D3.19 FASA NEW SKILLS PROGRAMME ANNUAL RELEVANCE, QUALITY, AND IMPACT REPORT (2ND EDITION)

Version 2.0

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(Partner Responsible: Häme University of Applied Sciences)

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1. Introduction

The central FASA (Future and Advanced Skills Academies) produces an Annual Relevance, Quality and Impact report based on the assessment of the new future and advanced skills programmes developed as part of WP6 and WP7. The central FASA leads the development of processes and tools which are used to assess the relevance, quality, and impact of Short Advanced programmes (SAPs) and Joint Programmes (JPs).

In 2022, FASA has used the *LearnWell* questionnaire, which is a research-based instrument to assess the quality, impact and relevance of RUN-EU Short Advanced Programmes (SAPs). Moreover, LearnWell is a self-reflection tool for the students to assess their own learning processes and study-related wellbeing.

This report describes the results of the LearnWell questionnaire in five SAPs organised in 2022 and proposes how the instrument could be utilised more broadly to assess the quality of SAPs and JPs in the RUN-EU network. Joint Programmes have not yet been implemented, and therefore, the use of the LearnWell in JPs will be reported in later stages.

2. Description of the LearnWell questionnaire

The objective of the LearnWell questionnaire is to gain knowledge on students' learning processes, experiences of the teaching-learning environment and wellbeing in diverse teaching-learning contexts. It can be used to measure students' learning and experiences in course/module level or programme level. Therefore, it can be used both in the context of SAPs and JPs. The aim of utilising LearnWell in the RUN-EU is to get as specific an idea as possible of the students' learning experiences and opinions about studying and learning in the SAP or JP they are participating. The results can thus be used to develop the teaching and teaching-learning environments and to support students' learning and well-being.

The questions and statements in the LearnWell questionnaire are based on prior research on academic teaching and learning, and the questionnaire is mainly based on the HowULearn questionnaire (see e.g. Parpala & Lindblom-Ylänne 2012) developed at the University of Helsinki. The HowULearn questionnaire has been developed specifically for higher education context. The LearnWell questionnaire has been further developed from the HowULearn questionnaire, and modified and extended at HAMK to take into account the context of universities of applied sciences. The LearnWell questionnaire consists of different parts which include items that are evaluated on a Likert scale. The different parts focus on 1) students' learning processes, 2) experiences of the learning environment, 3) experiences of competence development and 4) study-related well-being.

The LearnWell questionnaires allow various possibilities to explore students' learning and experiences. For example, it can be used to identify successful or at-risk-students through profiling the students based on their responses in the different parts of the questionnaire (see e.g., Asikainen et al., 2020), or to investigate how students' learning processes and experiences of the teaching-learning environment predict their experiences of workload and their wellbeing (see Cheung et al., 2020). It can also be used to explore students' learning both in face-to-face and online contexts (see Parpala et al., 2021).

In addition to being a research questionnaire, LearnWell can also be considered as a self-reflection tool for students. Through responding to the items, students have the opportunity to monitor their own studying and learning, and they can be given feedback (individual or group-level) to increase their awareness of their own learning. The aspects measured in LearnWell are skills that can be developed. Therefore, becoming aware of the importance of these aspects is important for the students to develop their own study processes and wellbeing.

For teachers and HE institutions, LearnWell provides valuable and reliable research-based information of students' study processes, experiences and wellbeing in different teaching-learning environments. This information can be used to develop teaching and teaching-

learning environments. The benefit of LearnWell is that it provides knowledge on how students adopting different kind of learning processes, i.e., approaches to learning, experience the teaching and the teaching-learning environment. Thus, it helps to detect what kind of development is required to enhance for example, the deep approach to learning, or student wellbeing.

The LearnWell questionnaire includes various scales and factors, but it can be shortened for different purposes. The scales, factors and items of the questionnaire are presented in Appendix 1. The parts measuring students learning processes (approaches to learning), experiences of the teaching-learning environment and wellbeing form the core of the questionnaire, and it is suggested that these scales are included in all versions of the questionnaire. The core parts of the questionnaire consist of 51 items, and it takes approximately 10-15 minutes to respond to the core items. The part measuring experiences of competence development is an optional component and can be included if it provides valuable information for the specific context where the questionnaire is used. This part includes 17 items. Thus, shorter or longer versions of the questionnaire can be utilised in SAPs and JPs.

Of the RUN-EU institutions, The LearnWell questionnaire is utilised at HAMK annually to measure students' experiences of studying and learning at the programme level. NHL Stenden uses the HowULearn questionnaire in a similar manner. The LearnWell questionnaire has been validated in the context of HAMK.

3. Use of the LearnWell in Short Advanced Programmes (SAPs) in 2022

The LearnWell questionnaire was piloted during the year 2021 in two SAPs in which HAMK had the main organising responsibility. The results are reported in the first edition of D3.18. During the year 2022, the LearnWell questionnaire was applied in six SAPs in which the main organising responsibility was on HAMK or IPCA. For this report, the results are reported from five SAPs. The first SAP, *How to Navigate through Unfamiliar Contexts – Develop your Skills for the Future,* was organised in May 2022. The second SAP, *Design expedition – Arctic Food Challenge*, was organised in September 2022. The third SAP, *Drawing and* Technology, as well as the fourth SAP, *Game Changing Games,* were organised in October 2022. The fifth SAP, *Aspects of Wellbeing,* was organised in November 2022. Each SAP included online sessions and a contact week in one of the organising institutions.

