UNIVERSITY TEACHERS' PERCEPTION OF ENHANCING LEARNING TO LEARN COMPETENCE IN HIGHER EDUCATION

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Abstract. Learning competence is perceived as a key competence for lifelong learning. However, it is not clear how teachers can effectively help students develop into self-regulated, lifelong learners.

The aim of the study was to find out how university teachers perceive students' learning to learn competence, as well as if and how often teachers in higher education incorporate the developing learning skills of students into their study programs and what the reasons are for doing or not doing so.

The participants of the study were teachers of the Estonian Military Academy and the Narva College of the University of Tartu. The questionnaire was administered and included open-ended questions on teachers' perception of learning to learn competence and the importance of developing this competence. It also comprised statements about teaching practices, which the participants had to mark according to how often they did them, bringing out the challenges they face.

The study revealed that university teachers recognise the importance of developing students' learning to learn competence but often focus more on content delivery, assuming students are already self-regulated learners. Teachers also noted that enhancing their own proficiency in learning strategies and involving diverse subjects throughout the study period could improve the development of students' learning to learn competence.

Keywords: learning to learn competence, higher education

Võtmesõnad: õpioskused, kõrgharidus

1. Introduction

The world is changing so fast that it may be difficult to determine what knowledge will be relevant in the future, and therefore what people need today is the ability to learn. Learning competence has been seen as a key competence for lifelong self-regulated learning. Having reviewed several studies in the field, Dignath and Veenman (2020)[1] conclude that, although it is generally agreed

[1] At the request of the author an in-text referencing style (APA) is used.

that self-regulated learning is important for academic success and lifelong learning, it is still not clear how teachers can most effectively help their students develop into self-regulated learners.

Alongside the term 'learning competence', the meaning and importance of 'self-regulated learning' needs explaining. A self-regulated learner takes greater responsibility for their success, is motivated to accomplish academic tasks, can set realistic goals, and is able to use, monitor and adjust appropriate learning strategies to ensure academic success (Zimmerman, 1990). Thus, developing self-regulatory skills will be beneficial for both students and teachers (Cazan, 2013). Self-regulation is not a personality trait and self-regulated learning is not easy, but systematic support in this enhances students' academic achievement at all levels of education (Dignath & Werf, 2012). Therefore, we should ask who should teach these important skills to our learners, when and how.

Higher education students are often expected to be self-regulated, possessing strong learning skills, which Hattie et al. (1996) define as the strategies and tactics students use to manage themselves. However, not all students may have developed effective learning skills. While some students may be able to cultivate these skills independently, many still struggle to do so. Therefore, we contend that these learning skills should be taught to help students develop into successful lifelong learners, a task where university teachers can play a crucial role. Whether university teachers see teaching learning to learn competence—which encompasses not only learning skills but also students' attitude, motivation and behaviour—as part of their duty is not clear.

Research in the field of education has also revealed that students frequently have unsuitable learning habits and prejudice towards learning (Gogus & Arikan, 2008; Männamaa & Kikas, 2005) which may result in the absence of effective learning skills, thus bringing about learning challenges. In addition, it has been found that some students may lack the self-evaluation and metacognitive abilities which are necessary to identify issues in their learning processes (Nordell, 2009). We believe that effective self-regulated learning could additionally bring about a greater sense of achievement and engagement, as well as motivation.

The importance of the development of learning to learn competence is also emphasised by Higgins (2009) who claims that learning to learn competence will be a crucial component of education in the future as it will enable students to reach their full potential. However, the question arises at which education level such crucial competence should be developed.

Far too often the need for learning to learn competence to be taught is overlooked by teachers in higher education, and students are not effectively prepared to learn on their own. As Zimmerman (2002, p. 69) states:

> *Students are seldom given choices regarding academic tasks to pursue, methods for carrying out complex assignments, or study partners. Few teachers encourage students to establish specific goals for their academic work or teach explicit study strategies. Also, students are rarely asked to self-evaluate their work or estimate their competence on new tasks.*

In his review article on self-regulated learning Panadero (2017) points out that, according to several studies, teachers in higher education tend to focus on course content and do not provide many opportunities for scaffolding self-regulated learning.

