foster the engagement of employers into education. The employers find that it is important to establish and develop consistent cooperation with general education schools starting already from early age, although there might be limiting regulations for involving students, especially minors. The real-life experience will bring benefit for the students, in addition to the school perspectives, employers emphasize also importance of developing the knowledge and attitudes which are important in work life (e.g. taxation, sense of duty).

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Keywords: integrative pedagogy, workplace learning, integration practices

3.9. High School Students' Work Experience: the Competences' Development.

Abstract for Special Issue. **Krista Loogma, Birgit Peterson and Maret Aasa.**

Work experience of students studying in formal education programmes is more and more recognised as potentially powerful way to prepare students for working life (Gijbles et al, 2021). It is assumed that early work experience can help to reduce the gap between formal education and world of work and thus, making young peoples' transition into the labour market smooth. Therefore, the connectivity between learning at school and work experience is becoming critical (Tynjälä, Beausaert, Zitter and Kyndt, 2021).

While the work experience of vocational education students in vocational programmes is rather well researched, to the work experience of general secondary students (gymnasium, high school) in authentic work environments less attention has been paid. However, there is a tendency that share of high school students working or having work experience in authentic work environment in parallel with learning in formal educational settings is expanding (e.g Gijbels et al, 2021). For example, from students in grades 6-12 of general education in Estonian schools, 62% had kind of work experience in a work environment outside the school whether by short-time and temporary work, voluntary work, family businesses etc. (Erss et al, 2024).

However, the learning potential of workplaces and significance of high school students' workplace experiences for the development of the life careers of students and as well, for the consideration in the framework of formal education curricula, is rather underestimated.

The general aim of the article is to understand the pattern of meanings, students attribute to the working experience. The particular attention has turned on the two aspects of students' experience: skills and competences, students acquired by learning at work and as well, the connectivity between the school learning and learning at work.

The theoretical framework originates from the model of integrating workplace learning in formal education programmes (Gijbels et al, 2021, p 46). We suggest the dominance of two main models of connectivity between school and work: alignment between the two separate practices of school and work and the incorporation of elements from one practice into the other practice: work to school or school to work (Tynjälä, Beausaert, Zitter and Kyndt, 2021)

The study applies phenomenological approach by conducting semi-structured interviews with students who have had work experience outside the school, in authentic work environments. The sample consists from high school (gymnasium) students of both genders, aged over 18 years with various regional backgrounds. As a rule, the students work aside the school deliberately having no specific work based learning programme at school.

The preliminary results of thematic analysis of the interview texts demonstrate, for example, the existence of two main patterns of motivation to work: to earn (pocket) money not to ask money from parents and become independent and secondly, thinking forward and consciously preparing for the own future career(s). Usually, the two main motives are combined. The competences learned are related to the working context and tasks and as well, to the motives, varying from planning activities, money and time and communication skills to the higher level of competences, such as self-regulation, metacognitive competences, supervision and teaching competences and others.

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3.10. How experiences at home, school and work shape students' mindsets and agency. Maret Aasa.

In addition to several expectations, it is assumed that secondary school graduates can participate in ensuring the economic development of society (Gümnaasiumi riiklik õppekava, 2011). However, while nearly 5% of young Estonians are engaged in entrepreneurship, 18.6% do not study or work (stat.ee). Thus, we can admit different patterns of actions, which might be derived from home environment, school conditions or work experiences, which play a role in the development of students' learning and employability skills and mindsets. While mindset is a key element in determining an individual's behaviour and achievement (Dweck, 2006), it is increasingly related to the individual's agency. The notion of agency is understood as a practice-based process of action and behaviour that individuals enact through influencing, making choices, and taking stances in their work (Eteläpelto, 2017, 186). However, the agency is not purely a matter of maintaining and reproducing behaviour but rather active behaviour with transformative influences (ibid.) related to social relations and contextual factors (Billett, 2008). However, one way to understand agency is to investigate differences between the present and previous state of individual practice (e.g. Eteläpelto, 2017). Since individual behaviour is related to the way how individuals make meaning of their context and wider environment, the agency should be viewed in relation to the individual's mindset.

The paper's primary goal is to explain how the role of environment, school conditions and work experiences are expressed in the formation of students' mindsets in relation to learning, work and agency related to the pursuit of further goals.

The conceptual framework applied in this paper comprises the concepts of agency, on the one hand, and mindset, on the other.

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3.11. Upper secondary school students' learning at work: the effect on agency at school. Maria Erss, Krista Loogma.

Abstract submitted for EARLI sig 10, 21 and 25 Conference 2024 Walking the Talk: Co-constructing the politics of meaning, diversity and learning

1. Theoretical framework, aims of the study and research questions

Student agency provides a key concept for understanding learning as a complex process in a particular socio-cultural environment and moment of time which refers to 'the sense of initiating and controlling events – the will and capacity to act and to influence others or the environment' (Crick et al., 2015). Recently, a study from the Estonian context highlighted the effect of teacher support, students' perseverance and work experience on student agency (Authors, 2024). Drawing from the research of Reeve and Shin (2020), and Mameli et al. (2019) we conceptualized agency as students' agentic engagement in school and their capacity to resist perceived injustice. We developed a new questionnaire for this study based on the ecological approach to agency, which sees agency as a capacity for agentic behaviour depending on the environment and the available resources at any given time (Emirbayer & Mische, 1998).

In the current study, our aim is to understand if and how work experience and the competences and insights that students acquire from work are related to their agency in school. Based on a previous study (Brauer et al. (2021), we hypothesize that self-regulatory skills (e.g. self-management or self-awareness) and socio-cultural knowledge (e.g. communication or collaboration skills) positively influence agency development at school.

2. Methodology

The study applies a mixed-method approach. The data was collected in two stages: quantitative data in 2022 during a large-scale student survey which was administered to students in 59 schools in Estonia. The current study extracted the data of 3052 students in general upper secondary schools (grades 10-12). The survey instrument was described in the article of Erss, Loogma and Jõgi (2024) and it included scales for agency, teacher support, perseverance and work experience. An open-ended question was asked to ascertain what skills students learned from the work experience. The answers were categorized into the following categories: social skills, specific skills, self-regulation, generic work skills, self-awareness, self-confidence, and responsibility. In the current study, we used the quantified categories of work-related skills in a multiple regression model to predict agency. Based on our previous study (Erss et al., 2024), we added teacher support, perseverance, gender and mother tongue. Since Jääskelä et al. (2021) highlight the positive effect of agency on student achievement, we included student achievement in Estonian language, history and mathematics as measured by the last period grade.

3. Results

After comparing several linear regression models, the best model explained 23,6% of the variance of student agency and was significant ($R^2 = .236$, $F(9, 3042) = 104,445$, $p < .001$). We found that perseverance ($\beta = .347$, $p < .001$), teacher agency support ($\beta = .172$, $p < .001$), various work-related specialized knowledge ($\beta = .066$, $p < .001$) and self-regulation skills ($\beta = .058$, $p < .001$) as well as social skills ($\beta = .053$, $p < .001$) significantly predicted agency. Also, students who had good or very good grades in history had somewhat better agency scores ($\beta = .049$, $p = .002$). Boys ($\beta = .112$, $p < .001$) and students with Estonian mother tongue ($\beta = .046$, $p = .004$) had somewhat higher agency scores than girls or students who spoke Russian or some other language. This confirms our previous research results (Erss et al. 2024). We partially proved our hypotheses which stated that self-regulatory skills and socio-cultural knowledge, gained at work positively predict agency at school. Among self-regulatory skills only self-management proved significant, while self-awareness did not.

4. Discussion/conclusions

The results support the findings of Brauer et al. (2021) that students develop through work experience besides specialized skills, such as subject-related skills and specific work skills, self-regulatory and socio-cultural skills which benefit their agency at school. The gender and ethnic differences in students' capacity for agency likely indicate differences in the cultural norms for boys and girls and for students from Estonian, Russian or other cultural background. An interesting finding that deserves more research is that better achievement in history promotes agency at school.

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Short abstract

Upper secondary school students' learning at work: the effect on agency at school. Maria Erss and Krista Loogma.

In the current study, our aim is to understand if and how work experience and the competences and insights that students acquire from work are related to their agency in school. We conceptualized agency as students' agentic engagement in school and their capacity to resist perceived injustice while using the ecological lens on agency which highlights agency as a capacity dependent on time, social and environmental resources. Student-level data (n=3052) was gathered from Estonian upper secondary school students (grades 10-12) in 2022. The survey instrument included scales for agency, teacher support, perseverance and work experience as well as an open question about what students thought they gained through work experience. We used the quantified categories of work-related skills in a multiple regression model to predict agency while adding some personal and school-level factors such as students' perseverance, gender, mother tongue, student achievement in Estonian language, history, mathematics, and perceived teacher support. The results indicate that perseverance, teacher agency support, various work-related specialized knowledge, self-regulation skills as well as social skills significantly predict agency. Students who had better grades in history had somewhat higher agency scores. Boys and students with Estonian mother tongue had comparatively higher agency scores than girls or students who spoke Russian or some other language. The results highlight that students develop through work experience besides specialized skills, such as subject-related skills and specific work skills, self-regulatory and socio-cultural skills which benefit their agency at school.

