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ПСИХОЛОГИЧЕСКИЕ АСПЕКТЫ ВЫСШЕГО ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ УЧАЩЕЙСЯ МОЛОДЕЖИ

PSYCHOLOGICAL ASPECTS OF HIGHER PROFESSIONAL EDUCATION OF YOUTH

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PSYCHOLOGICAL SCIENCE AND EDUCATION

PSYCHOLOGICAL ASPECTS OF HIGHER PROFESSIONAL EDUCATION OF YOUTH

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Dear Readers!

We present to your attention the 4th issue of the journal Psychological Science and Education (No. 4-2024). The issue contains two traditional rubrics "Developmental Psychology" and "Educational Psychology".

The rubric "Developmental Psychology" opens by a study conducted in the context of self-determination theory, which examines the role of motivational factors in the satisfaction with learning and intentions to complete it among PhD students. The theme continues with a study of mindful learning among university students. The practical contribution of the study is to present a methodological framework for integrating mindful learning into university disciplines. Readers can also read the study of technologies for designing individual educational trajectory for students with disabilities, as well as the study of cultural and political patriotism in students. The rubric closes with the results of the study of the relationship between independent learning opportunities and emotional intelligence, which shows the differences between students with high and low academic performance.

In the rubric "Educational Psychology" we present a study of the correlation between the basic values of personality and the nature of psychological adaptation to global digital risks, as well as the influence of faithfulness on the psychological well-being of students in long-distance relationships. The rubric is completed by the study of the role of value orientation for the satisfaction of basic psychological needs of the students and for their academic adaptation,

We hope that readers of the journal will find the new issue of our journal very interesting.

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DEVELOPMENTAL PSYCHOLOGY (AGE PSYCHOLOGY) |
ПСИХОЛОГИЯ РАЗВИТИЯ (ВОЗРАСТНАЯ ПСИХОЛОГИЯ)

What Determines Satisfaction with Graduate School and Intentions to Complete it Among Modern PhD Students?

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The article focuses on the role of motivational factors in the successful completion and satisfaction with postgraduate programs. PhD students (N=155, M=26,8, SD=4,2, 63% women) participated in the study. The theoretical framework is based on self-determination theory, which provides an understanding of the sources of autonomous and controlled motivation for research activity. A battery of questionnaires was used to assess autonomous and controlled motivation for postgraduate programs (the Universal Perceived Locus of Causality scales, UPLOC, and the Doctorate-related Need Satisfaction Scale, D-N2S), publication activity, intentions to complete the postgraduate program, and satisfaction with it. The results of the study demonstrated that autonomy need satisfaction was a predictor of autonomous motivation and satisfaction with the postgraduate program, whereas competence and relatedness needs satisfaction were predictors of intentions to complete the postgraduate program. Path models also showed that autonomy need satisfaction is a predictor of low levels of controlled motivation, which in turn is a negative predictor of intentions to complete the postgraduate program and satisfaction with it. It is concluded that it is important to study and monitor motivational factors, considering their predictive power in relation to PhD students' performance. Recommendations are offered to supervisors and faculty to support PhD students' basic psychological needs for autonomy, competence, and relatedness to foster their voluntary engagement and success in the research process.

Keywords: motivation, PhD students, self-determination theory, basic psychological needs, program satisfaction, intention to complete program.

От чего зависят удовлетворенность аспирантурой и намерения ее завершения у современных аспирантов?

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Представлены результаты работы, посвященной роли мотивационных факторов в успешном завершении аспирантуры и удовлетворенности ею. В исследовании приняли участие 155 аспирантов (M=26,8, SD=4,2, 63% женщин). Теоретической основой работы стала теория самодетерминации, позволяющая понять источники автономной и контролируемой мотивации научно-исследовательской деятельности. Автономная и контролируемая мотивация обучения в аспирантуре оценивались с помощью батареи опросников (шкал мотивационной регуляции UPLOC, удовлетворенности базовых психологических потребностей D-N2S), а также фиксировались публикационная активность, намерения завершения аспирантуры и удовлетворенность ею. Результаты показали, что удовлетворенность потребности в автономии является предиктором автономной мотивации обучения и удовлетворенности аспирантурой, тогда как удовлетворенность потребностей в компетентности и связанности является предиктором намерений завершения аспирантуры. Также с помощью путевых моделей показано, что удовлетворенность потребности в автономии является предиктором низкой выраженности контролируемой мотивации обучения, которая в свою очередь является негативным предиктором намерения завершения аспирантуры и удовлетворенности ею. Делается вывод о важности изучения и мониторинга мотивационных факторов с учетом их прогностических возможностей в отношении результатов деятельности аспирантов. Предложены рекомендации по поддержке научными руководителями и факультетами базовых психологических потребностей аспирантов в автономии, компетентности и связанности с целью добровольной вовлеченности аспирантов в исследовательский процесс и достижения в нем успешных результатов.

Ключевые слова: мотивация; аспиранты; теория самодетерминации; базовые психологические потребности; удовлетворенность обучением; намерения завершить обучение.

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Introduction

In recent years, the number of scientists and PhD students in Russia has been decreasing. The efficiency of postgraduate education, calculated as the ratio of thesis defenses on time to the number of those completing their studies, has been below 13% for the last five years [2]. It is important for science to replenish the talent pool of scientists and to understand the reasons behind the desire of postgaduate students to engage in scientific activity.

The activities of PhD students are complex and the goal of defending a thesis has become difficult to achieve. Motivation is a factor in the completion of PhD studies, academic achievement and well-being of postgraduate students [20]. Current research on motivation is based on self-determination theory (hereafter referred to as SDT) [17]. The value of SDT is that it allows to describe the characteristic types of human motivation to be described in terms of their strength, quality (different types of motivation) and combination of motivation types (motivation profile), and it establishes basic psychological needs for autonomy, competence and relatedness as sources of intrinsic motivation [26].

Meta-analyses show that intrinsic motivation is associated with academic achievement, high levels of satisfaction, positive affect and low levels of negative affect in students. Closely related identified regulation (personal value) is associated with effort, persistence, engagement, vitality, and low levels of depression [11]. These two types of motivation have been referred to as autonomous motivation, and those discussed below will be referred to as controlled motivation. Introjected regulation (motives related to guilt and shame) shows an intermediate position between intrinsic motivation and amotivation on measures of success, well-being, and adaptive functioning. It is associated with the pursuit of

achievement (demonstrative) goals and avoidance goals of various kinds. External motivation, driven by external control, desire for reward, or avoidance of negative consequences, is related to anxiety, depression, and negative emotions and is not related to achievement and persistence. Amotivation is associated with low academic achievement, absenteeism, boredom, higher levels of anxiety, low self-efficacy and low self-esteem [11].

The learning activity of undergraduate students, whose aim is to assimilate learning material, differs from the scholarly and practical activity of PhD students. Their activity is focused on thesis defence, publications, conference reports, so these patterns may not be fully reproduced. The aim of the present study is to identify the role of autonomous and controlled motivation and basic psychological needs in satisfaction with PhD studies and intentions to complete them.

Postgraduate students' motivation research

Based on SDT and using the Motivation for PhD Studies scale (MPhD) developed by Litalien and his colleagues [14], studies have been conducted on the relationship between motivation types and burnout and complaints about teachers and the learning process [19], perceived competence, probability of completing PhD studies and dropout intentions [13], stage of study and demographic variables [21].

The research shows that autonomous motivation is a positive and controlled motivation is a negative predictor of perceived competence. Postgraduate students who perceived themselves as more competent were more likely to graduate. Those with autonomous motivation were more likely to present at conferences, had more publications, and had lower dropout rates

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than PhD students with controlled motivation [13]. The largest shift in postgraduate students' motivation (from autonomous to controlled) occurred between the first (learning) and subsequent stages of study [21].

The latent profile analysis of PhD students' motivation shows the presence of three or four profiles. In the solution with three profiles such as highly motivated, demotivated and amotivated [19], and with four profiles — low and highly self-determined, introjected and identified [12] are highlighted.

Russian studies of PhD students have addressed motives for enrolment [5], environmental sources of intrinsic motivation [15], postgraduate plans at different stages of study, and socio-demographic characteristics of postgraduates [1; 4]. For example, Terent'ev and his colleagues conducted one of the first SDT-based studies of PhD students' motivation by analysing their extended interview responses [5]. They found that intrinsic motivation, such as an interest in conducting research and a desire to do science, remained the most common motivations for enrolment. However, there are PhD students who enter due to a lack of meaningful alternatives (16%) or due to a coincidence of circumstances (17%), i.e. those who have no meaningful reasons for admission, who are initially amotivated.

Due to the lack of a Russian version of the postgraduate motivation questionnaire, it is impossible to compare Russian studies with foreign ones, to assess their motivation profiles and environmental predictors. The inclusion of the amotivation scale in the PhD student motivation questionnaire is important because studies show its significant expression [5].

Sources of PhD students' motivation research

One of the statements of SDT is the position on the role of the basic psychological needs satisfaction as a source of intrinsic motivation. Basic psychological needs include the needs for autonomy, competence and relatedness [17]. The basic psychological need for autonomy is the desire to control one's own actions and behaviour, to be their independent initiator. The basic psychological need for competence is the desire to feel effective and able to cope with complex tasks. The basic psychological need for relatedness is the desire to build relationships that provide a sense of acceptance, understanding, and support. The ways in which basic psychological needs are satisfied may vary, but they themselves remain universal and necessary conditions for development, integration and well-being [23].

PhD students' autonomous motivation was related to the support of their basic psychological needs by their supervisor, faculty and other postgraduate students. PhD students who felt that their basic psychological needs were supported perceived to be more competent. They were more likely to complete their studies successfully [13] and showed persistence and engagement [22].

A number of studies suggest an unequal contribution of PhD students' basic psychological needs satisfaction to their motivation and performance [8; 19; 21]. Autonomy and competence satisfaction play a crucial role in determining the motivational profiles of PhD students [19]. Analyses of the relationship between basic psychological needs satisfaction and various indicators (exhaustion, progression, persistence and probability of completing postgraduate studies) showed their consistent relationship primarily with competence satisfaction [8].

In addition to the factors of PhD students' efficiency, the factors of intention to complete postgraduate studies and satisfaction with studies, scientific supervision is also examined. The contribution of the relationship with a supervisor and working as an assistant on research projects to PhD studies satisfaction have been confirmed [7; 9; 18]. The question of the correlation between satisfaction with PhD studies and intentions to complete them and different types of postgraduate students' motivation and their basic psychological needs satisfaction remains open.

The empirical hypotheses of the study were:

1) satisfaction with PhD studies and intentions to complete them will be positively related to autonomous motivation and negatively related to controlled motivation and amotivation;

2) the quality of motivation, satisfaction with PhD studies and intentions to complete them will

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be related to: a) basic psychological needs satisfaction, b) especially — to the basic psychological need for competence.

Participants and methods

Participants
Participants in the pilot study in spring 2021 included 69 postgraduate students aged 23 to 47 years (M=26.96; SD=4.07), including 52% women.

Participants in the main study in winter 2021/2022 were 155 postgraduate students from Russian universities aged 21 to 48 years (M=26.78; SD=4.22), including 63% women.

Methods
Motivation Diagnosis. Two scales of PhD students' motivation (MPhD and UPLOC) were used in the pilot phase. The second was selected for the main phase according to the criteria of the best fit with the theory and the pattern of intercorrelations of the subscales.

The Universal perceived locus of causality scales (UPLOC) [6] are modified for postgraduate students and consist of 29 statements and six scales (intrinsic, identified, positive and negative introjected, external motivation and amotivation). Participants were asked to rate on a 5-point Likert scale the response options to the question, "Why are you currently in PhD studies?" Example statement: "Because I enjoy working on my thesis" (intrinsic motivation). All scales had acceptable reliability (α=0.75—0.93).

Needs satisfaction. The basic psychological need satisfaction scales of the Doctorate-related Need Support and Need Satisfaction short scales (D-N2S) [22] were used. Participants were asked to mark their agreement with statements on a 7-point Likert scale, e.g.: "In the context of my PhD studies, I have confidence in my ability to finish my PhD studies" (competence satisfaction). All scales have acceptable reliability (α=0.69—0.73).

Satisfaction and performance indicators were measured as follows:

1) Satisfaction with postgraduate studies was assessed using a modification of E. Diener's Life Satisfaction scale, adapted by E.N. Osin and D.A. Leontiev [3]. The scale has acceptable reliability (α=0.89);

2) Life satisfaction was rated on a graphic scale with smiling faces from 1 (not satisfied) to 7 (very satisfied);

3) Self-assessment of the probability of completing PhD studies on time — 0—100%;

4) Publication activity: total number of published, in press and forthcoming publications.

Sociodemographic factors included age, gender, university, and year.

Methods of statistical data processing included descriptive statistics, correlation and regression analysis, structural modelling, calculation of reliability indices. Statistical procedures were performed in SPSS AMOS 26.0 and jamovi software packages.

Results

Correlation analysis showed that satisfaction with PhD studies and intentions to complete them are significantly strongly directly related to intrinsic and identified motivation, basic psychological needs satisfaction and negatively related to external motivation and amotivation. Publication activity is significantly positively related to autonomous motivation and basic psychological needs satisfaction, especially the need for competence. Life satisfaction is positively related to intrinsic motivation, needs satisfaction, especially the basic psychological needs for competence and autonomy (see table).

Regression analysis showed that amotivation was the strongest significant negative predictor of both satisfaction with PhD studies and intentions to complete them (β=–0.62, p<0.001; β=–0.38, p<0.001 respectively).

In order to test the assumption of the influence of motivational factors on the dependent variables, two structural models were constructed. PhD studies satisfaction and intentions to complete them were considered dependent variables. Basic psychological needs satisfaction was considered as their predictor, with direct and indirect effects through autonomous (intrinsic and identified motivation) and controlled motivation (external motivation and amotivation).

Table

Descriptive statistics and correlation analysis (Spearman) of the correlation between motivation, basic psychological needs and performance indicators

№	Variable	1	2	3	4	5	6	7	8	9	PhD studies satisfaction	Probability to complete PhD studies	Life satisfaction	Publications
1	Intrinsic motivation	—									0,55***	0,31***	0,21**	0,21**
2	Identified	0,81***	—								0,52***	0,29***	0,18*	0,21**
3	Positive introjected	0,18*	0,32***	—							0,16*	0,03	0,00	–0,09
4	Negative introjected	–0,07	–0,01	0,46***	—						–0,07	–0,10	–0,08	–0,06
5	External	–0,50***	–0,46***	0,10	0,38***	—					–0,40***	–0,21*	–0,12	–0,15
6	Amotivation	–0,71***	–0,69***	–0,11	0,16*	0,53***	—				–0,69***	–0,39***	–0,18*	–0,19*
7	Competence satisfaction	0,36***	0,32***	–0,11	–0,29***	–0,24**	–0,34***	—			0,30***	0,57***	0,35***	0,38***
8	Autonomy satisfaction	0,49***	0,39***	–0,04	–0,25**	–0,42***	–0,51***	0,36***	—		0,56***	0,24**	0,28***	0,18*
9	Relatedness satisfaction	0,25**	0,28***	–0,11	–0,12	–0,26**	–0,27**	0,25**	0,36***	—	0,27**	0,20*	0,17*	0,23**
10	M	3,85	3,82	2,93	2,12	2,06	2,23	4,15	5,32	5,24	19,70	68%	4,99	3,71
11	SD	0,93	0,88	0,99	1,00	0,95	1,16	1,34	1,25	1,28	7,13	27%	1,57	3,83
12	Cronbach's Alpha	0,92	0,90	0,78	0,81	0,75	0,93	0,69	0,70	0,73	0,89	—	—	—

Note: * — $p < 0,05$, ** — $p < 0,01$, *** — $p < 0,001$.

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Model evaluation showed an acceptable fit to the data [10]: $\chi 2=492$; df=292; p≤0.001; CFI=0.919; TLI=0.903; SRMR=0.075; RMSEA=0.068; 95% confidence interval for RMSEA: 0.058-0.079 (Fig. 1) and $\chi 2=411$; df=220; p≤0.001; CFI=0.910; TLI=0.887; SRMR=0.065; RMSEA=0.076; 95% confidence interval for RMSEA: 0.065-0.088 (Fig. 2). Figures 1 and 2 show only the structural parts of the models and the significant coefficients. The results showed that autonomous motivation was a significant predictor of PhD studies satisfaction and controlled motivation was a negative predictor of both dependent variables. Autonomy satisfaction is a direct and indirect predictor of PhD studies satisfaction, being a positive predictor of autonomous motivation and a negative predictor of controlled motivation. Needs for competence and relatedness satisfaction were significant predictors of intentions to complete PhD studies, especially competence satisfaction.

Discussion

Hypotheses regarding the relationships of autonomous and controlled motivation with basic psychological need satisfaction and PhD students' performance were confirmed. Regression analysis and structural equation modelling showed that autonomy satisfaction was a predictor of satisfaction with PhD studies and intentions to complete them successfully (via reduced controlled motivation), whereas competence satisfaction was a predictor of postgraduate study completion intentions. These findings are consistent with research indicating the importance of these two basic psychological needs for PhD students' performance [19]; our study adds to this the fact that each basic psychological need may predict its own specific outcomes. Consistent with hypothesis 2b, the importance of competence satisfaction was confirmed, with the results also indicating the importance of autonomy satisfaction and some importance of relatedness satisfaction.
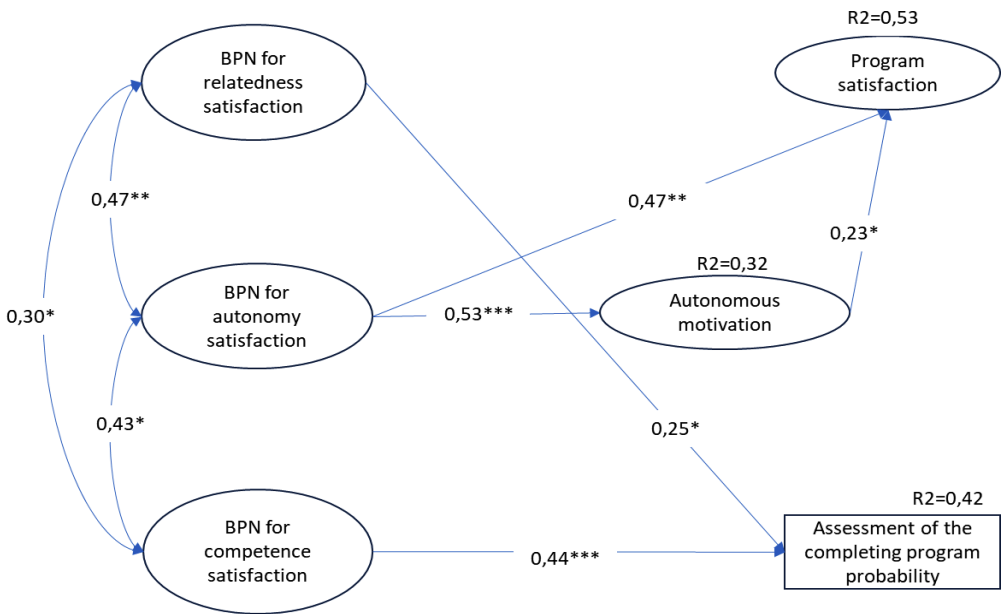
* p<0,05, ** p<0,01, *** p<0,001

Fig. 1. Structural model of the relationship between satisfaction with PhD studies and completion intentions, basic psychological needs satisfaction and autonomous motivation

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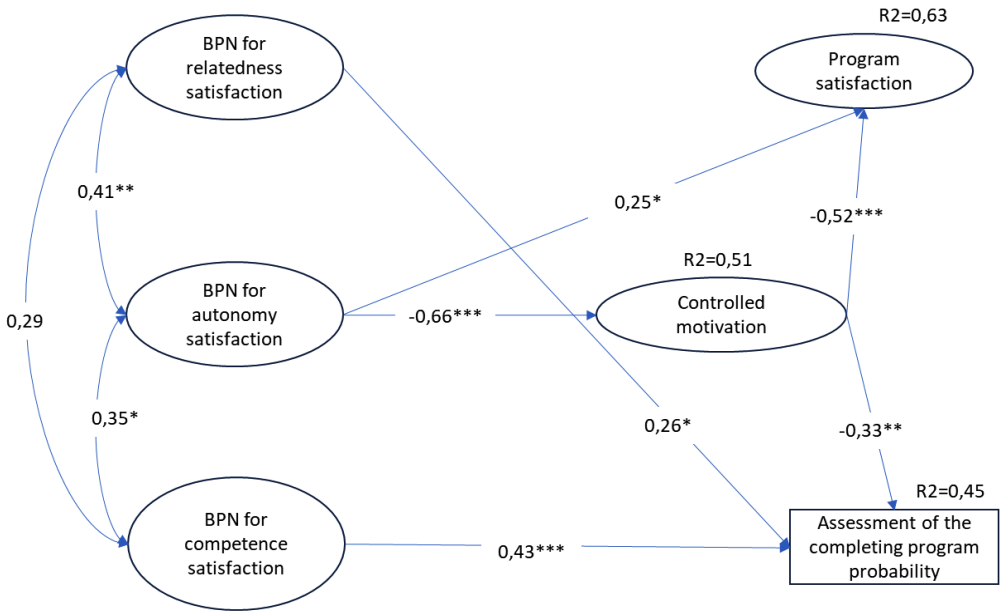
* p<0,05, ** p<0,01, *** p<0,001

Fig. 2. Structural model of the relationship between satisfaction with PhD studies, completion intentions, basic
psychological needs satisfaction, and controlled motivation

The assumption of amotivation as a characteristic type of motivational regulation of PhD students was confirmed. In contrast to the data obtained from undergraduate students [11], our data indicate a slightly greater predictive power of controlled motivation, which is a negative predictor of both dependent variables.

The main limitations of the study are its cross-sectional nature, which does not provide sufficient grounds for inferring about causal effects; the characteristics of the sample with a high proportion of first-year postgraduate students from metropolitan universities; and the lack of data on objective indicators of their performance.

Summarising the theoretical and empirical data on the influence of environmental factors on PhD students' motivation and basic psychological need satisfaction, it is possible to recommend practices to supervisors and faculties to support them:

Competence support: providing tasks of optimal complexity; helping to plan and structure research activities; paying attention to the quality, mode and timing of feedback; praising progress and effort; showing hope and optimism; advising on professional development and building an academic career; recognising of professional achievements;

Autonomy support: respecting research interests, ideas; encouraging independence; encouraging choice, decision making, leadership;

Relatedness support: paying attention to psychological well-being; demonstrating understanding; effective communication and dialogue; coherent communication style; creating opportunities for academic collaboration, an environment for active communication and socialisation.

Conclusion

The research highlights the importance of the variables studied. It shows that autonomous motivation is a predictor of satisfaction with PhD

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studies, while controlled motivation and amotivation are negative predictors of both satisfaction and intentions to complete PhD studies. Autonomy satisfaction is a predictor of PhD studies satisfaction, and competence satisfaction is associated with higher publication activity and is a predictor of intentions to complete PhD studies. The monitoring of PhD students' in universities could use data on amotivation, external, intrinsic and identified regulation, competence and autonomy needs satisfaction, as they provide the most important information on the PhD students'

motivational functioning. Prospects for further research could include analysing the environmental factors supporting basic psychological needs and the quality of PhD students' motivation, assessing their motivation profiles and basic psychological need satisfaction at different stages of their studies. PhD students' basic needs support underlies their intrinsic motivation for scientific activity. Informing academic supervisors about such support strategies can reduce amotivation and dropout, and increase their performance and satisfaction with PhD studies.

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Mindful Learning: Principles and Prospect of Use in Higher Education

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The article provides an overview of the principles of mindful learning in the context of higher education. Mindful learning is an approach in which students and teachers tune their attention to increasing value and awareness of what is happening in the surrounding context, to their experience and reflection about it. The relevance of the research is related to the interest in the effects associated with mindful learning: positive impact on psychological well-being, development of socio-emotional skills, as well as increasing intrinsic motivation, improving attentiveness and concentration of students. The article reviews research indicating the effectiveness of this approach for both learning outcomes and the psychological well-being of students and teachers in the educational process. The theoretical contribution of this research lies in highlighting the research agenda in the field of mindful learning: defining concepts of mindful learning and mindful teaching, identifying the main principles of mindful learning. These results provide a basis for further research of mindful learning in higher education. The practical contribution of the research lies in presenting a methodological basis for introducing mindful learning into university disciplines. The research may be of interest not only to teachers and methodologists but also to students and their parents due to the increased interest in the effects of mindful learning.

Keywords: mindfulness; mindful learning; mindfulness in higher education; langerian mindfulness; socio-cognitive approach.

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Осознанное обучение: принципы и возможности применения в высшем образовании

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В статье представлен обзор принципов осознанного обучения в контексте высшего образования — подхода, при котором студенты и преподаватели уделяют внимание ценности происходящего в окружающем контексте, собственному опыту и размышлениям о нем. Обращается внимание на то, что актуальность исследования обусловлена эффектами, которые связывают с осознанным обучением: положительным воздействием на психологическое благополучие, развитием социально-эмоциональных навыков, а также повышением внутренней мотивации, внимательности и концентрации в процессе обучения. Рассмотрены исследования, свидетельствующие об эффективности данного подхода как для результатов обучения, так и для психологического благополучия студентов и преподавателей в образовательном процессе. По мнению авторов, теоретический вклад данного исследования заключается в обобщении исследовательской повестки в области осознанного обучения: определение концепций осознанного обучения, выявление основных принципов этого подхода. Описанные наблюдения представляют собой основу для дальнейших исследований осознанного обучения в контексте высшего образования. Отмечается, что практический вклад исследования заключается в представлении методологической базы для интеграции осознанного обучения в университетские дисциплины. Материалы статьи могут представлять интерес не только для преподавателей и методологов, но и для студентов и их родителей в связи с повышением интереса к выявленным эффектам осознанного обучения.