Baldan Babayigit & Guven (2020) found that by the end of higher education the self-regulated learning skills of students remained the same or had even deteriorated. Fredriksson and Hoskins (2007) go even further, saying that it is important to develop learning to learn competence in all citizens across their whole lifetime and through different learning environments. We believe that students with poorer learning skills should not be left behind and that higher education should not only involve content learning but also learning how to learn more effectively to be successful in this rapidly changing globalised world.

The reasons why teachers in higher education do not pay attention to enhancing students' learning skills may be different: teachers feel that they have to focus on content, and in a densely-packed curriculum they have no time for developing learning skills in learners (Saks et al., 2020), or they may just assume that students have acquired sufficient learning skills in the previous stages of their education. However, previous research in this field conducted in Estonia and elsewhere (Granström et al., 2022; Hennok et al., 2022; Hennok, 2019; Kikas & Jõgi, 2016; Vandevelde et al., 2012; Ornstein et al., 2010) has revealed that students do not know how to implement effective learning strategies (e.g. summarisation, spaced repetition, self-explanation, etc.) and prefer ineffective strategies instead (e.g. cramming, rereading, underlining, etc.) because there is only little stimulation for self-regulated learning and students' knowledge of effective learning strategies is rather poor, while teachers' knowledge of learning strategies seems to be rather good.

In addition, teachers may not have adequate ideas for how to integrate the development of students' learning to learn competence into their study design

because they lack knowledge of techniques for enhancing competence (Saks et al., 2021). Teachers may have good knowledge of learning strategies but it is not clear which ones are really implemented in the learning process (Granström & Kikas, 2023). However, in order to be able to choose appropriate learning strategies, to understand their needs and to be able to make conscious decisions concerning their learning, students need guidance (Merilo et al., 2021).

Thus, it is crucial that teachers at any education level spread their knowledge about learning strategies among their students in order to facilitate their students' learning. However, the question remains: are university teachers adequately prepared and willing to undertake this responsibility?

The aim of the current study was to find out how university teachers perceive students' learning to learn competence, as well as if and how often teachers in higher education incorporate developing learning skills into their study design and what the reasons are for doing or not doing so. Based on the findings, suggestions can be offered to support teachers in finding ways to teach learning skills to students.

2. Theoretical framework

2.1. Learning to learn competence

'Learning to learn competence', 'learning competence', and 'learning skills' seem to be the terms used interchangeably in literature (e.g. Lewis, 1998; Ning & Downing, 2010; Letina, 2020; Kilag et al., 2023); however, some authors differentiate between skills and competence. As Tiana (2004, p. 73) puts it in his article discussing developing key competences in education, competence has a broader meaning than skill and it is considered to include several skills.

> *Learning to learn is a process which focuses on an individual's self-awareness as a student, which includes one's motivation to learn, one's learning goals, preferred learning strategies, and cooperation with other students* (Letina, 2020).

In other words, you have to understand who you are as a learner and develop strategies on how to learn. Learning to learn means that you are aware of yourself as a learner and you are able to adjust these strategies.

Learning to learn competence comprises the ability to plan and organise your own learning in both individual and group situations, as well as the ability to solve problems, efficiently manage time and information, and

accept, apply and assess new knowledge in a range of contexts (European Parliament and Council, 2006). This competence

> *makes people aware of how and why they acquire, process and memorize different types of knowledge. In this way, they are in a position to choose the learning method and environment that suits them best and to continue to adapt them as necessary* (Eurydice, 2002, p. 16).

In this process, people discover learning; they discover principles and skills which they can use to help them learn more effectively and so become lifelong learners.

However, learning to learn must be discussed in conjunction with the learning context, and the interaction between the learner and the facilitator of learning must be taken into account (Hoskins & Fredriksson, 2008). The classroom, youth club, work environment, home, peers, and adult learning centres are some examples of different learning contexts, and the facilitator could be a teacher or peer, or a youth worker for instance (Hoskins & Fredriksson, 2008).

In Helsinki University, a framework for assessing learning to learn was developed; they define learning to learn as

> *the ability and willingness to adapt to novel tasks, activating one's commitment to thinking and the perspective of hope by means of maintaining one's cognitive and affective self-regulation in and of learning action* (Hautamäki et al., 2002, p. 39).