Keywords: student agency, work experience, upper secondary school

SCHOOLWORK ENGAGEMENT SUPPORTIVE ELEMENTS OF THE LEARNING CONTEXT

Inge Timoštšuk, Anne-Mai Näkk and Kaidi Nurmik (manuscript under review)

ABSTRACT Students' motivation and learning engagement tend to decrease over the years, which could sometimes culminate in dropping out of school. The diverse learning context contributes to learning engagement. The indicators of the diversity of the learning context in this study included a) people involved in student learning, b) people and different learning environments integrated by teachers into school learning, and c) real-life related teaching practices. We aimed to examine how Estonian 6th -grade students (n=945) experienced their learning engagement and school learning context. A minority of respondents expressed clearly that they perceive themselves as engaged in schoolwork. Most respondents perceived relatively low engagement, and many students remained undecided. Both engaged and disengaged students perceive help in homework from family members and peers similarly. Likewise, engaged and disengaged students' learning experiences did not include different people or learning environments. Only engaged students agreed that their learning in school is related to

real life and that their teachers use practices that support their engagement in classroom learning. The result highlights the importance of integrating students' everyday lives and experiences into teaching.

KEYWORDS: Schoolwork engagement, learning context, authentic learning environment, teaching practice

3.12. The relationship between learning context and school burnout at the end of primary education. Anne-Mai Näkk & Inge Timoštšuk.

Abstract

Teachers have a crucial role in guiding students to master concepts and skills that empower them to engage in social activities within and outside the school context. Promoting a broader learning context has become pivotal in achieving this goal. However, prior research has highlighted varied approaches teachers use when referring to context in their lessons. As students get older, they perceive learning to become increasingly focused on subject content and less on their personal context, potentially resulting in a decline in their overall well-being and contributing to school burnout often experienced by middle school students. Therefore, our aim was to explore the relationship between students' experiences with context in learning and school burnout at the end of primary school. Four distinct teacher profiles emerged from students' perceptions of how teachers foster broad context in their lessons. Those students who perceived a more comprehensive integration of contextual aspects into subject learning were found to be less prone to experiencing school burnout. On the other hand, students who perceived a narrower integration of contextual aspects had experienced cynicism, a subdimension of school burnout, towards school. The findings indicate the need for professional development programs for teachers to support and include in creating a broader context in their lessons, including students' context, thereby enhancing the overall educational experience for students.

Keywords: situated learning, learning context, burnout, student perceptions

Introduction

In a rapidly evolving, dynamic, and interconnected world, cognitive skills and wide-ranging expertise are sought; thus, holistic and interdisciplinary thinking has become essential to developing 21st-century skills (European Council, 2019). The development of such skills is supported by student-centred teaching practices that enable them to participate actively in creating their knowledge and developing their skills (Harris et al., 2012). Moreover, learning relies on the prerequisite that students feel safe, engaged, and can cope with different situations (Hohnen & Murphy, 2016), as throughout the learning journey, students inevitably encounter stress and complex challenges (Cheetham-Blake et al., 2019). How students cope with these situations may be shaped by their understanding of the significance of the learning content to their daily lives and future (Hase & Blaschke, 2022). As students get older, they bring more knowledge, understanding, and skills from other contexts to the classroom, which teachers could include in learning situations (Hedges, 2014) to promote personal meaningfulness and a more coherent understanding of the world (Lonka, 2018). Long-term learning experiences that do not promote personal meaningfulness can contribute to cognitive fatigue (Thoman et al., 2011). Furthermore, feelings of exhaustion, lack of motivation, and feelings of incompetence

can lead to academic burnout (Salmela-Aro et al., 2009). Hence, teachers should carefully consider how they present subject content, as it has been found that social contexts shape decision-making, including emotions that are attached to those decisions and the way that information is processed (Fay et al., 2021).

The Situated Learning Theory emphasises the importance of social and contextual factors in the learning process (SLT; Lave & Wenger, 1991). It defines learning as a social process that occurs through interaction and collaboration with others as opposed to learning occurring through isolated and abstract instruction. Moreover, SLT highlights contextual learning through authentic and real-world situations that promote applicability and transfer of knowledge to various contexts. Although SLT calls for active, meaningful, and social learning experiences and has been widely studied within the last three decades, it is an ongoing challenge for teachers to balance the curriculum's expectations and requirements and integrate aspects of students' lives (Jackson & Barnett, 2020).

When teachers support students in recognising the relations between subject content and students' daily lives, it promotes the development of a more profound value for learning content and knowledge of it and, consequently, the willingness to re-engage with learning (Reeve, 2018). In many countries, primary school teachers spend most of the school day with one set of students, allowing them to explore students' perspectives and interests and then include these in learning activities. Research on Estonian primary school teachers' practices has revealed that teachers consider aspects related to broader context in learning activities (Authors, 2020); however, Estonian middle school students have reported that the context of learning is rather subject-centred, they recognise a low personal value of learning content (OECD, 2019) and many students experience burnout (Vinter, 2021). Grade 6 (students aged 12-13) marks the last year of primary school in Estonia. During this transitional grade, many students are taught by primary school teachers and subject teachers, exposing them to different types of teacher support. Based on the principles of SLT and previous research results, the aim was to explore the relationship between students' contextualised learning experiences and school burnout. To meet the aim, two research questions guided the study:

- 1) What typology emerges from students' perceptions of their teachers' practices in fostering broad context in learning?
- 2) How do students' perceptions relate to their experiences of school burnout?

A hypothesis was set that students with broader contextualised learning experiences perceive less school burnout.

1. Situative approach to learning

The situated view of learning refers to learning affected by a situation, whether in a physical and authentic sense or an epistemological sense, that knowledge resides in and across individuals and artefacts in a particular context (Waite & Pratt, 2015). People learn and develop in various ways and contexts throughout their lives, often engaging in simultaneous social learning experiences (Lave & Wenger, 1991). Thus, based on the situative perspective, every socially organised activity presents chances for learning, including unintended forms of learning that may differ from a teacher or mentor's intentions (Sawyer & Greeno, 2008). Nowadays, most students are actively involved in multiple contexts, such as home, school, social media, and extracurricular activities, and the transfer of knowledge and skills between these contexts forms the basis for formal and informal learning (Jackson, 2011). The

individuals and places encountered in these experiences can profoundly impact students' learning (Barnett, 2011).

All learning, school learning included, is situated in activity (Sawyer & Greeno, 2008). Lave (1997) argued that it would be a mistake to contrast school learning with everyday learning as school is the activity setting, a context in which teachers and students engage daily. Therefore, individual cognition and learning always occur in a context, but the question is: what is the context (Collins & Greeno, 2010). The situated view of learning focuses on teachers helping students gradually understand and master concepts and skills, enabling them to actively participate in their social and cultural activities in and out of school (Lave, 1997). Therefore, the practical value of learning content and the authenticity of the learning environment should be at the core of teaching and learning (Barron & Bell, 2016) because knowing and understanding are situated in the context where it has been learned (Lave & Wenger, 1991). For example, Silseth and Erstad (2018) found that secondary school teachers contextualise instruction by orienting to characteristics of the local community, examples from everyday practices, personal issues, concrete objects, and knowledge from travelling abroad. However, when teachers fail to activate students' previous knowledge or link subject content to a personally meaningful context, it can be difficult to transfer knowledge students learn in a classroom to other contexts (Lonka, 2018).

The situative approach to learning posits that collaboration to solve authentic problems embedded in real-world tasks leads to the most effective learning, i.e., increases the cross-context use of knowledge and skills (Sawyer & Greeno, 2008). However, abilities to participate need to be learned. Thus, it cannot be expected that students know how to successfully engage in, for example, group work when they have not been previously guided on how to approach it (Collins & Greeno, 2010). Moreover, students may share understanding when they formulate and solve questions in a classroom setting together, but the meaning that one attributes to the topic they are engaged in depends on the context of the task and the characteristics of the person (Sawyer & Greeno, 2008). Therefore, to engage each student and encourage their active participation in acquiring the anticipated knowledge and skills, it is vital that the learning content includes a sense of personal relevance (Reeve, 2016). This, in turn, highlights the importance for educators to develop a more profound understanding of the individual contexts of their students (Jackson & Barnett, 2020).

1.1. Fostering broader context in learning

It has been posited that teachers often conceptualise context as a static input variable that they, textbooks, or instructional designers have shaped instead of focusing on aspects stemming from their students (Gebre & Polman, 2020). Thus, to overcome that obstacle and focus on a student-centred approach, teachers could begin by creating a broader context by identifying and considering students' prior knowledge, experiences, and perspectives (Davis, 2004). Understanding students' beliefs and ideas allows teachers to plan learning activities that align more closely with students' levels (Reeve, 2016). Moreover, teachers can uncover previous knowledge, articulate its significance, and connect prior learning with new knowledge (Author, 2020). Highlighting knowledge and skills' value, usefulness, or importance can stimulate interest in initially mundane topics (Ryan & Deci, 2016). However, when students express dissatisfaction with their learning, a student-centred teacher remains calm and seeks to understand the situation (Reeve, 2016). Open and supportive discussions are effective ways to guide students in more profound reflection on their learning experiences, encourage consideration of peers, and enhance their ability to cope with emotions and needs (Author,

2020). Previous results have revealed that primary school students find learning situations meaningful when they include opportunities to learn in different places; they can feel free and actively participate, experience caring and sharing, and recognise their growth and achievement (Bergmark & Kostenius, 2018).

When teachers help students create or recognise connections between the subject matter and students' everyday lives, it supports a deeper appreciation of the learning content, consequently fostering interest in engaging with the subject in the future (Renninger & Hidi, 2016). To encourage students to apply acquired knowledge and skills autonomously outside of school, it is crucial for teachers to structure learning situations, considering the focus of the subject matter, the type and sequence of tasks, collaborative and individual work opportunities, illustration, and time allocation (Pressik-Kilborn, 2015). Students must also recognise how they can work with the learning content, and for this, practice is necessary to enable them to apply knowledge in new ways. Practical activities are beneficial when they vary in content and provide students with different approaches to new knowledge or phenomena so that they can apply prior knowledge (Pugh et al., 2015).