Ключевые слова: осознанность; осознанное обучение; лангерианская осознанность; социально-когнитивный подход.

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Introduction

Mindful learning in the context of higher education is a relatively new approach (rather underresearched by the Russian scholars) which refers to the conscious involvement of a person in the learning process.

In psychological research, mindfulness is viewed as a state of purposeful, non-judgmental attention to what is happening at the moment [25], with interest and acceptance [9]. Unlike mindfulness training programs, which include specialized courses, trainings, and practices, mindful learning implies specific principles and tools for increasing mindfulness while studying in general, i.e. undertaking the disciplines of the curriculum [31].

Based on the above definition of mindfulness [9, 25], mindful learning refers to an approach to education in which students and lecturers are in a state of purposeful, non-judgmental attention to what is happening in the present moment, with curiosity and acceptance. Students are aware of the context, think critically, and perfume creatively [35]. The lecturer's task is to support the students' awareness of the value and relevance of their own thoughts, observations, and inquiries regarding the subject being studied [22].

The use of mindfulness practices in educational environments has been a subject of academic and applied research for several decades, also in the context of higher education [28]. There are three main reasons for launching mindfulness courses within educational institutions: reducing stress and increasing stress resistance, improving academic performance, and personal development [41]. A meta-analysis of 24 studies on stress reduction practices for university students demonstrated the effectiveness of mindfulness practices in reducing stress during the learning process [36]. The emphasis on mindfulness in learning makes the skills and knowledge acquired by students more reliable, universal, suitable for alternative contexts;, also this approach makes learning more enjoyable for students [29]. Mindful learning increases sensitivity to diversity; it develops understanding that there are no single answers, but there are situationally appropriate solutions; it reduces the need for excessive zeal by increasing internal interest in the learning process [33]. At the same time lower levels of mindfulness in learning is manifested in students' efforts to memorize unambiguous "correct answers", approaching problems using schemes proposed by teachers, and acting "in autopilot mode", for example, taking notes without reflecting on the material [32].

The purpose of this study is to examine the principles and applications of mindful learning in the context of higher education. The article illustrates ways to adapt the principles of mindful learning within the disciplines of the main curriculum. In addition, the authors analyze criticisms of the use of mindful learning in higher education. The article aims at a wide audience of teachers, students, methodologists, heads of educational programs, parents, etc.

Key research questions:

1. What are the principles of mindful learning that could be applied in educational environment?

2. How can the principles of mindful learning be integrated into curriculum disciplines in higher education?

The article is structured as follows. We first examine the concept of mindful learning and its relationship to innovative trends in education. We also compare two approaches—mindfulness training and mindful learning—and outline the principles of mindful learning. After this, we consider the possibilities of their integration into the process of teaching curriculum disciplines through feedback and reflection. The article concludes with the analysis of critique of

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mindful learning and a discussion of possible directions for further research.

Mindful learning is not mindfulness training

Literature distinguishes two approaches to enhancing mindfulness in educational context: 1) mindfulness training - specialized courses (trainings, practices) of mindfulness that are offered to students either as mandatory elements of the curriculum or as elective classes [38], and 2) mindful learning - integration of tools and principles of mindfulness into curriculum disciplines [31].

Mindfulness training is based on well-known certified programs of mindfulness development, for example, the Mindfulness-based stress reduction program — MBSR [25]. Such programs often draw on traditional spiritual practices such as meditation, adapting them to secular contexts [25], and therefore this approach is also called meditative [47]. Studies of the effectiveness of such programs note an increase in subjective well-being of teachers, their self-efficacy, skills in establishing trustful relationships with students, and an improvement in the overall atmosphere in the classroom [42]. Students report an increase in self-awareness, awareness of others, self-regulation, willingness to express needs, and ability to apply the learnings in life and outside of class [20].

The effectiveness of such programs inspired researchers to create specialized mindfulness training courses for educational setting, primarily in secondary education. Many higher education institutions offer specialized mindfulness courses and programs for students and staff. Nearly 80% of medical universities in the United States offer their students mindfulness training in one form or another [11], and leading business schools (such as INSEAD) include mindfulness training in their MBA programs. In addition to face-to-face classes, many universities offer online resources on the topic of mindfulness with descriptions, instructions, video and audio materials for self-study. The most well-known on-line platforms are Mindfulness & Meditation by Harvard University, Mindfulness by the University of Massachusetts Medical School, and Mindfulness Defined by the Greater Good Science Center of the University of California, Berkeley.

Contemporary Russian research on the topic of mindfulness is mostly devoted to adaptation and analysis of psychometric properties of the Russian versions of the most widely used tools for assessing mindfulness [1, 2, 5]. Researchers in Russia also study the effectiveness of mindfulness interventions [6, 7].

Inspiring outcomes of mindfulness training programs have led to their particular tools and principles being incorporated into curriculum disciplines [21] which contributes to the problem of distinguishing between this approach and mindful learning.

Mindful learning implies conscious behavior of students and teachers in the process of mastering the disciplines of the curriculum. To do this, all participants in the learning process pay increased attention to the value of what is happening in the surrounding context, to their own experiences and to reflecting on them with curiosity and openness [37]. In the context of mindful learning, the concept of mindfulness is characterized by an emphasis on behavior such as seeking and creating novelty, engagement, flexibility; rather than on mindfulness as a skill, trait, or ability (which is the case for the concepts of *dispositional mindfulness*, *learned* or *cultivated mindfulness*) [35]. This means that the lecturer's task is mainly not to develop the skills, but to create conditions for a mindful learning process (for example, through the use of tasks stimulating reflection, teamwork, etc.).

In the literature, mindful learning is referred to as a social-cognitive approach [35]. The concepts of mindful learning and

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social-cognitive mindfulness are associated with the works of Harvard psychologist Ellen Langer [33] and, therefore, is approach is also known as *Langerian mindfulness*. To distinguish mindful learning from the meditative approach to mindfulness, it is also called *non-meditative* [43]. Studies confirm the effectiveness of this approach in increasing various competencies, especially creativity, as well as reducing burnout levels among students and teachers [31].

Most of the tools and principles of mindful learning are integrated in the learning process and stay and are present "in the background"; the concept of mindfulness as such may not even be discussed [39]. In this article we explore such principles: those that promote mindful behavior and can be integrated into the teaching of curriculum disciplines.

The concept of mindful learning and its association

with innovative trends in education

Comparing mindful learning with traditional education, Langer [31] lists the main misconceptions that are widespread in the learning environment, and thereby formulates the principles of mindful learning. For example, traditional education places an emphasis on memorization and intelligence, reducing them to the ability to quickly choose the right solution from several proposed options. Mindful learning, according to Langer, refers more to manifestation of attentiveness and openness to novelty, willingness to consider the situation from different points of viewproposing one's own solution that is most suitable for a particular situation. Table 1 presents a comparative analysis of the basic principles of traditional and mindful learning based on Langer's work [30, p. 199].

It is especially important to note innovative trends in education which overlap with mindful learning. Research [18, 34] notes similarity of the goals of mindful and Social-Emotional Learning (SEL) [24]. To increase students' resilience to stressful situations and improve their mental health, SEL implies development of five basic competencies: self-aware-

Table 1

Comparative analysis of the principles of traditional and mindful learning

Principles	Beliefs	
	... in traditional learning	...in mindful learning
1. Openness to novelty	The basics must be learned so well that they become second nature	A contextual approach to understanding the material, because facts are refuted even in the exact sciences.
2. Mindfulness of differences	Paying attention means staying focused on one thing at a time, which we should hold still	Mindfulness is maintained by searching for and identifying differences.
3. Sensitivity to context	Rote memorization is necessary in education	Autopilot interferes, students train sensitivity to context and differences of opinion, critical analysis of acquired knowledge, reflection, expression of doubts and tolerance of uncertainty, vigilance against new trends are encouraged.
4. Mindful self-regulation and emotion management	Delaying gratification is important.	There are many ways to increase the level of joy and usefulness of learning here and now, strengthen the internal motivation of students, and create a comfortable learning atmosphere in the group.

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Principles	Beliefs	
	... in traditional learning	...in mindful learning
5. Mindul choice and action	Intelligence allows to objectively assess current events.	Each person constructs his/her own subjective vision of what is happening.
6. Awareness of having more than one perspective	There are right and wrong answers.	There are different subjective views.
7. Flexible thinking	Forgetting is a problem.	Considering a problem and task from different points of view and finding non-standard creative solutions without regard to past experience.

Source: adapted [30; 31; 39].

ness, self-management, social awareness, relationship skills and responsibility for decision-making [18]. Same competencies are successfully developed by mindfulness training programs in the educational environment [18]. Importance of mindful learning is also considered for development of innovative competence or the 4C's: creativity, critical thinking, cooperation, and communication. The benefits of mindful learning from the perspective of experiential learning theory [47] and self-regulated learning [12] have also been noted. There are similarities between mindful learning and contemplative practices [48]. Table 2 presents the most prominent innovative learning approaches and their association to mindful learning. In our opinion, the development of targeted, non-judgmental attention to what is happening in the present moment, on which mindul learning is based, gives practitioners the opportunity to form a wide pool of student competencies that are only partially achieved through other educational technologies.

Table 2

The associations between mindful learning and the most popular innovative approaches to learning

Approach	Areas of intersection with the concept of mindful learning	Source
Social-Emotional Learning (SEL)	Competency development: 1) self-awareness, 2) self-government, 3) social awareness, 4) relationship skills, 5) responsibility for decision making.	[8, 18]
4C's Model	Skill development: 1) creativity, 2) critical thinking, 3) cooperation, 4) communication	[19]
Experiential Learning Theory	Suggestion of exercises for each stage of the Flask cycle: 1) accumulation of personal experience; 2) awareness and mental observations; 3) theoretical generalization; 4) experiment-practice.	[47]

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Approach	Areas of intersection with the concept of mindful learning	Source
Self-Regulated Learning	Improving learning skills: 1) organization of educational activities, 2) mastering educational materials, 3) self-control in the learning process, 4) self-assessment of academic performance.	[12]

Source: compiled by the authors

Feedback and reflection in mindful learning

The lecturers' task in mindful learning is to support students in realizing the value and relevance of their own thoughts, observations, and inquiries regarding the subject being studied [22]. Thus, special attention is given to feedback and reflection.

Traditionally, feedback in the learning process is the assessment of students by the lecturers. Such assessment is based on a standard or a set of correct answers to which students' responses are compared. Empirical research indicates that students' performance does not improve and may even deteriorate as a result of evaluative feedback. Contrary to expectations, the effect is stronger for cognitive and physical improvements rather than for students' motivation or behavior [27].

In mindful learning, feedback is a two-way process via which participants share their opinions non-judgmentally thus participating as a whole group in constructing knowledge [16, 46] including the standard with which student responses are compared. For this purpose, special tools aimed at stimulating feedback can be included in the curriculum of academic disciplines. Verpoorten et al. [44] call them *reflection triggers* as feedback is designed to stimulate reflection - a thought process that allows one to "voluntarily direct attention to oneself" [3, p. 114]. Verpoorten et al. [44] present 35 tools aimed at stimulating feedback in the form of: 1) reflection on the information received (for example, graphic illustration

of the material in the form of mind maps); 2) assessment of one's answers and decisions, including behavior and feelings in the process of completing tasks (for example, assessing satisfaction with one's answers and explaining such assessment); 3) verbalization of information (for example, an essay or report on the experience gained) [44]. Table 3 presents selected tools that can be used as such "reflection triggers."

A structured reflection process is important not only for students but also for lecturers. Lecturers can use feedback from students and their own observations to compare desired and observed levels of teaching excellence, and discuss discrepancies in peer reflection groups or when working with a mentor or coach [16]. The level of awareness while lecturing can also become a point of reflection. Lecturers can evaluate their skill level against the Mindfulness-Based Interventions: Teaching Assessment Criteria (MBI: TAC) — a set of self-assessment criteria for mindfulness interventions [13]. At the same time, mindful learning suggests perceiving these criteria not as an assessment tool but as a support for professional growth [16].

However, praising non-evaluative feedback and construction of knowledge during the learning process in mindful learning provokes discussion on the means of maintaining criterion-based assessment and avoiding grade inflation. The effectiveness of feedback can be increased if the standard with which the results are compared is related to the students' goals

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Table 3

Examples of reflection triggers

Name	Explanation
Reflection amplifiers by the receiving information	
1. Text visualization, for example, in mind-map format	Students visualize the material being studied or supplement it with new information in the form of graphic diagrams
2. Exchange of annotations	Students' comments and conclusions regarding the material being studied become available to the entire course group
3. Individual system of indicators of course completion success for each student	Students regularly track course performance, noting their progress against indicators of their choice.
4. Comparison of the results of knowledge acquisition with an external model	The results of another group, the performance of a lecturer or classmates can serve as a sample.
Reflection amplifiers by the giving information	
1. Specified indicators of information mastery	You can use informal indicators for self-assessment of understanding: everything is clear, vague, lost in information
2. On-demand assessment	Students themselves determine at what point they are ready to undergo the assessment procedure.
3. Assessing satisfaction with your answers and justifying such assessment	The lecturer provides the opportunity to evaluate one's own behavior or the results of a decision.
4. Selecting the difficulty of questions	Students can ask for easier or more difficult questions
Reflection amplifiers by the verbalizing information	
1. Preparing questions for the test	Students create their own questions for the final test
2. What and why is wrong?	Students are given information and asked to identify any errors in it and explain their opinion
3. Journaling	Students describe their experiences in an observation diary
4. Comments on comments	Students comment on comments received from the lecturers

Source, abridged version by Verpoorten et al. [44]

so that students see the gap and strive to eliminate it in order to achieve their own goals [26].

Thus, within mindful learning students can engage in 1) reflection on their own behavior / responses and on the behavior / responses of their colleagues; 2) construction of an external standard against which students' behavior / response is compared; 3) reflection on the identified gap between the standard and the fact. This approach is called productive (systemic) reflection as opposed to 1) introspection, with the focus on oneself without constructive gap assessment with the desired norm; 2) unreflectiveness with no reflection on self and attention directed only to the external standard, or 3) quasi-reflection, in which the student is carried away by abstract reasoning unrelated to the context [3].

Criticism of mindfulness practices in educational contexts

Adaptation of the principles of mindful learning within the framework of general curriculum disciplines significantly expands lecturer's methodological tools. However, a critical overview reveals the lack of discussion regarding negative evaluations and effects of such practices[45]. Nevertheless, such evidence (although rather sparse) does exist. there is mainly addressed to meditative approach in mindfulness, however, this may be due to the fact that the programs carried out in this approach are most often considered in research.

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A common cause for concern is differences in individual reactions to the programs and especially the presence of negative emotional reactions [17]. Such reactions are explained by the fact that with increasing emotional awareness, all groups of emotions become more noticeable, including those that are unpleasant [ibid.]. In addition, research notes that measures of effectiveness of mindfulness-based interventions are primarily measures of perceived stress, and objective data are rarely used. Including objective data in the analysis makes the interpretation of the results more difficult. For example, in a study by Creswell et al. [14] the experimental group participated in a short-term mindfulness training (3 days, 25 minutes per day), and participants in the control group participated in the training on development of analytical abilities of the same duration. Participants in both groups then completed the Trier Social Stress Test (TSST) after which their salivary cortisol, blood pressure, and perceived stress levels were measured. Participants in the experimental group who completed mindfulness training demonstrated lower levels of perceived stress in a stress test, but their cortisol levels were higher than those in the control group [14]. However, participants who had lower level of mindfulness before the experiment and who participated in mindfulness training had the highest cortisol levels after the stress test. A possible explanation of the change in cortisol levels may be related to more intense coping reactions as a result of mindfulness training in participants with an initially low level of mindfulness [14]. We did not find any studies of mindful learning utilizing biological markers of stress.

A meta-analysis of mindfulness meditation programs also identifies interventions that, contrary to expectations, did not lead to increased mindfulness, better sleep, or positive mood in participants [19]. In this regard, the importance of a deeper study of the theoretical justification of the mechanism of expected improvements is noted [40], especially taking into account cultural specifics of the context. The researchers also suggest that the effect of meditation interventions may be non-linear and follows an inverted U-shaped trajectory [10], which should be taken into account when determining intensity and duration of such interventions.

It is noted that the positive effect of mindfulness practices is most evident in participants who at the time of starting classes had a higher level of mindfulness and implicit motivation to practice. However, participants with less developed self-regulation skills are more likely to find classes difficult and boring, and are also more likely to quit practicing [6]. Individual resistance to mindfulness practices may negatively impact overall group dynamics, and alternative assignments might need to be provided to individual students when integrating mindfulness tools in the core curriculum.

It is important to note that elements of meditative approach to mindfulness development may be perceived as esoteric and, thus, inappropriate in the context of secular higher education [4], such as the term "mindfulness" itself. The first way out of this situation is to use other terms when translating this concept into Russian, as mentioned in the introduction. The second option is the background use of the principles of mindful learning, without emphasis on the topic of mindfulness in the class [39]. The third option is to combine the principles of mindful learning with other popular innovative approaches to teaching, such as SEL, 4C, etc. (see Table 2).

Conclusion and discussion

This article overviews research on the principles of mindful learning that are suit-

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able for the new context in which higher education finds itself due to the pandemic, economic and political challenges. The article reviews the principles of mindful learning exist and suggests the ways in which they can be integrated into the disciplines of the curriculum.

The theoretical contribution of the article lies in highlighting the concepts of "mindful learning" and "Langerian mindfulness", which are relatively new in Russian academic research, and identifying the agenda for research: current discourse, streams of research, and results of empirical studies.

The second topic is approaches to assessing students' mastery of tools: - is it worth leaving these tools for voluntary study, or is it important to introduce external incentives, for example, grades for their mastery?

The paper also reviews research which explores the intersections between mindfulness training and Kolb's experiential learning theory[47], SEL[34], self-regulated learning[12].

Special attention is paid to criticism of the meditative approach, and therefore the tools of this approach should be used with caution. We also emphasize the importance of critically reviewing interventions and taking into account possible side effects. We emphasize an overall lack of criticality towards social-cognitive approach and mindful learning in general.

The practical contribution of this study lies in the presentation of a methodological basis for adapting mindful learning to the tasks of university disciplines and vice versa: adapting university disciplines to the tasks of mindful learning. Reviewed principles of mindful learning are versatile and can be integrated into the curriculum providing an answer to many of the challenges faced by contemporary higher education.

Presented information should be considered from the point of view of existing limitations. First, this article is theoretical in nature, and suitability of the presented tools for the Russian context should be tested empirically. There is a possibility that low public awareness of the possibilities of mindful learning leads to undesirable associations among participants with esoteric or religious practices, also due to the spread of such practices performed by enthusiasts without appropriate academic and methodological training. Supplementing the results of quantitative studies with qualitative ones would add additional value, for example, by including the opinions of parents, students, methodologists, and heads of educational programs as apart from their status, they belong to different generational groups whose socialization took place in specific socio-economic conditions, which can also influence the adaptation of mindful learning practices and their perception. Semi-structured interviews, observation diaries, and student essays can help identify new facets of the process under study as well as its connection to other constructs for socialization of an individual in society, for example, the formation of various components of social capital. In addition, a comparative analysis of the developments of lecturers in various fields of education will allow to obtain a more objective view of mindful learning and possibly complement the list of principles for adapting tools to the conditions of Russian education.

Secondly, the format of the article does not allow us to describe the tools and provide detailed instructions for them. Other formats of methodological materials with greater detail and a dedicated training material may help in unscaling the results by involving more lecturers eager to try out the proposed methods and improve the quality of the interventions.

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Осознанное обучение: принципы и возможности применения в высшем образовании
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Technology of Designing an Individual Educational Trajectory for Students with Disabilities

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Students with disabilities represent a highly heterogeneous group. The study was based on the hypothesis that creating variable special conditions for students with disabilities as part of the design of individual educational trajectories (IETs) will ensure the success of higher education for disabled people. The article describes the logic and stages of research on the creation and implementation of technology for designing an individual educational trajectory for students with disabilities. The materials were formed as a result of the implementation of the practice at Cherepovets State University over 5 years. Four IET options are described in detail, with each option concentrically increasing the conditions to account for the needs and capabilities of the student. The study involved 873 disabled people (765 applicants and 108 students). The study included assessing the requests of applicants with disabilities, designing and implementing individual educational trajectories, monitoring the adaptation and satisfaction of students, and evaluating the effectiveness of students with disabilities in mastering the educational program. The results obtained show an insufficient starting level of applicants' readiness for the conscious construction of an individual educational trajectory. Additionally, data were obtained on the difficulties related to emotional and interpersonal adaptation for students with disabilities. Continuous dynamic monitoring of the requests from disabled individuals for special conditions and productive interaction among all participants in the design of IETs ensures improved adaptation indicators (statistically confirmed by the use of φ angular Fisher transformation), stability of the contingent of students with disabilities, and academic success.

Keywords: students with disabilities; individual educational trajectories; inclusive higher education; technologies for designing individual educational trajectories; special learning conditions.

Технология проектирования индивидуальной образовательной траектории для студентов с инвалидностью

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Представлены результаты исследования логики и этапов процесса
проектирования индивидуальной образовательной траектории (ИОТ),
реализованного в Череповецком государственном университете на
протяжении 5 лет. Обращается внимание на то, что студенты с инва-
лидностью представляют крайне неоднородную группу. Было сформу-
лировано предположение о том, что проектирование ИОТ для студен-
тов с инвалидностью обеспечит успешность получения ими высшего
образования. Описаны четыре варианта ИОТ, в каждом из которых
концентрично наращиваются условия с учетом запросов и возмож-
ностей обучающегося. В исследовании участвовали 873 инвалида
(765 абитуриентов и 108 студентов). Работа включала оценку запро-
сов абитуриентов с инвалидностью, проектирование и внедрение ИОТ,
мониторинг адаптированности и удовлетворенности студентов, оценку
эффективности освоения ими образовательной программы. Выявлен
недостаточный стартовый уровень готовности абитуриентов к осоз-
нанному построению ИОТ, трудности эмоциональной и межличностной
адаптации студентов с инвалидностью. Установлено, что постоянный
динамический контроль запросов инвалидов на специальные условия
и продуктивное взаимодействие всех участников проектирования ИОТ
обеспечивает улучшение показателей адаптации (подтверждено ста-
тистически применением φ углового преобразования Фишера), сохран-
ность контингента обучающихся с инвалидностью и их академическую
успешность.

Ключевые слова: студенты с инвалидностью; индивидуальные образо-
вательные траектории; инклюзивное высшее образование; технологии
проектирования индивидуальной образовательной траектории; специ-
альные условия обучения.

