



D4.2 – Complete research plan and funding application to be submitted



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Acronym: FEWL

Title: D4.2 – Complete research plan and funding application to be submitted

Work Package: WP4 Increasing Research Capacity and Public Impact

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List of Abbreviations

ERC-SyG – European Research Council Synergy Grant

ESR – Early Stage Researchers

FEWL – Enhancing Research on the Integration of Formal Educational Programmes and Workplace Learning

IVET – Initial Vocational Education and Training

IP / IP model – Integrative Pedagogy model

JYU – University of Jyväskylä

KA220-SCH – Erasmus+ Cooperation Partnerships in School Education

NTNU – Norwegian University of Science and Technology

OSKA – Labour market monitoring and forecasting system (Estonia)

PAR – Participatory Action Research

PI – Principal Investigator

PINVET – Promoting Inclusive Transition Mechanisms in European VET Systems

SES – School of Educational Sciences

TLU – Tallinn University

UPB – Paderborn University

VET – Vocational Education and Training

WP – Work Package

WP learning – Workplace learning

Executive Summary

This deliverable summarizes the work completed under Work Package 4 (WP4) of the FEWL consortium. The main objective of WP4 was to prepare a research proposal for a large-scale, international research project on integrating formal education and workplace learning to increase understanding of sustainability in school and work practices. This objective was pursued in collaboration with three research partners and additional partners from other European countries. The following subgoals were set: 1) supporting TLU partners in constructing a solid theoretical framework for an empirical study in Estonia (WP6, Task 6.1); 2) refining the theoretical framework for an empirical, comparative, international research project; 3) inviting research partners from European universities; 4) modifying and completing the research plan with partners; and 5) submitting the research proposal to a selected EU research funding scheme. This deliverable was completed in November 2024, one year ahead of the Autumn 2025 deadline. Consequently, this deliverable not only summarizes the application completed in 2024 but also other research funding applications related to WP4 of the FEWL project. WP4 was led by the University of Jyväskylä and completed with the involvement of all partners.

Increasing Research Capacity and Public Impact – Empirical Comparative International Research Proposals Developed under the Auspices of the FEWL Project

According to **Task 4.4**, "Modifying and Completing the FEWL Research Plan and Submitting the Funding Application," the joint outcome of Tasks 4.1 and 6.1, which describe the contemporary theoretical foundations of research on the integration of school and workplace learning (Deliverable 6.1), and the empirical results of the FEWL project (D6.2-D6.3), should serve as input for modifying and completing the research plan. The plan for preparing the research funding application for the international project was to be developed based on the outcomes of:

(1) **task 4.2**, "Discussing, defining, and specifying the research topic, goals, and setting, as well as the internal research team, based on deliverable 6.1";

(2) and **task 4.3** "Screening possible funding schemes and research partners, and constructing a theoretical framework and an initial empirical work plan for the comparative international project."

The completed tasks and related deliverables resulted in **D4.2. deliverable** "Complete research plan and funding application," which contributed to reaching the same **M4.2 milestone**: "Research plan finalized, funding application submitted." The University of Jyväskylä led the process and was responsible for completing the deliverable. All partner universities were involved in developing the research application. The deadline for completing the task and deliverable was month 36, but it was finished in month 23. We continued working on developing further project applications. This involved monitoring upcoming calls and engaging in ongoing discussions with all partners, and submitting other application proposals.

The collaboration under the auspices of the FEWL consortium resulted in six research funding applications for international projects involving the FEWL consortium and other partner institutions. Work under WP4 progressed smoothly, allowing us to accomplish our objectives more quickly and efficiently than expected. Table 1 provides a brief summary of the outcomes of WP4.

Table 4. Submitted funding applications for international projects

Funder/Call	Title of the application	Current state/result
ERC-Syg	Bridging Ecosystems of Learning for Meeting the Dual Transition to Sustainability and Human-Centered Digitalization	Submitted in November 2025. Leader: JYU. Not funded.
HORIZON-CL2-2024-TRANSFORMATIONS-01-10	Promoting Inclusive Transition Mechanisms in European VET Systems	Submitted in February 2024. Leader: Norges Teknisk-Naturvitenskapelige Universitet, NTNU. Not funded.