Problem-based learning is one widely used situated learning way to connect the curriculum and practicality of everyday life (Waite & Pratt, 2015). Problems are then socially constructed, and the problem's content depends on the activity's discourse (Kirsch, 2008). A curriculum focusing on intriguing real-world problems allows for creating a rich context for application (Barab & Roth, 2006). Students can leverage material and cultural resources when addressing problems embedded in specific contextual settings (Kirsch, 2008). Similar to problem-based learning, project-based and inquiry-based learning also enables students to act independently or collaboratively, using various sources to find relevant information on a given topic (Author, 2020). For example, in project-based learning, students search for information about a posed question or chosen phenomenon in the classroom, library, museum, or home. They then select essential information to present to others, create a final product (such as a presentation, video, or report), and present it to peers and the teacher, receiving feedback (Loyens & Rikers, 2017). All these activities represent a form of reasoning closely connected with the activities and context in which they occur (Kirsch, 2008).

Visits to external institutions, such as museums, evoke positive emotions that students recall months later (Uppin & Timoštšuk, 2019). Another study (Walls et al., 2023) revealed that visiting a novel institution to offer students direct experiences of the day-to-day activities in a specific professional field significantly improved their initially ambiguous understanding and changed their misperceptions surrounding their careers. However, simply going to another place than the classroom does not immediately result in authenticity (Glackin, 2016) or broader contextuality (King & Henderson, 2018). For example, teaching a science lesson in another place is insufficient to impact students, and other factors must be considered (Ayotte-Beaudet et al., 2021). When students are not used to learning in another context, they can become easily distracted by the context itself (Dale et al., 2020). However, instead of changing the physical environment, introducing others can enrich the lesson by inviting a relevant expert or practitioner to share their experiences. Teachers could also include parents in the learning process, when possible, to foster families' connectedness to their children's learning in formal and informal settings and to adapt the school curriculum to the community context more, as revealed by a recent study (Baxter & Kilderry, 2022). This way, students can better understand the subject matter and create broader connections to real-life situations (Niemi et al., 2015).

However, not all teachers are patient or student-centred; some may operate from their perspective and needs, expecting students to behave and think in ways the teacher desires (Haerens et al., 2016). In such teaching situations, students' interests and needs are disregarded, and there may be time pressure for students to comply with the teacher's demands (Reeve & Su, 2014). Teacher-centred teaching poses the risk of students acquiring knowledge and skills in isolation and struggling to apply them outside the classroom (Reeve & Su, 2014). Consequently, students may seem to participate in class but lack positive relationships with the teacher and the desire to understand the content deeply (Renninger & Hidi, 2016). However, it has been revealed that even when teachers acknowledge the need for a change in their teaching practices, they express concern about balancing curriculum requirements while improving and fitting in with colleagues and meeting parental expectations (Morcom & MacCallum, 2022).

2. School burnout

For students, school is a developmental context in which they spend a significant amount of their week and are expected to meet several expectations. As students progress from grade to grade, the academic demands increase, but the expectation to excel remains the same (Evans et al., 2018). Students can begin to feel that they cannot meet the demands or perceive schoolwork as lacking in personal relevance and meaningfulness (Reeve, 2018). Such experiences can lead to school burnout, which is defined as a combination of exhaustion, cynicism, and feelings of inadequacy (Walburg, 2014). The three subdimensions are interrelated (Salmela-Aro et al., 2009). Exhaustion at school includes school-related tension and chronic fatigue; cynicism toward the school refers to a loss of interest in schoolwork as well as an apathetic attitude to studying; and a sense of inadequacy at school refers to having a reduced sense of accomplishment as well as a perception of being inadequate at school (Salmela-Aro & Upadaya, 2012).

Higher levels of burnout have been linked to diminished cognitive and academic accomplishments, for example, problem-solving and attentional processes (May et al., 2015). Recent results in Estonia highlight that in middle school, many students experience burnout (Vinter, 2021). Madigan and Curran (2021) suggest that adolescence may be a crucial developmental period when school burnout poses salient risks. It is established that school engagement generally declines during adolescence (Poom-Valickis et al., 2016), accompanied by increased vulnerability and self-worth issues (Brummelman et al., 2014). Lebois et al. (2020) found that since learning has a fundamental role in shaping emotions, emotions are adapted to the situations in which they are experienced. Furthermore, a recent longitudinal study of early adolescents found that students were more likely to experience burnout at school when their parents and teachers tied their acceptance to academic performance (Lavrijsen et al., 2023). However, in a qualitative study (Cheetham-Blake et al., 2019) among primary school students, four themes emerged regarding tense experiences and coping: negotiating social complexities, pressure to excel in the modern world, fear of the unknown, and learning life's lessons. It has also been found that school burnout symptoms in upper secondary education can be predicted by the level of school burnout symptoms at the end of primary school, and in contrast, the symptoms can be predicted by psychological well-being, gender, and academic skills (Parviainen et al., 2021). To conclude, existing literature and previous results highlight the interplay between situated learning and burnout, linking it to academic success and well-being. The prevalence of burnout in middle school, as revealed by recent Estonian studies, indicates the need to understand students' perceptions of their learning experiences.

3. Methodology

3.1. Participants and data collection

Students in the last primary school year (Grade 6) participated in the study. A total of 966 students from 31 schools across Estonia completed an online questionnaire. The mean age was 12.4 years ($SD = 0.50$), and 52.6% were girls. Data were collected as part of a more extensive survey in which the schools had opted to participate. Nevertheless, participation for students was voluntary, and it was agreed with the schools that they would obtain informed consent from the parents.

Students were asked to report their background information (school, age, gender, native tongue). There were ten statements about the aspects of fostering contextuality in learning. Students were asked to think about their teachers' daily practices and rate them on a 7-point Likert-type scale ranging from 1 (*my teachers are not like this at all*) to 7 (*my teachers are very much like this*). All statements were compiled by one of the authors based on the theoretical implications of this study and the Estonian education context. Cronbach's α was .79.

The questionnaire also included seven statements about burnout based on the School Burnout Inventory (Salmela-Aro et al., 2009). It should be noted that the original scale by Salmela-Aro et al. (2009) included nine statements, which were shortened to fit the more extensive survey better. Additionally, one statement referring to feelings of inadequacy was changed to include stress related to tests and exams. It refers to the pressure to perform well, as outlined by the literature review. Students rated the statements on a 7-point Likert scale from 1 (*completely disagree*) to 7 (*completely agree*). Cronbach's $\alpha = .86$.

3.2. Data analysis

SPSS 25.0 was used to conduct data analysis. A typology based on students' perceptions of their teachers' practices in fostering contextuality in learning was found by using hierarchical cluster analysis to identify the optimal number of clusters, then K-Means cluster analysis was used to create the profiles, and an overview of descriptive statistics was found with One-Way ANOVA. A post-hoc analysis with Bonferroni correction was used to identify statistical differences between the clusters. Labels of the clusters were created by finding the outstanding aspects of each cluster.

The second part of the questionnaire analysis examined how students' perceptions relate to their experiences of school burnout. This was found with One-Way ANOVA by using the clusters found in the previous step. Statistical differences were again found with Bonferroni correction.

4. Results

4.1. Typology of fostering broad context in learning

Four types emerged based on students' perceptions of their teachers' practices (Figure 1). The *inconsistent contextual facilitators* profile was the largest ($n = 315$). These teachers were perceived to sometimes include everyday life aspects and sometimes not. Students expressed that it was not typical of their teachers to organise learning activities outside the classroom or involve others, such as experts, in their lessons. However, these teachers were perceived to sometimes communicate with the parents and encourage participation in extra-curricular activities and events. Thus, these teachers were seen to demonstrate a mixed pattern in facilitating contextuality in learning.

Moderate contextual facilitators, the second largest profile in size ($n = 282$). Students' perceptions of this profile reflect that these include real-life examples, encourage student expression, and occasionally relate subject content to everyday life. However, similarly to the *inconsistent contextual facilitators* profile, students did not perceive that these teachers tended to include external experts, organise learning outside the classroom, and utilise non-traditional methods.

In the third profile in size ($n = 199$), the *comprehensive contextual integrators* were perceived by students to include various strategies to foster contextuality in learning. These teachers were likely to bring real-life examples, encourage students' expression, link subject content to everyday life, invite experts, explain the practical value of new content, organise learning beyond the classroom, implement non-traditional methods, communicate with parents, and encourage participation in extra-curricular activities.

The *narrow contextual facilitators* profile was the smallest in size ($n = 170$). These teachers were perceived as having minimal engagement with contextual teaching ways. Students recognised these teachers as less likely to include real-life examples, encourage their expression, or link content to everyday life. They are not likely to include external experts or organise learning outside the classroom. Compared to the ratings of other profiles, students expressed disagreement with all of the contextual learning statements regarding these teachers.

Post-hoc analysis revealed that the profiles of *comprehensive contextual integrators* and *moderate contextual facilitators* were significantly different ($p < .001$) compared to other profiles regarding all statements. A few similarities appeared between the *narrow contextual facilitators* and *inconsistent contextual facilitators* profiles regarding bringing examples of everyday life ($p = .121$) and encouraging students to participate in everyday life activities ($p = .338$).