The students responded to the LearnWell questionnaire at the end of each SAP. The data were gathered via an online form (Webropol). The students were informed about the aim of the questionnaire and utilisation of the data, that there were no right or wrong answers, and that the answers would not affect the completion or evaluation of their studies. In addition, the students were informed that answering the questionnaire was anonymous, voluntary, the answers were handled confidentially, that it was possible to discontinue answering at any point, and that the results would be reported so that it is impossible to identify any individual respondent.

In total, 121 students responded to the questionnaire:

1. How to Navigate Through Unfamiliar Contexts – Develop your Skills for the Future, N=16
2. Design Expedition – Arctic Super Food Challenge, N=42
3. Drawing and Technology, N=10
4. Game Changing Games, N=12
5. Aspects of Wellbeing, N=41

The LearnWell questionnaire measures relevance, quality, and impact with various factors. Relevance was measured with experiences of the learning environment with three factors, namely alignment, constructive feedback, and interest and relevance. Constructive alignment ensures that learning goals, assessment methods, and teaching methods are aligned. Constructive feedback is specific, actionable, and objective feedback that helps individuals improve. Interest and relevance refer to how engaging and meaningful the material is to the learner. Ensuring that learning material is interesting and relevant is important for effective teaching and learning.

Quality was measured with approaches to learning (deep approach, surface approach, and organized approach), and psychological well-being with two factors, namely self-efficacy and psychological flexibility. A deep approach to learning involves seeking understanding and creating a cohesive understanding of the material. On the other hand, a surface approach to learning involves acquiring disconnected pieces of information with the goal of reproducing it. Organized studying involves effectively managing one's studies through techniques such as time and effort management. Self-efficacy is a person's belief in their ability to perform a specific task and influences their engagement, effort, persistence, and consideration of options. It is also linked to lower stress and task avoidance. Self-efficacy is a strong predictor of academic achievement. Psychological flexibility refers to the ability to adapt and respond effectively to different situations. It involves being open to new experiences, tolerating discomfort and uncertainty, and letting go of rigid thinking and behaviors. It is an important skill for mental health and well-being.

Impact was measured through two factors in generic competences scale, namely constructing and applying knowledge, and collaboration and communication. Furthermore, a set of six factors was used to measure collaboration. These factors are peer support, internationality, learning to collaborate on shared objects, integrating individual and collaborative working., interdisciplinary collaboration and communication, and understanding various disciplines and practices.

Table 1. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAPs (scale 1-5).

Area of the New skills programme	LearnWell scale	Learnwell factor	Mean value of all SAPs
Relevance	Experiences of the learning environment	Alignment	3.45
		Constructive feedback	3.62
		Interest and relevance	4.07
Quality	Approaches to learning	Deep approach	3.97
		Surface approach	2.34
		Organised approach	3.67
	Well-being	Self-efficacy	4.04
		Psychological flexibility	3.97
Impact	Generic competences	Constructing and applying knowledge	3.95
		Collaboration and communication	4.13
	Collaboration	Peer support	4.30
		Internationality	4.35
		Learning to collaborate on shared objects	4.08

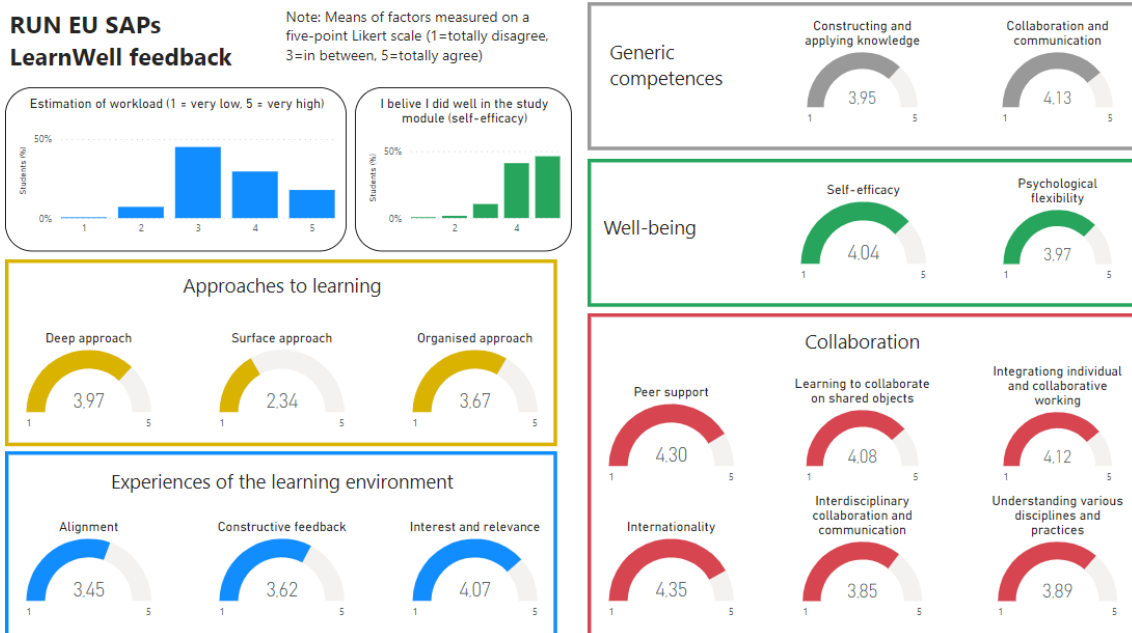|		Integrating individual and collaborative working	4.12
		Interdisciplinary collaboration and communication	3.85
		Understanding various disciplines and practices	3.89

Figure 1. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAPs (N=121).