Research Council of Finland Research fellowship application (individual grant for international project)	Adult Migrant Students' Learning at the Interface of Vocational Schools and Workplaces: A Collaborative Longitudinal Study	Submitted in January 2025. Leader: JYU. Not funded.
Emil Aaltonen Foundation (individual grant for international project)	Adult Migrant Students' Learning at the Interface of Vocational Schools and Workplaces: A Collaborative Longitudinal Study	Submitted in March 2025. Leader: JYU. Not funded.
ERASMUS+	Bridging Work-Life and Primary Education: Integrating Work-Life Topics and Key Competencies into Teaching Practice	Submitted in March 2025. Leader: TLU. Funded.
Ministry of Economic Affairs and Communications of the Republic of Estonia (Research and development grant)	Integrating General Education and the World of Work: Pathways to Enhancing Labour Market Resilience	Submitted in September 2025. Leader: TLU. Not funded.

Below, we provide summaries of all project applications developed under the auspices of the FEWL project, as well as some key points from the evaluation of the project proposals. Since this document is public, we provide abstracts and/or short project descriptions, as well as a self-assessment explaining how the objectives of FEWL Project WP4 were achieved.

ERC-Syg application “Bridging Ecosystems of Learning for Meeting the Dual Transition to Sustainability and Human-Centered Digitalization (BELTS)”

Abstract:

Education and learning are crucial for a successful dual transition towards digitalisation and sustainability. The main objective of this transdisciplinary project is to explore how to effectively support this transition through learning at different levels of education ranging from primary school to higher education, as well as in the workplace and other out-of-school settings. We refer to these different interconnected learning environments as ecosystems of learning. The project is based on synergy and integration of concepts derived from the three fields: research on expertise, agency and wisdom. These concepts refer to attributes that are essential prerequisites of the dual transition. Research lines on these phenomena have earlier been separate although they have overlapping features. Applying an action research approach, the three PIs design and lead interventions in Finland, Estonia, and Germany creating new ecosystems of learning based on collaboration between education institutions, workplaces, and non-school environments. The interventions focus on the development of agency, expertise and wisdom needed in the transition to sustainability and digitalization. The interventions apply the Integrative Pedagogy Model, which combines theoretical, practical, self-regulatory and socio-

cultural knowledge. The innovative synergy of the project is based on the following elements: 1) the creation of sustainable learning ecosystems through the cross-fertilisation of formal, non-formal and informal learning in physical and digital environments; 2) the integration of research lines on the development of agency, expertise and wisdom; 3) the implementation of interventions in learning ecosystems covering all levels of education from primary to higher education. The aimed main outcome will be a novel Wisdom Ecosystem Model for Education, which will direct future research into examining from new perspectives of wisdom-oriented pedagogy.

Brief description:

The BELTS project aims to create synergy between the collaborating institutions' key research areas of agency, identity, expertise, and wisdom. This transdisciplinary project focuses on fostering the dual transition in various educational contexts, including workplaces and other non-school environments. Our goal is to develop and examine innovative teaching methods in interconnected learning environments to address the challenges of the dual transition. The project builds on the collaboration of three renowned principal investigators (PIs)—Hannu Heikkinen from JYU, Inge Timoštšuk from TLU, and Christian Harties from UPB—and their teams, who specialize in workplace learning, education, sociology, psychology, philosophy, and future research. The PIs and key researchers have expertise in the project's key areas.