According to this definition, learning to learn competence is activated when a person is motivated to face a novel task that fits well with their knowledge, and self-regulation which includes planning and monitoring is also important in learning to learn. On the other hand, learning to learn in the European Reference Framework for lifelong learning is seen as a competence that goes beyond self-regulated learning and should be understood within a framework that also considers social, emotional, and creative factors (Pirrie & Thoutenhoofd, 2013).

2.2. Learning strategies

Learning strategies is a concept which is similar to the concept of learning to learn. Learning strategies are intended to support and facilitate the learning process, helping the learner to achieve their learning goal. It is assumed that different people learn in different ways and, by helping learners to choose suitable learning strategies, you help learners to learn more effectively. That

also includes the ability to self-reflect on the learning process. However, in addition to learning strategies, learning to learn competence involves motivation, curiosity and self-esteem (Hoskins & Fredriksson, 2008). Thus, learning strategies are a series of procedures which a student chooses in order to facilitate the acquisition, storage and use of information.

Learning about different learning strategies and learning how to implement them is time-consuming and requires special effort from the student (Dehn, 2011), but it is essential for academic success. Implementing effective learning strategies will eventually shorten the time devoted to learning and facilitate the acquisition of information. All students employ learning strategies but only self-regulated learners implement learning strategies systematically and purposefully (Zimmerman, 1990).

According to Mariani (2002), learning strategies are to support and help a student make the most of their learning process, especially in new tasks, but they also have an affective-emotional role, providing the student with the feeling that success in learning is in their own hands. He goes further, claiming that there are no intrinsically proper or improper strategies and each student has to choose the ones that suit them personally. The latter idea was also expressed in a case study where all interviewed teachers stressed that it is crucial for students to explore the strategies themselves and discover the ones most effective for them in particular situations (Listyani, Setyaningrahayu, & Thren, 2023). All this leads to a further question: are students aware of the full range of strategies that they could choose from?

Having examined different studies, Weinstein et al. (2011) conclude that there are a number of interventions developed to help college students become more strategic and self-regulated learners, ranging from creating learning centre handouts and brief workshops to semester-long learning-to-learn courses, and teaching learning to learn as part of course content. In order to be useful to them, students need to know the basic definition of the strategy, how to use it, and under what conditions it may be more or less useful for them. McCabe (2010) suggests that students' awareness of the effectiveness of learning and memory strategies is low or non-existent.

2.3. The importance of intervention in learning skills

Self-regulatory learning skills are difficult to achieve (McMahon & Oliver, 2001) and we argue that it cannot be taken for granted that students possess sufficient self-regulatory learning skills. Thus, it is necessary to find ways to effectively scaffold self-regulated learning strategies throughout the learning

process as well as teach these skills to the students. As McMahon and Oliver (2001, p. 1300) put it:

> *If an educator's role is to assist students in becoming better learners, then courses need to be designed not just to meet specific unit outcomes but to scaffold the development of learner's self-regulatory skills.*

In order to learn about and be able to use self-regulated learning strategies, students need powerful educational interventions (Boekaerts, 1999). Panadero (2017) concludes that self-regulated learning interventions are important to improve students' learning, and the effect depends on their educational level, with a higher impact when used at earlier educational stages.

In their review article, Dignath and Veenman (2020) stress the importance of teaching self-regulated learning strategies so that students can develop metacognitive knowledge and skills in order to successfully apply them in their learning process. According to Saks & Leijen (2015), the metacognitive process encompasses the learner's capacity to regulate their learning activities, particularly in terms of planning, monitoring, and assessing their learning efforts, as well as their willingness to take responsibility for their learning process and its effectiveness.

Reviewing research that aims to foster self-regulated learning, Bannert and Reimann identify general principles for effective instruction: 1) instruction on self-regulated learning should be integrated with the domain-specific instruction, i.e. embedded in the subject matter; 2) the application conditions and the usefulness of self-regulated learning strategies have to be explained to students; 3) students should be allocated sufficient training time in order to automatise the self-regulated learning strategies and skills (Bannert & Reimann, 2012).

