Future Primary School Teachers' Achievement Motivation in Remote Learning Process

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Abstract

Thesis. The aim of the study was to determine the level of achievement motivation of future primary school teachers during remote learning, as well as to describe each of the study dimensions characterising the achievement motivation.

Methods. The study involved 162 (N=162) first-course students from Latvia, two of them were male. The study raised three research questions. RQ1: At what level do students assess each of the study dimensions that characterise the achievement motivation? RQ2: What factors hinder students from taking the initiative in the study process? RQ3: How do students monitor the quality of task performance? This paper defined five study dimensions to be assessed by students: initiative, persistence, quality of task performance, self-efficacy, seizing and exploiting opportunities.

Results. The study found that four of the previously mentioned dimensions were highly assessed by the students. The dimension that characterises the persistence was assessed at a medium level. The students believe that lack of time, family conditions, and full-time work accompanying their study are the most common factors that hinder learning initiatives. To monitor the quality of task performance, most students bear in mind the assessment criteria provided by the lecturer, which are used as indicators to achieve an excellent result.

Conclusion. The study concluded that the students also have a high motivation for achievement when studying remotely. In further studies, it is necessary to determine if any significant changes happen in the long run related to students' achievement motivation when remote learning continues.

Key words: achievement motivation, initiative, persistence, quality of task performance, self-efficacy, future primary school teachers, remote learning

Introduction

The Covid-19 pandemic affects the higher education system all over the world. As a result, some universities switch the study process to remote learning, which leads to positive and negative impacts on students.

For example, Pravat Kumar Jena (2020) believes that although the pandemic destabilised all activities in higher education, it has produced several positive features: moving to blended learning; increasing the use of learning management systems; enhancing the implementation of digital learning material; improvement in collaborative work; rise in the number of online meetings; improving digital literacy; better time management (Jena, 2020). Remote learning has a more positive effect on those people who tend towards introversion, as they maintain a strong interest in learning either face-to-face or remotely (Smith et al., 2021).

The question of how to maintain motivation to study remotely is becoming increasingly important in times when learning, work, and private life come all together. Motivation is what drives persons and makes them want and do different things. Lyle Spencer and Signe Spencer (1993) believe that one of the types of motivation is motivation to achieve. Achievement motivation is a consistent striving force of an individual to meet particular standards (Sarangi, 2015), which determines further academic and professional success (Kołodziej, 2010), and includes the need not only for success but also the fear of failure (Beulahbel Bency, 2019). Achievement motivation focuses on measuring performance according to defined standards and provides for the improvement of learning outcomes. Michelle Richardson and Charles Abraham have found that conscientiousness and achievement motivation affect students' grade point average (Richardson & Abraham, 2009).

Achievement motivation is focused not only on the best outcome reflected in the assessment but also on the best performance that demonstrates the student's learning process. Robert Sternberg believes that the Covid-19 pandemic has taught people what intelligence is. Academic achievement as a measure of intelligence level is inessential compared with adaptive intelligence, which provides environmental adaptation (Sternberg, 2021). Therefore, in the current situation of the Covid-19 pandemic, it is increasingly important to assess how students' achievement motivation is expressed in the learning process, how they can adapt to the existing conditions without losing the desire to have self-efficacy, to show initiative and perseverance, to ensure quality performance, and to see and take advantage of opportunities. Albert Bandura (1997), the founder of social-cognitive learning theory, has revealed that persistence in action improves self-efficacy which determines, in turn, how much effort will one spend to accomplish a job and how long the activity will sustain to face challenges (Bandura, 1977). Self-efficacy is increased through project-based learning (Shin, 2018), appropriate classroom environment and teacher involvement in the learning process (Tawfeek, et al., 2021). However, the correlation between self-efficacy and final exam grades is not statistically significant (Bjørnebekk et al., 2013). Elizabeth Johnson and Mary Kathleen Walsh (2017) believe that teachers with higher self-efficacy levels and creativity have more opportunities to create dynamic learning experiences and increase student growth and achievement (Johnson & Walsh, 2017). That is why future primary school teachers

need to be self-effective.