BELTS utilizes the Integrative Pedagogy Model (IP Model; Tynjälä et al., 2022), focusing on the integration of different types of knowledge, as well as the development of agency and expertise. The project acknowledges the broader importance of agency in workplace and student learning. Examples of this include the work of Billett (2008, 2011), Eteläpelto et al. (2013, 2014), Goller & Paloniemi (2017), and Harteis & Goller (2014) in the context of workplace learning, as well as the work of Jääskelä et al. (2017, 2020a, 2020b), Erss et al. (2024), Erss (2023, 2018), and Goller & Harteis (2014) in the context of student learning. The ability of individuals or communities to influence and make choices is important in both workplace (Eteläpelto et al., 2013; Vähäsantanen et al., 2019) and educational (Jääskelä et al., 2017, 2020a, b) contexts. Student agency has also been associated with resistance to perceived injustice, the freedom to make mistakes, student-centered teaching, and active learning (Erss, 2023; Jääskelä et al., 2017, 2020a, b). Wisdom is the ability to address complex problems in ethical ways for the common good (e.g., Kallio et al., 2024; Rudney et al., 2019; Sternberg & Gladue, 2021; Sternberg et al., 2019). BELTS utilizes recent research on wisdom pedagogy (Bruya & Ardelt, 2018; Kristjánsson, 2024; Peters & Green, 2024), recognizing the need for diverse pedagogy to contribute to the development of the cognitive, affective-social, ethical-existential, and action dimensions of wisdom (Tynjälä et al., 2025). These models and concepts will be used in various ways in the interventions developed in this project to provide a framework for a holistic approach to bridging learning ecosystems to meet the dual transition.

The BELTS project and its interventions utilize the principles of the participatory action research (PAR) approach (Cornish et al., 2023; Heikkinen et al., 1999, 2006, 2007, 2023). The three interventions, developed, implemented, and assessed under the leadership of different PIs, address different levels of education and are co-created with various stakeholders from the worlds of work, education, museums, cultural and science centers, and the third sector.

The project will be carried out in three interconnected phases: (1) A literature review and ethnographic data collection (2025–2026); (2) Co-creation with institutional stakeholders of novel ecosystems of learning that apply the IP model and the Holistic Wisdom Model (Kallio & Tynjälä, 2025); and (3) Integration and synthesis of findings from the interventions. The applied funding is €9,914,928.

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Self-evaluation and next steps:

The application was not funded. However, we received valuable feedback on our ideas and the application from five reviewers. The reviews were somewhat contradictory. While most reviewers were convinced that the PIs' areas of expertise would create interesting transdisciplinary synergies, one reviewer pointed out that all PIs had a background in educational sciences. At the same time, all reviewers ambitiously stressed the PIs' excellence

in the project's core topics, such as expertise, agency, integrative pedagogy, and wisdom, concluding that the realization of the project would not be possible without the combination of expertise in these key areas.

Overall, we successfully designed an interesting and ambitious study that addresses a relevant societal challenge and research niche. However, there is still room for improvement regarding building synergies between the different PIs' subprojects and clarifying the groundbreaking nature of the study.

Although the project did not receive funding, it was an important and valuable learning experience for everyone involved. It built our capacity to apply for ERC funding in the future. Engaging in the application process also opened the door to new collaborations. For instance, in addition to the FEWL project consortium partners, the University of Jyväskylä developed a sub-project with the Jyväskylä University of Applied Sciences.

HORIZON-CL2-2024-TRANSFORMATIONS-01-10 application “Promoting Inclusive Transition Mechanisms in European VET Systems”

Abstract:

The “Promoting Inclusive Transition Mechanisms in European VET Systems” (PINVET) project, which brings together leading universities and stakeholders from Norway, Estonia, Germany, Finland, Sweden, Italy, the UK and Poland, focuses on improving vocational education and training (VET) to facilitate inclusive labour market transitions, particularly in the context of Europe’s green and digital developments. PINVET addresses the combined challenges of social inequalities and economic disruption, exacerbated by global crises such as the COVID-19 pandemic. This initiative aims to provide comprehensive insights into the inclusive mechanisms of VET, to assess their effectiveness and to explore the limitations that have been intensified by recent societal changes. Using an interdisciplinary approach that integrates economic, sociological, historical and pedagogical perspectives, PINVET aims to develop holistic models for analysing VET systems in Europe. The objectives of the project include the development of stakeholder tools, a better understanding of the role of VET at national and regional levels, and improved career guidance in VET systems. PINVET aims to make a significant contribution to a more inclusive, innovative and sustainable European society through improved VET pathways.