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Introduction

The idea of a personalized and differentiated approach in education is one of the fundamental ones. According to A.G. Asmolov [3], D.A. Leontiev [12], N.Y. Shaposhnikova [20], the choice of a person's life path is largely determined by the variable education. The tools of individualization and personification of education, among other things, include the individual educational trajectory (IET). E.F. Zeer and E.E. Simanyuk, D.P. Zavodchikov, M.V. Zinnatova, E.V. Lebedeva emphasize that IET is developed under the influence of the social situation, leading activity and one's own activity [8; 10]. E.F. Zeer, E.Y. Zhurlova proposed a conceptual model of IET support as a set of guidelines for the development of necessary competencies [9]. A.V. Khutorskoy considers IET as a component of the human congruity principle into pedagogy [19]. I.S. Morozova, N.A. Bugrova, Z.V. Kretsan, E.V. Evseenkova [13] consider the problem of IET development through a student's conscious attitude to the matter of choice. In the study of N.M. Mussa a correlation between the general self-efficacy of students and their academic performance is revealed [15]. V.E. Belchenko, A.A. Arutyunyan, G.A. Aleksanyan [5], O.Y. Muller [14] consider IET as a way to fulfill self-potential. T.B. Serebrovskaya defines a student's IET as a special procedure for taking into account their educational needs and personal capabilities [18]. According to A.Y. Shemanov, E.V. Samsonova, S.V. Alyokhina, it is advisable to consider IET in several aspects [1; 2]. M.A. Bureeva, V.I. Kokova, E.V. Perechozheva, V.V. Timchenko consider ICT as a means of implementing IET [22]. In foreign literature, the concept of IET corresponds to the ideas and principles of universal design (V. Scott Solberg, L. Allen Phelps, Kristin A. Haakenson, Julie F. Durham, Joe Timmons [34]; K. Rrofiah, R.T. Ngenge, S. Sujarwanto, I.K. Ainin [33]; José María Fernández-Batanero, Marta Montenegro-Rueda, José Fernández-Cerero [30]) and it is described through an assessment of conditions and consequences of differentiation. The works of Heather Buzick, Jonathan Weeks [25; 26], S. Hurwitz, B. Perry, R. Skiba [28], Maria Elena Oliveri, Rene Lawless, Frederic Robin, Brent Bridgeman [31], Adam E. Wyse, Vincent J. Dean, Steven G. Viger, Timothy R. Vansickle [21] emphasize that differentiation in testing and evaluating the academic success of people with disabilities ensure their progress. Henrik Nieminen, Anabel Moriña, Gilda Biagiotti, on the contrary, speak about the equality of grades as a condition for successful career preparation [27]. Jennifer Koran, Rebecca J. Kopriva [29] believe that such differen-

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tiation should be based not on teachers' ideas, but on specific needs, strengths and learning experiences of people with disabilities. H. Yoon, J. Shim, W.S. Lee, J. Moon [35] identify five attributes that determine the quality of life of people with disabilities (engagement in social and cultural events, travelling, employment, stress). L. Nel, A. de Beer, L. Naudé believe that disability is a factor for personal growth [32]. At the same time, according to J.M. Fernandez-Batanero, M. Montenegro-Rueda, J. Fernandez-Cerero, at universities people with disabilities feel underrepresented, marginalized and disenfranchised [23]. Hanan M. AlTaleb, Dalal A. Alsaleh, Anwar S. Alshammari, Shatha M. Alsomairy, Shahad M. Alsuaqir, Lama A. Alsaleem, Asma B. Omer, Ruqaiyah Khan, Reem M. Alwhaibi [24] believe that late disability trajectories are determined by intra-individual and non-individual factors. In general, foreign studies have shown that considering the phenomenon of inclusion there is an idea of the interaction and influence of social, institutional and personal areas. The works of Russian scientists emphasize that inclusion should be a responsibility shared by all participants in the educational process. L.A. Osmuk [16] identifies options for self-fulfillment of students with disabilities, considering it the basic mechanism of social inclusion. O.A. Denisova, O.L. Lekhanova, O.Y. Limarenko [6] describe the stages and substantive aspects of support in inclusive higher education. K.S. Bazhin, G.I. Simonova, S.B. Bashmakova [4], considering the formation of the career trajectory of students with disabilities, point out to the risk of a gap between physical abilities, personal motivation for the chosen type of activity and the demand for the labor market. V.V. Rubtsov, S.V. Alyokhina, A.V. Khaustov [17] provide the data confirming the relevance of developing a personal basis for the continuity of the educational trajectory of persons with disabilities. According to the authors, the development of IET from the stage of early care to the vocational education of a disabled person is one of the main tasks of inclusive education, a characteristic of its quality and a key methodological principle. Thus, the individual characteristics of students with disabilities create prerequisites for developing IET. However, there is a contradiction between the normative regulation of the right of persons with disabilities to individualized learning and the lack of practices with proven effectiveness describing the mechanisms of organizational and methodological solutions to the issue of building IET for students with disabilities in real-life university education.

Materials and methods

The contradiction revealed during the study assessment of the issue made it possible to determine the purpose and objectives of the implemented study, which was aimed at assessing the readiness of people with disabilities to consciously build an individual educational trajectory as a university student. The following tasks were highlighted here: 1) to identify the nature of the requests of applicants with disabilities for IET; 2) monitor the adaptability and satisfaction of students during university training; 3) to evaluate the effectiveness of mastering the curriculum of higher education by persons with disabilities.

The study took place for 5 years at Cherepovets State University as a part of the Resource Educational and Methodological Center for the Education of the Disabled (RMC ED ChSU). 873 people took part in the study at different stages: 765 applicants with disabilities living in the Northwestern federal district; 108 students with disabilities studying at ChSU from 2017 to 2022. The sample of applicants with disabilities is represented by young people aged 17-20 years old: 30% are disabled children, 36% are disabled people of group 3, 7% are disabled people of group

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2, 9% are disabled people of group 1. 24% of them have muscle-skeleton disorders, 11% have hearing disorders, 12% have visual impairments, 53% have general disabling diseases. 410 are boys, 355 are girls. The sample of students with disabilities is presented: 10% — visual impairment, 5% — hearing impairment, 28% — muscle-skeleton disorders, 57% — general diseases. 88% of students have disability group 3, 7% have disability group 2, and 5% have group 1. 93% have been disabled since childhood. The age group of students is represented by young people 18-24 years old (91%) and 24-44 years old (9%), respectively. 44 are boys, 64 are girls.

The study included several stages. At the first stage, 765 applicants with disabilities participated in the questionnaire and the survey according to the RMC HE network developed and posted on the all-Russian Inclusive Education portal (2017—2022). The second stage included IET design and implementation work for 108 students with disabilities at ChSU (2018—2022). At the same stage, the adaptation of students with disabilities to the university was assessed using the methodology of studying the adaptability of students at the university by T.D. Dubovitskaya, A.V. Krylova [6], based on the materials of a student survey. The dynamics of adaptability was statistically verified by applying the criterion of the Fisher's angular transformation. The third stage included an assessment of statistical results on the contingent stability of students with disabilities.

The results of the study

We will consistently analyze the obtained results during the study and determine to what extent yesterday's students with disabilities are ready to build the most suitable educational trajectory for them.

The results of the survey presented in Table 1 revealed that the most desirable mode of study among the surveyed was full-time education with students without health restrictions (51%). At the same time, 19% of respondents express a desire to study in specialized groups for people with disabilities. Nosologically, this group is represented by applicants with hearing disabilities (21% of 141 selections), vision (8%), motor disorders (22%) and general diseases (49%). Taking into consideration that universities rarely provide an opportunity for students with disabilities to study in a specialized group, it is obvious that universities will face a gap in the expectation of applicants and real learning conditions.

It is important that almost a quarter of applicants with disabilities are not confident in their career choice, 66% cannot name a university of priority, more than half do not identify themselves as needing help in building a career development trajectory.

Assessment of applicants with disabilities' requests for special educational conditions (Table. 2) showed that in the first place there is a request for socio-psychological coaching (38%), in the second place — for individual educational programs (18%). When answering the question whether the respondent believes that training programs should be (individually) adapted to the needs of people with disabilities, 73% of respondents (556 people) answered in the affirmative.

Taking into account the nosological distribution, it was determined that more than half of the applicants with motor disorders do not request for special equipment, persons with hearing and visual impairments also do not state a request for special equipment.

The data obtained at the first stage of the study became the basis for the design and implementation of IET development technology for students with disabilities. The mechanism of technology implementation was the productive interaction of all participants in inclusive educational relations, in which the IET is determined by

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Table 1

The career trajectory development of applicants with disabilities

Career trajectory development	N	%
1. Career trajectory development		
Yes, I am firmly convinced of what profession I will get	331	43
I have decided, but there are some doubts	236	31
I see my future career only in general terms	104	14
I have not decided on my future profession	93	12
2. The choice of top-priority university		
I clearly understand which university I plan to enter	256	33
I have not decided on the university	437	57
No response	72	9
3. Request for help in developing a career trajectory		
I need the help of a career counsellor	168	22
I do not need the help of a career counsellor	376	49
I have already asked for help and consulted	98	13
I don't know if I need help	123	16

Table 2

Applicants with disabilities' requests for special learning environment

The need for special learning environment	N	%
Social and psychological coaching	288	38
Special equipment	98	13
Assistant help	96	13
Individual educational training program	136	18
Special route-oriented provision of an accessible environment (lifts, ramps, adapted elevators, etc.)	76	10
Sound-amplifying equipment, sign language interpreter services, etc.	44	6
Electronic magnifiers, scanning machines, speech synthesizer, etc.	24	3
Specialized desks and chairs, an automated workplace, etc.	76	10
No special environment is required	522	68
I need another piece of equipment	92	12

the student together with the university staff, taking into account the motivation, abilities, mental, psychological and physiological characteristics of the student, as well as the facilities and resources of the university. As a result of the study, four IET options were identified and implemented at the second stage:

IET option 1 (89 students — 82.4%): students with disabilities are included in the general educational group. They master the basic curriculum, adaptive disciplines; e-learning and distance learning technologies are widely used, taking into account the specifics of HIA.

IET option 2 (11 students — 10.3%): an individual training schedule is provided with the possibility of passing final and midterm assessment at an individual pace and schedule, increasing face-to-face learning; selection of internship sites taking into account the nosology of the disorder.

IET option 3 (5 students — 4.6%): expanded by providing conditions for dosing

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academic loads by regulating the pace of learning, time and duration of classes through the lecture recordings. It is acceptable to rearrange the number of hours devoted to studying certain sections and topics, and to change the sequence of studying topics. The training involves the mandatory use of special equipment and technologies for the adaptation of materials. A tutor, volunteers, therapist, special education teacher (by profile) are additionally involved in the work.

IET option 4 (3 students — 2.7%): characterized by an increase in the duration of the program (for 1 year — at the bachelor's degree, for 0.5 years — at the master's degree). Additional hours are arranged for supervision and face-to-face learning (up to 50% of the subject).

Each option increases special conditions, taking into account the needs and capabilities of the student. The proposed IET allow responsible students to outline the range of opportunities for the student and help them make a choice.

The adaptation of students with disabilities to higher education was assessed by the methodology of T.D. Dubovitskaya, A.V. Krylova [6], as well as by the survey on the assessment of socio-psychological well-being developed by the Federal network of RUMC HE on satisfaction of students with disabilities with the help they receive. The assessment of adaptability and satisfaction was carried out on a dichotomous scale. Table 3 shows data on students classified as adapted and contented (absolute and percentage information on adapted and contented in the first and final years).

According to the obtained results, students show a high level of satisfaction with the help they received during IET training, high rates of cognitive and physical adaptation. To assess the dynamics of adaptation and satisfaction, a comparison was made between the indicators of first-year students with disabilities and the same students in their final years. As can be seen from Table 3, significant differences between the first and final year of students with disabilities affected 6 out of 8 indicators.

According to the obtained data, 77% of students with disabilities who studied as part of IET technology completed the educational program on time (Table 4). Comparing the results with the data provided in the article by V.V. Rubtsov, S.V. Alyokhina, A.V. Khaustov [15], according to which only 46.8% of university students complete their studies and get the opportunity for further employment, the implemented practice is quite effective.

Table 3

Satisfaction and adaptability indicators for students with disabilities

Satisfaction and adaptability indicators for students with disabilities	1 year		Final year		φ^*_{emp}	Area of interest
	n	%*	n	%*		
Emotional adaptation	35	32,4	75	69,4	**5,36**	**0,01**
Physical adaptation	85	78,7	99	91,7	**2.673**	**0,01**
Cognitive adaptation	94	87,0	102	94,4	**1.718**	0,05
Interpersonal adaptation	80	74,1	96	88,9	**2.786**	**0,01**
Satisfaction with the educational process	90	83,3	88	81,5	**0.368**	not significant
Satisfaction with self-fulfillment conditions	84	77,8	100	92,6	**2.942**	**0,01**
Student life satisfaction	79	73,1	99	91,7	**3.67**	**0,01**
Satisfaction with the help in adapting to the university	99	91,7	99	91,7	0	not significant

Note. * — of the total number of students with disabilities.

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Table 4

Indicators of the contingent stability of students with disabilities

Contingent stability of students with disabilities	n	%
The total number of students with disabilities	108	100%
Completed the educational program on time, being a person with a disability	40	37
Completed the educational program on time, being a person without a disability	31	28,7
Took an academic leave during the training	9	8,3
Used the right to increase the training duration	3	2,8
Total: contingent stability of students with disabilities	83	77
Honorable dismissal	6	5,6
Dropped out due to the health deterioration and inability to continue their studies	12	11,1

Discussion and conclusions

In the implemented study, the problem of developing an individual educational trajectory for students with disabilities received its theoretical and practical solution, and the obtained data expanded our understanding the possibilities and ways of individualizing education for people with disabilities.

The technology of IET development for students with disabilities, as the results of our work show, is a sequence of interactions between participants in inclusive educational relations. It has been established that applicants with disabilities are insufficiently aware of their limitations and capabilities, have a superficial understanding of the universities in which they plan to study, and do not have a formal request for help in building a career trajectory. This significantly complicates the initial period of work on the development of IET and requires coordinated work by university specialists to support the professional and personal development of students with disabilities. The initial adaptation periods of students with disabilities are characterized by difficulties in emotional and interpersonal adaptation, however student are satisfied with the help they receive during the adaptive process to higher education and designing IET. IET training ensures 77% of contingent stability of students with disabilities, which is one third higher than the average for universities in the Russian Federation.

The obtained data suggest that the mechanism for ensuring the development of an educational program by students with disabilities directly depends on the willingness of the university to develop IET for each student. Currently, the development of IET for students with disabilities is not the university responsibility and depends on the competence of specialists working at universities who provide guidance for inclusion. The mechanism for implementing the development of IET for people with disabilities involves setting and solving large-scale tasks to unify and normative consolidation of such practices.

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Personality Predictors of the Attitude to the Digitalization of Education among Russian Students

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The empirical study explores students' attitudes towards digital educational technologies and the digitalization of the education system as a whole. The survey, conducted between January and April 2022, shortly after the end of the lockdown, involved students from Russian universities aged from 18 to 38 (M=22,23; SD=3,17; N=132; 76% — female). The "Attitude towards Digitalization" questionnaire (D.V. Kashirsky, A.S. Ocheretin) and the Big Five Inventory (BFI-2-S, K. Soto, O. John) were used. The results of the survey revealed the extent to which students mastered the skills necessary for studying in a digital environment and whether these skills influenced their academic success. The study also examined the effect of the digitalization of education on the quality of education and identified the most effective learning formats as reported by respondents. Multiple regression analyses identified personality traits (Big Five factors) that underlie students' attitudes towards the digitalization of education. The results can be used to individualize the educational process at universities when implementing various educational technologies.

Keywords: digital technologies; digitalization of education; attitude towards digitalization; Big Five factors; university students.

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Личностные предпосылки отношения к цифровизации образования у российских студентов

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Представлены результаты эмпирического исследования личностных особенностей студентов с различным отношением к цифровым образовательным технологиям и цифровизации системы образования. В опросе, проведенном в январе-апреле 2022 года после окончания локдауна, приняли участие студенты российских вузов в возрасте от 18 до 38 лет (M=22,23; SD=3,17; N=132; 76% девушек). Использованы анкета «Отношение к цифровизации» (Д.В. Каширский, А.С. Очеретин); тест «Большая пятерка» (BFI-2-S) (К. Сото, О. Джон). На основе результатов анкетирования определено наличие у студентов навыков работы в цифровой среде, а также влияние степени их сформированности на успешность обучения. Выявлены представления студентов о зависимости качества образования от его цифровизации и о недостатках применения цифровых технологий, определены наиболее эффективные форматы обучения с точки зрения студентов. С помощью процедур множественного регрессионного анализа выявлены личностные предпосылки (факторы Большой пятерки), лежащие в основе отношения студентов к цифровизации российского образования. Полученные результаты могут быть использованы для индивидуализации учебного процесса в вузе при реализации различных образовательных технологий.

Ключевые слова: цифровые технологии; цифровизация образования; отношение к цифровизации; факторы Большой пятерки; студенты вуза.

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Introduction

In Russia's social and economic development strategy until 2024 and beyond to 2035, the country's leadership has outlined a course towards building a digital economy, where the digitalization of education plays a crucial role. The authors of the book *"Challenges and Prospects of Digital Transformation in Education"*, published by the HSE under the editorial leadership of A.Y. Uvarov and I.D. Frumin, had posed the question: how should education be transformed so that it becomes not just a state obligation, but a driving force for the country's social and economic development? A special emphasis in the book is placed on the process of digitally renewing education; the authors believe that it will play a key role in the upcoming digital transformation. The authors point out that the digital economy requires every learner (not just the top performers) to possess the skills needed in XXI century (such as critical thinking, the ability to self-learn, and the capacity to effectively utilize digital tools, resources, and services in their daily work) and to creatively (beyond standard templates) apply their knowledge in a rapidly evolving digital environment, as well as to manage their own learning process [21].

Over the past few years, the gradual and systematic introduction of digital educational technologies (DET) into the Russian education system has been taking place. This process was significantly accelerated due to the COVID-19 pandemic, when Russian universities began operating in a remote format, since carrying out educational activities would have been impossible without the use of DET. The experience of large-scale application of DET during the lockdown period provided an opportunity to assess the advantages, disadvantages, and risks of using digital technologies in education. It became clear that the effectiveness of education using modern DET depends not only on the quality of the technologies themselves but on the individual characteristics of the users and their attitudes toward DET [15; 35] as well. Therefore, examining the links between students' attitudes toward DET and their personal characteristics becomes particularly relevant.

Ideological Foundations and Risk Assessment of the Digital Transformation of Society. The ideological foundations of digital transformation as a necessary stage in the change of the modern world order are presented in Klaus Schwab's work *"The Fourth Industrial Revolution"*. The author assumes that the world stands on the threshold of a new technological revolution that promises to transform the society and the global world as a whole, to transform all the mankind. In terms of scale, scope, and complexity, this phenomenon is unparalleled in all of human history. The Fourth Industrial Revolution is based on digital transformation and combines a variety of technologies, leading to unprecedented paradigm shifts in the economy, business, society, and within each individual. It changes not only *what* and *how* we do things, but also *who* we are. It is noteworthy that the importance of digitalization is justified primarily not as a technological transformation of the world but as a shift in the way of living, carrying out activities, and communicating and, most importantly, as a change of the individual themselves—their mental structures and inner world. Schwab refers to digitalization as to disruptive innovation, designed to carry out a revolutionary shift in the consciousness and activities of individuals, leading to the transformation of their customary way of life and work, as well as that of society and the global world as a whole. A crucial role in the transformation of the modern world is assigned to education.

The idea of the widespread use of digital technologies raises certain concerns.

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In particular, in his book, Klaus Schwab presents research results indicating a link between the digitalization of education and a 40% decline in empathy levels among college students as compared with those who studied two or three decades ago [25]. In the same vein, Konrath and colleagues reported that a significant part of this decline occurred after the year 2000 [32]. Sherry Turkle also points to a decrease in societal empathy [38]. Turkle emphasizes that digital technologies harm three pillars of humanity: solitude which allows for reflection, friendship which implies empathy, and social life that involves mentorship, family, and education. According to her data, 44% of teenagers are never away from the internet, even during sports or meals with family or friends. This has led her to conclusion that entire generation of people who find it extremely challenging to listen to others, maintain eye contact, and understand non-verbal cues or empathize may soon emerge. In addition, numerous sociologists' and psychologists' empirical studies have established the influence of the digitalization of education on the decline in empathy [32; 38], reflection, and the quality of social interaction between people [15; 17; 38].

Several studies indicate the impact of internet engagement on cognitive development. For instance, Nicholas Carr [29] argues that the more time one spends in the digital space, the more his or her cognitive abilities decline due to reduced attention control. The internet significantly reshapes our perception of reality by fostering the only superficial understanding. As "skimming" becomes the dominant reading method, people lose the ability to read books deeply and to truly engage with their content. Thus, the author concludes that we may lose our "humanity" in this way. These concerns are supported by recent research findings, which point to the role of information and communication technologies (ICT) in diminishing cognitive abilities and fostering fragmented thinking in schoolchildren [3]. For example, the research made by E.V. Bakhadova [3] showed that adolescents with a high level of internet addiction exhibited fragmented thinking: their mental agility was coupled with reduced attention span, leading to difficulties in maintaining focus during long tasks. Superficial and inflexible perception resulted in an inability to deeply analyze information and perceive the world as a whole. Students with fragmented thinking demonstrated lower academic motivation, leading to academic difficulties. Bakhadova points out that fragmented thinking hinders the full development of students' personalities as develops spontaneously, whereas conceptual and theoretical thinking is being developed through systematic learning [3].

Analysis of Research on Students' and Teachers' Attitudes Toward the Implementation of Digital Educational Technologies (DET). In recent years, a significant number of studies analyzing the results of implementation of digital ICT in education [6; 17; 22] have been conducted. Some of them were based on the experience of digital ICT use in educational process during the COVID-19 pandemic [1; 5; 12; 13]. Several studies focused on examining the attitudes of teachers [11; 12; 20] and students [9; 13; 16; 35] toward the use of remote technologies in educational practice. It is important to note the contradictory nature of the research results. For instance, some studies [27; 39] revealed that more than a half of the students expressed a positive attitude toward the use of ICT in education. The other group of studies found out that the majority of students showed a cautious attitude toward remote, digital learning formats, preferring traditional or blended learning forms [14]. The differences in students' attitudes toward the digitalization of education were explained by various factors, including the

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accessibility of digital equipment and the experience of its use [26]. It was also noted that students' attitude toward digitalization vary depending on respondents' socio-demographic characteristics, such as country, field of study, year of study, familiarity with digital technologies, and the timing of the survey (whether it was conducted at the beginning of the lockdown or after a significant period of time following it) [35].

Studies aimed at examining students' and teachers' evaluations of the negative and positive aspects of digitalization are particularly interesting. It has been shown that, on one hand, students noted the time saved on commuting to and from the university [1; 12], the simplification of the educational process, and improved communication between students and teachers [39]. On the other hand, they mentioned passive learning, the lack of feedback from instructors [14; 39], and insufficient interpersonal communication and social interaction [1; 18].

When discussing the drawbacks of distance learning as one of the forms of implementing of digital educational technologies (DET), some authors point out that this format does not take into account the individual characteristics of students, their personal development levels, or how each student perceives information [16]. In this regard, studies analyzing the personal traits of students who prefer certain learning formats or the use of various ICTs are of a special interest. These include research on the connection between basic values and engagement in using ICT [20], the relationship of attitudes toward distance learning with academic disengagement and emotional burnout [14], motivation, identity styles, and Big Five personality traits [4; 35], as well as the studies examining the link of students' thinking patterns and Big Five traits with academic performance in distance learning [2]. Some studies on the connection between students' personality traits and attitudes toward distance learning and DET (in general) revealed a positive correlation of acceptance of digitalization in education with extraversion [4; 35], agreeableness, and openness [4; 36]. In a study with Taiwanese students [27], conscientiousness positively, and neuroticism negatively, predicted attitudes toward the effectiveness of online learning for them.

The aforementioned studies assessing the relationship between Big Five traits and attitudes toward specific online courses, viewed students' personality traits as predictors of their overall attitude toward DET, however, the particular forms or technologies of academic work were not specified there. Also, there is a lack of empirical data in the literature regarding the risks and benefits of learning through DET. In addition, while discussing DET, authors often did not examine them in their entirety, but artificially narrow the scope to distance learning formats.

The purpose of the present empirical study was to identify the personal prerequisites influencing students' attitudes towards various aspects of the digitalization of education.

The following ***objectives*** were addressed**:**

— to determine students' attitudes towards the digitalization of Russian education;

— to identify the personality traits of students with different attitudes towards the digital technologies used in Russian education.

The main ***research questions*** addressed in this study are:

RQ1: What digital skills are the most developed among students, and how do these skills impact students' academic success?

RQ2: How do students perceive the relationship between the implementation of digital technologies in education and changes in its quality?

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RQ3: What learning formats do students consider the most effective, depending on the extent of digital technology usage in education?

RQ4: What personal dispositions underlie students' attitudes toward digitalization and their preferences for certain educational formats?

Procedure and participants. The survey was conducted between January and April 2022, immediately after the lockdown, using the Google Forms platform. The study, which was voluntary, involved 132 students of Russian universities who had experienced distance learning during COVID-19. They were studying social sciences and humanities for 1— 6 years. The participants' ages ranged from 18 to 38 years (M=22.23 SD=3.17; Md=22; 76% were female).

Measures and data analysis. Two questionnaires were used in the study. The "Attitude towards Digitalization" questionnaire (D.V. Kashirsky, A.S. Ocheretin, 2022) was utilized to reveal different aspects of the students' opinion on digitalization of education. Students responded to each statement using a 4-point scale from 1(strongly disagree) to 4 (strongly agree) about: a) students' digital skills; b) the extent to which these skills influence academic success; c) the dependence of education quality on its digitalization; d) the drawbacks of applying digital technologies; e) the most effective learning formats. The Big Five Inventory-2/Short form of the Big Five Inventory-2 (BFI-2-S, K. Soto, O. John, 2017) was used to assess the five dimensions of personality.

The normality of the distribution of quantitative indicators was assessed using skewness and kurtosis criteria. Pearson Correlation Analysis and Multiple Regression Analysis using backward elimination method (MRA, Backward method) were performed to examine the relationship between personal dispositions and attitudes toward digitalization as well as between personal dispositions and preferences for certain educational formats.

Data processing was carried out using the JASP 0.17.2.1 software. The database with the research results is presented in the MSUPE RusPsyData repository [7].

Results

Students' attitudes towards the digitalization of education. Figures 1—4 and Table 1 in the Appendix present the results of the students' assessments of digitalization based on their responds to the questionnaire by D.V. Kashirsky and A.S. Ocheretin. According to Figure 1, the most developed students' digital skills were as follows: working on online simulators, taking tests (e.g., using Google Forms and similar tools), and posting materials on the internet (especially using cloud technologies). Less frequently, students utilized electronic libraries and databases, as well as were engaged in collaborative online activities.

The Fig. 2 presents the results of students' assessments of the influence of their specific digital skills on the effectiveness of learning. According to students, the most significant skills for academic success include proficiency in using various online simulators, active utilization of electronic educational content, and well-developed skills in organizing and storing educational and extracurricular outcomes on different platforms. The lowest rating in terms of significance was given to online testing.