Several studies have been devoted to identify the factors that influence achievement motivation. For example, Tim Mainhard (2015) studied the extent to which achievement goals are related to the interpersonal quality of teaching and concluded that students who preferred strict teachers had higher achievement goals. Amira Ali and Wael Hanna (2021), on the other hand, studied how the hybrid learning model can affect learning outcomes and concluded that students with a higher level of self-regulation often obtain higher grades (Ali & Hanna, 2021). Achievement motivation is also positively influenced by environment-based education (Athman & Monroe, 2004), role-playing (Amir et al., 2020), students' positive attitudes towards studies (Bakar et al., 2010), teacher support and involvement (Muijs & Reynolds, 2018), as well as by setting appropriate and specific goals (Castle & Buckler, 2018). The difference in achievement motivation levels during remote learning is also determined by the place of residence and the availability of the Internet (Abu–Alkeshek, 2021). The study has shown that achievement motivation is not associated with the student's sense of belonging to class (Poledňová et al., 2014) and that promoting well-being does not negatively affect achievement but also does not improve it in the context of cognition (Van Petegem et al., 2008).

The study examined achievement motivation considering not only the students' performance but also the learning process. The aim of the study was to determine the level of achievement motivation of future primary school teachers during remote learning, as well as to describe each of the study dimensions characterising the achievement motivation.

Methods

Participants

The study sample was formed according to the cluster or multi-stage method based on selected groups of students that were fully involved in the study. Five groups of first-year students who acquired the study course "Cultural Awareness and Self-Expression in the field of Arts" within the study program "Primary Education Teacher" participated in the study. The total number of respondents was 162 (N=162) students, two of them male.

Data Collection Instrument

The study raised three research questions: RQ1: At what level do students assess each of the study dimensions that characterise the achievement motivation? RQ2: What factors hinder students from taking the initiative in the study process? RQ3: How do students monitor the quality of task performance?

The study used a questionnaire that took into account the ideas of Spencer and Spencer (1993) on creating excellent performance. The questionna-

ire aimed to find out the respondents' opinions about how motivated they are to focus on their achievements in the learning process. The questionnaire consisted of 15 closed-ended statements that describe the five dimensions of the study: initiative; persistence; quality of task performance; self--efficacy; seizing and exploiting opportunities. The students rated each of the statements according to a four-point Likert scale: 4 points = agree; 3 points = rather agree; 2 points = rather disagree; 1 point = disagree. The four-point Likert scale was used to avoid choosing the neutral option and force the respondents to decide whether they have a positive or negative attitude toward an item. It was determined that the level from 1.00 to 2.00 is low, from 2.01 to 3.00 is medium, and the level from 3.01 to 4.00 is high, as an indicator of measuring the level of students' initiative, the persistence, the quality of task performance, the self-efficiency, and the ability to seize and exploit opportunities.

In addition to the closed answer options, open-ended or free-answer questions were used for each statement to justify students' choices. Content analysis was used to interpret the content of the textual data. The results obtained were expressed as a percentage.

Data Collection Procedure

The data were collected by sending the questionnaire to each group of students via the group's joint e-mail. The respondents completed the survey on a computer. The administration of the questionnaire took place in an online MS Team environment by the observation of the researcher. The questionnaire was anonymous within each group and took about 20 minutes to complete. The respondents had the opportunity to consult with the researcher during completing the questionnaire if necessary. The students were informed that their responses collected from the questionnaire will be summed in an aggregated form and used only for scientific issues.

Data Analysis

Statistical Package for Social Sciences (SPSS 22.0) was used for data analysis. Descriptive statistics (Mean (M), Standard Deviation (SD), Standard Error of Mean (SE), Median (ME), Minimum (Min), Maximum (Max)) were used for the comparison of the study dimensions. The mean scores were calculated to assess the level of the variables in the study and to reveal the interrelationships between them. The median determined the symmetric nature of the data obtained. The Pearson correlation was used to find out the relationship between study dimensions, assuming that the significance of level was set at $p<0.01$. The Cronbach's Alpha coefficient was calculated to determine the internal consistency, reliability and the validity of the questionnaire statements. The reliability of the scales was 0.68, which indicates that despite the small number of respondents included in the study, the study scale is applicable. To determine the normality of each variable, the Skewness was used. If the Skewness ranges it less than -1 or more than

1, then it is highly skewed. The one sample t-Test was calculated to understand if the scores of respondents were significantly different from the central tendency. In turn, the non-parametric Friedman's ANOVA test was used to determine the difference between high, medium, and low levels of each study scales.

Research Results

The motivation to start and involve in a particular activity is one of the factors that lead to successful goal achievement, which is expressed in the desire to complete a task on time, the ability to convert thoughts and ideas into action, and solve problems independently. The first dimension of the study determined students' initiative (Table 1). The initiative is the ability to do more than is required or expected to complete a task. Showing initiative requires the ability to act here and now to take advantage of the opportunities afforded to the student and, if necessary, overcome difficulties that arise in pursuit of a goal. Students who show initiative have a proactive approach that allows them to get in front of the issue before it escalates.