Several studies into the matter show how crucial it is to promote intervention initiatives in order to foster the appropriate use of learning strategies. According to McCabe (2010, p. 474):

> *educational intervention, in the form of targeted instruction on learning and memory topics, may have the potential to improve metacognitive awareness of factors associated with academic success.*

In a study with psychology students, Cazan (2013) revealed that interventions which teach a combination of metacognitive and cognitive strategies can effectively enhance self-regulation skills. In addition, cognitive self-regulation training had a positive impact on motivation and behaviour, although no specific training was given. The teaching methods that promoted self-reflection

and guided students' goal setting and expectations led to a higher level of self-regulation, the use of more adaptive learning strategies, and the ability of students to organise their learning environment. In the same study it was also concluded that interventions should last for a longer time period to facilitate the acquisition and use of self-regulated learning strategies. (Cazan, 2013)

In Pelton's study with students majoring in sociology (Pelton, 2014), interventions were made throughout five semesters to develop learning strategies with the aim of understanding whether teaching about learning leads to students adopting more self-regulatory behaviours; the study reported a positive impact of these activities on students' motivation as well as their use of cognitive and metacognitive strategies.

Martins and Santos (2019) conducted a study into the use of learning strategies by new university students, and the data from the study confirm the need to work on self-regulation strategies of learning at university level in order to develop the active, reflexive and critical posture of university students. According to Martins and Santos, it is particularly important to set the focus of these educational actions on the development of metacognitive strategies.

Research conducted in Estonia with first year university students participating in a language course (Saks & Leijen, 2015) showed that it is possible to advance students' self-regulation if prompting is used to support students' cognitive and metacognitive learning strategies. Embedding prompts into assignments resulted in better intrinsic motivation in students as well as control of their learning beliefs. Consequently, the students were better at planning and evaluating their own learning process (Saks & Leijen, 2015).

This all leads to the understanding that it is important to address the question of how university teachers can better support the development of self-regulated learning skills among students, ultimately leading to more effective teaching practices and improved student outcomes.

3. Method

The aim of the study was to find out what the university teachers' perception is of learning to learn competence and its development in higher education. To this end, the following research questions were posed:

1. How do university teachers understand learning to learn competence?
2. How often during their subject course do university teachers use activities for developing students' learning to learn competence?

3. What are the challenges university teachers face when developing learning to learn competence in students?

In order to answer the research questions an electronic questionnaire was administered in the e-learning environment ILIAS. The method of the electronic questionnaire was chosen to reach university teachers who often work different hours or even in different institutions simultaneously, giving them the autonomy of time to respond. Participation was voluntary and all participants were informed that the analysis would be non-personalised. The questionnaire was in the Estonian language and included multiple-choice and open-ended questions focusing on teachers' perception of learning to learn competence and the importance of developing such competence. The participants were also asked about their teaching practices and the challenges they face when teaching learning skills to their students.

The sample for the study consisted of 22 university teachers, with 14 university teachers from the Estonian Military Academy and 8 from Narva College of the University of Tartu. Both institutions are oriented on applied higher education with a relatively small number of staff. In the case of the Estonian Military Academy, the largest proportion was made up of university teachers whose teacher training was limited to a course on pedagogy or who had no pedagogical training. In the case of Narva College, the majority of respondents had a master's or doctoral degree in pedagogy or had received further training in pedagogy.

The respondents were relatively evenly distributed across age groups: 4 (18.1%) were aged 25–34 years, and in the age groups 35–44 years, 45–54 years and 55 years or older there were 6 participants in each (27.3%).

The respondents were distributed according to their teaching experience as follows: 4 (18.2%) respondents had less than 1 year of teaching experience, 3 (13.6%) had 1–5 years, 2 (9.1%) had 5–10 years, 2 (9.1%) had 10–15 years, 4 (18.2%) had 15–20 years, and 7 (31.8%) had over 20 years of teaching experience.

A qualitative data analysis of open-ended questions was supported by the web-based software package QCAmap (Mayring, 2022). An inductive approach was used to sum up the content of open-ended questions. The codes were derived from the responses and then combined with theory by grouping the ideas by the main themes presented in theoretical sources (e.g. student's abilities, skills, methods of development, etc.). The authors undertook parallel coding in order to guarantee uniformity in the interpretation of the data. The authors discussed the codes and reached a consensus.