According to Table 1 in the Appendix, which reflects the distribution of responses to the question about the impact of digitalization on the education quality, approximately 41% of students believe that the use of digital technologies significantly lowers education quality. By contrast, 38% of respondents hold the opposite view. Almost 8% were unable to clearly express their position, and about 13% noted that the impact

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Working with online simulators — 3,379
Taking tests — 2,705
Uploading materials — 2,697
Organizing and storing educational and extracurricular results — 2,614
Accessing electronic educational content — 2,561
Online consultations with instructors — 2,508
Using online services for submitting/receiving documents — 2,5
Participating in webinars — 2,47
Collaborative activities in an online format — 2,326
Online communication with all participants in the educational process — 2,288
Using electronic libraries and databases — 2,091

Fig. 1. Students' self-assessment of their digital skills

Working with online simulators — 3,121
Accessing electronic educational content — 2,409
Organizing and storing educational and extracurricular results — 2,409
Participating in webinars — 2,379
Online consultations with instructors — 2,364
Using electronic libraries and databases — 2,311
Online communication with all participants in the educational process — 2,303
Collaborative activities in an online format — 2,227
Uploading materials (electronic storage devices, cloud technologies and etc.) — 2,205
Using online services for submitting/receiving documents — 2,106
Taking tests — 2,008

Fig. 2. Students' assessment of the impact of their skills on learning effectiveness

of digitalization on education quality cannot be assessed as either positive or negative.

Students' opinions concerning the role of digital technologies in the change of education quality are graphically represented in Fig. 3. As shown, the primary disadvantage of digitalization, as perceived by students, is a decline in the quality of studying some particular subjects and in the quality of education as a whole, as well as in the effectiveness of practical training of university graduates. According to the respondents' opinion, the introduction of digital technologies has negatively affected the quality of

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lecture courses and a reduction in the time of live communication with classmates and teachers as well, but to a lesser extent.

Next, we aimed to reveal predictors of the decline in education quality on the whole (see the line 2 in the list of digitalization drawbacks, Fig. 3) from the list of the specific adverse consequences of digital technologies implementing in the educational process (see the lines 3—11 in the list, Fig. 3). For this purpose, MRA was performed as the following assumptions were met: the independent and dependent variables in the analysis had normal distributions (the skewness and kurtosis values were between –1 and +1 each), each predictor was statistically significantly linearly related to the dependent variable, while the independent variables did not correlate. As a result of 8 iterations, MRA yielded a regression model (Model 1), which was recognized as statistically valid (R=0,723; Adj R^2=0,523; F=34,826; p≤0,001). According to MRA data, the main predictors of the decline in education quality, as reported by students, are the following: reduction of time to live interaction with peers, increased

demands for information originality, decreased quality of educational resources, and a decline in students' practical training quality (Table 2 in the Appendix).

It is worth noting that several factors did not have a significant impact on the overall decline in education quality due to the introduction of digital technologies into the learning process. They are as follows: changes in the quality of lecture courses, reduced communication with instructors, changes in student engagement in the learning process, and the overall workload. However, each of these causes separately (as shown earlier) was considered by respondents to be a negative consequence of digitalization.

The results presented in Fig. 4 provide insight into which learning format students find most effective, depending on the extent of digital technology use. The most effective format, according to them, combines digital technologies with direct in-person interaction between instructors and students in a classroom setting. The preferred approach would involve delivering lectures online while holding seminars via direct
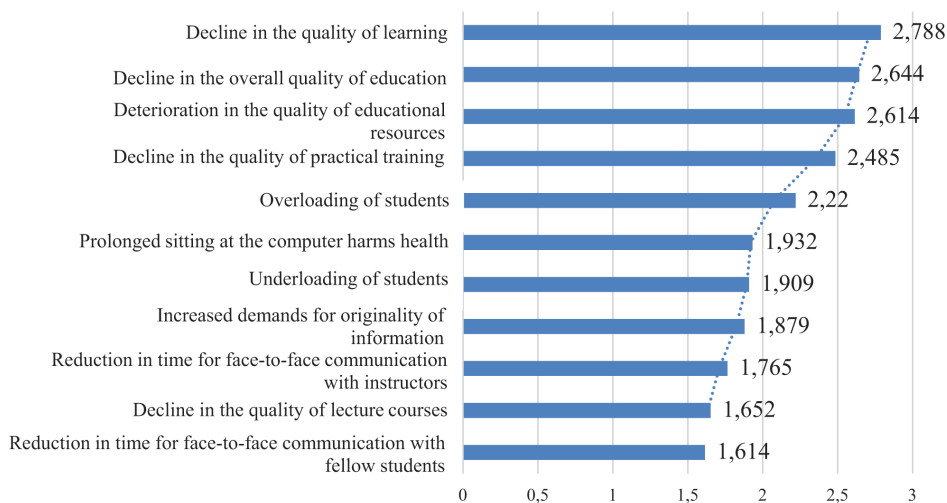
Fig. 3. Students' assessment of the main drawbacks of digitalization

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student-instructor interaction. The traditional in-person learning format, supplemented with digital tools and methods as auxiliary means, was also rated highly by the respondents. On the other hand, fully online formats, including those that involve personal consultations with the instructor if needed, received the lowest ratings from students.

Personal Traits of Students with Different Attitudes Toward Digitalization in Education. To assess the contribution of Big Five factors to students' evaluations of the role of digital technologies in education, Multiple Regression Analysis (MRA) was used. It is worth noting that the conditions for applying MRA, as described above, were met in this case as well. Out of 11 regression models, where the dependent variables were the drawbacks of digitalization in the educational process (as listed in Figure 3), only three models had statistically significant multiple correlation coefficients and could therefore be meaningfully interpreted (models 2—4, Table 3, Appendix). According to MRA, the most significant predictors of the overall assessment of decreased education quality are conscientiousness ($\beta=0{,}249$; $t=2{,}713$; $p \leq 0{,}008$) and neuroticism ($\beta=0{,}198$; $t=2{,}159$; $p \leq 0{,}033$). Conscientiousness also appeared to be the most powerful predictor of the assessment of digital learning formats as detrimental to health due to significant time spent working on the computer ($\beta=0{,}294$; $t=3{,}502$; $p \leq 0{,}001$), while agreeableness was the strongest predictor of assessing digital formats as reducing students' academic workload ($\beta=0{,}204$; $t=2{,}377$; $p \leq 0{,}019$).

Using MRA, we also examined whether the development of skills in the digital environment is determined by Big Five factors. For this purpose, 11 regression models were constructed, where the students' ratings of 11 digital technology skills mentioned above (Figure 1) were used as dependent variables. According to the calculations, two final models were statistically sound (models 5 and 6, Table 3, Appendix). In these models, the dependent variables were: the successful forming of skills of using electronic educational content and skills of working with electronic libraries. According to MRA, openness to experience ($\beta=0{,}279$; $t=3{,}167$; $p \leq 0{,}002$) underlies the former, while low neuroticism ($\beta=-0{,}204$; $t=-2{,}394$; $p \leq 0{,}018$) underpins the latter. Thus, low openness to new experiences and high neuroticism were found to be predictors of poor development of these skills.

To identify how the subjective usefulness of certain virtual space skills is related to Big
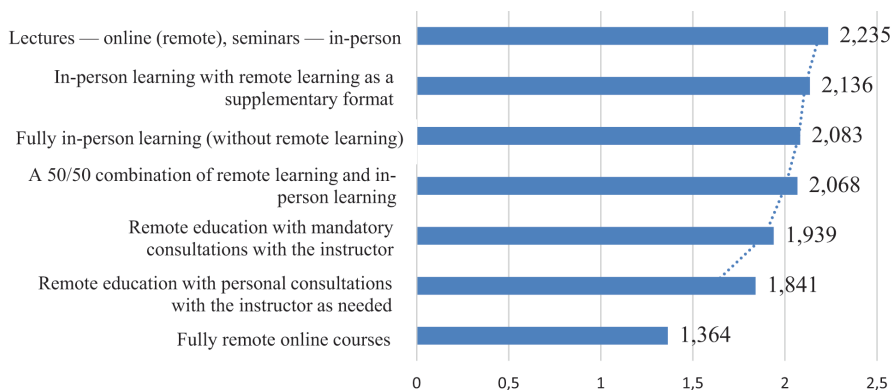
Fig. 4. Students' assessment of the most effective learning format

- Lectures — online (remote), seminars — in-person: 2,235
- In-person learning with remote learning as a supplementary format: 2,136
- Fully in-person learning (without remote learning): 2,083
- A 50/50 combination of remote learning and in-person learning: 2,068
- Remote education with mandatory consultations with the instructor: 1,939
- Remote education with personal consultations with the instructor as needed: 1,841
- Fully remote online courses: 1,364

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Five traits, 11 regression models were built, of which only one was statistically justified (model 7, Table 3, Appendix). According to MRA, conscientiousness ($\beta=0,295$; t=3,168; $p\leq0,002$) and neuroticism ($\beta=0,204$; t=2,185; $p\leq0,031$) positively predict high evaluation of the usefulness of the skill of organizing and storing educational and extracurricular activities' products.

Lastly, regression models were constructed to assess the relationship between the Big Five personality traits and preferences for specific learning formats, varying in the balance between distance and traditional forms. However, none of the final models proved to be statistically suitable for meaningful interpretation. Introducing into analysis of the other predictors, such as age, year of study, and a form of education, alongside the Big Five factors, in order to evaluate their influence on attitudes toward digital educational technologies (DET), did not resulted in models worth considering from a statistical validity perspective.

Discussion

The conducted study was aimed to answer the four research questions posed at the beginning.

The first research question was as follows: which digital skills are the most developed among students, and how do they influence academic success?

The study revealed that students' skills in working within digital learning environments are fairly well developed. Students are most proficient in using online learning tools (using software systems to assess knowledge, skills, and abilities; repetitive test exercises, etc.), uploading materials to the internet (using cloud technologies like Yandex Disk), and completing online tests (Google Forms, etc.). Students are less proficient in working with electronic libraries and databases, as well as in collaborating with classmates via an online format.

According to the survey participants, the most significant factors influencing their learning effectiveness are the following: working with online learning tools, having access to electronic educational content, and possessing well-developed skills in organizing and storing the products of educational or extracurricular activities on various media. Completing online tests has the least impact on learning effectiveness. It is worth noting that in some cases, students gave negative feedback on this form of digital technology in education; this happened possibly due to the significant increase in testing caused by the rise of online learning in recent years.

The second research question was aimed to identify the impact of digitalization on education quality as a whole and students' assessments of the drawbacks of digital technologies currently used in education.

It was found that, according to most students (40.9%), digital technologies have a negative impact on the quality of education. Slightly fewer number of students (37.8%) noted the positive role digitalization in learning and education. A small number of respondents (8%) were unable to clearly express their position, while 13% noted that this impact could not be evaluated as either positive or negative. Our data partially align with the findings of Nevryuyev and colleagues' [14] research, where the largest group of students noted the negative role of online education compared to traditional learning.

The main drawback of digitalization, according to students, is the decline in the quality of mastering the content of certain subjects and the in overall education received, as well as in the level of practical training for future graduates. According to students' point of view, introduction of digital technologies has a less negative effect on the quality of lecture courses and live interaction with peers and instructors.

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When analyzing the relationship between the decline in overall education quality and the other negative consequences of digitalization, we found that the primary factors of the decline include reduced live interaction time with peers, increased demands for the originality of information (a predictor entered the regression equation with a negative sign), decreased quality of educational resources, and lowered quality of practical training. These results met our expectations, since the online learning, due to its mediated nature, reduces the opportunities for direct academic collaboration, which is essential for successful learning. Also, these findings are consistent with the other studies indicating the limitations of online education in high-quality practical training [9; 22]. According to the students, the increased demands for the originality of information in recent years are an important condition for improving education quality, and digital technologies like the Antiplagiat system are helpful in this regard. However, this finding contradicts the opinion of some authors who argue that the Antiplagiat system lacks 100% objectivity in assessing originality, and that the extreme demands embedded in the system "not only fail to encourage independence but also force students to abandon any attempts to demonstrate it, discouraging them from even picking up a book." Additionally, there are widespread cases of students bypassing the Antiplagiat system by using relevant internet services. In our view, the current system for assessing originality fulfills its intended tasks by filtering out non-original texts. However, a downside is that it may mistakenly identify original texts as non-original due to its built-in algorithms.

The answer to **the third** research question regarding the most effective learning formats for students can be formulated as follows. Students consider the most effective formats for learning (in order of diminishing importance) to be: 1) remote lectures with in-person seminars; 2) face-to-face learning as the primary format with online learning as a supplementary format; 3) learning without using any online components; 4) a roughly equal combination of online and in-person learning (50/50). The lowest ratings were given to fully online formats, including those which offer personal consultations with instructors if needed. These results are similar to those obtained in the other research conducted with only Moscow students and noted that students tend to prefer a blended format over a fully online one.

It should be noticed that remote learning formats in our study were more attractive to students who combined work and studies at university, compared to non-working students. However, even this group preferred traditional (in-person) or blended (with online elements) formats over fully online learning. These findings are consistent with the results of the study conducted by Sorokova with students from MSUPE, enrolled in programs at different levels [18]. This, presumably, reflects general trends in the attitudes toward digital technologies among working students.

The fourth research question was aimed to identify the personality dispositions (Big Five factors) underlying students' attitudes toward digitalization and their preferences for various educational formats.

The research results showed that the Big Five traits predict students' success in acquiring digital skills, as well as their attitudes toward certain aspects of the digitalization of Russian education. Openness to experience predictably leads to the successful acquisition of skills related to working with electronic educational resources and their active usage in academic activities. Meanwhile, no connection was found between openness to experience and negative evaluations of digitalization in the educational process. We explain this by the fact that openness to experience is as-

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sociated with a willingness to embrace new approaches and practices with interest and enthusiasm [33], including those related to digitalization.

Neuroticism negatively affects the formation of skills for working with electronic libraries and contributes to a negative assessment of the role of digitalization in education as diminishing the quality of the learning process. These findings are in line with our expectations, since it has been previously established that more anxious and sensitive individuals, characterized by emotional instability, are more likely to become nervous in difficult and unfamiliar situations and tend to fall into depression [37]. Typically, they possess an external locus of control and low self-regulation [34], which prevent them from easy and quick handling of academic tasks, require additional efforts, and thus, form a pronounced negative attitude toward the cause of their difficulties— the introduction of new digital tools and learning formats. At the same time, neuroticism positively predicts high appreciation of the benefit of organizing academic content in digital space. This is because organizing and structuring material by individuals with high neuroticism leads to their self-confidence, which helps to reduce anxiety and emotional tension.

Conscientiousness, like neuroticism, serves as a predictor of a negative evaluation of the role of digitalization in the educational process and impacts to the belief that the digital format of learning harms one's health due to prolonged computer work. These findings are partially in concordance with the results of an experimental study by Dutch researchers [30], who found that, under the conditions of a forced shift to remote work, extraversion and conscientiousness—traits traditionally associated with success in work—were linked to unfavorable outcomes, such as low productivity and engagement, dissatisfaction with work, and emotional burnout. It appears that conscientious individuals experienced these challenges due to their tendency to thoroughly complete even the most difficult tasks. The new conditions and formats that disrupted their usual workflow, thus inevitably led to physical and emotional overload. Thereby, it can be assumed that students with high levels of neuroticism and conscientiousness faced the greatest difficulties during the abrupt transition to digital learning. Additionally, conscientiousness, like neuroticism, positively predicts the benefit of the skill of organizing educational content for academic success. In other words, having qualities like punctuality, consistency, the ability to follow a set algorithm, act according to a model, and, in some cases, pedantry, form the basis for successful application of digital skills, particularly the skill of organizing of educational materials. This trait can be effectively utilized by educators in the educating process.

Agreeableness proved to be the strongest predictor of viewing the digital format as reducing the workload for students. This fact can be interpreted in two ways. On one hand, the subjectively perceived insufficient workload of students in this group may be associated with good self-control, which is a characteristic of people with high levels of agreeableness [31], and is an important factor of success in distance learning [12]. On the other hand, the subjective feeling of reduced academic workload may indicate a decrease in student engagement in the learning process, which is often noted as accompanying the transition to distance learning [21; 22]. In our opinion, this finding requires further investigation.

It should also be noted that expected correlation between extraversion and the high rating of the lack of social interaction in distance learning was not found. Based on the data obtained, most students, regardless of their personality traits, suffered from the lack of communication during the lockdown.

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The conducted study has limitations. The first limitation is the imbalance in the gender composition of the sample, with male students accounting for less than one-third of all respondents. The second limitation applies to the fact that the overwhelming majority of respondents experienced the use of digital technologies in education for the first time during the crisis caused by the spread of the coronavirus, which led to a forced "leap" in distance learning. Not all necessary conditions were created for distance learning, which could have caused negative emotions and anxiety among students, influencing their rejection of the new educational format. Therefore, future research should focus on studying the relationship between students' personality traits and their attitudes toward the digitalization of education implemented in a more gradual, evolutionary way, rather than under emergency conditions of a sudden transition to distance learning.

Conclusion

Introduction of digital technologies into education during the spread of COVID-19 had ambiguous and not always predictable consequences. It turned out that factors which in traditional learning formats contributed to academic success (conscientiousness) and those that, on the contrary, hindered it (neuroticism) could, under the new conditions, both become unfavorable for students' psychological and physical health, decreasing academic performance. At the same time, it appeared that high neuroticism could aid in mastering educational content through the systematic organization of learning materials.

Digital technologies are an essential part of our everyday life, it is difficult (though still possible) to imagine our life without them. However, they should be viewed not as a final goal but as a tool to ease human activities where it is necessary and appropriate. Definitely, digital technologies in education have proven their worth. Various internet-based learning platforms, cloud technologies, and modern online communication tools, which can facilitate individual and group work with colleagues and students, represent important resources for enhancing the quality of education.

The conducted research makes it possible to draw a conclusion that there exists personal predisposition towards digitalization of education among students of Russian universities. The obtained results can be used to individualize the educational process at the university when implementing various educational technologies. However, one should be aware that the digital educational environment is a means of the development of the personality itself. In some cases, it can facilitate student's activity in the educational process, in others it can lead to overload and be stressful, especially for students with pronounced conscientiousness and neuroticism.

It seems that the optimal condition for the interaction between the learner and the digital educational environment, leading to true personal development, is neither the "simplification" of activities nor their unjustified "complication," which leads to overload. Instead, it is the way of organization of learning where the student performs a volitional action that includes both an element of internal freedom (realizing meaning) and overcoming obstacles as a resolution of internal contradictions, challenges, and complexities. Personal development occurs when a person, acting out of internal necessity, rises above the situation and above the former self. This is what should not be forgotten in the age of digital gadgets and technologies, since now more than ever, it is crucial to think about the individuals, to remember their fate and purpose both as a biological specie and as cultural and spiritual beings, possessing a personality with free individuality, having senses and values that they realize and defend while shaping their existence in the world of people, as well as in material and virtual world.

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Appendix

Table 1

Students' perceptions of the impact of digitalization on the quality of education

Responses	Number of students (%)
Does not have a significant impact	12,879
Reduces the quality of education	40,909
Slightly improves the quality of education	21,212
Significantly improves the quality of education	16,667
Difficult to assess the impact of digitalization on the quality of education	7,576
Missing values	0,758

Table 2

Evaluation of the significance of regression coefficients (Model 1)

Predictors	β	t	p
Reduction in face-to-face communication with peers	0,218	3,486	0,001
Increased demands for originality of information	−0,200	—2,977	0,003
Deterioration in the quality of educational resources	0,661	9,545	0,001
Decline in the quality of practical training	0,218	3,352	0,001

Note. Dependent variable: decline in education quality, β — standardized regression coefficient, t — Student's t-statistic, p — level of significance.

Table 3

Evaluation of the quality of regression models (Models 2—7)

Model Number	Dependent Variable	R	Adj R²	F	p
2	Evaluation of overall education quality as diminished	0,254	0,050	4,435	0,014
3	Health deterioration due to prolonged computer use	0,294	0,079	4,700	0,004
4	Low engagement in the educational process	0,204	0,034	5,649	0,019
5	Development of skills in using electronic educational content	0,280	0,064	5,497	0,005
6	Development of skills in working with electronic libraries	0,257	0,051	4,553	0,018
7	Usefulness of skills of systematizing educational content in electronic form	0,279	0,064	5,458	0,005

Note. Independent variables: Big Five factors, R — multiple correlation coefficient, *Adj R²* — Adjusted R-squared, F — Fisher's statistic, p — level of significance.

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Psychological State of Russian Student Youth in the Crisis: The Relationship with Cultural and Political Patriotism

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The analysis of markers and determinants of the current psychological state of Russian youth as a risk group with high probability of combined influence on its state of normative crisis of identity and complex external conditions is important and necessary. In the study we conducted a hierarchical regression analysis of the correlation between the severity of psychological trauma associated with the special military operation and with the perception of the future of Russia (dependent variables) and cultural and political patriotism and several control variables (predictors). University students from Moscow, Omsk, Penza, Saratov, Smolensk, Khabarovsk (718 Russian citizens ages 18 to 25, M=19,4; SD=1,46, 21,6% of men) participated in the study. Data were collected in October 2022. We used the Russian version of "International Trauma Questionnaire (ITQ)" and questions from the International Social Survey Programme (ISSP 2013). We found signs of psychological trauma in the third of respondents. The link between the psychological condition of students and cultural and political patriotism and some control variables has been revealed. Cultural patriotism, combined with a low level of political patriotism, has contributed to the psychological trauma of young people in the current crisis. Cultural patriotism combined with political patriotism is a factor of positiv perception of the future of Russia. Based on the results, we presented a portrait of student who is in great need of psychological help.

Keywords: psychological state of youth; psychological trauma; cultural patriotism; political patriotism; ideas about the future of Russia; student youth; psychological support.

Муращенкова Н.В. Психологическое состояние российской студенческой молодежи
в условиях кризиса: связь с культурным и политическим патриотизмом
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Психологическое состояние российской студенческой молодежи в условиях кризиса: связь с культурным и политическим патриотизмом

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Анализ маркеров и детерминант текущего психологического состояния российской молодежи как группы риска с высокой вероятностью сочетанного влияния на ее состояние нормативного кризиса идентичности и сложных внешних условий — важен и необходим. Представлены результаты иерархического регрессионного анализа связей выраженности психологической травматизации, ассоциированной со специальной военной операцией, и представлений о будущем России (зависимые переменные) с культурным и политическим патриотизмом и рядом контрольных переменных (предикторы) у российской студенческой молодежи. Выборку исследования составили 718 студентов вузов — граждан России в возрасте от 18 до 25 лет (21,6% мужчин; M=19,4; SD=1,46) из Москвы, Омска, Пензы, Саратова, Смоленска и Хабаровска. Сбор данных проходил с 7 по 31 октября 2022 г. Использовалась русскоязычная версия «Международного опросника травмы (ITQ)» и вопросы из программы Международного социального опроса (ISSP 2013). Полученные результаты продемонстрировали наличие признаков психологической травматизации у трети опрошенных. Выявлена связь психологического состояния студенческой молодежи с культурным и политическим патриотизмом и рядом контрольных переменных. Культурный патриотизм в сочетании с низким уровнем политического патриотизма положительно связан с психологической травматизацией молодежи в текущих условиях, а в сочетании с выраженным политическим патриотизмом — положительно связан с позитивными представлениями о будущем страны. На основе полученных результатов представлен портрет современного студента, особо нуждающегося в психологической помощи.

Ключевые слова: психологическое состояние молодежи; психологическая травматизация; культурный патриотизм; политический патриотизм; представления о будущем России; студенческая молодежь; психологическая помощь.

Murashcenkova N.V. Psychological State of Russian Student Youth in the Crisis:
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Introduction

Monitoring the psychological state of youth is an important task in the current crisis. Meeting this challenge is essential to maintaining young people's mental health. Sociological surveys and scientific researches confirm that the polarization of Russian society, caused by the start of the special military operation [3; 6; 9; 12; 24; 25], provokes the development of negative psychological states in people of different ages [2; 5; 18]. In this case, the risk group is young people because their psychological state can be affected by both a normative identity crisis and by complex external conditions. Modern Russian youth belongs to this generation with its distinctive characteristics [11; 14; 15; 21; 23; 26; et al.]. Despite the cultural diversity of youth groups in modern Russia [14], there are features that distinguish young people from other generations [11; 15; 21; 23; et al.]. This is the digital generation [26] with its own attitudes, goals, and values, including its understanding of ideas of citizenship and patriotism [13; 16; 31]. Despite the intra-group heterogeneity, modern youth is predominantly convinced of the complexity of the social world, seeks to think critically, trusts themselves, and takes into account a significant value of self-realization. At the same time, modern youth is quite sensitive and emotionally vulnerable, exhibiting a distinct request for psychological support. Sociologists note a fairly high demand for qualified psychological help among young people [4]. According to a survey conducted by the VCIOM (Russian Public Opinion Research Center) in November 2022, the demand for such assistance among modern Russian youth aged 18-24 was quite high — 35% of respondents said they needed it [4].