3.1 SAP 1: How to Navigate through Unfamiliar Contexts – Develop your Skills for the Future

The aim of this SAP was that the participants recognise the importance of future skills (generic skills, such as collaborating with others, problem solving, flexibility, taking responsibility, compassion and respect towards oneself and others) and set goals for developing their own future skills. The SAP was worth of 3 ECTS and lasted for six weeks, including online sessions and a 1-week contact week at HAMK. The target group was RUN-EU students from any study cycle. Teaching of the SAP was based on student-activating and interactive methods and challenge-based learning. The SAP included group work and hands-on excercises (e.g. prototyping, 3D modelling) and individual tasks. The SAP was assessed as Fail/Pass through self- and group assessment. The SAP was organised by HAMK, IPLeiria, NHL Stenden, FHV and TUS.

According to the LearnWell data, the students reported higher values in the deep approach to learning, lower values in surface approach to learning, and higher values in organized approach to learning compared to the overall mean values of all SAPs, meaning that the SAP encouraged the use of learning strategies enhancing deep understanding and reflectivity. The students also reported above average values in experiences of constructive alignment and interest and relevance. While the students showed good values in generic competencies, well-being, and collaboration, there is room for improvement in the factor measuring constructive feedback. Overall, the only area where the students identified a need for improvement was in constructive feedback. This might be related to the assessment type of the SAP, which was based on self- and group assessment. When using this type of assessment, the students might experience that they do not receive enough feedback from the teachers. Thus, a development area for this SAP seems to be the development of the feedback practices from the teachers to the students.

Figure 2. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAP *How to Navigate Through Unfamiliar Contexts – Develop your Skills for the Future.*

3.2. SAP 2: Design Expedition – Arctic Super Food Challenge

The aim of this SAP was that the students will learn design thinking and business design in an authentic real-life business challenge. Furthermore, the aim was that the students will discover, define, develop, deliver and evolve problems and solutions. Various design thinking and business design tools were used. The SAP was worth 2 ECTS and lasted for 2,5 weeks, including online sessions and a 1-week contact period at HAMK. The SAP was targeted for RUN-EU students from any study cycle. The SAP was based on activating teaching methods, such as group work, prototyping, experimenting and group reflection. At the end, the student

groups competed against each other in a sales pitch competition and the winners were awarded. The SAP was assessed as Fail/Pass. The assessment was based on individual participation (20%) and group project (80%). The SAP was organised by HAMK and IPCA.

In this SAP, the students reported average level values on the factors measuring approaches to learning. However, the score for the deep approach was lower that on average. The students scored lower than average also in the interest and relevance factor. In addition, the values on generic competences, self-efficacy, and factors measuring collaboration were also below the average. This suggests that there may be some areas of improvement in terms of student engagement and skill development in these areas. One explanation could be that the short duration of the SAP, combined with an experience of higher workload than in most of the SAPs, did not enable students to go deep into the topic and fully engage in fruitful collaboration. Moreover, competing against other groups might cause pressure on the students and lower their self-efficacy beliefs. The group size was bigger than in the other SAPs, which might also influence the results.
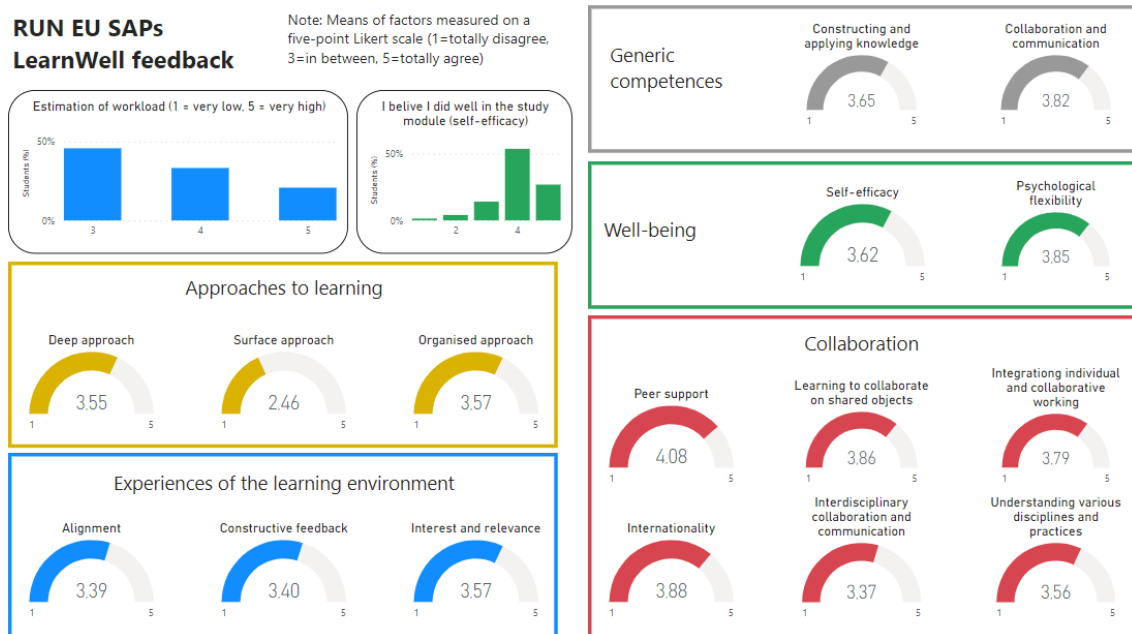
Figure 3. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAP *Design Expedition – Arctic Super Food Challenge*.