Brief description:

The PINVET proposal outlines an eight-country, multi-method study on vocational education and training (VET) as a key pathway for supporting young people’s transitions during times of societal disruption. These transitions include: (1) transitioning into upper-secondary education via VET, including occupational preparation, (2) moving from school to work, (3) shifting toward a green economy and sustainable societies, and (4) adapting to digitalized processes and

work practices. The project examines the role of VET in enabling these transitions, assesses the current state of affairs via reviews, practical inquiries, and syntheses, and provides policy and practice recommendations for inclusive and just green and digital transformations. The project recognizes VET's role in promoting equal opportunities, inclusion, and social mobility (Cedefop, 2022; Council of the European Union, 2020) of different groups of students including students from disadvantaged backgrounds such as young women or migrant youth. Yet, PINVET stresses the importance of maintaining and rethinking VET's inclusivity in the context of green and digital transition.

PINVET collaborates with institutional stakeholders to develop policy solutions at multiple level guided by the following objectives: (1) examine the current strengths, limitations, and potential of VET in facilitating effective, inclusive, and scalable transitions by reviewing and investigating its purposes, processes, and outcomes; (2) critically examine inclusion mechanisms across countries and regions to understand how VET supports young people's transitions; (3) identify key features of sustainable inclusion and their relevance for VET amid economic and societal change; and (4) collaborate with stakeholders to develop impactful policies and investments that promote youth transitions and long-term green and digital transformations.

The PNVET employs the concepts of inclusion (Molla & Gale, 2023), capability (Sen, 2000), and social justice (Rawls, 1999; Esmond & Atkins, 2022) to examine the intersection of inequalities with various educational pathways, national systems, partnerships, and evolving industry and labor market trends (e.g., Nylund & Rosvall, 2019; Rapp & Knutas, 2023).

PINVET involved collaboration with Tallinn University and the University of Jyväskylä, who are partners in the FEWL project. The Norwegian University of Science and Technology was the coordinator. PINVET was planned for three years. The applied funding was €3,297,427.

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Self-evaluation and next steps:

The project was not funded. However, the project received a good evaluation. Specifically, the project was appreciated for its concise consortium, well-planned division of roles, clearly defined objectives, methodological and theoretical perspectives, utilization of digital channels to promote project outputs, and involvement of policymakers, other stakeholders, and disadvantaged groups. However, there is room for improvement regarding the dissemination plan and project sustainability activities. The evaluators also wished for a more detailed description of the sample and the expected outcomes, as well as a risk assessment related to data collection and the involvement of hard-to-reach categories of young people.

Overall, the detailed feedback received provides a solid foundation for further developing the project proposal and utilizing these well-developed ideas and international collaborations in future applications.

Research Council of Finland application „Adult Migrant Students’ Learning at the Interface of Vocational Schools and Workplaces: A Collaborative Longitudinal Study“

Abstract/brief description:

The overall aim of this study is to deepen our understanding of migrant students’ learning at the interface of vocational schools and workplaces and help them become members of Finnish vocational communities. The study utilises and further develops the presage, process and product (3P) model of workplace learning and integrative pedagogy (IP) by adjusting them to migrant students’ learning at the interface of school and workplaces. The study 1) examines vocational teachers, work supervisors and migrant students experiences and perspectives through partnerships and collaborations with these stakeholders in two vocational fields with large numbers of migrant students; 2) identifies pedagogical practices and seeks, together with teachers, work supervisors and migrant students solutions to enhance migrant students’ learning at the interface of school and workplaces; 3) further develops a combined 3P-IP model for understanding migrant students’ learning at the interface of schools and workplaces; and 4) develops methodologies for studying migrant students’ learning at workplaces.