The events of the last three years, summarized as the period of global turbulence [8], contributed to the intra-group differentiation of Russian youth and significantly influenced young people's ideas about their generation and their own lives [19]. The relatively homogeneous youth biographical narratives of 2020 have been replaced by the hetero-geneous narratives of 2022, which may be due, among other things, to the intra-group polarization of young people's opinions about the special military operation [24; 25]. Differences in the evaluation of the role that a special military operation played/did not play in changing the psychological state of young people were recorded by researchers of the agency Russian Field in a survey among students of Russian universities (N=1362) in June 2022 [5]. In this survey, 42% of respondents indicated that these events did not affect them at all, but 48% of respondents said that the events in Ukraine had a negative impact on their mental well-being (5% of respondents found it difficult to answer and 5% of students reported a positive impact). According to the VCIOM analysis, it is the young people, who between February and July 2022, began to seek professional psychological help more frequently [29]. However, experts note that a significant part of the Russian student youth had also experienced a need for qualified psychological assistance during the COVID-19 pandemic [18]. At the same time, the cumulative negative effects of the pandemic and the special military operation were not only felt by young people. Comparative analysis of the results of the surveys conducted by the Institute of Sociology of the Federal Center of Theoretical and Applied Sociology of the Russian Academy of Sciences in March 2021 and March 2022 shows that "in 2021, 62% of Russians assessed the situation in Russia as a crisis or disaster, and in 2022 — 86%" [2, p. 50]. Experts emphasize that "the general reaction to the pandemic and the events of 2022 was a sense of uncertainty. However, in 2020—2021, people were more often confused, and they were shocked in 2022" [18]. If during the pandemic an important means of coping with stress was communication with relatives, then in 2022 this resource was blocked by the polarity of opinions regarding the special military operation [18]. According to a nationwide telephone survey conducted in June 2023 (N=1604), more than one third of respondents feel personally threatened

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by the special military operation (36% of the sample, 38% in the 18—29 years old sample). This fear is more often experienced by women, as well as those who believe that official data on the course of a special military operation cannot be trusted and those who would like to stop it [27]. Respondents were almost equally divided in terms of confidence/mistrust of official data on the operation. Thus, 46% of respondents trust the official discourse and 45% do not (in the sample, it is 56% of 18—29 year olds), and the rest of the respondents found it difficult to answer or refused to answer [27]. The supporters of signing a truce are more numerous among young people and women [7; 27]. All the above confirms the relevance and importance of studying the psychological state of young people in the current crisis.

Psychological state, as a systemic characteristic of a person's functioning over a period of time, includes emotions, expectations, and "filters" one's perception and attitude towards reality and oneself [1; 10; 22]. In the current socio-historical context of Russia, when analyzing the psychological state of young people, it is important to assess the level of possible psychological trauma associated with the special military operation and to identify the youth's perceptions of the country's future as a marker of social optimism [17] and the factors influencing these perceptions («filters» perception). In the context of inter-state conflict, a civic identity can be an important predictor and filter of perception [17; 25; 30]. In contrast, under the current conditions of Russian society polarization [12; 24; 25], a differentiated analysis of the contribution of the two components of civic identity to youth's psychological state as separate predictors is justified. These components are cultural and political patriotism [30]. Political patriotism is associated with showing pride in the country's achievements in social, economic, and political spheres. This is often due to the expressed institutional trust [17]. Cultural patriotism is pride in achievements in science, culture,

art, etc. Therefore, here the connection to institutional trust may not be manifested.

The aim of our study is to analyze the psychological state of Russian student youth and their interrelations with cultural and political patriotism in the current crisis caused by the special military operation. We suggested that in the polarized Russian society, political patriotism may be negatively related to psychological traumatization associated with the special military operation, and positively related to the positive representations about Russia's future among Russian student youth. Regarding the connection between cultural patriotism and the psychological state of student youth, we did not put forward any hypotheses, but posed a research question: in the context of the polarization of Russian society, is cultural patriotism related to manifestations of psychological trauma associated with the special military operation and with representations of the country's future among Russian student youth?

Organization of Research and Methods Used

The sample included 718 students of higher education institutions, citizens of Russia aged between 18 and 25 years (21.6% men; M=19.4; SD=1.46) from Moscow, Omsk, Penza, Saratov, Smolensk and Khabarovsk. We collected empirical data from October 7 to October 31 in 2022. This was seven months after the start of the special military operation and two weeks after the announcement of partial mobilization in Russia. The anonymous survey was organized in selected universities in groups of respondents with the personal presence of data collectors. Students who agreed to participate in the study by using mobile devices followed the link and filled out an online questionnaire posted on the platform anketolog.ru.

We used the Russian version of International Trauma Questionnaire (ITQ) to assess the severity of psychological traumatization associated with the special military operation [20]. According to the purpose of the survey, the respondents answered

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the questions of the questionnaire based on the possible impact of the operation on their lives. We identified all markers of PTSD (post-traumatic stress disorder) and CPTSD (complex post-traumatic stress disorder) embedded in the questionnaire. In the hierarchical regression analysis, we used the sum of the indicators of three clusters of PTSD symptoms as a dependent variable: Re-experiencing (Re), Avoidance (Av), and Sense of Threat (Th).

We defined representations about life in Russia in the future using the question from the International Social Survey Programme (ISSP 2013) [32]: "If we talk about the country as a whole, how do you think life in Russia will be better or worse than it is now?" (scale: 1 — much worse, 2 — slightly worse, 3 — same as now, 4 — slightly better, 5 — much better).

We also measured cultural (1) and political (2) patriotism using questions from the International Social Survey (ISSP 2013) [32]: (1) To what extent are you proud of Russia in the areas presented below? (achievements in literature and art; scientific and technical achievements; etc.) and (2) To what extent are you proud of Russia in the areas presented below? (political influence in the world; social protection system; etc.)", (scale: from 1 — not proud at all to 4 — very proud).

The control variables were sex, age, economic status, distance from the special military operation (presence of relatives, participating/wounded/dead as a result of the operation), and the presence of rela-

tives who emigrated from Russia after the beginning of the operation.

We used SPSS Statistics version 23 for statistical analysis. We performed hierarchical regression analysis of socio-demographic factors and measured variables.

Results

Table 1 shows the descriptive statistics of the main variables of the study. According to the mean values in the sample of Russian students, cultural patriotism is expressed more than political patriotism (see Table 1).

According to the data obtained, 13.5% of respondents meet the PTSD criteria and 19% of respondents meet the CPTSD criteria. The total representation of psychological trauma in the sample is 32.5%.

We identified three groups of respondents with different ideas about the future life in Russia. The first group included those respondents who said in October 2022 that life in the country will not change in a year. They constituted 26% of respondents who chose the answer "same as now". The second group included 39% of respondents. These were students who predicted an improved life in Russia in the future. Their answers were "much better" and "slightly better". The third group consisted of respondents who predicted a worsening of life in Russia within a year. Such students constituted 35% respondents in the sample with answers "much worse" and "slightly worse". Table 2 shows the correlation between the level of psychological trauma associated with the special military operation and the

Table 1

Descriptive statistics of the main variables of the study (*N*=718)

Variables	Min	Max	M	SD
Cultural patriotism, Cronbach's alphas=0,75	1	4	3,36	0,60
Political patriotism, Cronbach's alphas=0,90	1	4	2,40	0,82
Severity of psychological traumatization associated with the special military operation, Cronbach's alphas=0,89	0	24	8,65	6,81
Positive representations about life in Russia in the future	1	5	2,91	1,19

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representations about life in Russia in the future with cultural and political patriotism and with control variables. The predictors of psychological traumatization associated with the special military operation among Russian students are female gender, low economic status, minimum distance from the special military operation, and high level of cultural patriotism combined with low level of political patriotism (see Table 2).

The predictors of positive representations of future life in Russia are older age and high economic status, the absence of close relatives who emigrated from the country due to the special military operation, and high levels of political and cultural patriotism (see Table 2). The final models' predictors are related to 40% of the dispersion

of positive ideas about future life in Russia (model 4), and only 18% of the dispersion of psychological traumatization is associated with the special military operation (see model 2). At the same time, the contribution of cultural and political patriotism in the representations about life in Russia in the future is higher (Δ r2=0.31) than in the manifestations of psychological trauma associated with the special military operation (Δ r2=0.05).

Discussion

As a result of the study, we confirmed the assumption about the connection of cultural and political patriotism with the indicators of the psychological state of Russian student youth in the current crisis. We also found differences in the predictors of

Table 2

Hierarchical regression analysis of the correlation between the level of psychological trauma associated with the special military operation and the representations about life in Russia in the future with cultural and political patriotism and with control variables (*N*=718)

Predictors	Severity of psychological traumatization associated with the special military operation		Positive representations about life in Russia in the future	
	Model 1	Model 2	Model 3	Model 4
	β	β	β	β
Control variables				
Age	0,01	−0,01	0,02	**0,08**[*]
Sex (*M* = 1, *W* = 2)	**0,18**[***]	**0,18**[***]	0,00	−0,01
Economic status (1 — low, 4 — high)	**−0,11**[**]	**−0,07**[*]	**0,18**[***]	**0,07**[*]
Distance from the special military operation (1 — max, 4 — min)	**0,18**[***]	**0,18**[***]	−0,07	**−0,07**[*]
Presence of relatives who emigrated from Russia due to the beginning of the special military operation (no — 1, yes — 2)	**0,21**[***]	**0,14**[***]	**−0,24**[***]	**−0,09**[**]
Basic variables				
Cultural patriotism		**0,08**[*]		**0,08**[*]
Political patriotism		**−0,27**[***]		**0,55**[***]
R[2] (adjusted)	0,13	0,18	0,09	0,40
F	21,70[***]	23,05[***]	14,69[***]	68,27[***]

Note: β — standardized regression coefficients; statistically significant coefficients β are shown in bold; [*]*p*<0,05, [**]*p*<0,01, [***]*p*<0,001; *R*[2] — explained variation; *F* — Fisher's statistic; the change of *R*[2] in model 2 relative to model 1 and in model 4 relative to model 3 is statistically significant at level *p*<0,001.

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psychological trauma associated with the special military operation and the predictors of representations about life in Russia in the future among young Russians.

The strong cultural patriotism combined with the low level of political patriotism is positively related to the psychological traumatization of student youth along with such socio-demographic and contextual parameters as female sex, low economic status, minimum distance from the special military operation, and the presence of relatives who have left Russia. We constructed a psychological portrait of a young Russian student in need of psychological support under current conditions. According to our data, this is a girl who is proud of the country's cultural achievements, but not of its socio-economic and political achievements. She also has low socio-economic status, and her relatives include those who participated or have been injured or even died as a result of the special military operation, and those who have left owing to the start of the operation.

The results of the study show that the presence of close relatives who have left Russia because of the beginning of the operation and close ones who participate in it in the socio-psychological space of respondents can aggravate their psychological state.

The fact that almost one third of respondents meet the criteria of PTSD and CPTSD associated with the special military operation requires special attention to the psychological state of modern Russian student youth. Our data is correlated with the results of a study conducted on a sample of young people in Khabarovsk Krai (900 people aged 17-30), according to which "four out of ten respondents (42.2%) experience the overt stress in the form of anxiety associated with a special military operation" [28, p. 222]. Our results also correlate with a study conducted on a sample of university students from 15 regions of Russia in April 2023 (1,380 people aged 18 to 22) [25] describing the impact of the operation on stress growth among student youth. The study also showed that the special military operation

"influences the decrease of students' trust in social-political institutions and actors, as well as influences migration sentiment dynamics, increasing the percentage of young people who consider migration as a possible option for their life path" [25, p. 9]. These data, as well as the results of our research, emphasize the need to pay special attention to the psychological state of modern Russian student youth and provide them with timely qualified psychological help. The role of the university psychological support centers play a significant role in this, as well as in teaching students of mental states regulation [22]. The greatest manifestations of psychological trauma are found among young people with low socio-economic status. At the same time, as sociological surveys [5] show, the barrier that prevents young people from accessing paid psychological centers is the high cost of services. The barrier for addressing government facilities where psychological support is provided free of charge is low levels of trust among young people in these facilities. They doubt that they will receive qualified help and doubt that there will be a confidentiality policy. University psychological support centers, which provide qualified and effective professional psychological care, can become a platform where the identified barriers will be minimized. In addition, university psychological support centers have the opportunity to take into account and use data generated by contemporary research on the preservation factors of psychological health and well-being among young people in conditions of long-term atypical crisis.

It is worth paying attention to the portrait of a Russian student who expressed positive opinions about life in Russia in the future. The results of the study show that it is a student of older age, with high socio-economic status, and who possesses a high level of political and cultural patriotism without any close relatives who left Russia after the start of the operation. Political patriotism in the model of regression is a key factor in positive representations about the future of Russia. It might be a representation of the mechanisms

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for maintaining social optimism, linked to the strengthening of civic identification, trust, and loyalty to the authorities in crisis conditions [17]. At the same time, the peculiarities of the connection between cultural patriotism and the psychological state of young people in the current crisis are not obvious, since the orientation of this connection depends on other psychological factors, for example political patriotism (and possibly the institutional trust of citizens). This in turn is consistent with the conclusions of Nestik, who emphasizes that "to support social optimism in the context of crisis, measures are needed to strengthen citizens' confidence in their ability to influence their own present and future, values of compassion and mutual support, as well as trust in social institutions" [17, p. 16].

Conclusion

This study has limitations, such as non-representativeness of the sample and the use of data based on self-reports. In addition, it was conducted in a rather tense and emotionally charged period. However, despite these limitations, the results confirm the connection between cultural and political patriotism with such indicators of the psychological state of Russian student youth as the psychological traumatization, associated with the special military operation, and the representations about life in Russia in the future. We believe that further monitoring of the psychological state of Russian student youth and other social groups, including using longitudinal slices and additional markers of psychological state and their potential determinants is important and necessary.

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My Ideal University: Physical and Non-Physical Components of the Environment in Student Presentations

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The article addresses the issue of identifying the needs of modern students in relation to the university educational environment. The study involved 48 architecture students aged 18 to 27 years (M=19.81; Mo=19; SD= .82), including 83.33% girls (n=40) and 16.67% boys (n=8). The aim was to identify the most significant categories of the university educational environment. The research, which utilized a projective method — an essay titled "My Ideal University" — and content analysis of the responses, revealed that students consider non-physical categories to be the most important for effective and comfortable study. These categories include the organization of the educational process, the quality of the teaching staff, the curriculum, and opportunities for personal development. To confirm these results, a chi-square test was conducted, showing that non-physical categories of the educational environment were significantly more important than physical ones ($\chi2$=14.812, df=1, p=0.001). The most prominent physical environment categories mentioned by students included the equipment of offices and classrooms, the aesthetic qualities of the space, well-organized university grounds, coworking spaces, and rest areas in the interior. The data obtained can provide practical recommendations for designing new campuses or renovating and reconstructing existing universities. Precisely determining the optimal conditions for an effective and comfortable educational process will help avoid excessive financial investments in improving the physical environment.

Keywords: student perceptions of the university environment; university physical environment; non-physical environmental categories; co-design.

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Мой идеальный университет: физические и нефизические категории среды в представлениях студентов

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Представленные в статье материалы посвящены проблеме выявления запросов современных студентов в отношении образовательной среды высшей школы. Целью исследования, в котором приняли участие 48 студентов-архитекторов в возрасте от 18 до 27 лет (M=19,81; M_o=19; SD=1,82, из них: девушки — 83,33% (n=40) и юноши 16,66% (n=8)), стало выявление наиболее значимых категорий образовательной среды университета. В результате исследования, выполненного с помощью проективной методики — сочинения-эссе «Мой идеальный университет», контент-анализ ответов показал, что наиболее важными для эффективной и комфортной учебы студенты считают нефизические категории — организацию учебного процесса, преподавательский состав, учебную программу, возможности для развития (для подтверждения полученного результата был использован критерий хи-квадрат, который показал большую значимость нефизических категорий образовательной среды по сравнению с физическими: $\chi2$=14,812, df=1, p=0,001). Показано, что наиболее выраженные категории физической среды в ответах студентов — это оснащение кабинетов и аудиторий, эстетические качества пространства, правильно организованная территория при университете, коворкинг и места для отдыха в интерьере. Полученные данные могут служить практическими рекомендациями при проектировании новых кампусов или реновации и реконструкции уже функционирующего вуза. Точное определение оптимальных условий для эффективного и комфортного учебного процесса поможет избежать чрезмерных финансовых вложений в совершенствование физической среды.

Ключевые слова: представления студентов о среде университета; физическая среда университета; нефизические категории среды университета; соучастное проектирование.

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Introduction

A number of new campus projects are currently being implemented in Russia[1]. However, modern university campuses do not meet the requirements for comfortable student accommodation [12]. The aging of university infrastructure and the discrepancy between the physical environment and the needs of students are also observed in many European higher schools [22]. According to the classification of living environments based on their level of compliance with the subject, an environment without the necessary functionality is not safe [6].

Despite the positive dynamics of implementing new projects, students and teachers are rarely involved in the co-design of educational spaces. The needs of both students and teachers, their ideas about the ideal educational environment, and the nature of interactions remain scarcely studied.

Studying the most significant categories of the university environment (from the students' and teachers' perspective) will help increase the level of involvement in the educational process, create optimal conditions for an effective and comfortable educational process, and avoid excessive financial investments in improving the physical environment.

The educational environment is defined as a set of psychological and pedagogical conditions created to develop the abilities and interests of students [7]. There are four basic types of educational environment: dogmatic, career, serene, and creative. They form the foundation of the ecological-personal model of educational environment [17]. According to the theory of ecological systems of Urie Bronfenbrenner, development proceeds within several interconnected systems (levels) of the environment: microsystems, mesosystems, exosystems and macrosystems [18]. The educational environment model also includes the following main components: physical, organizational-managerial, psychodidactic, socio-psychological and subject components of the educational environment [1]. The physical environment is one of the components of the educational environment [16].

Some studies show that the professionalism of teachers is of paramount importance [2, c. 117]. The quality of teaching and the overall reputation of a university have a much stronger influence on applicants' choice of institution than the design of the campus, the quality of the physical environment and facilities [23]. The sense of belonging to the university has an indirect positive effect on the quality of students' lives: the sense of identity with the university is in turn formed by the feeling of security in the building and satisfaction with the physical and social conditions at the university [20]. Another pressing issue is satisfaction with conditions in a dormitory: spacious rooms, proper storage organization, lighting, good ventilation, and the possibility of privacy ultimately shape the students' level of perception of their university [19].

Another research area is exploring satisfaction with the public spaces of the university building, where the majority of the students is concentrated. A study based on 248 questionnaires collected at Isfahan University of Arts (Isfahan, Iran) showed that students value the potential for multifunctionality in the physical environment: opportunities for individual and group study, relaxation, communication and interaction in public spaces [21].

The spaces that students prefer or reject depend on the nature of the exterior and interior of the university campus. For a building embedded in a natural environment, parks, alleys, artificial water areas are ranked high by the students, while for a building located in a dense historical urban area, the preferred spaces are so-called

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[1] Far Eastern Federal University on Russky Island, Skolkovo Institute of Science and Technology Skoltech, Skolkolo Moscow School of Management campus, development of the territory of the construction facilities V.I. Vernadsky Crimean Federal University, Innopolis University in Tatarstan, restoration of the main building of Graduate School of Management of St. Petersburg University, new building of MSU named after M.V. Lomonosov on Vorobyovy Gory, development of the territory of Bauman Moscow State University.

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individual places (buffets, canteens, cafes) provided that the interior has been renovated [9].

Researchers often focus on analyzing interpretive design, which is a system of place meaning, or on a system of preferred and rejected spaces [8]. To determine the characteristics of the subject's perception of the environment of everyday life (among university students), the following methods are used: an associative experiment based on which a thesaurus of places-situations and definitions is compiled to assess these places; a procedure of subjective scaling (based on the material of contrasting photographs of places-situations); ordering of the initial data using factor analysis; interpretation of the identified factor structures; a two-stage questionnaire (with open and closed questions) [5; 11].

Empirical research, sampling and instruments

The perception of the educational environment was analyzed among student teachers, lecturers [2; 3; 4]; student architects [14—16]; students of agricultural and economic universities [10; 13].

Although the interaction of individual components of the educational environment and the participants of the educational process is regularly studied both in Russia and abroad, there is still a dearth of knowledge about the impact of the physical component on students in higher education. Furthermore, previous studies were conducted using standardized methods or game exercises. In this study, we pose the following question: is it possible to improve the effectiveness of the educational process, increase the motivation of students and teachers in architectural and architectural and construction universities only by improving the physical component of the educational environment? To achieve this, during the first step we determined whether the importance of the physical environment for the participants in the educational process in modern conditions.

Research hypothesis: the idea of the ideal university environment among students majoring in Architecture focus on the physical component due to their professional specifics.

Research instruments: we used a projective technique — an essay (short composition) on the topic "My ideal university" (the online survey was anonymous and was sent out in a Google form).

Results and Discussion

Content analysis of the essay responses showed that 62.6% of the analysis units described the so-called non-physical categories of the educational environment, while 23 out of 48 responses did not contain a single analysis unit describing any categories of the physical environment. Only 5 essays out of 48 did not touch upon non-physical categories of the university environment. To confirm the obtained result, the chi-square criterion was used, which showed a greater significance of non-physical categories of the educational environment for architecture students compared to the physical ones ($\chi2=14,812$, df=1, p=0,001).

Notably, when the respondents were asked to describe their ideal university, the majority of responses were based on the existing negative (according to students) indicators of the university they are studying at.

Non-physical categories of the educational environment in the perceptions of university students (table 1). Based on the results of the content analysis of the essay responses, we identified three essential components of the educational environment from the university students' perspective: "various criteria, requirements for the university and the organization of the educational process" (interesting concepts for each area, expansion of international relations, lack of a grading system, free attendance, formation of student groups based on the number of points received upon admission, etc. — 30 units of text analysis), "teachers" (19 units of text analysis), and "curriculum" (15 units of text analysis).

The data obtained confirm the results of pertinent research: the teaching staff is the most significant component of the educational environment [3; 5]. At the same time, there are some differences: student teachers most often mentioned other students as a condition for effective education at the university, while

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students majoring in Architecture proposed a variety of criteria for improving the organization of university activities (30 units of text analysis) [4]. We identified only 4 units of text analysis that touched upon certain qualities of fellow students in the architecture students' essay responses.

We assume that this is a manifestation of the professional specifics of student architects — interaction of the type of person-"artistic image", as well as the individuality of creativity: students complete educational assignments independently, consulting with the teacher at each stage.

All answers from the students' essays that touched on non-physical parameters were classified by the author into 20 categories (table 1).

Notably, the main vectors of the ideal university curriculum from the students' perspective are more complex material and assignments in general, compliance with modern professional requirements, focus on practice and freedom in choosing disciplines and areas of study.

Based on the essay responses, the ideal teacher is competent, knowledgeable, a master of their craft, interested in their subject, in their activities, in teaching students, the teacher understand and loves their subject, able to devise a program related to other disciplines, interacts with colleagues, communicates knowledge in an

Table 1

**Rating of text analysis units in students' essays "My ideal university"
(non-physical environment)**

	Categories of non-physical environment of the university	Number of text analysis units	Share in the total number of analysis units (%)
1.	Various criteria, requirements for the university and the organization of the educational process	30	12,8
2.	University teachers	19	8
3.	Curriculum	15	6,4
4.	Extracurricular activities (scientific and creative events, conferences, etc.)	9	3,8
5.	Development	8	3,4
6.	Competencies of the Future	8	3,4
7.	Feeling of comfort	7	3
8.	Practice	7	3
9.	Attitude towards students	7	3
10.	Social Security	6	2,6
11.	Canteen (catering)	6	2,6
12.	Freedom	5	2,1
13.	Schedule	5	2,1
14.	Security	4	1,7
15.	Students about students	4	1,7
16.	Library (as a database)	2	0,9
17.	Fair assessment of skills	2	0,9
18.	Stable Internet	1	0,4
19.	Fair entrance examinations	1	0,4
20.	Psychological assistance to students (in the context of the essay answer as a service, not a room)	1	0,4
Total:		147	62,6

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interesting way and has a burning desire to help, teach and graduate excellent specialists.

7 units of text analysis of students' essays contained the concept of "comfort", these data are consistent with those obtained earlier [15]: more than half of the students indicate the comfort of being at the university [2]. A fairly pronounced category is extracurricular activities (creative, scientific and sporting events).

Physical environment in the responses of university students (Table 2). **Equipment for classrooms and lecture halls** was the most significant component of the physical environment (24 units of analysis). The respondents' responses were extremely specific: students know exactly what rooms, tools, and environmental parameters they need for successful and comfortable study. Thus, students consider pragmatism the most important characteristic of the physical environment, which means that classrooms and study rooms should be the most functional. The specific nature of training in creative fields increases students' anxiety about the results of their work, which in turn encourages respondents to specify the requirements for the learning environment more accurately: additional large drawing and painting studios, updating the necessary tools for graphic disciplines, and optimal lighting in the classrooms. The data obtained confirm earlier studies, which identified specialized workshops as the preferred places for architecture students. Notably, at SPbGASU, where the aforementioned study was conducted, the workshops are not locked and are freely used by the students [14]. 15 units of text analysis touch upon various characteristics of the university interior design, aesthetic qualities, and subjective perception of the educational environment. This category of answers was the most "fuzzy" and implied an intuitive perception of the university environment as pleasant, comfortable, convenient, and beautiful.

As previous studies show, historical university buildings are perceived positively by the students, provided that the interior and exterior of the buildings are renovated [9].