4.2. The relationship between students' perceptions and school burnout

The results revealed that, overall, sixth-grade students *somewhat disagree* that they have experienced school burnout. However, a closer examination based on students' perception of their teachers' practices did reveal some differences (Table 2). First, the only statistically significant differences appeared in statements about cynicism toward the school. Students who perceived their teachers as *moderate* or *comprehensive contextual facilitators* reported that they disagreed with statements that expressed cynicism toward the school. The results of both clusters were statistically different from the *inconsistent* and *narrow contextual facilitator* perception clusters. On the other hand, students who perceived their teachers as *inconsistent* or *narrow contextual facilitators* reported ambiguity regarding cynicism toward the school. The results of these two clusters were not statistically different from one another. (Table 2 here)

Although, based on the descriptive information, differences appear regarding experiences of exhaustion, the differences were not statistically significant. Nevertheless, the *inconsistent* and *narrow contextual facilitators* perception groups reported exhaustion-related ambiguity. The *moderate* and *comprehensive contextual facilitators* perception groups reported that they have not experienced exhaustion at school.

The descriptive information across the three perception groups indicates a tendency towards a lower likelihood of experiencing feelings of inadequacy at school.

Discussion

This study revealed four distinct perception profiles about teaching practices to foster contextuality in learning and explored the relationship between students' perceptions and their experiences of school burnout.

Most sixth-grade students perceived their teachers to foster contextuality inconsistently, as the pattern of this profile reflects a mixed approach. This result could reflect the ongoing challenge to balance the curriculum's expectations and requirements and include elements from students' daily lives (Jackson & Barnett, 2020; Silseth & Erstad, 2018). On the one hand, students recognised that these teachers occasionally included broader contextual aspects, such as examples related to real life and communication with parents. On the other hand, students noted a lack of consistency in organising learning outside the classroom or involving other knowledgeable people in their lessons. Nevertheless, inconsistency may pose a risk in providing students with cohesive and meaningful learning experiences (Reeve, 2016), leading to lesser interest in engaging with the subject in the future (Renninger & Hidi, 2016).

The second largest group of students perceived their teachers to facilitate contextuality moderately. While these teachers were seen to use various ways to foster broader contextual understanding in their lessons, they were seen to miss out on several beneficial aspects to create meaningful contextuality. Namely, moderate facilitators were not seen to include external experts or communicate with parents. However, recent results suggest parental inclusion benefits students' cross-context learning and promotes better alignment between the community and school curriculum (Baxter & Kilderry, 2022). Further, moderate facilitators were less likely to use non-traditional learning methods, which, according to the situated view of learning, can significantly undermine students' ability to form connections between subject content and the practicality of everyday life (Waite & Pratt, 2015). Thus, although these teachers bring real-life examples, they miss the chance to pose socially constructed problems (Kirsch, 2008) that help bring intriguing real-world problems close to students' context (Barab & Roth, 2006).

The third largest group recognised their teachers' practices as comprehensively fostering contextuality, characterised by a holistic approach to learning. The practices of these teachers align with the central tent of SLT, that learning is a social process that occurs through interaction and collaboration (Lave & Wenger, 1991). These teachers used various ways to facilitate diverse learning experiences. They were recognised for bringing real-life examples, linking subject content to everyday life and explaining the usefulness and value of knowledge and skills, which are significant aspects to capture students' interest and promote personal meaningfulness in learning (Author, 2020; Reeve, 2016; Renninger & Hidi, 2016). Further, this profile was the only one to occasionally include experts or organise learning outside the classroom. However, previous results have indicated that museum visits provide memorable positive experiences (Uppin & Timoštšuk, 2019). Authentic on-site experiences efficiently improve initial ambiguous understanding and change misperceptions (Walls et al., 2023).

However, a group of students perceived their teachers as narrowly facilitating contextuality. These students could be at a higher risk of losing the willingness to re-engage with learning as such practices do not promote the development of a profound value of subject content and knowledge of it (Reeve, 2018). Students recognised these teachers as less likely to include different aspects of contextual learning, indicating a more teacher-defined or subject-centred approach to teaching (Haerens et al., 2016). The notable absence of contextualisation that

students perceive in the practices of these teachers is in opposition to the tenets of SLT and can lead to learning experiences that occur in isolation and instruction that remains abstract (Lave & Wenger, 1991). Struggling to use the knowledge and skills independently outside the classroom may diminish teacher-student relationships and students' desire to understand the content deeply (Renninger & Hidi, 2016). Prolonged learning experiences without recognising personal meaningfulness can result in feelings of school burnout (Salmela-Aro et al., 2009; Walburg, 2014).

Therefore, the second part of the results focused on the relationship between students' perceptions and their experiences of school burnout. A hypothesis was set that students with more contextualised learning experiences perceive less school burnout. Overall, sixth-grade students did not report experiencing significant burnout in their schoolwork. Thus, the hypothesis was rejected. However, a closer examination revealed variations. Students who perceived their teachers as moderate or contextual facilitators were less likely to experience exhaustion at school and feelings of inadequacy at school, and they were less likely to express cynicism towards the school. The latter result suggests a potential relation between contextualised teaching practices and positive attitudes toward school and learning. On the other hand, ambiguity regarding exhaustion at school and cynicism toward school was revealed in the inconsistent and narrow contextual facilitators' perception groups. This refers to the possible influence of certain teaching practices on students' well-being (Lavrijsen et al., 2023), which can have a long-lasting effect on students as the roots of burnout that students express in upper secondary school have been linked to burnout experiences at the end of primary school (Parviainen et al., 2021). However, it is essential to note that the study's results highlight the tendency towards a lower likelihood of sixth-grade students experiencing feelings of inadequacy at school across the three perception groups.

The limits of the study are recognised. The findings are specific to the participants and schools of the study; therefore, caution should be taken when generalising the results to broader populations. The study relies on students' perceptions, and although these offer valuable insights, they are inherently subjective. Thus, observations could be conducted to corroborate students' perceptions. The cross-sectional nature of the data captures a snapshot of the relationships at a specific time. Therefore, longitudinal methods could capture the dynamic nature of contextualised learning experiences and burnout.

Studying students' perceptions of contextualised teaching practices and school burnout provides a comprehensive understanding of the learning context. The study's results could be considered to improve teaching methods, to rethink student learning to match better-situated learning experiences and better support students' development into independent learners who can use their knowledge and skills in several contexts and, therefore, participate in their communities more actively. Future research could explore specific teaching strategies within the identified profiles and offer interventions for enhancing contextual teaching practices that would be aligned with the needs of the rapidly evolving world.

Conclusion

This study highlighted the importance of contextualised learning in enhancing students' learning experiences and mitigating the risk of burnout among sixth-grade students. Four profiles of fostering contextuality in learning emerged based on students' perceptions. These profiles offer a nuanced understanding of the varied approaches that students experience at the end of primary school. The findings reveal the significance of consistency in contextualising

learning practices, as students who perceived a more comprehensive integration of contextual elements were less likely to report burnout in any of its subdimensions. However, an indication regarding students who perceived a narrower integration of contextual elements was evident. Namely, these students reported experiences of cynicism towards school. This finding is concerning, given previous research indicating that the manifestation of school burnout symptoms in upper secondary education can be predicted by the extent of school burnout symptoms observed at the end of primary school (Parviainen et al., 2021). In addition, the emerged profiles may refer to the challenge that teachers encounter in their daily work – how to balance curriculum requirements and the contexts of students lived experiences – as revealed in previous research (Jackson & Barnett, 2020; Morcom & MacCallum, 2022; Silseth & Erstad, 2018). The results indicate a need for professional development programs to help teachers in creating a broader context in their daily lessons, including aspects of students’ context. This research contributes to our understanding of the complex interplay between teacher practices, the broad context of learning, and student well-being, offering practical insights for teachers and teacher educators seeking to create a more engaging and supportive educational environment.

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IV Chapter

Vocational education context: ideas and evidences relevant for general education

Integrating workplace learning in migrant education: A case of Finnish vocational education. *Authors: University of Jyväskylä team*

Purpose and stage of completion: Abstract accepted for special issue and EARLI SIG 14 conference 2024 in Jyväskylä

The paper focuses on migrant students’ learning at workplaces in Finnish vocational education context. It examines the opportunities and challenges of integrating workplace learning into vocational studies and how these relate to migrant students’ learning and integration into Finnish working communities. The presentation is based on individual interviews with migrant students (n=11) and vocational teachers (n=13), and one group interview with six migrant students.

The theoretical framework utilizes 3-P model of workplace learning (Tynjälä, 2013) and integrative pedagogy (Tynjälä, 2021). In the 3P model of workplace learning factors meaningful for learning at workplace have been divided into presage (e.g., learners’ motivation, previous knowledge and skills, atmosphere at workplace), process (e.g., pedagogical practices) and product (outcomes of learning visible in improved skills and work performance) aspects of workplace learning. Integrative pedagogy has promoted strengthening connections between different areas of knowledge (conceptual, practical, self-regulative and socio-cultural) through careful choice of pedagogical solutions to integrate workplace learning with theoretical studies and self-reflection. Participation, interaction with co-workers, adequate guidance, and emotions have been recognised as important for learning in workplaces (Billett, 2004; Filliettaz 2011; Virtanen, 2017). The actions should ensure becoming a valued member of work community (Lave and Wenger 1991; Wenger 1999).

The theory guided content analysis (Schreier, 2016) showed that learning at workplace was perceived as beneficial for migrant students’ learning of vocational matters and managing their

professional and everyday lives in Finland. In experience of migrant students and some trainers learning at workplace offered education relevant to working life and contributed to students' gaining a self-confidence in their vocational skills. However, some students pointed out to lack of connection between what is learnt at institute (explicit knowledge) and at workplaces (tacit knowledge).