Table 1. Respondents by institution and pedagogical training

Institution / pedagogical training	Number
Estonian Military Academy	14
Pedagogical course as part of specialised studies or applied higher education (e.g. instructor training, etc.)	5
Bachelor's degree in pedagogy	1
Master's or doctoral degree in pedagogy	3
Continuing education in pedagogy	1
None	4
UT Narva College	8
Bachelor's degree in pedagogy	1
Master's or doctoral degree in pedagogy	3
Continuing education in pedagogy	3
None	1
Total	22

4. Results and discussion

In the following section the results of the study are presented following the research questions. The results are discussed and compared with previous research or theory.

1. How do university teachers understand learning to learn competence?

In order to answer the first research question, open-ended questions were presented in the questionnaire: participants had to describe what competence, in their opinion, students must possess to be successful in their studies and how important it is, in their opinion, to develop students' learning to learn competence in higher education.

In their answers the respondents viewed learning to learn competence as students' ability to manage their studies in a way that ensures successful outcomes. This includes the ability to make connections between existing knowledge and understanding what they already know and what they need to know. To achieve this, students must be able to plan their time effectively so that educational tasks are completed successfully and they attain the

intended learning outcomes. This result concurs with what Hautamäki et al. (2002) defined as learning to learn. The results indicated that the respondents regarded goal-setting, selecting appropriate learning methods, reflecting on the learning process, and adjusting learning activities accordingly as essential components of students' learning to learn competence, aligning with Letina's (2020) definition.

The idea of collective learning skills was also presented. These were defined by the university teachers as the implementation of a mutually agreed-upon plan within a group. This aligns with the framework proposed by Pirrie & Thoutenhoofd (2013) including social factors.

As for the methods of learning to learn development, the respondents considered it important to discuss with students how they can more easily grasp the subject matter and how to more easily extract important information from learning materials. This also involves discussing different learning styles and how memory works. In addition, the respondents help their students to set learning goals, encourage them to visualise, take notes, ask questions, create concept maps, and make summaries of the material learnt. They also reported encouraging students to plan tasks in stages over a longer period of time. The respondents use the application of knowledge in practice and reflection with their students to develop students' learning to learn competence.

The respondents argued that learning skills can be consciously developed and applied by students or they can be subconsciously imitated based on a role model, and mentioned that in order to be successful in learning students must understand the teacher and vice versa. The relationship between students and the teacher should be respectful and supportive, as also discussed by Hoskins & Fredriksson (2008) who consider it important to take interaction between the learner and the facilitator of learning into account.

About 60% of the respondents viewed enhancing students' learning to learn competence in higher education as very important, and nearly 30% considered it important. This perspective stems from the belief that learning to learn competence is integral to lifelong learning and should be cultivated at all educational stages, as also stated in previous works (Boekaerts, 1999; McCabe, 2010; Cazan, 2013; Panadero, 2017; Dignath & Veenman, 2020). Only about 11% found that this competence must be achieved prior to higher education, and thus it is of little importance to develop it in higher education. It is essential to note that those who considered it important to enhance learning skills in higher education also agreed that the competence should be acquired at earlier stages of education, but admitted that most of the time this is not the case and students often come to higher education with very little or

even non-existent learning skills. Interventions are said to be more effective when used at earlier educational stages (Panadero, 2017) but, according to one respondent, "it is crucial to support students in developing their learning skills to mitigate academic failures and foster a sense of accomplishment", regardless of their educational level. This notion was also supported by Fredriksson & Hoskins (2007) who posit that learning to learn competence should be cultivated throughout the entire lifespan of all individuals, as well as Männamaa & Kikas (2005, p. 20) who emphasised that "these skills should be enhanced/taught at every age, but in different ways". It was also concluded in the responses that it is the fundamental goal of higher education to teach students learning skills in order for them to be able to find solutions rather than merely memorise facts.

2. How often during their subject course do university teachers use activities for developing students' learning to learn competence?

To address the second research question, respondents indicated the frequency of their use of the learning strategies outlined in the questionnaire using a scale ranging from never (0) to once during the course (1), a few times during the course (2), and consistently throughout the course (3).