Table 2

**Rating of units of text analysis of students' essays "My Ideal University"
(physical environment)**

	Categories of the physical environment of the university	Number of text analysis units	Share in total number of text analysis units (%)
1.	Equipment for classrooms and for educational activities	24	10,2
2.	University interior design, aesthetic qualities of the environment	12	5,1
3.	Places (spaces) for rest	11	4,7
4.	University territory	9	3,8
5.	Coworking	7	3
6.	Canteen	5	2,1
7.	University environment safety (restricted access and evacuation in case of fire)	5	2,1
8.	Ventilation of classrooms and corridors	4	1,7
9.	Dormitory	3	1,3
10.	Location of the building in the city	2	0,9
11.	Lighting	2	0,9
12.	Library	2	0,9
13.	Bathrooms	1	0,4
14.	Lift	1	0,4
Total:		88	37,4

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Spaces (places) for rest and, possibly, work (outside the classrooms) were also prominent in the students' essay responses (11 text analysis units).

In addition to this priority, there is an interest in creating an environment that will facilitate dialogue and collaboration by giving priority to the acquisition of competences such as teamwork, communication skills and critical thinking.

Extracurricular free closed and semi-open spaces have the potential to develop students' competencies such as teamwork, communication skills, and critical thinking. This is the conclusion reached by the authors of a study on the influence of physical space on the institution of mentoring in higher education [22].

Co-working has become an important category of the ideal university in the students' perception. In the context of the physical environment, co-working spaces are the centers of collaboration that bring people together for communication and creative interaction (7 units of text analysis). Importantly, this category was the most clearly identified by students.

Another significant characteristic of a university for the students is its exterior — the territory around the university (9 units of analysis). The results obtained correlate with the data of modern studies: parks and alleyways in the immediate vicinity of the university were ranked high by the students [9]. In another study of how the environment of a pedagogical university is perceived, students and teachers did not mention any exterior components at all; all responses were focused on the internal physical environment — the interior [3].

Conclusion

The pilot study, conducted for the first time using a project-based method on a Moscow sample of architecture students, allowed us to determine that, despite their professional specifics, architecture students identify various non-physical categories of the educational environment as the most significant for an ideal university: the organization of the educational process, the teaching staff, the curriculum, quite clearly identifying the criteria for these parameters. At the same time, the most pronounced category of the physical environment is the equipment of classrooms and lecture halls as a resource for improving the quality of the educational process. Therefore, future architects place responsibility for their education not only on the university administration and teachers, but also consider the development potential of the physical environment highlighting the aesthetic qualities of space, a properly organized territory at the university, co-working and places for relaxation in the interior.

The identified qualities of the physical environment specific to the students of creative professions can serve as practical recommendations for designing a new campus of Moscow State University of Civil Engineering.

The main components of the physical environment identified in this study are important for most higher education institutions; therefore, the obtained results can be applied in new design or renovation and reconstruction of an already functioning university.

Limitations of the study: the projective method — an essay on the topic "My ideal…" is suitable for small groups, mainly senior students, master students and postgraduates who already have the skills to analyze the educational environment and have relevant educational experience. For a certain number of students, writing an essay seems like an extremely difficult task; it is much more convenient for them to fill out an online questionnaire with closed questions.

This type of research should be combined with an expert assessment of the university building, since certain issues can be identified at the stage of a field survey. Importantly, teachers and students are able to get used to certain inconveniences of the environment and therefore not reflect them in their answers or transfer their dissatisfaction with the environment to its other components.

Research prospects include studying students' perception of the physical environment of the university using the standardized research methods on a larger sample and studying teachers' perception of the ideal university environment.

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Parental Maturity: Concept Content and Structure in Domestic and Foreign Studies

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The author analyzes the concept of parental maturity with the aim to operationalize it and define the structure. The construct is based on maturity understanding in the context of parenthood. Parental maturity is a complex, diversified form that reflects personal maturity. The structure of the construct is presented as a set of instrumental, motivational, and value components, integrating in the internal position of a parent in life choices regarding the birth, upbringing of children, and responsibility for the decisions made. The development of parental maturity is facilitated by the development of the parent's internal position, including self-reflection. It helps to assess the level of personal maturity and analyze parental position, resiliency, involvement, control of a child's development, and taking risks associated with children growing up. Within parenthood, the development of semantic and life-meaning orientations activates the setting of new self-development tasks by the parents themselves.

Keywords: parental maturity; parenting; components of parental maturity.

Родительская зрелость: содержание и структура концепта в разрезе отечественных и зарубежных исследований

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Проводятся анализ и операционализация конструкта «родительская зрелость». По мнению авторов, она представляет собой сложное многоплановое образование, совокупность инструментальной и мотивационно-ценностной составляющих, интегрирующихся во внутренней позиции родителя, в жизненных выборах относительно рождения, воспитания детей и ответственности за принятые решения. Утверждается, что становлению родительской зрелости способствует развитие внутренней

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позиции родителя, включающей личностную рефлексию, направленную на оценивание степени собственной зрелости, анализ собственной родительской позиции и жизнестойкости, вовлеченности, контроля за процессом развития детей и принятия риска, связанного с взрослением детей. Развитие смысловой ориентировки и смысложизненных ориентаций в рамках родительства активизирует постановку самими родителями новых задач саморазвития.

Ключевые слова: родительская зрелость; родительство; компоненты родительской зрелости.

Introduction

Parenting is a human ability to transfer mankind experience to the next generations [8]. This activity is not obligatory. It is only a decision of a person to become parent or not. This means that a person has to make such important decision which can be interpreted as an indicator of self-determination and self-identification [19].

Parenting is a complex psychological and social phenomenon. It includes such components as responsibility, definite social roles and rules, motivation, parental position, self-actualization, and self-development. In this context parental maturity plays a significant role for the position of effective parent [6; 10].

The goal of this research is the analysis of contradiction between the existing society demand to have the characteristics of an effective parent, on the one hand, and, on the other hand, a lack of studies of the parental maturity (see, for example, [8; 19; 21]). In this regard, we identified two research oblectives: 1) to define the content and structure of the parental maturity in domestic and foreign studies, and 2) to analyse the difference between parental maturity interpretations.

Foreign and domestic approaches analysis

The concept of parental maturity is based on the general concept of maturity set by personality psychology.

Maturity is of multilevel and multidimensional structure. It is the integral characteristic of personality both as a resource of personal development and as its criterion. Maturity implements through performance and human existence. This duality makes a person to act like a stakehoder of his own life, to realise his own self-determination, to set and achieve life goals, to solve different unique problems and build up a system of interpersonal relations.

The significant component of maturity is maturity self-assessment. It can be interpreted as a person's ability to correlate own maturity criteria and real life. In order to obtain the ability to solve life problems one person looking for such criteria at a particular period of life.

Almost all people think about parenting. They should make a decision to be or not to be. Preparation to it faces a person with completely new position to another newborn person [17; 28; 30]. The content of this position dictates a person to implement parent role which includes responsibility and oblig-

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atory actions such as childcare, child development and support. In relation to the parent role a person can have a certain opinion. He or she can accept or reject this position because of emotional experience which can vary from joyful acceptance to desperate rejection [21; 24; 25; 29].

The intersection of perception of personality maturity and human implementation as a parent gives us an opportunity to define parental maturity as a complex phenomenon with multilevel structure. In order to do this, we analyse the content of 'parental maturity' concept in foreign and domestic approaches.

Parental maturity interprets as the ability to perceive a child as an 'independent adult' with limitations and needs. Also, it includes the readiness to treat the child as an independent adult, M. Mendonça and A.M. Fontaine think [23]. The ideal situation is when parents perceive their child as an adult who no longer needs care. This means that a child acquires parents' realistic perception.

E. Fromm identifies parental maturity components such as empathy, sympathy, ability and readiness to love, expression of care, emphasising its social aspect [13].

S.N. Nydegger [26] defines parental maturity as a role-specific trait. He describes it as the parents' ability to involve in close and reciprocal relationships with a child. Parents recognise the child as psychologically equal to the adult who has own autonomy, needs, limitations, and abilities.

S.A. Anderson and R.M. Sabatelli [14; 15] defines parental maturity is a two-sided complex unity. It combines two multidirectional processes. On the one hand, it includes the child separation from the parent, or distancing, on the other hand, one can observe the child's rapprochement with parents, or understanding.

Parental distancing means the reducing control degree of child's behaviour. It also involves acceptation and encouraging autonomous relationships. This is necessary to make the objective assessment of the child. Parental understanding includes different components such as the acceptance of child's uniqueness and social environment, relationships flexibility and empathy. Parental maturity means accurately balancing two factors (distancing and understanding) [26], and also combining levels of closeness, autonomy and separateness [14; 15]. Thus, it can be said that highly differentiated relationships (high degree of closeness and individualisation) are more adaptive than low-differentiated ones.

H. Ginott [9] treats parental maturity as a part of parent-child communication. Effective communication is based on unconditional acceptance, parents' recognition of child's feelings. The maturity means to give a child opportunity of making own choices in everyday life. Humanistic and psychoanalytic psychologists (C. Rogers, H. Ginott) consider abovementioned factors necessary for the development of mature parental attitude to a child and his/her harmonious development. H. Ginott paid special attention to developing and improving communication skills and empathy for the child's feelings. The researcher manifested the expression of parents' feelings and emotions openly and sincerely in response to the child's behaviour [9].

D. Baumrind, Y. Kuzgun and D. Levy emphasise the meaning of relationships in the child-parent dyad [16; 20; 22]. They divided parents' attitudes toward children into four types: democratic, authoritarian, permissive, and overprotectioning. The democratic type means responsiblity, planning and organizing life activities. It shows

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high level of maturity. Parents encourage the child's independence and at the same time set boundaries and limits. Authoritarian type can be described in such characteristics as pressure, ignoring abilities, expecting obedience. Permissive type is described in uncontrol, freedom, tolerance, poor concentration and control [16]. Overprotectioning type means restrictions, lack of responsibility and independence in decision making [20; 22].

A. Isambert [18] emphasises two aspects of maturation in parental maturity. The first one is personal development from dependence to autonomy. This implies the ability to make independent decisions and take responsibility for actions. The second one includes the behavior development from self-concern to concern for the other. These two aspects of parental maturity overlap and reflect parents' effectiveness. Such parents are able or unable to make decisions and take responsibility. The researcher believes that personal maturity is the necessary condition for the parental maturity development. The additional factor of parental maturity is their level of education. It plays an important role in enhancing the quality of personal maturity [18].

In domestic theory and practice parental maturity research is characterized by parental position and child-parent relations.

E.I. Zakharova [4] treats parental position as 'dependent, responsible' and 'highly emotionally intense'. The social maturity of personality is in the focus of the study. It is connected with the development of parent internal position. Such characteristics as empathy, tolerance and closeness contribute to the development of mothers' parental position in relationships. Empathic 'warm' mothers accept the parental position. Alongside with such elements as dependence on the child, responsibility for

another person life and development, constant relations with a child demand emotional support.

O.N. Babyleva [1] points out that parental attitude includes the degree of emotional closeness and control of child's behaviour. At the same time, competence as a component of parental maturity implies the parent's mastering in relationships with the child.

I.A. Kibalchenko [7] notes in the parents' psychological maturity the importance of such mothers' personal traits as reflexivity, locus of control, self-esteem, development of volition and activity. The researcher also marks that mother's high level of creativity plays an important role. Creativity is associated with above-mentioned traits. Mothers with a high level of creativity can be characterised as responsible persons with high level of self-control. They are conscious, empathic, independent, sociable and open. These traits can be treated as the indicators of parental maturity.

Individuals' personal and social maturity have much in common with the image of effective parent. A.S. Spivakovskaya [11; 12] argues that personal maturity features and effective parent features are very close. Parents' psychological maturity appears in the attitude to themselves and to the child. The parent is interested in the acceptance and approving attitude to the child's personality and feelings. He reveals sensitivity to the child's emotional state, feelings and experience.

Discussion and conclusion

In the table below we present the results of the analysis of parental maturity definitions in foreign and domestic approaches.

Foreign definitions of parental maturity often emphasise the instrumental component. C.N. Nydegger focuses on the par-

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Table

Parental maturity in foreign and domestic approaches

№	Expert	Definition
		Foreign approaches
1	Mendonça M., Fontaine A.M.	The ability to perceive their child as an 'independent adult' with limitations and needs.
2	Fromm E.	The ability to empathise, sympathise, love, care.
3	Nydegger C.N.	The ability to involve in close and reciprocal relationships with a child. Parents recognise the child as psychologically equal to the adult in terms of autonomy, needs, limitations, and abilities.
4	Anderson S.A., Sabatelli R.M.	The child separation from the parent, or distancing, on the other hand, one can observe the child's rapprochement with parents, or understanding.
5	*Ginott H.*	The ability of unconditional acceptance, parents' recognition of all child's feelings, giving the child to make own choices in everyday life.
6	Baumrind D., Kuzgun Y., Levy D.	Encourage the child's independence and at the same time set boundaries and limits.
7	Isambert A.	The development of parent's personality from dependence to autonomy. The development of behavior orientation from the self-concern to concern for the other.
		Domestic approaches
8	Zakharova E.I.	Social maturity of personality in the connection of the development of the parent internal position.
9	Babyleva O.N.	Emotional closeness and control over the child's behaviour. competence, parent's mastering in relationships with the child.
10	Kibalchenko I.A.	Reflexivity, locus of control, level of self-esteem, development of volition and activity, level of creativity.
11	Spivakovskaya A.S.	Acceptance and approving attitude to the child's personality and feelings, sensitivity to the child's emotional state, feelings and experience.

ents' communicative competence, the ability to fulfil parent role. S.A. Anderson and R.M. Sabatelli interpret parental maturity as the parents' ability to regulate the distance in relations with a child. H. Ginott highlights the value of communication skills in parent-child interactions. D. Baumrind, Y. Kuzgun and D. Levy emphasise the manifestation of the parent's attitude towards the child, including language constructs, prohibitions and sanctions, childcare.

In domestic studies the parental maturity content reveals motivational and value components. They reflect the importance of parenthood goals, raising a child as an autonomous representative. Some researchers concentrate on the importance of parents' personal qualities (I.A. Kibalchenko, A.S. Spivakovskaya), the development of value attitude to parenthood (E.I. Zakharova, O.N. Babyleva), the motivation development to parenthood (E.I. Zakharova, O.N. Babyleva). It interprets as procreation and specific contribution to the community of 'inhabitants of the Earth' (definition of A. Gusev).

In parental maturity development special role is given to parent's internal position. It combines instrumental and value-motivational components and reflects self-assessment of maturity in parent's personality structure. It manifests as life-meaning orientations, reflection of the parental position in parent's personality personal resources (E.I. Zakharova, A.S. Spivakovskaya).

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Parental maturity is the component of the lager general category of maturity. It can be considered either as a personality characteristic, or as the continuum of person's life. Maturity is interpreted as person's integral characteristic. It is embodied in the concept of 'mature personality' (A. Adler, G. Allport, E. Erikson, C. Rogers, etc.); as an integrative structure developed in ontogenesis (L. Steinberg); as a set of emotional, volitional and motivational traits and value development (A.A. Rean); as a personality's ability to choose (D.A. Leontiev); as a personality characteristic (E.S. Efremova); as a stable complex of personality traits (Y.V. Rashchupkina, E.V. Lioznova); as a social construct (A.V. Miklyaeva). It can also be considered as a supporting resource in crisis and life choices (S.L. Rubinstein, B.G. Ananyev, E.I. Rasskazova). It can be considered in different contexts: ontogenetic development (J. Levinger), mental development (V.S. Volchenkov), life stage of an adult (N.N. Rybnikov), a model of favourable development (V. Frankl).

At the same time, maturity is considered as a certain level that reflects a concrete development stage of the personality comprehensive system [13; 17]. Personality maturity manifests in parenting. It influences on parents' effectiveness and simultaneously develops and strengthens within the parenting [5; 10; 11]. Parenting maturity is the component personality maturity. It is heterogeneous phenomenon, acting at the same time as personality attribute and stage of personality development. It is a flexible marker on the scale of 'immaturity — maturity' [4; 6; 9].

Foreign researchers note the importance of expression degree of parental maturity components, as well as the life stage when parental maturity can be manifested or labelled as undeveloped [16; 18; 19]. An additional fact is that a person can manifest the degree of own maturity. Such situations are often associated with meaningful choices made by a mature individual [19; 20].

The important feature of research is to consider the social demands making for the person and the conformity of 'responses' to these demands [27]. Person self-determination towards future parenthood is significant at the stage of parental realization. It is inherent to the personality to demonstrate responsibility, independence in decision making when rising up a child. It also includes readiness for parenthood and parental role fulfilment which a person develops independently.

To sum it up parental maturity is a complex multidimentional phenomena. It consists of several levels: instrumental (instrumental skills such as communication skills and distance control); motivation and value (such characteristics as parental goals and value, parent internal position which integrates all other levels) (see picture).

Maturity is not the 'final point' in the process of becoming a parent. It is a constantly changing complex multilevel development. It depends on a person life problems, age of a child, number of children in a family, stage of family development as a system, social context and other factors.

Parent's goal is to bring up a socialised person. To do it qualitatively, a parent needs to be a mature person follow the path of reaching psychological maturity.

To look at the point in more details, the parent figure is extremely significant in providing conditions for the child better development [12; 13]. A parent is a part of a system of child significant relationships. He/she is emotionally close person, and a child expects support, acceptance, love and attention [2; 4; 5]. Therefore, it is necessary for the parent to be mature enough,

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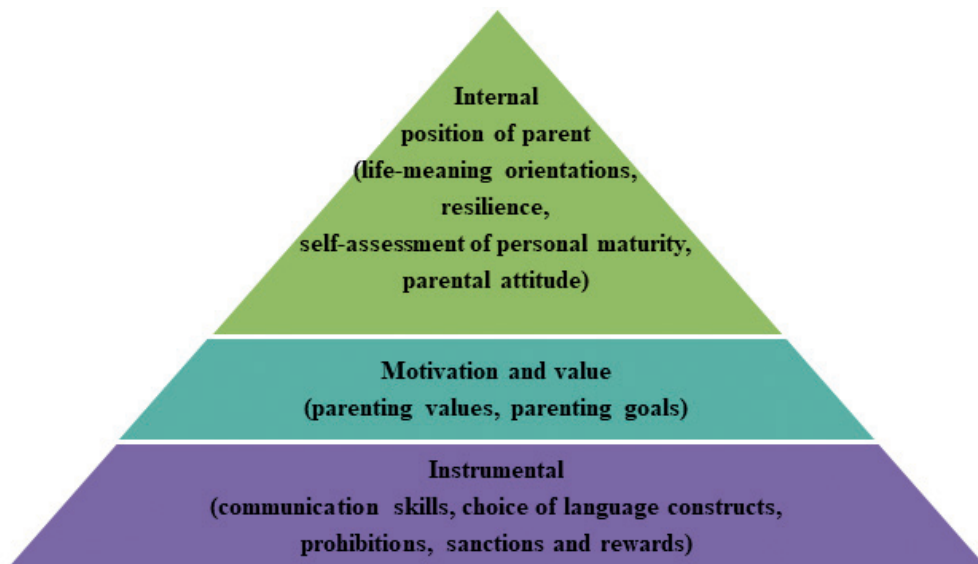
Pic. The structure of parental maturity

to possess techniques of contacting with the child, to understand own goals, objectives and difficulties of upbringing a child. Significant foundations in the parenting maturity development are the components of resilience, life-meaning orientations and the development of the ability to self-assess one's own maturity.

Maturity and parental maturity studies reveal and confirm the significance in person and parent development [5; 6; 10; 23]. The problem of identifying maturity criteria reflects the complexity of a human's personal organization which represented simultaneously at different levels — body, psychological and socio-spiritual. Maturity components are highlighted by different authors and often intertwined because they reflect the integrity of a person, for example, socio-psychological maturity, personal maturity [4; 9; 10; 17; 21].

On the basis of above-mentioned studies, we can argue that human maturity contributes to the development of parenthood. On the other hand, parenthood makes its own contribution to the development of personality maturity. It strengthens the development of choice components, responsibility, self-actualisation and self-development.

Thus, parental maturity is a complex multidimensional phenomenon which represents by a set of instrumental and motivational-value components. These components are integrated in the parent internal position, life choices regarding the birth of a child, upbringing of children and responsibility for decisions. The development of parental maturity is facilitated by the development of the parent's internal position, including personal reflection development. Regarding the reflection it aimed to assess the degree of person's own maturity, analyse own parental position and resilience, involvement, control over the children's development process and accepting the children's growing up risks. The development of parenthood meaning and life-meaning orientations activates the parents to set new tasks of self-development.

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Self-Directed Learning and Emotional Intelligence: Differences between Students with High and Low Academic Performance

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The answer to students' learning challenges lies in exploring the connections and differences between self-directed learning, emotional intelligence, and academic achievement. This study investigated the differences in self-directed learning and emotional intelligence between high achievers and low achievers. The data collection instruments were the self-directed learning scale and the emotional intelligence scale. The results showed significant differences between students with high academic performance and students with low academic performance in self-directed learning, in favor of high achievers. Students with low academic performance exhibited greater emotional intelligence. There was a significant positive correlation between self-directed learning and emotional intelligence in students with better academic results. The correlation between self-directed learning and emotional intelligence in students with low academic performance was significant and negative. The study concluded that self-directed learning has a broad positive impact on university students' academic performance by raising their achievement levels.

Keywords: self-directed learning; emotional intelligence; high academic performance; low academic performance.

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Самостоятельное обучение и эмоциональный интеллект: различия между студентами с высокой и низкой академической успеваемостью

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Ответ на проблемы, возникающие у студентов в обучении, кроется в изучении связей и различий между самостоятельным обучением, эмоциональным интеллектом и академической успеваемостью. В данном исследовании изучались различия между высокоуспевающими и низкоуспевающими студентами. Для сбора данных использовались шкала самостоятельного обучения и шкала эмоционального интеллекта. Результаты показали значительные различия между студентами с высокой академической успеваемостью и студентами с низкой академической успеваемостью в отношении самостоятельного обучения, причем в пользу высокоуспевающих. Студенты с низкой академической успеваемостью продемонстрировали более высокий уровень эмоционального интеллекта. Наблюдалась значительная положительная корреляция между самостоятельным обучением и эмоциональным интеллектом у студентов с более высокими академическими результатами. Корреляция между самостоятельным обучением и эмоциональным интеллектом у студентов с низкой академической успеваемостью была значимой и отрицательной. В результате исследования был сделан вывод о том, что самостоятельное обучение оказывает широкое положительное влияние на академическую успеваемость студентов университета, повышая уровень их успеваемости.

Ключевые слова: самостоятельное обучение; эмоциональный интеллект; высокая академическая успеваемость; низкая академическая успеваемость.

Introduction

With fast changes in technologies and education demands, there is more need to highlight the crucial roles that self-directed learning (SDL) and emotional intelligence (EI) can contribute to various levels of education in different atmospheres and different countries. In higher education, independent learning places a strong emphasis on personal growth, accountability, and autonomy to meet social expectations. As

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a result, alongside SDL, other comparable ideas like independent learning and lifelong learning are emphasized and stated as typical traits of graduates in many universities worldwide. The amazing ability of self-directed learning allows students to choose from a wider variety of educational opportunities and materials with greater freedom. It helps satisfy the requirements of the learner, boosts their innate motivation to learn, and gives pupils access to previously sought-after knowledge wherever they are and whenever they want it. On the other hand, if a student requires an explanation for a topic that he did not understand in traditional learning (face-to-face learning), he must schedule an appointment with the instructor. There's a good chance the teacher will decline to repeat the explanation if he doesn't get it the first time. The student in SDL is independent, engaged, and responsible for completing their work. Thus, it has been demonstrated that SDL offers a variety of possibilities, the most noteworthy of which is a sensation of confidence that enhances the student's capacity to master his or her learning without explicit help (Eid, 2022). Emotional intelligence (EI) distinguishes between people who succeed and those who fail to overcome life's challenges. EI is a complex variable that includes some positive skills that assist an individual in achieving success in various aspects of life, i.e., self-management, sympathy, etc. Therefore, Sahibzada, et al. (2019) stated that continuous study and development endeavors concerning Emotional Intelligence are vital. EI is important for both students and teachers Wang's study (2023) revealed significant findings that emphasized the crucial functions that EI possesses in teachers' construction of the educational landscape.

This research responds to the question: "How can we, as faculty members, help students achieve higher academic performance?" The study is also a result of the Ministry of Education's and Saudi universities' demands for more research on the variables associated with improved academic performance. Furthermore, it investigates the causes of the difficulties that university students face in achieving their best academic performance. Due to the widespread COVID-19 pandemic, it is urgently necessary for

schools and communities to motivate kids to develop their SDL abilities. A thorough assessment of the literature revealed several conclusions about how learner characteristics contribute to academic success and learning success in educational environments (Koc, 2019; Zhoc et al., 2023). As a result, SDL and EI have a big impact on the characteristics and learning preferences of students.

The results of this study could pave the way for the participation of university students in training programs to improve SDL and EI. The finding of a relationship between EI and SDL and differences between high-performing and low-performing students confirms the need to pay more attention to improving student performance and managing learning materials.

Correlation between SDL and EI

Cognitive, metacognitive, and emotional abilities that may be learned and honed via increasing self-awareness and practice are included in EI and SDL (Bar-On, 2010; Cazan & Schiopca, 2014; Schulze, 2014; Goodwin, 2016; Zhoc et al., 2018). SDL and emotional intelligence are positively correlated, according to Lee & Lee's research (2020). In line with Zhok et al. (2018), who examined SDL and EI in higher education, SDL is seen as a crucial goal of higher education. The findings demonstrated that students with high EI had higher SDL skills than others. This study proves that students with higher emotional intelligence are more independent, promoting better academic achievement and general growth and contributing to greater college satisfaction. Hwang and Kim (2023) found a substantial positive link between SDL and emotional intelligence. According to Cazan and Schiopca (2014) and Koc (2019), SDL may operate as a buffer between psychological traits (such as EI or self-efficacy) and academic success. Engin (2017) discovered that, in a learning context, EI could predict SDL.