The results suggest that learners' motivation, previous knowledge and skills, workplace organization and atmosphere were related to adult migrant students' outcomes of learning at workplaces. The migrant students (as perceived by students themselves and their teachers), enjoyed learning at workplaces and acknowledged the benefits of it. The students had, though, different starting points for learning at workplace, and this was related to their previous set of experiences, skills, personal and professional histories and the workplace itself. The outcomes of migrant learning at workplaces may differ depending on the practices (e.g. guidance) and atmosphere at workplaces (e.g., are migrants welcome as valued members of workplace and vocational field or not). The cases of migrant learners being perceived as difficult to be guided and difficult colleagues have been reported among students' and teachers' interviewees alike. At the same time, some teachers provided examples of migrant students' skills and outcomes of workplace learning being appreciated, which resulted in becoming a recognized member of a work community and a permanent staff member.

The findings suggest that attention should be paid in migrant education to creating an appropriate balance between theoretical components and workplace learning, recognising 1) the benefits of workplace learning for migrant students' learning and becoming valued members of work communities, and 2) the existence of stereotypical views.

Malinen, R., Virtanen, A., & Marttunen, M. (2024). Monitieteinen työelämäprojekti työelämätaitojen oppimisen edistäjänä – Opiskelijoiden ja työelämä edustajien kokemuksia (A multidisciplinary project course to promote the learning of generic skills: The experiences of students and representatives of working life). Accepted to publish in *Ammattikasvatuksen aikakauskirja* 2/2024.

Abstract: This study focused on whether a multidisciplinary project course could effectively teach generic skills to students. In the study teams of students from different fields developed a project for an authentic client. Recently, multidisciplinary project courses have been implemented to strengthen students' multidisciplinary working skills. However, previous research on multidisciplinary courses has not considered the perspectives of representatives of working life. In this study, four different teams of students and several professionals who represented four different working life projects assessed students' abilities to learn generic skills as well as the nature of the students' learning processes during the course. Data were collected from both target groups via interviews and were analysed using qualitative content analysis. According to the reported experiences of both the students and the representatives of working life, the students learned project work skills as well as the skills that were necessary to successfully work with people from different fields. The students felt that their expertise increased during the course and became more concrete by nature; however, the representatives of working life found that the students' expertise remained at a very early stage of development. The results suggest that the multidisciplinary project course was a positive and encouraging learning experience for the students and the representatives of working life. However, more research is needed—particularly from the perspective of educational providers—to improve pedagogical development.

van der Baan, N., Beauseaert, S., Gijssels, S., Inken, G., Tynjälä, P., & Kyndt, E., (2024). **The education-to-work transition: A systematic analysis of pedagogical interventions in the context of higher education. Submitted to Scandinavian Journal of Educational Research.**

Abstract

Higher education has implemented various pedagogical interventions to increase connectivity with the workplace and ease students' education-to-work transition. However, the effectiveness and underlying mechanisms of these interventions in supporting students with this transition remains largely unexplained. The present review article analyzed 49 articles bringing together two theoretical frameworks on this transition: connectivity and boundary crossing. Results show that connectivity can be increased by collaborating with the workplace in several ways. However, our results also show that higher education seldom learns from this collaboration, resulting in a lack of effective boundary practices to support students in their education-to-work transition. On top of that, our research demonstrates the importance of assessing the effectiveness of any of these interventions from both a student and a labor economics perspective.

Keywords: Transition, Education-to-work, Higher Education, Connectivity, Boundary Crossing

Conference presentation: Virolainen, M., Heikkinen, H.L.T. Kallio, E., Tynjälä, P. (2024) Asiantuntijat ja viisaaksi oppiminen [Experts and learning wisdom]. Aikuiskasvatuksen tutkimuspäivät [Adult Education Days], 8.-9.2.2024, Kasvatustieteellinen tiedekunta, Helsingin yliopisto.

Conference presentation abstract [translated from Finnish with the help of Deep.]

Finding solutions to the wicked problems of our time requires multidisciplinary cooperation between experts. To build this cooperation, we need a broad understanding - what we might call wisdom. According to the Holistic Wisdom Model (HWM), developed by the Wisdom and Learning research group at the University of Jyväskylä, which draws on previous research, wisdom is multidimensional, situational and dynamic. Its interlocking dimensions and features include: the knowledge base and its limitations in terms of patience and humility; the ethical-existential dimension of values, reflection on right and wrong actions; social skills and emotional intelligence; and the pursuit of the common good and agency.

Empirical research on experts' perceptions of learning to be wise is scarce, although the link between experts and wisdom has been considered an important area of research. This presentation reports preliminary findings on the learning to be wise of experts in international assignments. The research questions are: what learning experiences have experts identified as relevant to their learning to become wiser actors in their work, and how they have sought to act to find wiser solutions. The data has been collected from experts who have worked in international assignments, whose work has been considered by colleagues as exemplary wisdom, and who are a pleasure to work with. Eleven (n=11) of the more than 30 interviews conducted in the project in Australia, Switzerland and Finland are used in the presentation.

The data are analysed using abductive analysis. The data show that a degree in a specific field was a prerequisite for being selected for the job. Practical experience of working with more

senior experts, being able to listen to and consider the views of other experts and professions, and wanting to keep learning from others by reflecting on one's own work were all relevant experiences for becoming wiser.

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- Tynjälä, P., Kallio, E. K., & Heikkinen, H. L. (2020). Professional expertise, integrative thinking, wisdom and phronēsis. *Development of adult thinking: Interdisciplinary perspectives on cognitive development and adult learning*, 156-74.

Article classification/Research paper: an der Baan, N., Meinke, G., Virolainen, M., Beusauert, S. & Gast, I. (submitted, 2024) "Factors influencing turnover among recently hired employees: a systematic literature review". *Education + Training*

Purpose and methodology: Employer organisations have difficulties in retaining recent graduates and in recognising the factors influencing their voluntary turnover, which may be different from those influencing the voluntary turnover of permanent employees. Recent graduates are an important source of talent among hired employees, bringing up-to-date knowledge to the employer organisation. However, employers find it difficult to retain them and to identify the factors that influence their voluntary turnover. These factors may be different from those influencing the voluntary turnover of permanent employees, as graduates have less experience of the world of work and the job in question. Recent graduates have to adapt to a completely new context and develop their professional identity. Therefore, the study provides an overview of the factors influencing voluntary turnover and turnover intentions of newly hired employees.

The study is based on a systematic literature review of 59 articles from several databases. The review identifies factors that influence voluntary turnover (intentions) among newly hired employees and presents them in a model. The model identifies four categories of factors that influence voluntary turnover (intentions): pre-entry expectations, person-environment fit, the role of the supervisor, and human resource (HR) practices. Employers can influence these factors by paying attention to the induction and socialisation of recent graduates into the organisation.

Implications: The model deepens the understanding about why new employees leave an organization and shows how supervisors and HR practices play an important role in reducing voluntary turnover among newly hired employees. The article concludes with practical suggestions on how to retain these employees. Originality

Although employee turnover has been studied extensively, research on early turnover among recently hired employees is scattered. The review presents a holistic model of the factors influencing voluntary turnover among recently hired employees.

Keywords: Recently hired employees, graduate employees, newcomers, turnover intentions, retention, pre-joining expectations, person-environment fit, induction, onboarding

Tynjälä, P., Virtanen, A., Virolainen, M. H., & Heikkinen, H. L. (2022). Learning at the interface of higher education and work : Experiences of students, teachers and workplace partners. In E. Kyndt, S. Beusaert, & I. Zitter (Eds.), *Developing Connectivity between Education and Work : Principles and Practices* (pp. 76-96). Routledge. <https://doi.org/10.4324/9781003091219-7> **Open Access**

The article by Tynjälä, Virtanen, Virolainen, and Heikkinen (2022) delves into the critical connection between education and workplaces. This connection is often regarded as a central element in preparing students for the future labor market.

The study focuses on strengthening the connectivity between Finnish higher education institutions and workplaces. Specifically, the researchers investigate 11 work-related study modules where students engage in commissioned assignments or projects from companies or public sector organizations. The data collection process involved interviews with 88 students, 35 teachers, and 17 workplace partners.

The analysis draws upon the modified 3-P Model of Workplace Learning, which outlines presage, process, and product factors related to workplace learning. Here are the key findings:

1. **Appreciation and Challenges:** Overall, all parties involved (students, teachers, and workplace partners) appreciated the collaborative processes and outcomes of education-work collaboration. However, challenges were also identified.
2. **Presage Factors:** The role of previous experience emerged as a significant factor influencing workplace learning. Students' prior knowledge and exposure played a crucial role in shaping their learning experiences.
3. **Process Factors:** The study modules provided valuable opportunities for students to engage in real-world tasks. These experiences allowed them to apply theoretical knowledge in practical contexts, enhancing their understanding and skills.
4. **Product Factors:** The outcomes of education-work collaboration were generally positive. Students gained practical skills, workplace insights, and a better understanding of their chosen field.

In summary, this chapter sheds light on the complexities and benefits of bridging the gap between education and work. [It emphasizes the importance of experiential learning and highlights areas for improvement in fostering effective education-work partnerships1. For further details, you can access the full chapter via the provided DOI link.](#)

Virolainen, M., & Stenström, M. L. (2013). Building workplace learning with polytechnics in Finland: multiple goals and cooperation in enhancing connectivity. *Journal of Education and Work*, 26(4), 376–401. <https://doi.org/10.1080/13639080.2012.661846>

This article examines the goals of employers when they organise work placements for students. It explores how far, in cooperating with polytechnics, employers adhere to a connective model

of students' work experiences within their organisations. The paper makes use of a quantitative study based on employers' responses to a questionnaire (n=269). The study identifies four groups of employers: employers who emphasise the employment perspective, cooperative developers, employers with multiple goals and employers concerned with the development of their own work. The differences in employer profiles are discussed with respect to development of curricula and the higher education system. The paper raises questions concerning how curriculum development at various institutional levels may develop, depending on whether the emphasis is on work-based learning or on work-related learning.