Table 2. Frequency of learning strategies used by university teachers

		Arithmetic mean M	Standard deviation SD
Methods	I use learner self-assessment, such as review questions or self-check tests.	2.3	0.79
	I introduce learners to reading strategies, e.g. predicting content, generating questions, and seeking detailed information.	2	0.89
	I distribute learning materials in print so that learners can underline/highlight important sections in the text.	1.6	0.89
	[Reversed statement] I encourage learners to take verbatim notes of the lecture/class content.	1.7	0.9

		Arithmetic mean M	Standard deviation SD
Metacognition	I encourage learners to reflect on their own learning by providing questions.	2.6	0.62
	I ask learners to share their analysis of their learning experience with their peers and me.	2.1	0.81
	At the end of the topic, I have learners analyse whether they achieved the learning goals they set for themselves and how they did so.	1.9	0.77
	Before starting a new topic, I have learners think about and write down what they already know about the topic and what they want to learn more about.	1.9	0.72
Memory techniques and improving memorisation	During class, I provide the opportunity for learners to summarise what they have learned, either verbally or in the form of a mind map/diagram, and share it with their peers.	2.5	0.82
	I encourage learners to spread out their studying over a longer period of time.	2.4	0.81
	I encourage learners to reread the material multiple times to master the subject matter.	2.3	0.78
	I introduce learners to memory strategies, e.g. visualisation, systematisation, repetition, and note-taking.	2.2	0.75
	I encourage learners to take breaks in their studying to forget (and to return to the material after some time).	1.7	0.87
	(Reversed statement) I encourage learners to put in the most effort just before the exam/test.	1.3	0.7
Planning	When assigning independent work, I provide guiding questions for planning and completing the task.	2.9	0.25
	I discuss time management with learners.	2.4	0.62
	I encourage learners to systematise the study material.	2.3	0.86
	I discuss with learners the creation of a suitable learning environment.	2.1	0.85
	I start a new topic with a task where learners themselves derive rules that would allow the best learning outcome to be achieved.	1.3	0.6

Note: The activities were evaluated on the scale: never (0), once during a course (1), a few times during a course (2), throughout a course (3).

The study revealed that the learning skill development techniques most frequently used by university teachers fall within the categories of planning and memory. For example, students are often given guiding questions for task planning and execution, and this activity showed the least variability among the respondents (M=2.9, SD=0.25). Similarly, discussions with students about time management or directing them to systematise study materials were reported (M=2.4, SD=0.62 and M=2.3, SD=0.86, respectively). Among the activities aimed at improving memory and retention, summarising what has been learnt (M=2.5, SD=0.82), spacing out the learning over a longer period of time (2.4, SD=0.81), and reviewing the learning material repeatedly (M=2.3, SD=0.78) were reported as the most frequent. Reflecting on learning to develop students' metacognitive skills is also frequently utilised (M=2.6, SD=0.62). Among teaching methods, student self-testing was highlighted as more frequent (M=2.3, SD=0.79).

Reversed statements, which are not generally considered to contribute to effective learning according to learning theory, are not generally used much (verbatim note-taking M=1.7, SD=0.9; encouraging last-minute effort just before exams M=1.3, SD=0.7).

However, the use of a number of beneficial metacognitive methods was reported relatively infrequently (e.g. students' self-analysis of existing or required knowledge, or assessing their achievement at the end of learning). Similarly, the effective use of forgetting as a strategy and self-imposed rule-setting was little reported. Nevertheless, according to the contemporary approach to learning, learner-centred learning has been recognised as effective. Therefore, these activities could be more prominently featured in university teachers' repertoires.

The study did not find that the use of teaching strategies had any relation to the age or teaching experience of the respondents. However, it was found that if a university teacher considers the development of learning skills important then he/she is more likely to introduce reading and memory strategies frequently. For both, there was a strong statistically significant correlation (Spearman's correlation coefficient $r=0.74$, $p<0.01$), and a moderate statistically significant correlation with the use of achievement of the set goals at the end of learning ($r=0.64$, $p<0.01$).