Table 1
Students' Initiative

Statements	M	SD	SE	ME	Skewness	Min	Max
I solve the problems independently	3.29	.872	.096	3.00	-.717	1.00	4.00
I start performing tasks on time	3.39	.719	.079	4.00	-.1.159	2.00	4.00
I am able to turn existing ideas into action	3.32	.721	.080	3.00	-.587	1.00	4.00

Source: own research.

The students have highly assessed all the statements that characterise their initiative in the study process. The students believe that they solve the problems independently (M=3.29, SD=.872) and turn ideas into action (M=3.32, SD=.721). The study found that there was no smooth distribution of the data obtained for the statement "I start performing tasks on time" (M=3.39, skewness=-1.159; t=42.497, p=.000). There were no students among the respondents who did not complete the tasks during the study process. However, this does not exclude the possibility that some students did not start the activity on time, deeming it necessary to postpone their completion or procrastinate. The study revealed that those students who began tasks without delay were able to use time effectively (r=.448, p<0.01),

monitored their correctness while performing tasks (r =.331, p<0.01) and re--examined the completed activity (r =.303, p<0.01).

The students also mentioned several factors that hinder their initiative (Table 2). The dominant factors are lack of time, family conditions, full--time work accompanying their study, excitement, technical difficulties, and inability to figure out what to begin. Due to the Covid-19 pandemic, the study process mainly happens online rather than face-to-face. Although some students cited current epidemiological conditions as a hindrance to showing initiative, the study found that this was not one of the most mentioned factors. That is probably because the remote learning process takes place in a learning environment chosen by the student, where he or she can be alone, which, in turn, does not require any epidemiological safety measures (wearing masks, hand disinfection, two-meter distance, etc.).

Table 2
Factors Hindering Students' Initiative

Content units	f%
Laziness	5.1
Lack of time	20.5
Family conditions	15.4
Full-time work, in addition to studies	15.4
Excitement	10.3
Technical difficulties	10.3
Performing the task at the last minute	5.1
Unable to understand where to start	10.3
Other work to be done	5.1
Current epidemiological situation	2.5

Source: own research.

Achievement motivation highlights the extent to which the student persistently pursues the goal. The second dimension of the study was to identify students' persistence, which is essential if difficulties arise. It provides an opportunity to overcome obstacles to achieving the goal intended. The students rated two statements at medium level "I repeat the steps to solve the problems" (M=2.35, SD=1.064) and "I look for solutions to solve the problems" (M=3.00, SD=1.095), which characterise students' persistence if they faced any problems during the learning process (Table 3). The students have highly assessed the statement that describes their commitment to solving a problem without delay (M=3.35, SD=.811). The study found that there was difference between the central tendency and variability (M=3.35, Skewness=-1.039; t=37.266, p=.000) in the statement "I solve the problems without delay," which indicates that although the majority of students solved the problems immediately, some of them significantly delayed the solving of the problems occurred during the learning process.

The delaying action is a tendency for students to drag along unpleasant but necessary activities. Accordingly, it is needed to anticipate the steps involved in the tasks and set specific deadlines for each of them. That helps, in turn, not to lose motivation to start dealing with the problems immediately and complete what has been begun.

Table 3
Students' Persistence

Statements	M	SD	SE	ME	Skewness	Min	Max
I repeat the steps to solve the problems	2.35	1.064	.118	2.00	.127	1.00	4.00
I look for solutions to solve the problems	3.00	1.095	.121	3.00	-.819	1.00	4.00
I solve the problems without delay	3.35	.811	.090	4.00	-1.039	1.00	4.00

Source: own research.

The third study dimension determined the students' opinion about the quality of task performance during the learning process, which is an essential indicator of achievement motivation. The quality of student's performance to complete a task is characterised by the statements: "I re-examine the completed tasks" (M=3.55, SD=.758), "I monitor the correctness during the tasks" (M=3.39, SD=.701) and "I have a desire to perform the tasks in a high quality" (M=3.55, SD=.670). All the statements that describe the quality of task performance were rated high by the students (Table 4). Converting the existing ideas into action helps students to monitor the correctness of tasks in the completing process ($r = .314$, $p<0.01$) and re-examine them after the performance ($r=.287$, $p<0.01$). Those students who care more about the correctness of the task performance re-examine it even after completion ($r=.452$, $p<0.01$). In turn, those who want to perform the task in a high quality monitor the correctness during completing the task ($r= 378$, $p<0.01$).