Virolainen, M. (2007). Workplace Learning and Higher Education in Finland: reflections on current practice. *Education + Training*, 49(4), 290-309

Abstract

Purpose: The purpose of this article is to describe the organization of workplace learning in Finnish polytechnics, the models that have been developed for this purpose, and the challenges presented.

Design/methodology/approach: First, the models for embedding workplace learning in the curriculum are described and analysed. Second, the conflicting factors encountered in building the network of expertise to support students' workplace learning in the cooperation of polytechnics and working life are investigated. Third, suggestions are made regarding some of the questions raised by the introduction of connectivity that might be explored to better understand the similarities and differences between workplace learning and learning at school (polytechnics). The study was carried out in five Finnish polytechnics in 2002-2006. It focused on the bachelor's degree programmes in the fields of social services, business administration and engineering. Data were collected through thematic interviews conducted with teachers supervising and organising workplace learning. The different models utilized in the five polytechnics with respect to the three educational fields are incorporated into a single holistic model on the basis of a theory-led content analysis of the interviews. Further analysis of the interviews indicates the institutional barriers and obstacles that exist to the development of placements.

Findings: Placements in working life by Finnish polytechnics exhibit considerable variety. In addition the cultural practices that guide and limit the organising of placements are presented. These include the location of placement in the curriculum, negotiation of students' contracts, guidance in the workplace and practices, assessment including self-assessment, student remuneration, and rewards for employers. The development of quality in workplace learning is heavily dependent on local initiative, as introducing connectivity is a practical process that has to be implemented and reflected on by networks of expertise. The debate on similarities and differences of workplace learning and learning in education could be enhanced by a more detailed exploration of the questions on what is learned and where.

Originality/value: The description given here of the organisation of placements can be utilized by higher education institutes and polytechnics as a tool in reflecting on their own models. Furthermore, the questions presented here within a framework grounded in a socio-cultural approach may be used by teachers and developers of education as stimuli in developing quality assurance tools and in analysing the strengths and weaknesses of their placement systems.

Virtanen, A., Tynjälä, P. & Collin, K. 2009. Characteristics of workplace learning among Finnish vocational students. *Vocations and Learning* 2 (3), 153–175.

In Finnish VET, students' work experience is explicitly defined as workplace learning, instead of the practice of already learnt skills. Therefore, vocational students' learning periods in the workplace are goal-oriented, guided and assessed. This paper examines the characteristics of students' workplace learning and compares them with the characteristics of employees' workplace learning. The data were collected with an Internet questionnaire from final-year vocational students (N = 3106). In total, 1603 students (52 %) answered the questionnaire. The data were analysed using quantitative methods. The results indicate that features typical of employees' workplace learning can also be found in student learning as well. However, VET-related workplace learning has a number of characteristics that have not been brought to light in research on employees' workplace learning thus far. We suggest that in developing educational practices it would be useful to draw on some of the features of workplace learning such as the use of collaboration and shared practices; conversely for workplace practices it would be useful to draw on some of the features of educational practices. For example, by utilising the structures of students' workplace learning system presented in this study, learning at work could be transformed towards more goal-directed, guided and assessed activity

Virtanen, A., Tynjälä, P. & Stenström, M.-L. 2008. Field-specific educational practices as a source for students' vocational identity formation. *Teoksessa S. Billett, C. Harteis & A. Eteläpelto (toim.) Emerging perspectives of workplace learning. Rotterdam: Sense Publishers, 19–34.*

Although work-related identity research has undergone considerable expansion in recent years, vocational identity among students remains a neglected area. However, initial vocational education plays a crucial role in the process of lifelong learning. Accordingly, this chapter discusses students' vocational identity formation during their vocational education and training. As recent findings on vocational or professional identity emphasise its context-based or sociocultural construction, we examined students' vocational identity formation in two different fields: 1) technology and transport, and 2) social services and health care. Our quantitative data indicate that while students' vocational identity formation begins during vocational education and training, there are differences between students in different fields. On the basis of our qualitative data it seems that students' vocational identity is heavily constructed in line with the education practices of their own specific fields. Thus, even during educational context has an important role in the formation of vocational identity.

Virtanen, A. & Tynjälä, P. 2008. Students' experiences of workplace learning in Finnish VET. *European Journal of Vocational Training* 44, 199– 213.

The Finnish vocational education and training system underwent remarkable transformations at the turn of the century. One of the biggest changes was introducing compulsory and guided on-the-job learning periods in all study programmes. In this article, students' experiences of on-the-job learning and in particular of integrating school-based and work-based learning and guidance of students are examined. Data were gathered by an Internet questionnaire of final-year students at vocational institutes in the City of Helsinki (N=1282). The questionnaire was answered by 41 % of the students. In general, students were satisfied with connecting school-based and work-based learning and guidance in vocational institutes and at workplaces. However, there were clear differences between fields of study. On-the-job learning seemed to function best in social and healthcare.

Collin, K., Paloniemi, S., Virtanen, A. & Eteläpelto, A. 2008. Constraints and challenges on learning and construction of identities at work. *Vocations and Learning* 1 (3), 191–210.

This paper analyses and discusses different constraints on workplace learning, vocational development and formation of identity. We ask how the learning and development of vocational identities are related to the various learning constraints and restrictions present in the socio-cultural contexts of the workplace. The study utilizes 20 interviews of industrial designers and nursing staff in Finland. The data on the vocational students was collected with Internet questionnaires (N=1125) from these two fields; technology and transport, and social services and health care. The results indicated that constraints on learning and professional/vocational identity development at work were mainly social in nature among employees as well as students. Therefore, we suggest that the most necessary conditions for workers' and students' learning are related to the feeling of "weness" that arises from individuals' active participation in the social community.

Virtanen, A., Tynjälä, P. & Eteläpelto, A. 2012. Factors promoting vocational students' learning at work: Study on student experiences. *Journal of Education and Work*. <http://www.tandfonline.com/doi/pdf/10.1080/13639080.2012.718748>

In order to promote effective pedagogical practices for students' work-based learning, we need to understand better how students' learning at work can be supported. This paper examines the factors explaining students' workplace learning (WPL) outcomes, addressing three aspects: (1) student-related individual factors, (2) social and structural features of workplace and (3) educational practices related to the organising of WPL periods. The data were collected from final-year vocational students (N = 3106, n = 1603) via an Internet questionnaire. The findings from regression analysis showed that students' WPL outcomes cannot be seen merely as consequences of student-related individual factors such as motivation, as has often been suggested; even more important for the success of students' WPL were the social features of the workplace and the pedagogical arrangements for WPL periods. A further finding was that the learning environments of different vocational fields at the interface of school and working life seem to differ significantly from each other, and to offer students different settings for learning at work. This implies that when studies on WPL and professional development are conducted on a single employee group, they should not be directly generalised across different domains.

Tynjälä, P., Virtanen, A., Virolainen, M. & Heikkinen, H. 2021/2022. Learning at the Interface of Higher Education and Work: Experiences of Students, Teachers and Workplace partners. In E. Kyndt, S. Beauseart, & I. Zitter (Eds.). *Developing connectivity between education and work: Principles and practices* (pp. 76-96).

Fragment of introduction: In recent research, connectivity between education and workplaces is often seen as a central element in preparing students for the requirements of the future labour market (e.g., Guile & Griffiths, 2001; Billett, 2015; Sappa et al., 2014, 2016; Tynjälä et al., 2020). In accordance with the focus of this book, designing connectivity between education and work, this chapter will present findings from a study that focused on strengthening the connectivity between Finnish higher education institutions and workplaces. In this study, our data covered both learning at the workplace and work-related assignments carried out in collaboration with the workplace and higher education institutions. Before describing the

findings of the study, we first introduce the theoretical and analytical framework of our study in the following section.

Töytäri, A., Tynjälä, P., Vanhanen-Nuutinen, L., Virtanen, A., & Piirainen, A. 2019. Työelämäyhteistyö ammattikorkeakouluopettajan osaamishaasteena. Ammattikasvatuksen aikakauskirja 21 (1), 8-24.

Abstract/part of intro: Tässä tutkimuksessa tarkasteltiin ammattikorkeakouluopettajien työelämäyhteistyön osaamishaasteita. Tutkimusaineisto kerättiin yksilö- ja ryhmähaastatteluilla, joihin osallistui 16 eri alojen ammattikorkeakouluopettajaa. Aineisto analysoitiin temaattisella analyysillä. Työelämäyhteistyön osaamishaasteina tulivat esille muutos koulutuksen ja työelämän suhteissa, verkostomainen opettajuus, monipuolisten taitojen hallinta ja pedagogiikan uudistaminen. Ammattikorkeakouluopettajien työelämäyhteistyö edellyttää uusien taitojen omaksumisen lisäksi yhteisöllisyyden kehittämistä niin työelämän kuin opiskelijoidenkin kanssa. The purpose of this study was to research competence challenges that teachers of Universities of Applied Sciences face in professional collaboration with workplaces. Data was collected in one-on-one as well as group interviews. The informants of the study were 16 teachers with different subject specialties. The transcribed data was analyzed with qualitative thematic analysis. When collaborating with workplaces, teachers reported the following competence challenges: changes in relationships between education and work, teachers' networking, adoption of versatile skills, and pedagogical reforming. In addition to acquiring new skills, partnerships with workplaces require establishing and maintaining a sense of community across staff and students as well as workplaces.