3.3. SAP 3: Drawing and Technology

This SAP aimed to provide an in-depth analysis of visual note taking and the methodology of *thinking on paper*; the process of making visual and contextual observations, and the subsequent stages involved in establishing connections for a meaningful narrative and composition. The SAP was worth 2 ECTS and consisted of a four-day online period and 5-day

contact session at IPCA. The SAP was targeted for 1st cycle students. The SAP included individual assignments and group work discussion, supervision, and presentations / final exhibition. The assessment of the SAP was based on individual participation, work process, project / development of drawings, presentations, and final exhibition. To SAP was assessed as Fail/Pass. Passing the SAP required attending at least 75% of the lectures and active participation in the final group presentation / exhibition. The SAP was organised by IPCA and TUS.

In this SAP, the students reported higher values on the deep approach to learning and lower values on the surface approach to learning compared to the overall mean values. Additionally, the students reported higher values on constructive alignment, interest, and relevance, indicating that they are motivated and engaged in their studies. The students also scored distinctively high on constructive feedback, indicating that they valued and benefitted from receiving feedback on their learning in this SAP. Finally, the students scored distinctively high on self-efficacy, indicating a strong sense of confidence and belief in their own abilities to succeed academically. Overall, these results suggest that the SAP managed to engage and motivate students extremely well, as well as provide meaningful feedback on their learning. The small group size (max number of participants was 20) and the focus only on bachelor-level students might influence the results, since it seems that the SAP was well designed to meet the needs of students at this level and enabled fruitful collaboration and feedback practices.
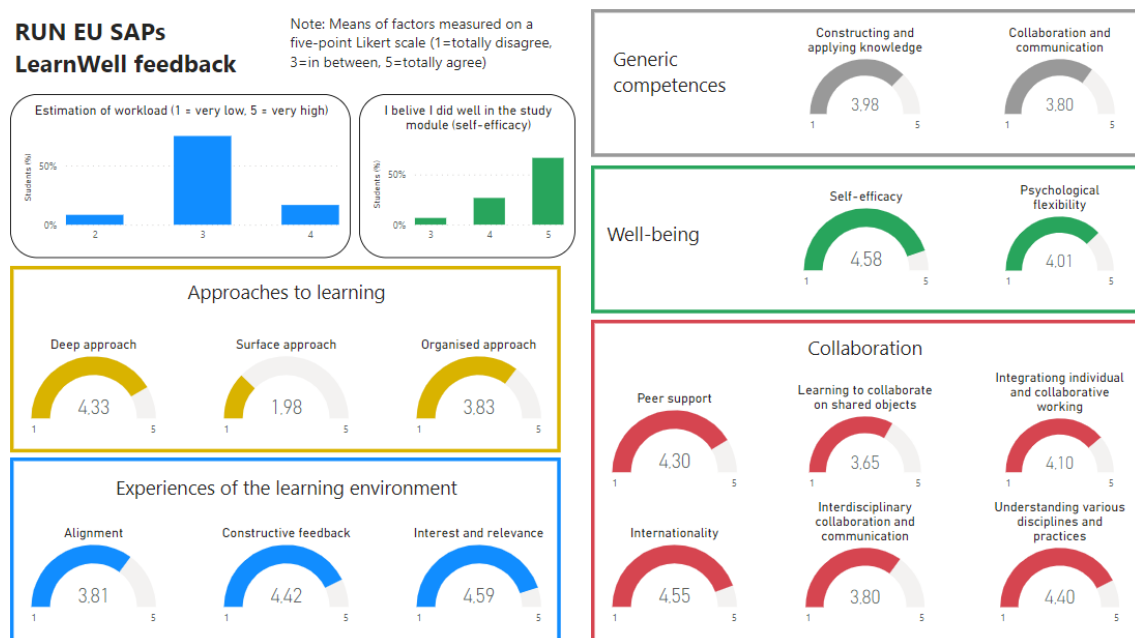

Figure 4. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAP *Drawing and Technology.*

3.4. SAP 4: Game Changing Games

The goal of the SAP was to understand how game designers can address complexities to incite change, fostering the sustainable co-existence of humans and the ecological systems. The aim was that the participants will be able to know crucial concepts and approaches of game design, be capable of developing and prototypically realizing a concept focussing on future challenges using games as a medium or creating playful experience, work in a multidisciplinary and multicultural team and finally, communicate solutions for societal real problems and challenges that demand innovation and a varied set of skills. The 3 ECTS SAP lasted four weeks, including a 3-week online period and 5-day contact week at IPCA. The SAP was offered for 1st cycle students, but 2nd and 3rd cycle students were also welcomed to attend. The SAP was based on peer learning and challenge-based learning, and it included group work, hands-on exercises as well as individual assignments. The SAP was assessed as Fail/Pass, and the assessment was based on group work, participation, work process, functionality of prototype, final presentation, assignments, and a final individual reflection report. The SAP was organised by FHV, IPCA and NHL Stenden.