This research has a longitudinal character and involves a follow-up study with two migrant groups studying to become practical nurses and cooks. Partnerships with the stakeholders in these two programmes will last until the key student participants complete their studies and continue also one year after the completion of their studies in the job search phase. The data set consists of rich ethnographic material including focus group interviews with vocational teachers, migrant students and workplace supervisors, migrant students’ observations at workplaces and artifacts from co-creative workshops. The practical implication of the study involves the renewal and development of guidelines for key stakeholders (teachers, supervisors and migrant students) on migrant students’ learning at the interface of school and workplaces. The project will last four years. Funding applied €1 004 033.

Although it was an individual research fellowship application, the project was designed for extended international collaboration with Tallinn University and Paderborn University. The collaboration included research visits, co-writing, and further research. The project was planned to be based at the University of Jyväskylä.

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Self-evaluation and next steps:

Two reviewers evaluated the project, suggesting improvements to the research question, a better match between the research questions and the theoretical background, and a simpler research design. The project was not funded. However, the specific feedback received creates great potential for further developing the proposal, such as expanding it into a larger project.

Emil Aaltonen Foundation application „Adult Migrant Students’ Learning at the Interface of Vocational Schools and Workplaces: A Collaborative Longitudinal Study“

Abstract/brief description:

The aim of the study is to deepen our understanding of how immigrant students learn at the interface between vocational schools and workplaces and to help them become members of Finnish work communities. The study is based on long-term partnerships and cooperation with stakeholders in two professional fields that have a large number of immigrant students (social and health care, and the restaurant industry). The research utilizes and further develops the presage-process-product (3P) model of workplace learning and integrative pedagogy (IP) by adapting them to the learning of immigrant students in the workplace. The study 1) examines the experiences and perspectives of teachers, workplace supervisors, and immigrant students on the learning of immigrant students at the interface between vocational schools and workplaces; 2) identifies pedagogical practices and, together with the research participants, seeks solutions that promote the learning of immigrant students in vocational education; 3) develops a combined 3P-IP model for immigrant learning; 4) develop methods for studying the learning of immigrant students in the workplace. Various ethnographic data collection methods will be used as research methods. The partnerships with the stakeholders of these two educational programs will continue until the student participants complete their studies and possibly continue for one year after the completion of their studies during the job search phase. The material consists of focus group interviews with vocational teachers, migrant students and workplace supervisors, migrant students’ observations at workplaces and artifacts from co-creative workshops. Narrative and nexus analysis will be used in the analysis of the material. At the end of the project, a seminar will be held for workplace supervisors. The purpose of the seminar is to enable workplace supervisors to exchange experiences of supervising immigrant students and to discuss the results of the study. Based on the research results, guidelines will be produced to enhance the workplace learning of immigrant students.

This was a project application with involvement of two researchers (PI and research assistant). Funding applied: €200 000. The project involved collaboration (co-writing, research visit, development of bigger project) with the University of Paderborn, Germany.

References from the Emil Aaltonen Foundation:

Same as in Research Council of Finland project application.

Self-evaluation and next steps:

The Research Council of Finland Research Fellow application was reformulated for the needs of The Emil Aaltonen Foundation. While RCF application was planned for four years, this project was planned for three years, had narrower scope and involved less extended international collaboration. The application was not funded. The foundation does not provide feedback.

Erasmus+ KA220-SCH “Integrating work-life topics into the primary school learning process through project-based learning (WISH)”

Abstract:

The project focuses on supporting class teachers in integrating work-life-related topics and key competencies into the learning process. To this end, a handbook and five thematic learning modules will be developed and piloted in general education schools. In addition, an in-service training module will be created to enhance teachers' competence in integrating work-life topics and key competencies. The project outcomes will enrich class teachers' teaching practices and promote the dissemination of research-based approaches both locally and internationally. Funding applied €400 000.

There are urgent discussions taking place around the world about how to better align formal education with the demands of working life. The goal is to facilitate a smoother transition into employment and develop competencies that will prepare students for future jobs. These ideas are reflected in several EU policy documents, such as Key Competences for Lifelong Learning, adopted by all member states for their national curricula, and the EU sustainability competence framework, GreenComp. Similar ideas are found in OECD policy documents, such as Future of Education and Skills 2030. Key competencies are integrated into school curricula, placing responsibility for their development on teachers (ENCBS, 2011). However, teachers often find this task overwhelming and require support (Erss, 2018; Nakk & Timoštšuk, 2021).