Arpiainen, R.-L., & Tynjälä, P. (2017). Introducing team learning in a developing economy: Students' experiences of experiential entrepreneurship education in Namibia "We did not just become classmates, we became a family.". Journal of Enterprising Culture, 25 (2), 179-210. doi:10.1142/S0218495817500078 <http://www.worldscientific.com/doi/pdf/10.1142/S0218495817500078?src=recsys>

Entrepreneurship is considered to be a driving force behind nations' economic development, and entrepreneurship education's role is essential in shaping entrepreneurial attitudes, skills and culture. The objective of this study was to investigate students' experiences of entrepreneurship education in a developing economy, especially as regards learning in and through teams. The research project was conducted in Namibia, where the challenges to breaking out of poverty are huge. Methodologically, the study was based on qualitative thematic analysis of semi-structured interviews (2009–2014) of higher education students (N=13) taking part in an action-based, experiential entrepreneurship programme. In the analysis of students' teamwork experiences, five main themes related to learning in and through teams emerged — the first three relating to individuals, the fourth to the team, and the fifth to wider social relations: (i) psychological safety, (ii) tolerance of uncertainty, (iii) strengthening of self-efficacy, (iv) strengthening of team-efficacy, and (v) understanding of others and other cultures. The outcomes may be utilised in establishing, developing and planning similar entrepreneurship education programmes across different cultural settings in developing economies.

Aarto-Pesonen, L. & Tynjälä, P. 2017. The core of professional growth in work-related teacher education. Qualitative Report 22 (12), 3334-3354.

Abstarct

This paper presents a Glaserian grounded theory study of adult students' holistic professional growth in a two-year tailored, work-related, teacher qualification program in physical education. The data consisted of reflective learning diaries, interviews and the written texts of 20 adult students. The data analysis followed the stages of Glaserian grounded theory analysis with substantive and theoretical coding processes carried out using the constant comparative method. The article presents the emotional core and its properties (criticality, ethicality and empowerment) of physical education teacher students' professional growth. In addition, the article introduces a substantive theory of a process of adult students' multifaceted professional growth during a work-related physical education teacher-qualification program and discusses the pedagogical implications in relation to developing teacher education in general and the education of physical education teachers in particular.

Aarto-Pesonen, L., & Tynjälä, P. 2017. Dimensions of Professional Growth in Work-Related Teacher Education. Australian Journal of Teacher Education, 42 (1), 1. <https://doi.org/10.14221/ajte.2017v42n1.1>

This article conceptualises adult learners' professional growth in a tailored, work-related, teacher-qualification programme in physical education. The study data consisted of the reflective-learning diaries of 20 adult learners during a 2-year tertiary and work-related teacher-qualification programme. The data were analysed using data-driven open coding analysis, which was conducted using the constant comparative method of the grounded theory approach. This article presents the horizontal dimensions (egocentric learner, researching professional and expert within society) and the vertical dimensions (transforming self-image, expanding professional self-expression and widening agency) of the adult learners' multifaceted professional growth process. In addition, the article discusses pedagogical implications in relation to developing teacher education in general and the education of physical education teachers in particular.

Korhonen, H., Heikkinen, H., Kiviniemi, U. & Tynjälä, P. 2017. Student teachers' experiences of participating in mixed peer mentoring groups of in-service and pre-service teachers in Finland. Teaching and Teacher Education 61, 153-163. <http://dx.doi.org/10.1016/j.tate.2016.10.011>

This article examines from the student perspective a new Finnish model of teacher development that uses the peer group mentoring (PGM) method for combining pre-service and in-service teacher education. Reflective reports of student teachers (N = 19) who participated in PGM were analyzed using the phenomenographic method. The results show that students' experiences varied from considering the activity as (1) a coffee break or (2) peer-support, to seeing it as (3) identity construction or (4) a way of participating in a professional community. In further development of the model more emphasis should be placed on the integration of theory and practice.

Täks, M., Tynjälä, P. & Kukemelk, H. 2016. Engineering students' conceptions of entrepreneurial learning as part of their education. *European Journal of Engineering Education* 41(1), 53-69. DOI: 10.1080/03043797.2015.1012708 <http://www.tandfonline.com/eprint/4ABMRCSC7QJXKKYvpb43/full>

The purpose of this study was to examine what kinds of conceptions of entrepreneurial learning engineering students expressed in an entrepreneurship course integrated in their study programme. The data were collected during an entrepreneurship course in Estonia that was organised for fourth-year engineering students, using video-recorded group interviews ($N=48$) and individual in-depth interviews ($N=16$). As a result of the phenomenographic analysis, four qualitatively distinctive conceptions of entrepreneurial learning were discerned. Entrepreneurial learning was seen to involve (1) applying entrepreneurial ideas to engineering, (2) understanding entrepreneurial issues in a new way, (3) action-oriented personal development, and (4) self-realising through collective effort. These qualitatively distinct categories differed from each other in four dimensions of variation: nature of learning, response to pedagogy, relation to teamwork, and learning outcomes.

Virtanen, A., Tynjälä, P. & Eteläpelto, A. (2014). Factors promoting vocational students' learning at work: Study on student experiences. *Journal of Education and Work* 27(1), 43-70.

In order to promote effective pedagogical practices for students' work-based learning, we need to understand better how students' learning at work can be supported. This paper examines the factors explaining students' workplace learning (WPL) outcomes, addressing three aspects: (1) student-related individual factors, (2) social and structural features of workplace and (3) educational practices related to the organising of WPL periods. The data were collected from final-year vocational students ($N=3106$, $n=1603$) via an Internet questionnaire. The findings from regression analysis showed that students' WPL outcomes cannot be seen merely as consequences of student-related individual factors such as motivation, as has often been suggested; even more important for the success of students' WPL were the social features of the workplace and the pedagogical arrangements for WPL periods. A further finding was that the learning environments of different vocational fields at the interface of school and working life seem to differ significantly from each other, and to offer students different settings for learning at work. This implies that when studies on WPL and professional development are conducted on a single employee group, they should not be directly generalised across different domains.

Virtanen, A. & Tynjälä, P. (2013) Kohti työelämätaitoja kehittävää yliopistopedagogiikkaa – opiskelijanäkökulma. *Yliopistopedagogiikka* 20(2), 2-10.

The aim of the study is to identify good teaching practices for learning work-life skills, to share them with others to use, and to theorise university pedagogies that support the learning of work-life skills. The study was carried out by looking at three courses that university students had already experienced as contributing concretely to their knowledge of working life. Data from university students ($N=163$, $n=123$) were collected through an internet survey, in which they assessed what knowledge and skills were learned in these courses and how they felt the courses were structured pedagogically. According to the results, the courses seem to provide students with concrete tools or ways of working in their future working communities, such as basic skills in their field, working together and acting in a team, working creatively and proactively. The pedagogical structure of the courses can be summarised as working in a collaborative way and discussing at the interface between theory and practice in a safe and secure environment to

encourage students to think critically developing students' critical thinking. University pedagogy that develops work-life skills thus seems to have similarities with both constructivist learning environment and the integrative pedagogical model. In addition to these starting points, the development of university teaching that supports work-based learning, attention should be paid to creating a positive atmosphere in the courses and maintenance of a positive atmosphere. In other respects, university pedagogy for developing work-life skills seems to require contact teaching, small-group work and the interlinking of different forms of activity. Overall, the results show that students do not always need to go out into the world of work to learn work-related skills.

Keywords: university education, university pedagogy, workplace skills, learning, teaching, university students

Heikkinen, H., Tynjälä, P. & Kiviniemi, U. (2011). Integrative pedagogy in practicum. In M.Mattsson, T.V. Eilertsen and D. Rorrison (eds.) 2011. A Practicum Turn in Teacher Education. (pp 91-112). Rotterdam: Sense Publishers.

The chapter introduces a model of integrative pedagogy in teaching practicum within a Finnish context. The aim of this action research project is to integrate educational theory and practice in teaching practicum with a view to promote student teachers' professional autonomy. In the Integrative Pedagogy Model, theoretical knowledge, practical skills and self-regulation (reflective and metacognitive skills) are merged. The empirical part of the chapter is based on the content analysis of the experiences of students and their supervising teachers. The results show that an exceptional sense of community is being achieved in this kind of teaching practicum. The interprofessional collaboration between teachers, teaching assistants and other staff members is also highlighted. In addition, the preservice teachers and their supervisors report their experiences of reflective dialogue. However, promoting autonomy in the teaching practicum appears dilemmatic. As a theoretical conclusion, we introduce the concept of 'second order pedagogical paradox', which is a hyponym of the classical Kantian pedagogical paradox. The second order pedagogical paradox means that a teacher educator inevitably faces a double paradox if she/he seeks to promote prospective teachers' autonomy, who in turn are expected to promote their preservice teachers' autonomy.

Virtanen, A. Tynjälä, P. & Collin, K. 2009. Characteristics of workplace learning among Finnish vocational students. *Vocations and Learning* 2 (3), 153-175.

In this study, students' learning at work will be examined in relation to students' self-assessed learning outcomes. However, the learning outcomes are understood more widely than in the definitions of the European Qualifications Framework (EQF) (see e.g. Explaining the European... 2008.) Students' learning outcomes at work will be considered here not merely as skills learning, but also as involving students' vocational identity development. Particularly outside Europe, vocational education is often viewed not purely as a system for the inculcation of skills and knowledge, but equally as an endeavour aiming at students' wider vocational development (e.g. Chappell 2003). With this in mind, the present study seeks to describe students' professional growth somewhat more comprehensively than would be the case if the students' learning at work were understood purely as skills learning (e.g. Nyström 2009).