Table 4
Monitoring the Quality of the Task Performance During the Learning Process

Statements	M	SD	SE	ME	Skewness	Min	Max
I re-examine the completed tasks	3.55	.758	.084	4.00	-1.692	1.00	4.00
I monitor the correctness during the tasks	3.39	.701	.077	3.00	-.875	1.00	4.00
I have a desire to perform the tasks in a high quality	3.55	.670	.074	4.00	-1.736	1.00	4.00

Source: own research.

Monitoring the task performance helps the student maintain achievement motivation in stressful situations or critical conditions. The students check the quality of task performance during the learning process in various ways (Table 5). The majority of students considered that assessment criteria, which indicate the progress towards the goal, as essential for monitoring the quality of task performance. The students examined the spelling and the steps that were done, which are affected by the overall quality of the work.

Table 5
Ways of Monitoring the Quality of Task Performance

Content units	f %
I look at the assessment criteria	67.8
I follow the spelling	16.1
I involve other people	3.2
I read it several times	12.9

Source: own research.

Confidence in abilities is essential for all students to achieve their goals. It enables the student to use knowledge and skills effectively. The fourth dimension determined the students' opinions on self-efficacy, which is significant for completing the tasks faster and with better outcomes. The students rated the statements that characterise their self-efficacy at a high level (Table 6). The students search and find a way to better complete the task (M=3.22, SD =.741), use additional information (M=3.65, SD=.635) and effectively use the time devoted to completing the task (M=3.23, SD=.794). The students effectively used the time needed for accomplishing the task if they monitored the correctness of it in the process ($r=.437$, $p<0.01$), searched for and found a way to better deal with the task ($r=.292$, $p<0.01$), focus on re-examining the performance after finishing it ($r=.362$, $p<0.01$) and are creative ($r =.367$, $p<0.01$).

Table 6
Students' Self-efficacy

Statements	M	SD	SE	ME	Skewness	Min	Max
I search and found a way to perform the tasks better	3.22	.741	.082	3.00	-.761	1.00	4.00
I use additional information to complete the tasks	3.65	.635	.070	4.00	-2.253	1.00	4.00
I can use the time devoted to the tasks effectively	3.23	.794	.088	3.00	-.603	1.00	4.00

Source: own research.

The study found significant differences in students' opinions on whether they used additional information to complete the task. (M=3.65, Skewness=-2.253; t=51.743, p=.000). It means that most students used additional information very intensively, and only a few of them did not think they needed to do it. The students often search for additional information in internet browsers and books. Self-efficacy is associated with academic achievement and the power of not giving up the ability to face difficulties. The students search for and find ways to complete the task correctly. To achieve this goal, the majority of students search for information on the Internet, look at several options and choose the best one, ask the course mates, or try in the pedagogical process (Table 7).

Table 7
Ways to Improve Task Performance

Content units	f%
Asking course mates	11.1
Searching for information on the internet	16.7
Monitoring the quality of task performance	7.4
Performing the tasks creatively	7.4
Reviewing the tasks multiple times	3.7
Listening to the lecturer	3.7
Looking at several options and choosing the best	18.5
Reviewing the lecture materials	5.6
Consulting with teachers who already work	5.6
Doing it with an interest	7.4
Trying in the pedagogical process	9.2
Using books and other library resources	3.7

Source: own research.

The fifth dimension of the study analysed the students' views on seizing and exploiting opportunities in the study process (Table 8). The students' answers show that they can foresee and use the opportunities provided through studies at a high level. If students are interested in searching for and finding a way to perform the task better, they do it creatively (r=.350, p<0.01). The students who can foresee and catch all the opportunities to finish the activity qualitatively was more often to monitor the correctness of the performance (r=.422, p<0.01), re-examined it (r=.378, p<0.01), looked for ways to achieve the best performance (r=.295, p<0.01), used the time efficiently (r=.454, p<0.01) and were creative (r=.510, p<0.01).

Table 8
Students' Ability to Seize and Exploit Opportunities

Statements	M	SD	SE	ME	Skewness	Min	Max
I perform the tasks creatively	3.37	.641	.071	3.00	-1.118	2.00	4.00
I seize and exploit every opportunity to complete the tasks with high quality	3.34	.673	.074	3.00	.-797	1.00	4.00
I am satisfied with the performance of the tasks	3.51	.550	.061	4.00	-1.336	2.00	4.00

Source: own research.