By the end of primary school, students are expected to have a general understanding of the world of work (European Commission, 2018). In general, schools emphasize practices targeted at students nearing entry into the workforce. However, promoting key competencies and positive attitudes toward work should start earlier (Nurmik & Timoštšuk, 2024). Additionally, fostering an interest in society is essential for becoming an active and responsible citizen and begins in childhood through collaboration between families and schools. This collaboration is supported by classrooms that encourage open discussions (Pöder et al., 2023). However, general education tends to focus on subjects, and pedagogical practices involving authentic environments and contextually rich learning approaches, such as project-based learning, are implemented inconsistently (Praxis & CentAR, 2019).

Our motivation stems from two key factors. First, students' educational experience is influenced by their diverse socioeconomic backgrounds, but schools have the responsibility and opportunity to empower all students through appropriate practices (Pöder et al., 2023). Second,

society places high expectations on schools and teachers to prepare students for life after graduation. Teachers need more support to provide meaningful and balanced learning experiences. Involving contextually rich learning environments, real-life settings, and interactions with diverse individuals allows students to gain new perspectives, expand their worldviews, and be better prepared to enter the workforce (Barab & Roth, 2006).

The aim of this project is to bridge the gap between encouraging students' work-related competencies and understandings, and the lack of knowledge and tools for schools and teachers to integrate work-related topics into the curriculum. Our initiative aims to highlight work-related themes in primary education and support teachers in planning and implementing these activities.

The project partners are: Libera Università Maria SS. Assunta di Roma (Italy), Helsinki University (Finland), Masaryk University (Czech Republic), and Padeborn University (Germany). The Padeborn University is the partner from the FEWL project.

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Self-evaluation and next steps:

The project was funded. The project and related developmental work will start in December 2025. The project webpage: <https://www.tlu.ee/en/hti/researchresearch-groups/wish-bridging-work-life-and-primary-education-integrating-work-life>

Ministry of Economic Affairs and Communications of the Republic of Estonia application “Integrating General Education and the World of Work: Pathways to Enhancing Labour Market Resilience”

Abstract/brief description:

The project explores ways to meaningfully connect school learning with work-related experiences in order to strengthen young people’s employability and improve the adaptability of the labor market. The study aims to analyze institutional frameworks, as well as the experiences and practices of schools, employers, and students, in order to identify effective strategies for linking education with work. The study focuses on general education, where connections to the world of work are less developed than in vocational education. The conceptual framework is based on learner agency — the ability to set goals, make decisions, and adapt in changing work environments.

The expected outcomes include pedagogical guidelines, policy recommendations, and examples of successful school-workplace cooperation. These outcomes aim to reduce declining learning motivation, early school leaving, and youth labor market vulnerability. The project will raise awareness among policymakers, teachers, employers, and the public about the importance of integrating education and work. It will also contribute to the development of sustainable education and labor market policies. The project team applied for €200,000.

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Self-evaluation and next steps:

The results of the review process were announced on November 11th. The application exceeded the threshold and received a rating of good or very good in all evaluated categories. However, the evaluation committee made a preliminary proposal to not approve the application because the available budget is insufficient to fund it (according to the established ranking of all applications). We will develop the project ideas according to the written feedback and look forward to relevant project calls.

Conclusions

The aim of WP4 of the FEWL project was to develop a competitive international application proposal. The WP4 objectives were completed ahead of schedule. Further work on the WP resulted in numerous international project application proposals, which contributed to broadening perspectives on sustainability in school and work practices, as well as better embracing these aspects through the integration of formal educational programs with workplace learning. Furthermore, developing common applications strengthened the prospects for future international collaboration within the FEWL consortium and beyond. The thorough feedback received on the ERCSyg application provides a solid foundation for further development of the application and applying for funding from the same or a similar instrument in the future.