Tynjälä, P., Pirhonen, M. Vartiainen, T. & Helle, L. 2009. Educating IT project managers – How to meet working life requirements. Communications of the Association for Information Systems 24 (Article 16), 270-288. [http://aisel.aisnet.org/cais/](http://aisel.aisnet.org/cais/Educating_IT_Project_Managers_through_Project-Based_Learning:_A_Working-Life_Perspective) [Educating IT Project Managers through Project-Based Learning: A Working-Life Perspective](http://aisel.aisnet.org/cais/Educating_IT_Project_Managers_through_Project-Based_Learning:_A_Working-Life_Perspective) (manaraa.com)

This study discusses project-based learning and describes a course that is designed around these principles. The study also examines the working-life requirements of today's IT project managers and assesses the potential of project-based learning in promoting the development of the necessary skills and knowledge for successful project management. The data were collected and combined from three different sources: Recent graduates (questionnaires, n=185) were asked to identify the most important skills they needed in their work; project managers (interviews, n=15) were asked their opinions of the contents and methods used when educating IT project managers; and students (interviews, n=58) were asked what they had learned during the project-based course. According to a comparative analysis of the three sets of data, the respondent groups were unanimous regarding two aspects of working-life requirements and learning outcomes: domain-specific knowledge and social skills. The graduates and the project managers saw these as vital in the work of IT professionals, and the students mentioned them as the most important learning outcomes. The findings suggest that project-based learning may provide students with a learning environment that prepares them well for their future working lives. Keywords: project-based learning, project managers, project management, working-life skills

Murtonen, M., Sahlström, S. & Tynjälä, P. 2009. Educating novices at the workplace: Transformation of conceptions and skills of students on a metal industry course. In M-L. Stenström & P. Tynjälä (eds.) Towards integration of work and learning. Strategies for connectivity and transformation. Springer (pp. 93-113).

Part of introduction: Traditional formal education has often been accused of being disconnected from the learning of real working life competencies. Recent studies have shown that students may feel that formal education is 'too theoretical', and graduates often claim that they do not possess the competencies needed to do their jobs (e.g., Mora, Garc'ia-Aracil, & Vilas, 2007; Stenstrom, 2006; Tynjälä, Slotte, Nieminen, Lonka, & Olkinuora, 2006; van der Velden, 2006;). A similar criticism often levelled by entrepreneurs and employers is that the slow process of formal education hinders it from responding to the acute needs of working life (e.g. Billett, 2007).

The aim of this chapter is to examine a specific example; the company-based training of shipyard workers. Our assumption is that training carried out in an authentic work environment, and its close vicinity in the company school, could provide a promising starting point for realising the connective model of work experience (Griffiths & Guile, 2003; Guile & Griffiths, 2001) described in Chapter 2 of this volume. Thus, we examine whether features of the connective model are present in a shipyard metal industry course run by the company in the workplace. We also examine company-based training from the expertise development point of view and analyse how the transition from novice towards expert begins and proceeds in a workplace-based training programme carried out in a combined classroom and authentic work environment. In our analyses we draw on ideas from two different directions of research: classical studies of expertise and studies of conceptual change. This is a novel approach to vocational development. We start by discussing the theoretical viewpoints and previous empirical findings of expertise research that supports the idea of providing education and training in the workplace. We also discuss possible problems related to workplace training. We

examine the development of expertise from different complementary perspectives and describe expertise as a complex phenomenon composed of cognitive, social, and bodily aspects. In the second part of this chapter we present empirical findings from a study conducted in the shipbuilding industry where future employees are trained in the company's own school and in an authentic production environment.

Virtanen, A. & Tynjälä, P. 2008. Students' experiences of workplace learning in Finnish VET. *European Journal of Vocational Training* 44(2). 199-213.

The Finnish vocational education and training system underwent remarkable transformations at the turn of the century. One of the biggest changes was introducing compulsory and guided on-the-job learning periods in all study programmes. In this article, students' experiences of on-the-job learning and in particular of integrating school-based and work-based learning and guidance of students are examined. Data were gathered by an Internet questionnaire of final-year students at vocational institutes in the City of Helsinki (N=1282). The questionnaire was answered by 41 % of the students. In general, students were satisfied with connecting school-based and work-based learning and guidance in vocational institutes and at workplaces. However, there were clear differences between fields of study. On-the-job learning seemed to function best in social and healthcare.

Virtanen, A., Tynjälä, P. & Stenström, M-L. 2008. Field-specific educational practices as a source for students' vocational identity formation. In S. Billett, C. Harteis & A. Eteläpelto (eds.) *Emerging perspectives of workplace learning* (pp. 19-34). Rotterdam: Sense Publishers.

Although work-related identity research has undergone considerable expansion in recent years, vocational identity among students remains a neglected area. However, initial vocational education plays a crucial role in the process of lifelong learning. Accordingly, this chapter discusses students' vocational identity formation during their vocational education and training. As recent findings on vocational or professional identity emphasise its context-based or sociocultural construction, we examined students' vocational identity formation in two different fields: 1) technology and transport, and 2) social services and health care. Our quantitative data indicate that while students' vocational identity formation begins during vocational education and training, there are differences between students in different fields. On the basis of our qualitative data it seems that students' vocational identity is heavily constructed in line with the education practices of their own specific fields. Thus, experiences during vocational education, even before individuals enter the workforce, play an important role in the formation of vocational identity.

Helle, L., Tynjälä, P., Olkinuora, E. & Lonka, K. 2007. "Ain't nothin' like the real thing" Motivation and study processes in university-level project studies. *British Journal of Educational Psychology* 77 (2), 397-411.

Background: Advocates of the project method claim that project-based learning inspires student learning. However, it has been claimed that project-based learning environments demand quite a bit of self-regulation on the part of the learner.

Aims: Consequently, it was tested whether students scoring low in self-regulation of learning experienced 'friction', an incompatibility between student self-regulation and the demands posed by the learning environment. This would be manifest in cognitive processing and motivation.

Samples: The target group consisted of 58 mainly third-year Finnish university students taking a mandatory project course in information systems design. During the project course, student teams completed a commissioned assignment. The study also included a matched nonequivalent comparison group composed of computer science students attending study programmes without a project-based component.

Methods: Data were gathered by means of a questionnaire administered at the beginning and end of the project course and it was analysed by between-groups repeated measures ANOVA. In addition, the students on the course were interviewed.

Results: Results suggest that the work-based project model in question may indeed have a substantial motivational impact, interestingly benefitting especially those students who scored low in self-regulation.

Conclusions: It is argued that we tend to view learning environments too simplistically. In particular, a basic distinction should be made between individual and collaborative learning contexts, since peer scaffolding, group grading and choice of group roles may explain why students scoring low in self-regulation of learning did not encounter friction as expected.

Helle, L. & Tynjälä, P. (2007). Outcomes of project-based studies and student self-regulation of learning. In P.B. Richards (ed). Global issues in higher education. New York: Nova Science Publishers, 215-235.

Why is it that some students succeed in their studies better than others? Are they smarter? Do they study more? Do they use more and better learning strategies? Do they hold certain beliefs about learning that make them more resilient to challenges? Or were they so precocious that they have in a sense had an academic mind set for significantly longer than others? There have been studies and entire lines of research exploring all of these questions and they most likely all contribute to partially explaining success in higher education. For instance, research on epistemological beliefs has shown that academic performance is related to styles or ways of knowing and especially to the belief that learning does not occur instantaneously, but takes time ($r=0.31$) (Schommer-Aikins and Easter, 2006). According to studies on expertise, there is a general rule that attaining a high-performance level in just about any field requires at least 10 years of intense preparation; this applies at least to the domains of chess, musical composing and science (Ericsson, Krampe and Tesch-Romer, 1993). Recently, it has been suggested that it is the time spent on certain study strategies that distinguishes the best (science) students from the others although the best students also were shown to study more (Nandagopal and Ericsson, 2007). In a study concerning engineering education, it was similarly found that a deep study strategy was the most important predictor of study success, while surface strategy and doubt about one's abilities were negatively related to study success (Tynjala et al., 2005). Also intelligence has a role in at least in inductive science learning as evidenced by a recent study by Prins et al. (2006). However, the correlation between intelligence or other ability measures and learning is surprising low-in.

Helle, L., Tynjälä, P. & Olkinuora, E. 2006. Project-based learning in post-secondary education – theory, practice and rubber sling shots. Higher Education 51 (2), 287-314

The purpose of the study was to explore what project-based learning is, what are the pedagogical or psychological motives supporting it, how it has been implemented and what impact it has had on learning in post-secondary education. The study is based on a qualitative review of published articles. The work revealed that the majority of articles on project-based

learning are course descriptions focusing on the implementation of individual courses, whereas serious research on the topic is virtually non-existent. In addition, the term project-based learning subsumes different activities with varying purposes. Therefore, practitioners and curriculum developers are encouraged to reflect upon the purpose and possibilities of project-based learning along with students and to set realistic, clear goals. Practitioners and researchers are urged to document courses even more carefully. Several issues for further research are identified.

Summary

We have prepared this working paper to get a better understanding and make visible how members of the project team understand personal and institutional factors and mechanisms influencing the integration of school learning and WPL for agency development.

We have summarised both the relevant theoretical reviews (chapters 1 and 2) and the reviews of empirical studies that have just been completed or are currently underway as part of the science work package (chapter 3). Also, relevant studies of project members on vocational education are presented (chapter 4). Making these reviews available in a single place will help us move forward more quickly and in a more focused way when planning the next project and studies.