In this SAP, the students reported higher values on the deep approach to learning, constructive feedback, and self-efficacy, and lower values on the surface approach to learning compared to the overall mean values. The students also scored high on the factors measuring generic competences, indicating that the SAP promoted skills and abilities in areas such as critical thinking, problem-solving, and communication. However, the experience of workload was relatively high. This could be due to the various types of learning activities included in the SAP (such as group work, assignments, prototyping, preparing a final presentation and individual reflection report). Despite the experience of heavy workload, the students were able to adopt the deep approach to learning and they experienced high self-efficacy in this SAP.
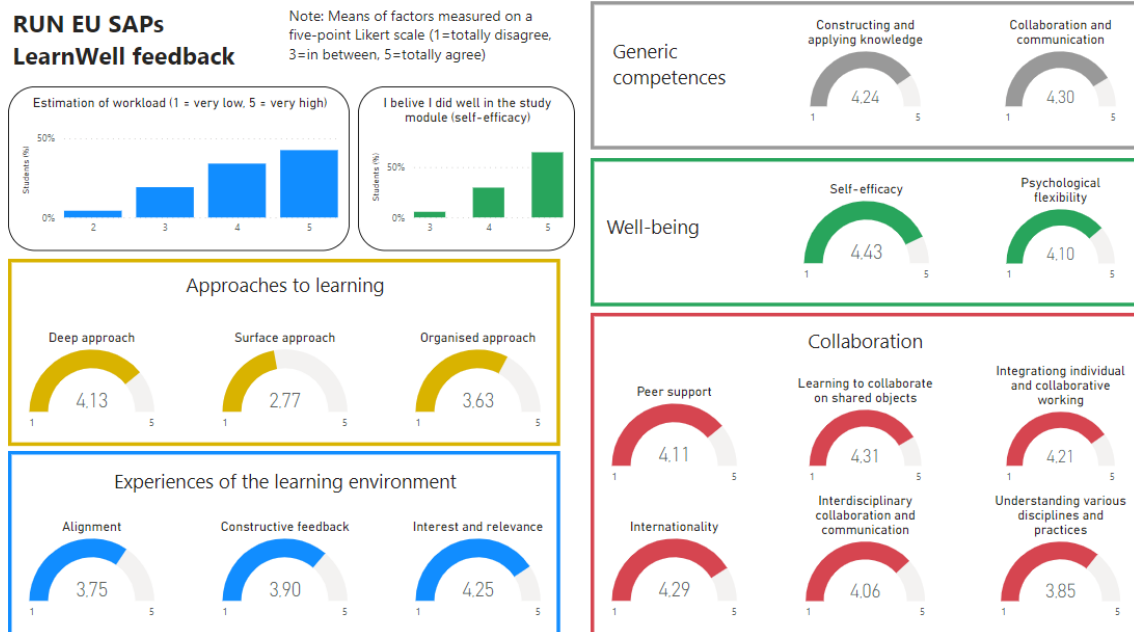
RUN EU SAPs LearnWell feedback

Note: Means of factors measured on a five-point Likert scale (1=totally disagree, 3=in between, 5=totally agree)

Estimation of workload (1 = very low, 5 = very high)

I belive I did well in the study module (self-efficacy)

Approaches to learning
- Deep approach: 4.13
- Surface approach: 2.77
- Organised approach: 3.63

Experiences of the learning environment
- Alignment: 3.75
- Constructive feedback: 3.90
- Interest and relevance: 4.25

Generic competences
- Constructing and applying knowledge: 4.24
- Collaboration and communication: 4.30

Well-being
- Self-efficacy: 4.43
- Psychological flexibility: 4.10

Collaboration
- Peer support: 4.11
- Learning to collaborate on shared objects: 4.31
- Integrationg individual and collaborative working: 4.21
- Internationality: 4.29
- Interdisciplinary collaboration and communication: 4.06
- Understanding various disciplines and practices: 3.85

Figure 5. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAP *Game Changing Games.*

3.5. SAP 5: Aspects of Wellbeing

This aim of this SAP was that the students will be able to foster innovation implementation while broadening perspective on how the business environment changes with regards to supporting a lower ecological footprint. Moreover, the aim was that students learn to balance and maintain a true ecological path while creating sustainable value for themselves and the society they are part of, as well as become an impact changer and nurture the passion for a healthy lifestyle that is harmless to the environment. Also transdisciplinary skills for adaptation to ever-changing environments and define and claim own wellbeing, personally and professionally. The SAP included four paths, from which the students chose one: Ecological path, Personal path, Financial path and Societal path. Wellbeing was addressed from the perspective of these four paths in the SAP. The SAP was short in duration, lasting 5 days at HAMK and being worth 1 ECTS. The SAP was offered to 1st cylce students and it was organised bty HAMK and FHV. The SAP included field visits, teamwork, coaching and final presentations. The assessment was Fail/Pass, and it was based on both self- and teacher assessment based on project outcomes. Active participation was required to pass the SAP.