Purpose of the Present Study

Self-directed learning and emotional intelligence are vital variables that play an essential role in many aspects of a typical learning environment. In college courses, researchers have con-

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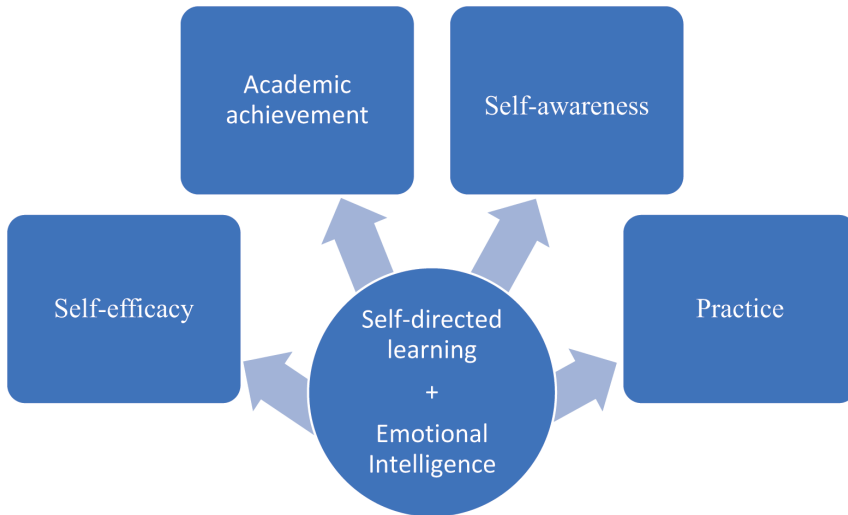
Fig. 1. Improved aspects of the relationship between self-directed learning and emotional intelligence
(suggested by the author)

sidered some of the essential variables that could explain the high performance of some students and the low performance of others. Point-based concepts have been explored in research on SDL related to learning outcomes. Furthermore, emotional intelligence is a hybrid that includes motivation and social skills that many students benefit from. According to the literature, independent learning and emotional intelligence are closely related to high academic performance (Bandari et al., 2020; Lee & Lee, 2020; Zhoc et al., 2018; Rahimi, 2016; Grandinetti, 2015). Zhoc & Chen (2016) showed that universities need to assess students' characteristics (such as EI and SDL) and then connect them with appropriate learning environments and teaching methods to achieve the best results.

Recently, universities in Saudi Arabia have strived to be among the world's universities to compete in the labor market with their successful students. Therefore, many universities have focused on studying the difference between high and low achievers. It has also been demonstrated that encouraging students to achieve outstanding academic achievement can be accomplished by addressing the psychological issues they encounter while learning. A novel approach to examining the significance of this relationship is to examine self-directed learning and its relationship with emotional intelligence in successful Saudi university students. This study may provide helpful advice on improving self-directed learning with increased emotional intelligence. These inquiries were made considering the literature review:

1- Is there a difference in self-directed learning between high- and low-level students?

2- Is there a difference in emotional intelligence between high- and low-performing students?

3- Is there a relationship between self-directed learning and emotional intelligence in high achievers?

4- Is there a relationship between self-directed learning and the emotional intelligence of university students with low academic performance?

Self-directed Learning

Many academics have tried to define self-directed learning (SDL) and have contributed to the discovery of multiple interpretations of the term (Eid, 2022). The definition of self-directed learning according to Bhandari et al. (2020) is

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"an active learning approach in which students are responsible for their learning outcomes, with the instructor acting as a facilitator of learning." An additional definition of SDL is provided by Leatemia et al. (2016): "Students controlling their learning process using planning, implementation, monitoring, and assessment." SDL is a process (Chan 2018; Schulze 2014). But according to recent research, SDL isn't anything that belongs in the personality trait category (Cazan & Schiopca, 2014; Zhoc et al., 2018). Studies in literature have demonstrated a connection between students' self-directed learning and academic success (Grandinetti, 2015). Sansom (2023) exhorts educators to investigate Self-Directed Learning approaches within the context of higher education classes. According to a study by Bhandar et al. (2020), the top students scored higher on most SDL skills. However, they should also work on improving their interpersonal skills. Hwang and Kim (2023) presented evidence supporting the importance of self-directed learning competency in the link between optimism and emotional intelligence.

Emotional Intelligence

As Floyd (2017) pointed out, our emotions can significantly influence our behavior, even in the classroom, so practicing EI in a learning environment promotes learning. According to Sahibzada, et al. (2019), EI is directed towards knowledge expansion, enhancing self-worth, workforce autonomy, and societal transformation. Regarding emotional intelligence, people with EQ skills are highly adaptable and able to manage emotions. However, those who lack these skills are more likely to have impaired emotional functioning and social interactions with others (Salovey & Mayer, 1990). Radford (2014) examines two concepts related to contemporary theories on the nature of emotional intelligence. The first idea is dichotomous and regards emotion as a fundamental mode of conduct for introspection. Others view feelings as power reserves that may be traded during expression.

In their publication, Salovey and Mayer (1990) define EI as "a subcategory of social intelligence that involves the ability to observe, distinguish one's own emotions and those of others, and use this knowledge to regulate one's beliefs and behavior." Goleman introduced EI in 1995 as a hybrid model, focusing on natural skills and attributes for leadership success. Emotional intelligence, linked to professional talent, accounts for 67% of leadership capacity (Goleman, 1998). Coleman (2015) defined emotional intelligence (EI) as the capacity to recognize emotions in oneself and others, appropriately identify and describe the many emotions one feels, and use emotional information to inform one's beliefs and conduct. Furthermore, according to Al Akaishi (2003), emotional intelligence (EI) is "a person's ability to recognize and regulate their own emotions, motivation, and feelings, as well as the ability to understand and manage the emotions of others flexibly through strong communication skills."

The EI theory consists of four components: feeling emotions, using emotions to solve problems, understanding emotions to categorize them, and managing emotions. Accurate emotional intelligence starts with feeling emotions, which involves recognizing and expressing them. The second and third branches focus on using emotions to make better decisions and take calculated risks. The fourth branch involves managing emotions for self-awareness and reflection (Salovey et al., 2002). Rahimi (2016) discovered a strong connection between EI and academic success. EI and intellectual satisfaction have a helpful link, according to Urquijo and Extreme (2017). Academic engagement was also mentioned as a mediator between EI and educational satisfaction.

Study design

This study is based on a descriptive scheme that describes the behavior of the sample but does not influence it in any way. The purpose of descriptive research is the systematic collection of data to describe a phenomenon, situation, or population. Saudi Arabian university students were randomly selected as a sample. Eid (2018) developed a self-learning scale to assess participants in an ongoing study on self-directed learning. Al Akaishi's (2003) emotional intelligence scale was used to assess the participants' emotional intelligence in this study. SPSS

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was used to analyze research data. All data was collected electronically through the online survey service and sent to SPSS for statistical analysis. To answer these questions, the author utilized statistical methods (T-test, Pearson correlation, Cohen's d, mean, and standard deviation).

Data collection

The sample consisted of university male students (with a GPA of 2,5 and above, ages 18 to 22). Participants were 224 university students with a GPA of more than 2,5. The researcher divided 2,5 to 5 into 4 to get the higher quartile, which was from 4,375 to 5, and the lower quartile, which was from 2,5 to 3,125. The university students with high academic performance were 52, representing the higher quartile with a GPA of 4,375 to 5. The university students with low academic performance were 56, representing the lower quartile with a GPA of 2,5 to 3,125. The participants were 108 university male students (ages 18 to 22 — M=20,4, SD=0,99) with high and low academic performance.

Study Tools

Self-directed Learning Scale. The self-directed learning scale was developed by Eid (2018). It consisted of thirty phrases. Eid (2018) examined the reliability of the Self-directed learning scale, which was calculated by the test-retest in Saudi Arabia. Two weeks later, the scale was introduced to the 22 students. The reliability value was 0,941.

Emotional Intelligence Scale. Al-Akayishi (2003) conducted a study at the University of Baghdad to investigate mental health and its relationship with emotional intelligence among university students. Because of the cultural similarities between the Gulf countries, this scale was chosen in the current study. The scale consists of 36 items. It was retested for 40 students, and the reliability value was 0,80. The researcher investigated the reliability of the EI scale in the Saudi Arabian environment. The scale was administered to 25 university students. The half-split was measured. The value of the half-split was 0,715. The EI scale is reliable in the Saudi Arabian environment.

Results

To answer the study questions, 108 students were recruited. Descriptive analyses were conducted to establish normality and to determine if the data met the assumptions for selecting appropriate statistical methods.

Research Question 1

The first question shows significant differences in self-directed learning between high-performing and low-performing students. The average grades of high-achieving students are higher than those of low-achieving students. It was (M=118,5, SD=14,24) for successful students and (M=98,35, SD=13,27) for unsuccessful students. The effect size, as measured by Cohen's d, was d=0,96, indicating a large effect.

According to the findings, students with high academic performance have more self-directed learning skills than students with low academic performance. As a result, this confirms that students with high academic performance are accountable for their current and future learning. They work hard to achieve even higher academic performance, indicating that they are engaged in their tasks. They take the initiative and independently seek out various methods and approaches to learning. They have some unique and positive characteristics that enable them to engage in the learning process much more effectively than students with low academic performance.

Table 1

**T-test of self-directed learning of university students with high
and low academic performance**

Variable	Students	N	mean	Std. Deviation	T-Test	Sig.	Cohen's d
Self-directed learning	Students with high academic performance	52	118,5	14,24	7,609	0,000	0,96
	Students with low academic performance	56	98,35	13,15			

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Research Question 2

The answers to the second question revealed a significant difference in emotional intelligence between students who performed well and those who did not. The average score for the students who performed the best was 122,98, while the average score for those who performed the worst was 128,82. According to mean scores, low achievers have more outstanding EI scores than high achievers. The effect size, as measured by Cohen's d, was d=0,35, indicating a small effect.

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Research Question 3

The findings of research question 3 are like those of Lee & Lee (2020) and Zhoc et al. (2018). The answer to the third question re-

vealed a link between university students' exemplary academic achievement and emotional intelligence regarding self-directed learning. The results confirm the significance of enhancing EI in university students' self-directed learning. This significant relationship can also be explained by the fact that motivation and self-management are components of EI, and the student with high SDL skills has the motivation and self-control to learn independently. Bar-On (2006) identified a link between EI and SDL. He went on to say that having a higher level of SDL improves one's EI.

Research Question 4

The findings of research question 4 showed that there is a significant negative correlation between self-directed learning and the EI of students with low academic performance. Engin (2017), in line with the result of this question, asserted that in a learning context, EI could predict SDL. Zhok et al. (2018), who examined SDL and EI in higher education, found that students with high EI had higher SDL skills than others. In contrast, the answer to question 4 makes it clear that students with low academic performance could have a higher level of EI, but self-directed learning isn't the same.

Table 2

T-test of emotional intelligence of students with high and low academic performance

Variable	Students	N	mean	Std. Deviation	T-Test	Sig.	Cohen's d
Emotional intelligence	Students with high academic performance	52	122,98	12,89		0,034	0,35
	Students with low academic performance	56	128,82	15,22	2,14		

Table 3

Correlation between self-directed learning and EI of students with high academic performance

Correlation	N.	value	Sig.
Self-directed learning and EI of students with high academic performance	52	0,394	0,004

Table 4

Correlation between self-directed learning and EI of students with low academic performance

Correlation	N.	value	Sig.
Self-directed learning and EI of students with low academic performance	56	-0,299	0,025

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Discussion

According to Bhandari et al. (2020), who found a link between self-directed learning and substantial academic achievement, the answer to study question 1 is in line with their findings. Grandinetti (2015) found a link between student academic progress and self-directed learning. This supported the current study's first research question's finding, which stated that students with high SDL achieve high academic performance. The outcome is consistent with the nature of high academic performance, which necessitates some personal qualities. The learner should have perseverance, responsibility, a desire to learn, self-organization, striving for realistic goals, high ambition, and long-term planning based on these characteristics.

Although there is a sizable variation in the second question, the means for high and low achievers are comparable. There needs to be more research on the link between solid academic achievement and EI. Hwang and Kim (2023) and Tremonte et al. (2024) discovered a tangible link between high academic achievement and EI. Since there is no relationship between IQ and emotional intelligence, it follows from the findings that substantial academic achievement and emotional intelligence are unrelated. The body of research on emotional intelligence supports this conclusion.

EI and SDL both need cognitive, metacognitive, and affective skills, which may help to explain why EI and SDL were associated in this study. Additionally, the socioemotional components of learning can enhance SDL and EI, which can enhance academic success (Koc, 2019; Zhoc et al., 2018).

Limitations and Future Recommendations

Despite the positive outcomes, it is crucial to recognize the study's substantial limitations. First, the sample only consisted of one Saudi Arabian university. As the sample is not representative of higher education, the study should be replicated at other universities to establish the generalizability of the results. Second, the sample was mostly male, with the exception of female university students. Future research could include conducting more studies on male and female university students. The study also made use of self-reported GPA. Using actual performance data from student records can improve the data's dependability. Additionally, self-reports, which may be skewed and may not accurately reflect performance, have been used to evaluate emotional intelligence and self-directed learning (Mega et al., 2014). Future research might also call for behavioral evaluations.

Conclusion

Arab university students with poor academic performance require more encouragement from their professors to complete their assignments without assistance. According to Cohen's d, question 1's effect size was d=0,96, showing a significant effect that highlights the value of self-directed learning for college students who perform well academically. Self-directed learning has a broad positive impact on university students' academic performance by raising their achievement levels. Zhoc, et al. (2018) emphasized that "self-directed learning" in Chinese higher education institutes facilitates the relationship between EI and learning achievements.

Goleman (1998) distinguished between IQ and EQ and stated that students with higher academic performance should not have a higher EI. Thus, the answer to the second question was d=0,35, which indicates a small influence, according to Cohen's d, which measures effect size. High levels of academic achievement and exceptional learning are slightly affected by emotional intelligence (EI). In addition, Goleman stated that assessing learning outcomes should also take into account non-IQ traits such as tenacity for self-development, teamwork, flexibility, and self-confidence. The answers to questions 3 and 4 highlighted the connection between EI and self-directed learning for all types of students, regardless of their academic standing in higher education. Iqbal et al. (2022) asserted that students at universities can more effectively improve their study habits with the support of emotional intelligence.

The current study's findings might point to changes that should be made to rules and regulations to encourage faculty members at several

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colleges to use instructional strategies that promote high SDL and EI. Thus, these actions could help staff members deal with difficult situations related to students with low academic performance. It is advised that psychological training programs to enhance SDL and EI be conducted concurrently when self-directed learning is low to get the best outcomes.

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—— PSYCHOLOGY OF EDUCATION | ПСИХОЛОГИЯ ОБРАЗОВАНИЯ ——

The Connection Between Basic Personal Values and Psychological Adaptation to Global Digital Risks

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The study is relevant to understanding the predictors of successful adaptation to the risks of digitalization of society. The goal is to study the connection between personal values and the characteristics of digital adaptation. The objectives included identifying groups differing in psychological adaptation to digitalization; analyzing differences in basic and social beliefs and value orientations among these groups; and conducting a comparative study of age-related characteristics of psychological adaptation to digitalization in youth and middle adulthood. The research methods included the following: the "Psychological Adaptation to the Risks of Digitalization" questionnaire (E.P. Belinskaya, O.A. Karabanova, O.A. Tikhomandritskaya, etc.); "Faith in a Competitive World" and "Faith in a Dangerous World" (DW-S) by J. Jakkita (adapted by O.A. Gulevich and others); the "Belief in a Just World" technique, adapted by S.K. Nartova-Bochaver and others; "Scale of Basic Personal Beliefs", adapted by M.A. Padun, A.V. Kotelnikova; "Portrait Questionnaire of Values" by S. Schwartz; a new questionnaire of tolerance to uncertainty (T.V. Kornilova et al.). The sample consisted of 408 respondents aged 18 to 55 years, of whom 49,7% were men and 50,3% were women. Three groups were identified based on their adaptation to digital risks: "adapted," "anxious-maladapted," and "non-adapted". Significant differences were found in basic and social beliefs among respondents of these groups. The hypothesis that basic values are connected to successful adaptation was confirmed. Age-related features of adaptation to digitalization have been identified. The heterogeneity of adaptation to digitalization according to various criteria has been revealed. The hypothesis about the connection between values of self-overcoming and change with adaptation success was confirmed. The connection of adaptation success with the developmental tasks of youth and middle maturity and activities relevant to them was revealed.

Keywords: psychological adaptation; values; risks of digitalization; basic beliefs; age-related characteristics of adaptation.

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Связь базовых ценностей личности с характером психологической адаптации к глобальным цифровым рискам

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Представлены материалы исследования предикторов успешности адаптации к рискам цифровизации общества. В работе изучались связи ценностей личности с особенностями цифровой адаптации. В числе основных задач авторы определили выделение групп, различающихся по уровню психологической адаптации к цифровизации; выявление различий в базисных убеждениях и социальных верованиях, ценностных ориентациях у лиц с различным уровнем психологической адаптации к цифровизации; сравнительное изучение возрастных особенностей психологической адаптации личности к цифровизации в молодости и средней зрелости. В исследовании был использован следующий инструментарий: опросник «Психологическая адаптация к рискам цифровизации» (Е.П. Белинская, О.А. Карабанова, О.А. Тихомандрицкая и др.); «Вера в конкурентный мир» и «Вера в опасный мир» (DW-S) Дж. Джаккита (в адаптации О.А. Гулевич и др.); методика «Вера в справедливый мир», адаптированная С.К. Нартовой-Бочавер и др.; Шкала базисных убеждений личности в адаптации М.А. Падуна, А.В. Котельниковой; Портретный опросник ценностей Ш. Шварца; новый опросник толерантности к неопределенности (Т.В. Корнилова и др.). Выборку составили 408 респондентов в возрасте от 18 до 55 лет, из них 49,7% мужчин и 50,3% женщин. Были выделены три группы, различающиеся по характеру адаптации к цифровым рискам — «адаптированные», «тревожно-неадаптированные» и «неадап-

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тированные». Обнаружены значимые различия в базисных убеждениях и социальных верованиях у респондентов этих групп. Подтверждена гипотеза о связи базовых ценностей с успешностью адаптации. Выявлены возрастные особенности адаптации к цифровизации. Выявлена гетерогенность адаптации к цифровизации по различным критериям. Подтверждена гипотеза о связи ценностей самопреодоления и изменений с успешностью адаптации. Выявлена связь успешности адаптации с задачами развития молодости и средней зрелости и релевантными им видами деятельности.

Ключевые слова: психологическая адаптация; ценности; риски цифровизации; базисные убеждения; возрастные особенности адаптации.

Introduction

The relevance of studying the factors and conditions of human psychological adaptation to global digital risks generated by the modern transitive information society is beyond doubt. According to the socio-cognitive concept of digital socialization, the transformation of a person into a technologically completed "extended" personality, equipped with new cultural and technological tools (gadgets) and having mastered the symbolic reality of the Internet, reflects the process of human adaptation to the opportunities and risks of a dynamic socio-technological convergent environment as an innovative ecosystem [4]. Digital hyperconnectivity as a characteristic of a changing personality permeates the entire system of social interactions [21]. We can talk about global digital risks for an adequate life of a modern person: issues of difficulties in online communication in interpersonal and professional aspects, security of personal data and a high risk of encountering fraud, searching for adequate information, issues of the effectiveness of online learning. Personal adaptive potential is a complex multi-level system characterized by a set of individual psychological features that determine the effectiveness of psychological adaptation and determine the direction, content, and intensity of the adaptive response of the individual. At the personal level, the adaptive potential includes a motivational component that determines goal setting and the choice of means to achieve the goal in accordance with the accepted system of values, and communicative component [3]. Achieving a high level of digital competence, which is an indicator of successful psychological adaptation of an individual to the digitalization of society, is based on

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the motivational potential of the individual, the content and dynamics of which, in turn, are determined by the system of basic human values and social support for the individual's desire to satisfy the need for competence and autonomy, moderated by the value of self-development and self-improvement [28].

Currently, the relationship between digital competence and personal characteristics with the success of adaptation in adolescence in the context of the problem of digital socialization has become the subject of a comprehensive study in a number of works [13; 15]. It is shown that the growth of digital competence in adolescents and their parents is reflected in increased responsibility of behavior in the online environment [14]. Theoretically and on the basis of empirical research, the position is substantiated that the leading factor determining the psychological well-being of an individual in situations of hard and soft transitivity in online and offline communication is the style of information identity as an essential characteristic of the individual [10].

A relationship was found between the level of dispositional optimism as a significant personality characteristic and the effectiveness of psychological adaptation to the digitalization of professional activity [7]. At the same time, an ambiguity was found in the relationship between psychological well-being and job satisfaction with such indicators of psychological adaptation to digital transformation as the level of organizational stress and employee engagement [1]. It has been proven that digital anxiety as an indicator of unsatisfactory adaptation to the digitalization of society is negatively associated with resilience and dispositional optimism [2]. In a study of ideas about real and virtual spaces as a component of the current picture of the world in a digital society, adolescents and their parents established a connection between ideas and value orientations, and for parents — ideas about the real and virtual world, and for adolescents such a connection was recorded only for ideas about the real world [16].

Values as fundamental motivators of personality directly or indirectly determine the vector and target orientation of human behavior and relationships, their prosocial nature at any age [22; 25]. The connection between basic human values and decision-making style was established in the study of problem solving by adolescents [24]. Variables mediating the influence of values on behavior are context, situational pressure, restrictions, cognitive support, specific individual and ethnocultural factors [26]. A meta-analysis of 797 studies confirmed the theoretical hypothesis that situational restrictions, such as perceived social pressure and possible difficulties, weaken the connection between value attitudes and behavior [30]. However, in order for values to become real motives and give meaning to human activity, regulate the behavior corresponding to them, it is necessary that values be cognitively processed and acquire significance in the value structure of the individual's consciousness [29]. In a study of the relationship between the activity of using information and communication technologies and basic values in accordance

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with the circular model of S. Schwartz, a relationship was found between nine out of ten basic values among Russian youth and the older generation, with the exception of "stimulation", with inclusion in ICT, regardless of age. The absence of a connection between the activity of using the Internet and the values of the Self-overcoming block and a positive connection with the values of the Openness to Change and Self-affirmation blocks were revealed [17]. At present, with the recognition of the leading role of values as an expression of culture and the understanding of ICT as new socio-cultural means that determine human psychological abilities, the connection between values with the characteristics of human psychological adaptation to digital risks has not been sufficiently studied, which determined the purpose of this study. The theoretical and methodological basis of our study was formed by the theory of values by S. Schwartz, who defines values as "transitional goals that differ in importance and are guiding principles in the life of a person as a social subject", indicating seven characteristics of values distinguished directly or indirectly in most psychological models of values [19; 27]. These characteristics include beliefs about the importance of desired goals, their connection with emotions, the goal and motivating function, which can be realized both at the level of consciousness and the unconscious; the cost effect arising from a compromise between the corresponding values, the function of the standard as a standard for evaluating actions, people and events; hierarchical ordering by significance. The improved

theory of basic human values identifies 19 motivationally different values in a circular continuum, which can be reduced to four values of the highest order and 10 basic values determining the focus of values (social or personal) and the strategy of life (development and growth or anxiety and self-defense) [19].

As proven by a meta-analysis of studies of more than 7,300 respondents, the identification of 19 values can increase the predictive and explanatory power of value patterns of behavior, including adaptive ones [23]. The circle reflects three critical characteristics of the relationships between values: a) neighboring values in the circle are motivationally compatible and can be realized in the same action (e.g., hedonism and stimulation); b) values located on opposite sides of the circle are motivationally opposite and usually cannot be realized in the same action (e.g., stimulation or security); c) motivational compatibility of values decreases with increasing distance between them along the circle. Relationships between values can be described in different sets of two dimensions (coordinate systems). The most common sets of core dimensions, also called core principles, that organize the value circle include the following: openness to change versus conservation values, self-improvement versus self-enhancement values, personal focus versus social focus values, and growth versus self-protection values [27]. Since a number of studies have confirmed the invariance of the circular model of Schwartz's hierarchical value system as the basis for the goal-oriented nature of human behavior, we hypothesized that there is a relationship between an indi-

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vidual's orientation toward specific basic values and higher-order values and the success of psychological adaptation to the digitalization of society.

Hypothesis: there are differences in value orientations and basic beliefs in individuals with different levels of psychological adaptation to digitalization. Orientation toward the values of openness to change and self-overcoming is more significant for well-adjusted individuals.

respondents adapted to digital risks, compared to those who experience adaptation difficulties.

Objectives: 1) identification of groups differing in the level of general psychological adaptation to digitalization and adaptation in the professional, educational and family spheres; 2) identification of differences in basic beliefs and social beliefs reflecting the image of the world in individuals with different levels of psychological adaptation to digitalization; 3) identification of differences in value orientations in individuals with different levels of psychological adaptation to digitalization (testing the hypothesis); 4) comparative study of age-related features of psychological adaptation of an individual to digitalization in various social spheres in youth and middle adulthood.