In addition, correlations among all potential methods for enhancing learning skills were analysed in the study in order to identify which methods are most likely to be simultaneously used by a university teacher. Two main patterns emerged: a focus on rational reflection, planning, and goal-setting; and a focus on the implementation of practical techniques, methods, and

strategies. For example, if a university teacher more frequently reports discussing time management with learners, this also correlates with the analysis of existing and required knowledge ($r=0.73$, $p<0.01$), creating a suitable learning environment ($r=0.72$, $p<0.01$) and orienting students' learning to a longer time span ($r=0.53$, $p<0.05$). If a university teacher uses the introduction of reading strategies, this also correlates with the introduction of memory strategies ($r=0.80$, $p<0.001$) and the analysis of existing and required knowledge ($r=0.63$, $p<0.01$). Goal-setting (analysing the achievement of goals at the end of a topic) correlated with working out rules in order to achieve the best outcomes ($r=0.63$, $p<0.01$).

3. What are the challenges university teachers face when developing learning to learn competence in students?

In order to answer the third research question, two open-ended questions were included in the questionnaire: What factors hinder the development of learning to learn competence in your subject? What would facilitate the development of learning to learn competence in your subject?

The study showed that most university teachers find it difficult to develop students' learning to learn competence. The primary challenge arises from time constraints driven by the necessity to cover course content, a factor also highlighted in the study by Saks et al. (2020). At the same time, one additional factor was identified: university teachers' insufficient knowledge of effective methods for developing learning skills. As Saks et al. (2021) also claimed, teachers may lack sufficient understanding of how to incorporate the development of students' learning to learn competence into their study design. The issue is also subject-specific, e.g. language teachers and those teaching youth work find it easy to integrate developing learning skills in their subjects.

Another hindering factor highlighted by the respondents was the students' attitude towards developing learning to learn competence. There are students who prioritise exam results over broader skill development. As Gogus & Arikan (2008, p. 2) also put it, "Most students start their university lives with their minds conditioned to test solving and memorization as opposed to learning."

However, it was also admitted that it is not necessary to develop students' learning to learn competence in the subject classes. This seems to contradict the foundational principles of lifelong learning and one of the principles suggested by Bannert and Reimann (2012), stating that guidance on self-regulated learning should be embedded within the subject matter. This, in turn, leads us to the conclusion that it is necessary to raise awareness of these principles among university teachers.

In order to cope with the challenges, the respondents viewed enhancing their own proficiency in effective learning strategies as a viable approach. What is more, they pointed out the need for additional time to plan lessons conscientiously in order to integrate those elements essential for fostering learning to learn competence in students. Developing students' learning to learn competence also requires teachers to be self-disciplined and persistent. Sustained enhancement of students' learning to learn competence can be achieved by involving diverse teachers and subjects throughout the students' entire study period.

5. Conclusions

There are certainly limitations to generalising the results of the study, primarily due to the relatively small sample size and the fact that all respondents were those who took interest in participating in the survey. Therefore, it cannot be claimed that the findings regarding the enhancement of learning to learn competence reflect the preferences of a broader range of university teachers. Instead, this study is aimed at raising the question of whether university teachers need to consider developing learning to learn competence as an essential competency for lifelong learning as well as the importance of the issue as such.

In conclusion, university teachers participating in the current study were aware of the necessity of students to acquire learning skills, but did not often incorporate teaching these skills into their study design. They tend to focus predominantly on teaching content knowledge, often neglecting the development of students' learning to learn competence because they believe that students entering higher education are already self-regulated learners. What is more, university teachers recognise the importance of enhancing students' learning to learn competence, but they often lack the knowledge and experience to do so effectively and thus they do not persistently develop learning skills in students.

Nevertheless, the study provided insights into university teachers' perceptions regarding the development of students' learning to learn competence and provided a basis for developing more effective future interventions to enhance such competence. The study also revealed that university teachers themselves must be instructed in effective learning strategies and how to teach them before they can effectively impart these strategies to students.

Also, university teachers' persistence and the regularity of their interventions are of the utmost importance. As Saks (2020) points out, when teachers

of different subjects employ various activities at different times students also come to understand that learning should be approached consciously in every class and every course. This fosters the development of metacognitive learning skills that extend beyond specific subjects and can be applied universally throughout lifelong learning.

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