Fourty-three students responded to the LearnWell questionnaire as follows:
Ecological path, N=7
Personal path, N=17
Financial path, N=4
Societal path, N=13

Because of the low number of respondents from the Ecological and Financial Paths, the responses are merged together, consisting a total of 41 responses.

In this SAP, the students reported average values on approaches to learning. Their scores on experiences of constructive alignment were lower as compared to other SAPs, but on the other hand, they scored relatively high on all the factors measuring collaboration. This suggests that the students were able to work effectively with others in diverse and cross-cultural contexts. In particular, the students scored especially high on internationality, indicating a strong ability to collaborate effectively with people from different cultural backgrounds. Overall, these results suggest that the students are well-equipped with the skills needed to succeed in a collaborative and diverse environment and the SAP was well organised in terms of supporting meaningful collaboration between the students. However, the low scores on constructive alignment indicate that the learning objectives might have not been fully clear to the students, and that the teaching and assessment methods could have been better aligned to support the achievement of the learning objectives.
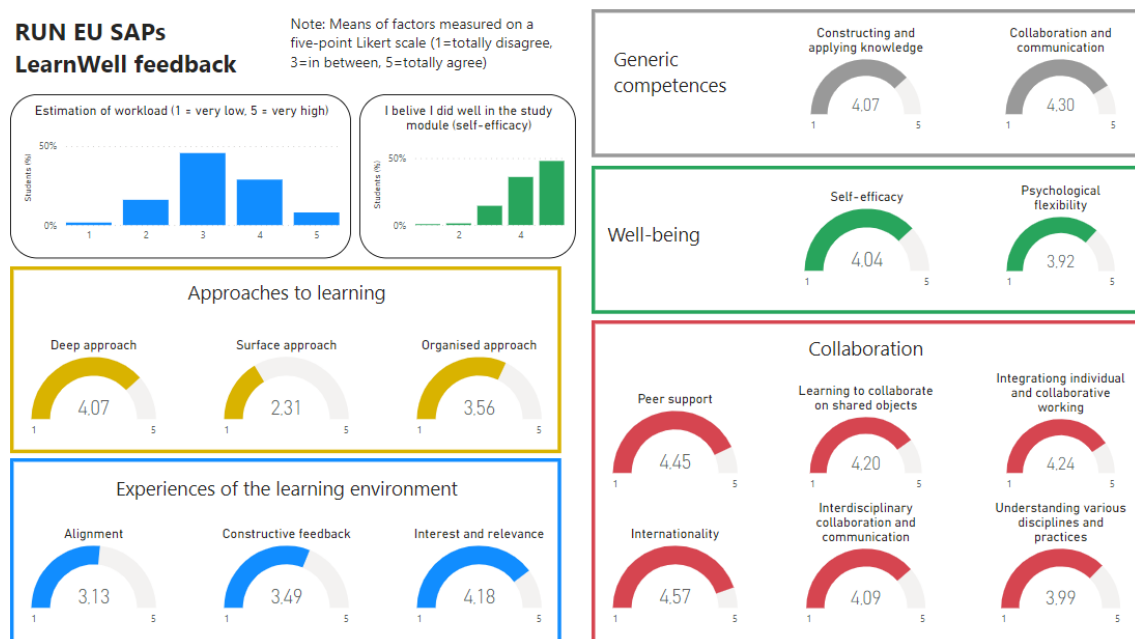

Figure 6. The mean values of the LearnWell factors measuring relevance, quality, and impact in the SAP *Aspects of Wellbeing.*

4. Further possibilities for using the LearnWell in RUN-EU

The use of the LearnWell in seven SAPs in 2021 and 2022 has shown the potential of the questionnaire in assessing the quality, relevance and impact of the SAPs from the students' perspective. Being a research-based instrument, it provides reliable information concerning students' experiences, learning processes and wellbeing. In some of the SAPs, the FASA has organized feedback sessions at the end of the SAPs based on the LearnWell results, which provides valuable information for the students about their responses and promotes their reflection of their own studying and learning. It also allows reflective feedback conversations between the students and the teachers. Often, students experience that surveys collected from them don't have much impact, and they do not receive any feedback from their responses. However, feedback is central to the development of student learning, and bi-directional, reflective feedback practices connecting the students and teachers are needed to promote effective and sustainable feedback processes (Carless et al., 2011). Therefore, the aim is to expand the feedback sessions in each SAP in 2023. This will be done in collaboration with all Institutional FASAs. The LearnWell data of each SAP will be analysed at HAMK's Institutional FASA and visualised in PowerBI. Each Institutional FASA can utilise the PowerBI in organising the feedback sessions for the SAPs their institution is responsible for. Institutional FASA members are trained to understand the basic principles of LearnWell and provide the feedback sessions by Central FASA.

In addition to promoting student reflection and awareness of their own learning and enhancing teachers' awareness of how students' experience the SAPs, the data can be used to detect best practices. For example, implementations showing exemplary feedback practices, or those supporting deep learning or student wellbeing, can be taken as good examples from which the good pedagogical practices are spread within RUN-EU to enhance the quality of teaching and learning. For this, more data is needed to allow more in-depth quantitative analyses. Moreover, data from all SAPs/JPs can be integrated for research purposes. This could provide valuable information for the overall development of SAPs and JPs within RUN-EU.