The study found significant differences in students' perceptions of creativity in completing tasks (M=3.37, Skewness=-1.118; t=47.309, p=.000) and the satisfaction following the performance (M=3.51, Skewness=-1.336; t=55.091, p=.000). The study did not identify any student who was not creative in general (Min=2.00) and not happy with the final result (Min=2.00).

Fig. 1
The Dimensions of the Study that Characterise Achievement Motivation
Source: own research.

The study found (Figure 1) that students rated four out of five dimensions at a high level as follows: the initiative (M=3.33; $\chi 2(2) = .117$, p=.943); the quality of task performance (M=3.49; $\chi 2(2) = 5.808$, p=.055); the self-efficacy (M=3.67; $\chi 2(2) = 23.433$, p=.000); the seizing and exploiting opportunities (M=3.41; $\chi 2(2) = 2.772$, p=.250). The students rated the dimension that describes persistence at a medium level (M=2.90; $\chi 2(2) = 31.801$, p=.000).

The differences between high, medium and low levels were significant only for persistence ($\chi 2(2) = 31.801$, p=.000) and self-efficacy ($\chi 2(2) = 23.433$, p=.000) dimensions. The Post –hoc test results demonstrated a significant

difference between medium and high level (p=.003) and between medium and low level (p=.000) for the study dimension persistence. The difference between high and low levels (p=.004) for the self-efficacy was significant.

Discussion and Conclusion

The first research question was to determine how students assess each of the study dimensions that characterise the achievement motivation. The study found that the students generally have a high achievement motivation level during remote learning. The students believe that they show initiative, are interested in the quality of the tasks, are self-efficient, and can seize and exploit opportunities. Persistence is the only study dimension assessed by the students at a medium level. Some students postpone completing the given tasks while learning remotely. This study did not intend to examine how delaying the tasks may affect students' academic outcomes. However, in daily academic work, it has been observed that such students often show lower learning outcomes than their course mates. This situation is also confirmed by a study on passive procrastination conducted by Demeter Karmen and colleagues, which concluded that students show a lower level of academic outcomes and have a more negative attitude when procrastinating (Karmen et al., 2015). Moreover, Ismail Erten's (2014) study has found that students with high achievement motivation may suffer from academic burnout and refrain from engaging in academic work. It means that too high achievement motivation can also have a negative effect on students, encouraging them to postpone completing their tasks.

The second research question was to identify the factors that prevent students from showing initiative in the study process. The study revealed several factors that negatively affect students' initiative during learning. These are mainly: lack of time; family conditions; full-time work in addition to studies; excitement; technical difficulties; inability to figure out where to start. It has been observed during the academic experience that in the process of remote learning, the encouragement of lecturers to show initiative is necessary. Eyüp Çelik (2015) has studied the relationship between initiatives and a student's growth. He concluded that academic support has direct and indirect effects on students' personal growth. It means that the students have to think about how to eliminate the factors that hinder the initiative, and at the same time, the academic staff must encourage the students to show initiative in the study process.

The third research question was to determine how students monitor the quality of task performance. The study revealed that in monitoring the quality of task performance, most students use the assessment criteria previously provided by the lecturer, which are used as indicators to achieve an excellent result. Students search for and find ways to complete the tasks more successfully. To achieve the goal, the students mostly search for infor-

mation on the Internet, look at several options and choose the best, ask course mates or try in the pedagogical process. It has been observed in academic work that students' desire to monitor the quality of task performance is related to the ability to be creative and sufficiently competent. Creativity in the study process is the implementation of different technologies to ensure the quality of the performance. The students value their creativity at a high level in this study. Margarita Shkabarina and colleagues also concluded that the development of educational creativity of future primary school teachers is more effective if innovative educational technologies are involved in the teaching process (Shkabarina, et al., 2020). Independent work in the study process should enable future primary school teachers to use innovative educational technologies, which, in turn, would promote students' creativity. The study also found a link between monitoring the correctness of the task and the desire to perform it in high quality. It has been observed that students want to complete tasks correctly if they are confident in their competence. A study involving the participation of practising teachers conducted by Mohamad Sumantri and Prayuningtyas Whardani (2017) found a significant positive relationship between professional competence and performance on the one hand and between achievement motivation and work performance on the other hand. It means that monitoring the quality of task performance, as one of the factors influencing achievement motivation, is an essential part of future primary school teachers' study process.

In further studies, it is necessary to understand whether significant changes in the students' achievement motivation will happen if the remote learning process is continuous.

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