In addition to assessing students' learning experiences, FASA should also assess the teachers' teaching experiences. The next step is to consider how the teachers' perspective could be included in assessing the quality of the SAPs and JPs. The HowUTeach -tool, which focuses on the teachers' teaching processes, experiences of work environment (such as collegial support and autonomy) and teachers' wellbeing, provides one alternative for this. It is a research-based tool designed to support high-quality teaching in higher education (see Parpala & Postareff, 2021). In 2023, teachers' teaching experiences will be collected from SAPs thorough the HowUTeach -tool and open-ended questions. Combining students' LearnWell data and teachers' HowUTeach data will provide new perspectives to interpreting the data.

5. References

Asikainen, H., Salmela-Aro, K., Parpala, A., & Katajavuori, N. (2020). Learning profiles and their relation to study-related burnout and academic achievement among university students. *Learning and Individual differences*, *78*, 101781.

Carless, D., Salter, D., Yang, M., & Lam, J. (2011). Developing sustainable feedback practices. *Studies in higher education*, *36*(4), 395-407.

Cheung, K., Yip, T. L., Wan, C. J., Tsang, H., Zhang, L. W., & Parpala, A. (2020). Differences in study workload stress and its associated factors between transfer students and freshmen entrants in an Asian higher education context. *PloS one*, *15*(5), e0233022.

Muukkonen, H., Lakkala, M., Lahti-Nuuttila, P., Ilomäki, L., Karlgren, K., & Toom, A. (2020). Assessing the development of collaborative knowledge work competence: Scales for higher education course contexts. Scandinavian Journal of Educational Research, 64 (7), 1071–1089. 10.1080/00313831.2019.1647284

Parpala, A., Katajavuori, N., Haarala-Muhonen, A., & Asikainen, H. (2021). How Did Students with Different Learning Profiles Experience 'Normal'and Online Teaching Situation during COVID-19 Spring? *Social Sciences*, *10*(9), 337.

Parpala, A., & Lindblom-Ylänne, S. (2012). Using a research instrument for developing quality at the university. Quality in Higher Education, 18 (3), 313–328.

Parpala, A., & Postareff, L. (2021). Supporting high-quality teaching in higher education through the HowUTeach self-reflection tool. Journal for Professional Development, 4/2021.

Appendix 1. Scales, factors and items of the LearnWell questionnaire (items converted to fit the context of SAPs).

Scale	Factor	Item
Learning processes		
Approaches to learning HowULearn (Parpala & Lindblom-Ylänne 2012), modified from the ALSI questionnaire (Entwistle et. al 2003)	Deep approach to learning	I looked at evidence carefully to reach my own conclusion about what I'm studying. Ideas and perspectives, I came across while I was studying made me contemplate them from all sides. I tried to relate new material to my previous knowledge. I tried to relate what I learned in this SAP/JP to what I have learned elsewhere.
	Surface approach to learning	Often, I had to repeat things in order to learn them. I often had trouble making sense of the things I had to learn during the SAP/JP. Much of what I learned seems no more than unrelated bits and pieces. I was unable to understand the topics I needed to learn because they were so complicated.
	Organised studying	On the whole, I've been systematic and organised in my studying. I organised my study time carefully to make the best use of it. I put a lot of effort into my studying during the SAP/JP. I carefully prioritized my time to make sure I can fit everything in.
Experiences of the teaching learning environment		
Teaching-learning environment HowULearn (Parpala & Lindblom-Ylänne 2012) modified from ETLQ (Entwistle et al. 2003); some wording changed to fit the UAS context Collaborative Knowledge Procesess (CKP; Muukkonen et al., 2020) *Added after HAMK student focus groups	Alignment	It was clear to me what I was expected to learn in the SAP/JP . * The learning goals were clearly stated. What we were taught seemed to match what we weree supposed to learn. * Assessment seemed to focus on competences which are based on the learning goals. It was clear to me what was expected in the assessed work (i.e., final exam, exercises). I could see how the set work fit in with what we were supposed to learn. ** The teaching practices supported me to achieve the learning goals of the SAP/JP.
	Interest and relevance	I could see the relevance of what we were taught.

**Developed by HAMK Edu researchers		I found most of what I learned in the SAP/JP really interesting. I enjoyed participating in SAP/JP.
	Constuctive feedback	The feedback given on my set work helped to clarify things I hadn't fully understood. The set work helped me to make connections to my existing knowledge. The feedback given on my set work helped to clarify things I hadn't fully understood. I received enough feedback about my learning.
	Peer support	Students supported each other and tried to give help when it was needed. Talking with other students helped me to develop my understanding. I could generally work comfortably with other students.
	*(*) Work load	** The workload matched the received study credits. * Estimate the general workload of your studies in a scale 1 (very low workload) - 5 (very high workload).
	CKP: Learning to collaborate on shared objects	During the SAP/JP I learned to coordinate the development of products (e.g., presentations, plans, reports, models) together with others. During the SAP/JP I learned to take responsibility for the shared group work. During the SAP/JP I learned to plan the collaborative work. During the SAP/JP I learned to develop ideas further together with others.
	CKP: Integrating individual and collaborative working	During the SAP/JP I learned to understand how important the expertise of others is when developing products. During the SAP/JP I learned to define sub-goals for the collaborative work. During the SAP/JP I learned to understand the benefits of working in collaboration. During the SAP/JP I learned to accomplish challenging tasks in collaboration with others.
Experiences of competence development		
Generic competences Tuononen (2019); two dimensions Myllykoski-Laine et al. (2021) Collaborative Knowledge	OPTIONAL FOR SAPs AND JPs: Generic competences / Constructing and applying knowledge	I learned to apply theoretical knowledge to practice. I learned to analyse and categorise information. I learned to see things from different points of view. I learned to make arguments for my thoughts.

		During the SAP/JP I learned to solve problems in practical situations.
Procesess (CKP; Muukkonen et al., 2020) *Added after HAMK student focus groups **Developed by HAMK Edu researchers based on the Finnish National Agency for Education publication Osaaminen 2035 [Competences 2035]	OPTIONAL FOR SAPs AND JPs: Generic competences / Collaboration and communication	The SAP/JP developed my collaboration skills. Studying at the SAP/jp developed my skills in acting as a group member. During the SAP/JP learned how to get my points across in different interaction situations.
	OPTIONAL FOR SAPs AND JPs: CKP: Understanding various disciplines and practices	During the SAP I learned new aspects about the practices of different organisations. During the SAP I learned the practices of people with different kinds of expertise. During the SAP I learned about the practices of work-life experts. During the SAP I learned how useful it is to learn the working practices of other fields and organisations.
	OPTIONAL FOR SAPs AND JPs: CKP: Interdisciplinary collaboration and communication	During the SAP I learned to ask questions relating to the practices of another field. During the SAP I learned to present my expertise to representatives of another field. During the SAP I learned to collaborate with representatives of other fields.
	OPTIONAL FOR SAPs AND JPs: ** Internationality	The SAP developed my skills to understand people from different backgrounds and cultures. During the SAP I was able to develop my interaction skills required in international collaboration.
Study-related well-being		
Self-efficacy HowULearn (Parpala & Lindblom-Ylänne, 2012) modified based on Pintrich (1991)	Self-efficacy	I believe I did well in the SAP. I'm certain I could understand the most difficult material in the SAP. I'm confident I could understand the basic concepts of the SAP. At the beginning, I expected to do well in the SAP. I'm certain I could learn well the skills required in the SAP.
Psychological flexibility The work-related acceptance and action questionnaire (WAAQ; Bond et al., 2013), developed for the Finnish context (Asikainen et al., 2018)	Psychological flexibility	I could study effectively even if I had worries. I can admit mistakes I have made and still be successful in the SAP. I could study effectively even if I was nervous. My worries did not prevent me from succeeding in the SAP. I could do what was required of me in the SAP, despite any emotions I might have had. I could work effectively even when I had doubts.

		My thoughts and emotions did not create an obstacle to studying.

References of the LearnWell questionnaire

Asikainen, H., Hailikari, T., & Mattsson, M. (2018). The interplay between academic emotions, psychological flexibility and self-regulation as predictors of academic achievement. *Journal of further and Higher Education*, *42*(4), 439-453.

Bond, F., L. Joda, and N. Guenole. 2013. "The Work-Related Acceptance and Action Questionnaire (WAAQ): Initial Psychometric Findings and Their Implications for Measuring Psychological Flexibility in Specific Contexts." Journal of Occupational and Organizational Psychology 86 (3): 331–347.

Entwistle, N., V. McCune, and J. Hounsell. 2003. "Investigating ways of enhancing university teaching-learning environments: Measuring students' approaches to studying and perceptions of teaching." In Unravelling Basic Components and Dimensions of Powerful Learning Environments, edited by E. De Corte, L. Verschaffel, N. Entwistle, and J. van Merrienboer, 89-107. Oxford: Elsevier Science.

Helsingin yliopisto 2016. HowULearn. Verkkojulkaisu: https://blogs.helsinki.fi/howulearn/files/2013/04/HowULearn-2016-1-extrakandipalaute_suomeksi-1.pdf

Kember, D., Biggs, J., Leung, D. Y. P., 2004. Examining the multidimensionality of approaches to learning through the development of a revised version of the Learning Process Questionnaire. British Journal of Educational Psychology, 74, 261-280

Muukkonen, H., Lakkala, M., Lahti-Nuuttila, P., Ilomäki, L., Karlgren, K., & Toom, A. (2020). Assessing the development of collaborative knowledge work competence: Scales for higher education course contexts. *Scandinavian Journal of Educational Research, 64 (7), 1071–1089. 10.1080/00313831.2019.1647284*

Myllykoski-Laine et al., (2021). Manuscript submitted for publication.

Opetushallitus (2019). Osaaminen 2035: Osaamisen ennakointifoorumin ensimmäisiä ennakointituloksia. Raportit ja selvitykset 2019:3. https://www.oph.fi/sites/default/files/documents/osaaminen_2035.pdf

Parpala, A. & Lindblom-Ylänne, S. (2012). Using a research instrument for developing quality at the university. Quality in Higher Education, 18 (3), 313–328.

Pintrich, P. R. (1991). A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ).

Tuononen, T. (2019). Employability of university graduates: The role of academic competences, learning, and work experience in the succesfull transition from university to working life. Academic dissertation, University of Helsinki. http://urn.fi/URN:ISBN:978-951-51-5123-0

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