Characteristics of the sample and the tools used

The study sample consisted of 408 respondents aged 18 to 55 years, 49.7% were men and 50.3% were women. The youth age group included 160 people aged 18 to 26 years, the middle maturity age group included 248 people aged 45 to 55 years. The identification of youth and middle maturity groups was proposed in the periodization of B. Newman and P. Newman, based on the model of E. Erikson, where the identification of different periods of maturity is associated with solving human development problems.

To achieve this goal, the following methods were used in our study.

The questionnaire Psychological adaptation to digitalization risks (E.P. Belinskaya, O.A. Karabanova, O.A. Tikhomandritskaya et al.) is aimed at studying the general parameters of digital adaptation (behavioral adaptation as the ability to ensure one's own safety in the digital world and as information search literacy); communicative adaptation as everyday involvement in virtual communication and the adequacy of mutual understanding in it; normative adaptation as the absence of a tendency to deception, fraud in virtual communication; digital anxiety as a person's experience of losing his or her subjectivity and the inability to influence anything), indicators of general adaptation in the professional, educational and family spheres and special indicators of readiness for online learning, adaptation to communication in online learning, anxiety regarding online learning and a positive attitude towards digitalization. The methodology was proposed in the authors' previous works [2; 7]. The questionnaire includes 97 statements and 12 scales on a 5-point R. Likert scale.

The Belief in a Competitive World (DW-S) technique by J. Jakkit (adapted by O.A. Gulevich, O.A. Anikeenok, I.K. Bezmenova) is aimed at studying the perception of the world as a competitive world. The technique contains 12 statements

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that are assessed on a 5-point R. Likert scale and provide a general integrative indicator of belief in a competitive world [5].

The Belief in a Dangerous World (DW-S) technique by J. Jakkit (adapted by O.A. Gulevich, O.A. Anikeenok, I.K. Bezmenova) is aimed at studying a person's general attitude to the world in which he lives, from the point of view of its danger. The technique contains 12 statements that are assessed on a 5-point R. Likert scale and provide a general integrative indicator of belief in a dangerous world [5].

The Belief in a Just World method, adapted by a group of authors (S.K. Nartova-Bochaver, M.B. Podlipnyak, A.Yu. Khokhlova), is aimed at studying belief in a just world. The method contains 13 statements that are assessed on a 6-point R. Likert scale and provide a general integrative indicator of belief in a just world [11].

The scale of basic beliefs of the individual (Yanoff-Bulman), adapted by M.A. Padun, A.V. Kotelnikova [12]. The method includes 5 basic beliefs, the core of the subjective world of a person: the "benevolence of the surrounding world", "justice of the surrounding world", "positivity of the self-image", "belief in luck" and "confidence in control over life". The method contains 37 statements that are assessed on a 6-point R. Likert scale.

The Portrait Questionnaire of Values by Sh. Schwartz (PVQ-Revised) is a modified form of the study of value orientations, adapted by a group of authors (Sh. Schwartz, T.P. Butenko, D.S. Sedova, A.S. Lipatova). It is aimed at studying various values, describes the entire continuum of basic values (independence of thoughts and actions, stimulation, hedonism, achievements, power over resources and power as dominance, reputation, personal and public safety, traditions, conformism to rules and interpersonal, modesty, benevolence as care and a sense of duty, universalism as care for nature, for others and tolerance) and higher-order values (changes, preservation, self-overcoming and self-affirmation). The questionnaire consists of 57 statements [19].

The new uncertainty tolerance questionnaire (Kornilova, Chumakov) is aimed at identifying the personality characteristic of uncertainty tolerance based on A. Fernham's scheme. The questionnaire consists of 33 statements [9].

Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS), adapted from the works of R.S. Shilko et al. The scale-questionnaire consists of 14 statements that must be answered on a 5-point Likert scale [20].

Statistical processing of the obtained results was carried out using SPSS version 21 and Jamovi programs.

Results

Before analyzing the results, we present the data on descriptive statistics for all the methods we used in the study. The results obtained are presented in the Appendix. Using the K-means method based on the scales of psychological adaptation to digitalization, clustering of the sample was carried out, identifying three clusters and determining significant differences between the clusters using one-way ANOVA and the Tukey test (Tables 1 and 2).

Three groups of approximately equal size were identified, differing in the nature

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Table 1

Distribution of respondents into groups differing in the nature of psychological adaptation to digitalization (N=408)

Scales of psychological adaptation to digitalization	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Differences		Effect strength
	M	SD	M	SD	M	SD	F	p	η2
Ensuring security in the digital environment	3,47	0,60	3,57	0,57	2,98	0,53	41,99	<0,01	0,17
Information retrieval literacy	3,09	0,42	3,58	0,46	3,05	0,39	60,37	<0,01	0,23
Communicative adaptation	3,33	0,53	3,25	0,53	2,94	0,45	22,08	<0,01	0,11
Normative adaptation (lack of tendency to deception and fraud)	3,11	0,83	4,11	0.52	3,31	0,63	80,82	<0,01	0,28
Digital anxiety	3,70	0,50	2,93	0,69	2,90	0,57	84,04	<0,01	0,29
Adaptation to digitalization in the family sphere	2,84	0,70	3,93	0,55	3,19	0,59	107,73	<0,01	0,35
Adaptation in the professional sphere	2,83	0,41	3,55	0,41	3,08	0,35	117,46	<0,01	0,37
Adaptation in the educational sphere	2,98	0,31	3,23	0,58	3,09	0,28	21,02	<0,01	0,10
Readiness for online learning	3,39	0,43	3,76	0,43	3,11	0,47	72,96	<0,01	0,26
Anxious attitude towards online learning	1,99	0,61	2,84	0,42	3,36	0,69	148,64	<0,01	0,42
Communicative adaptation to online learning	2,44	0,50	2,83	0,62	3,00	0,42	32,91	<0,01	0,14
Positive attitude towards digitalization	2,98	0,49	3,12	0,51	3,10	0,40	3,55	0,03	0,02

Table 2

Significant differences between clusters differing in the nature of psychological adaptation to digitalization, using the Tukey test (N=408)

Scales of psychological adaptation to digitalization	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Ensuring security in the digital environment	−0,10	0,32	0,49	<0,01	0,59	<0,01
Information retrieval literacy	−0,47	<0,01	0,04	0,66	0,51	<0,01
Communicative adaptation	0,09	0,34	0,39	<0,01	0,30	<0,01
Normative adaptation (lack of tendency to deception and fraud)	0,99	<0,01	−0,20	0,037	0,79	<0,01
Digital anxiety	0,77	<0,01	0,81	<0,01	0,03	0,88
Adaptation to digitalization in the family sphere	−1,09	<0,01	−0,35	<0,01	0,74	<0,01
Adaptation in the professional sphere	−0,72	<0,01	−0,25	<0,01	0,47	<0,01
Adaptation in the educational sphere	−0,26	<0,01	−0,11	0,01	0,14	<0,01
Readiness for online learning	−0,37	<0,01	0,28	<0,01	0,65	<0,01
Anxious attitude towards online learning	−0,85	<0,01	−1,37	<0,01	−0,52	<0,01
Communicative adaptation to online learning	−0,19	0,01	−0,52	<0,01	−0,33	<0,01
Positive attitude towards digitalization	−0,14	0,04	−0,11	0,11	0,03	0,883

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of psychological adaptation. The respondents of the first cluster (N=142), "Anxiously maladapted", are characterized by the highest values of the "Digital anxiety" scale and, relative to other groups, low values of the Positive attitude towards digitalization scale. Anxiety as an expectation of a threat in connection with digitalization determines fairly high values of the Ensuring security in the digital environment scale with low values of the Information search literacy scales and adaptation scales in the family, professional and educational spheres. In the educational sphere, this group shows high readiness and low anxiety in relation to online learning, which is probably due to a clear preference for mediated indirect forms of communication, typical for people with a high level of anxiety.

The second cluster has the highest adaptation indicators, compared to other clusters, for almost all the given scales, with the exception of the Digital Anxiety and Anxious Attitude to Online Learning scales. The ability to ensure the safety of one's actions in the digital environment, literacy in information search, adaptation in the professional, educational and family spheres are combined with a high level of normative adaptation and the absence of a tendency to deception and fraud. We called this group "adapted" (N=131).

Respondents of the third cluster show the lowest adaptation scores for all scales, respondents of this cluster do not have sufficient information search and security skills, experience difficulties in communicating in the digital environment, have an insufficient level of adaptation to digitalization in the family, professional and educational environment with a low level of digital anxiety. At the same time, this group is characterized by the lowest readiness and the greatest anxiety in relation to online learning. This group can be characterized as "not adapted" to digitalization (N=135).

Since the psychological well-being of an individual can be considered as a criterion for the success of psychological adaptation, to confirm our conclusion about the nature of psychological adaptation, we compared clusters according to psychological well-being assessments (Table 3).

Table 3

**Descriptive statistics and significant differences between clusters
on the psychological well-being scale (N=408)**

Scale	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Significant differences between
	M	SD	M	SD	M	SD	
Psychological well-being	3,46	0,57	3,84	0,51	3,20	0,64	One-factor analysis ANOVA. F=41,51, p<0,01, η2=0,17 Tukey test: between 1 и 2 MD=-0,38; p<0,01, between 1 и 3 MD=0,26; p<0,01, between 2 и 3 MD=0,64; p<0,01.

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The highest psychological well-being scores were found for respondents in the "adapted" cluster and the lowest for the "non-adapted" cluster. Significant differences in the level of psychological well-being were found for paired comparisons of all clusters. Thus, our conclusion about the nature of psychological adaptation for the identified clusters was confirmed.

Let us analyze the significance of differences in basic beliefs and social beliefs that reflect the image of the world in individuals with different levels of psychological adaptation to digitalization. The results of statistical analysis using one-way ANOVA and Tukey's test are presented in Tables 4 and 5.

Table 4

Descriptive statistics and significant differences between clusters for core beliefs and beliefs (N=408)

Basic Beliefs and Beliefs Scales	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Differences		Effect strength
	M	SD	M	SD	M	SD	F	p	η2
Friendliness of the World	3,18	0,94	3,00	0,65	2,88	0,46	4,67	0,01	0,02
Justice of the World	3,50	0,81	3,48	0.69	3,21	0,68	6.51	<0,01	0,03
Self-Image	3,46	0,73	3,63	0,67	3,14	0,63	18,39	<0,01	0,08
Belief in Luck	3,13	0,64	3,21	0,59	3,00	0,62	3,75	0,02	0,02
Belief in Control over the World	3,43	0,71	3,53	0,62	3,21	0,65	8,34	<0,01	0,04
Belief in a Dangerous World	3,30	0,45	3.11	0,46	3,19	0,39	6,10	<0,01	0,03
Belief in a Competitive World	2,70	0,49	2,38	0,53	2,69	0,47	18,17	<0,01	0,08
Belief in a Just World	3,31	0,55	3,50	0,52	3,31	0,64	4,72	0,01	0,02
Intolerance of Uncertainty	4,71	1,16	4,72	0,88	4,30	0,97	7,74	<0,01	0,04
Tolerance of Uncertainty	4,79	1,00	4,86	0,74	4,32	0,92	14,27	<0,01	0,07

Table 5

Analysis of significant differences between clusters on basic beliefs and beliefs using Tukey's test (N=408)

Basic Beliefs and Beliefs Scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Friendliness of the World	0,17	0,18	0,29	0,01	0,12	0,44
Justice of the World	0,02	0,96	0,29	<0,01	0,27	0,01
Self-Image	−0,17	0,09	0,32	<0,01	0,49	<0,01
Belief in Luck	−0,08	0,51	0,12	0,23	0,21	0,02
Belief in Control over the World	−0,10	0,44	0,22	0,01	0,32	<0,01

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Basic Beliefs and Beliefs Scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Belief in a Dangerous World	0,19	<0,01	0,11	0,11	−0,08	0,30
Belief in a Competitive World	0,33	<0,01	0,01	0,99	−0,32	<0,01
Belief in a Just World	−0,18	0,02	0,01	0,99	0,19	0,22
Intolerance of Uncertainty	−0,01	0,99	0,42	<0,01	0,43	<0,01
Tolerance of Uncertainty	−0,06	0,83	0,48	<0,01	0,54	<0,01

A comparative analysis of the basic beliefs of the respondent groups that differ in the nature of their adaptation reveals significant differences between the "maladapted" group and the "adapted" and "anxious-maladapted" groups on all scales, with the exception of the belief in the goodwill of the world, compared to the "adapted" group, and the belief in luck, compared to the "anxious-maladapted" group. Thus, the group of respondents "maladapted" to digitalization is characterized by the lowest rates of beliefs in the goodwill, fairness, and controllability of the surrounding world, belief in luck, and a positive self-image. Interestingly, a significant difference between the "adapted" and "anxious-maladapted" was recorded only with respect to the self-image scale, which is less positive for "anxious" respondents than for "adapted". As for social beliefs, the "anxious-adapted" group is characterized by the highest scores for belief in a dangerous and competitive world, compared to other groups. The image of the world, defined through social beliefs, is the most positive in the "adapted" group. The "unadapted" group is more inclined, compared to the "adapted", to believe in a competitive and less fair world, revealing a contradictory attitude to uncertainty, which is expressed in the lowest assessments of both tolerance and intolerance to uncertainty.

The results of the comparative analysis of higher-order values and basic values using one-way ANOVA and the Tukey test are presented in Tables 6 and 7.

Significant differences in the assessments of higher-order values were found between all clusters that differ in their level of adaptation to digitalization. "Adapted" respondents differ from groups of respondents with a low level of adaptation to digitalization by a higher significance of the value of self-overcoming and a lower significance of the opposite value of self-affirmation. Respondents from the "unadjusted" cluster have the lowest scores for all value groups, inferior to the other two clusters, with the exception of the value of self-affirmation. "Anxiously maladapted" respondents surpass "maladapted" respondents in the values of change, preservation, self-overcoming, with the exception of the value of self-affirmation. An analysis of differences in basic values allowed us to give the following characteristics of the value sphere of each cluster. Respondents with a high level of digital adaptation differ significantly from other groups in their high value of independence of thoughts and actions,

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Table 6

**Descriptive statistics and significant differences between clusters
for higher-order and basic values (N=408)**

Value scales	Cluster 1 Anxious-maladapted N=142		Cluster 1 Adapted N=131		Cluster 3 Maladapted N=135		Differences		Effect strength
	M	SD	M	SD	M	SD	F	p	2
Values of change	4,38	0,71	4,52	0,56	4,02	0,84	17,48	<0,01	0,08
Values of preservation	4,43	0,73	4,50	0,67	4,02	0,82	15,86	<0,01	0,08
Values of self-overcoming	4,51	0,74	4,76	0,62	4,08	0,86	26,50	<0,01	0,12
Values of self-affirmation	3,78	0,79	3,54	0,84	3,59	0,86	2,95	0,05	0,02
Independence of thoughts	4,68	0,84	5,16	0,58	4,29	1,11	30,34	<0,01	0,13
Independence of actions	4,81	0,90	5,23	0,61	4,32	1,06	35,55	<0,01	0,15
Stimulation	4,06	0,81	4,16	0,84	3,71	0,93	9,20	<0,01	0,04
Hedonism	4,27	0,95	4,17	0,92	4,01	1,09	2,33	0,10	0,01
Achievements	4,02	0,98	3,99	1,07	3,83	1,06	1,34	0,26	0,01
Power-dominance	3,30	1,10	2,93	0,94	3,17	0,99	4,66	0,01	0,02
Power over resources	3,46	1,14	3,05	1,19	3,37	1,12	4,75	0,01	0,02
Reputation	4,62	0,85	4,56	0,94	4,15	1,05	10,54	<0,01	0,05
Personal security	4,64	0,97	4,72	0,82	4,24	0,98	10,40	<0,01	0,05
Public security	4,98	0,95	5,25	0,77	4.44	1,10	25,09	<0,01	0,11
Traditions	4,29	1,18	4,42	1,15	3,79	1,26	10,44	<0,01	0,05
Conformism in relation to rules	4,00	1,00	4,13	1,05	3,85	0,99	2,49	0,08	0,01
Interpersonal conformism	4,21	0,96	4,02	0,96	3,82	0,94	5,81	<0,01	0,03
Modesty	3,99	0,84	3,88	0,81	3,67	0,93	4,98	<0,01	0,02
Universalism — concern for others	4,70	0,89	4,72	0,98	4,15	1,03	16,09	<0,01	0,07
Universalism — concern for nature	4,14	1,06	4,32	0,96	3,85	1,08	6,96	<0,01	0,03
Universalism — tolerance	4,22	0,89	4,45	0,83	3.81	1,03	17,68	<0,01	0,08
Benevolence — care	4,73	0,91	5,15	0,69	4,34	1,16	23,17	<0,01	0,10
Benevolence — duty	4,75	0,90	5,11	0,62	4,29	1,05	29,57	<0,01	0,13

Table 7

**Analysis of significant differences between clusters on higher-order values
and basic values using Tukey's test (N=408)**

Value scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Values of change	−0,15	0,21	0,36	<0,01	0,51	<0,01

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Value scales	Cluster 1/ Cluster 2		Cluster 1/ Cluster 3		Cluster 2/ Cluster 3	
	MD	p	MD	p	MD	p
Values of preservation	−0,07	0,74	0,41	<0,01	0,48	<0,01
Values of self-overcoming	−0,24	0,02	0,42	<0,01	0,66	<0,01
Values of self-affirmation	0,23	0,06	0,18	0,18	−0,06	0,85
Independence of thoughts	−0,48	<0,01	0,39	<0,01	−0,87	<0,01
Independence of actions	−0,42	<0,01	0,49	<0,01	0,91	<0,01
Stimulation	−0,10	0,62	0,34	<0,01	0,44	<0,01
Hedonism	0,10	0,70	0,25	0,08	0,16	0,40
Achievements	0,04	0,95	0,19	0,27	0,16	0,44
Power-dominance	0,37	<0,01	0,14	0,51	−0,24	0,14
Power over resources	0,41	0,01	0,09	0,81	−0,32	0,06
Reputation	0,06	0,87	0,47	<0,01	0,41	<0,01
Personal security	−0,08	0,76	0,40	<0,01	0,48	<0,01
Public security	−0,27	0,05	0,54	<0,01	0,81	<0,01
Traditions	−0,12	0,69	0,50	<0,01	0,63	<0,01
Conformism in relation to rules	−0,13	0,54	0,15	0,45	0,28	0,07
Interpersonal conformism	0,19	0,24	0,39	<0,01	0,20	0,19
Modesty	0,12	0,51	0,32	<0,01	0,21	0,12
Universalism — concern for others	−0,01	0,99	0,56	<0,01	0,57	<0,01
Universalism — concern for nature	−0,17	0,35	0,29	0,05	0,47	<0,01
Universalism — tolerance	−0,23	0,09	−0,47	<0,01	0,64	<0,01
Benevolence — care	−0,42	<0,01	0,39	<0,01	0,80	<0,01
Benevolence — duty	−0,37	<0,01	0,46	<0,01	0,83	<0,01

public safety, universalism as tolerance and benevolence both in the form of care and duty, as well as a lower significance of power, dominance and power over resources. Significant differences were also revealed in the greater significance of the values of stimulation, reputation, personal safety, traditions, normative conformism and all types of universalism for the "adapted" group, compared to the "unadapted" group. The differences in the value sphere of the "unadapted" and "anxious-unadapted" clusters consist in the greater significance of the values of independence of thoughts and actions, stimulation, reputation, personal and public safety, traditions, interpersonal conform-

ism and modesty, universalism as care for others and tolerance, benevolence in the form of care and duty for respondents of the "anxious-unadapted" cluster. It can be stated that the characteristics of the value sphere of respondents of the "adapted" and "anxious-maladapted" groups are very close, and there are large differences with the "maladapted" group. Accordingly, it can be concluded that the importance of the value of self-overcoming acts as a motivator for setting and implementing goals of psychological adaptation to the challenges of the digital society, while the value of self-affirmation, on the contrary, hinders the effectiveness of the adaptation process.

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A comparative study of age-related features of psychological adaptation of an individual to digitalization in various social spheres in youth and middle adulthood was aimed at identifying differences in the scales of psychological adaptation and features of value consciousness (Table 8).

An ambiguous picture of psychological adaptation to the digitalization of society was revealed when analyzing the results of the age groups of youth and middle maturity. Respondents of the older age group surpass the younger in literacy of information search and normative adaptation, adaptation in the family and professional spheres, while respondents of the younger group are more adapted to Internet communication and to digitalization in the educational sphere. Respondents of the older group are more prone to digital anxiety, but at the same time show greater readiness for online learning. Young people show greater adaptation to digitalization in the educational sphere and communication in online learning. Thus, our data indicate different involvement and mastering of digital tools in various social spheres of representatives of age groups, which is associated, in our opinion, with the significance and degree of mastery of a particular area of activity. For the youth group, more effective mastering was revealed for the sphere of education and communication, and for the middle maturity group for the professional and family spheres. However, adaptation to digitalization in the older age group is combined with high digital anxiety with a positive attitude towards the digitalization process itself.

Table 8

Differences between age groups in the level of psychological adaptation to digitalization (N=408)

Scales of psychological adaptation to digitalization	Youth (18—26 years)		Medium maturity (45—55 years)		Differences		Effect strength
	M	SD	M	SD	F	p	η^2
Ensuring security in the digital environment	3,47	0,60	3,57	0,57	0,38	0,54	<0,01
Information search literacy	3,37	0.58	3,33	0,64	5,65	0,02	0,01
Communicative adaptation	3,16	0,47	3,26	0,47	4,70	0,03	0,01
Normative adaptation (lack of tendency to deception and fraud)	3,26	0,53	3,15	0,54	71,95	<0,01	0,14
Digital anxiety	3,12	0,81	3,73	0,72	5,09	0,03	0,01
Adaptation to digitalization in the family sphere	3,10	0,69	3,74	0,72	42,39	<0,01	0,09
Adaptation in the professional sphere	3,01	0,73	3,47	0,75	9,47	<0,01	0,02
Adaptation in the educational sphere	3,06	0,51	3,20	0,46	5,22	0,02	0,01
Readiness for online learning	3,14	0,31	3,07	0,35	11,33	<0,01	0,02
Anxious attitude towards online learning	3,33	0,49	3,49	0,51	5,62	<0,01	0,01
Communicative adaptation to online learning	3,12	0,44	3,05	0,49	43,3	<0,01	0,09
Positive attitude towards digitalization	2,83	0,84	2,64	0,89	2,61	0,10	0,01

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Based on the hypothesis about the role of the value sphere of the individual as the basis for motivation and goal-setting in the process of psychological adaptation to the digitalization of society, we compared the indicators of higher-order values in the studied age groups, which found significant differences in the nature of psychological adaptation to digitalization (Table 9).

The results obtained using one-way ANOVA reveal significant differences in all higher-order values, with the exception of the value of self-affirmation in respondents of the middle-maturity age group. It can be assumed that the greater significance of the values of change and self-overcoming in respondents of the older age group determines the motivation for adaptation in the professional and family spheres that are significant for this age, as well as the behavioral digital adaptation in the form of high information retrieval literacy necessary for the success of professional activity. The greater significance of the value of self-affirmation, compared to the older group, is the basis for the motivation and purposefulness of young respondents to solve the development problems of this age — finding partners in joint activities and close

interpersonal relationships (adaptation in communication) and obtaining an education. Thus, we have received confirmation that values, forming the basis for goal-setting and motivation for activities that are significant for the age stage of personality development, are a condition for the successful psychological adaptation of the individual to the digitalization of various social spheres. The stated assumption requires continuation of the study and constitutes its prospects.

Discussion of the results

The central system-forming characteristic of human psychological adaptation as a complex systemic phenomenon is a person's attitude to the surrounding reality and to himself [6], when human activity, prompted by motives and regulated by values that mediate goal-setting, acts as an active formation by the subject of strategies and methods of mastering the situation at different levels of behavior regulation [8]. Value hierarchies as supra-individual systems that determine the relationship "personality — society" can both facilitate and hinder adaptation processes [18]. We assumed that basic values, as well as higher-order values, acting as motivators and transitional

Table 9

Descriptive statistics and significance of differences in value assessments by a group of respondents of youth and middle maturity (N=408)

Higher-order values	Youth (18—26 years)		Medium maturity (45—55 years)		Differences		Effect strength
	M	SD	M	SD	F	p	η^2
Values of change	4,17	0,83	4,41	0,65	12,25	<0,01	0,03
Values of preservation	4,05	0,81	4,48	0,71	37,59	<0,01	0,08
Values of self-overcoming	4,24	0,85	4,59	0,70	22,29	<0,01	0,05
Values of self-affirmation	3,85	0,79	3,51	0,79	20,32	<0,01	0,04

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goals of the individual, will be associated with the success of the psychological adaptation of the individual to the digitalization of various social spheres of a dynamically changing society. We identified three groups of respondents differing in adaptation features: a group of well-adapted, maladapted, characterized by high anxiety in connection with digitalization, and maladapted, not experiencing anxiety in connection with digitalization. Our assumption about the nature of adaptation of the selected groups was confirmed by the established fact of a higher level of psychological well-being in the group of well-adapted respondents. A comparative analysis of the features of deep convictions and social beliefs of the groups revealed significant differences in their image of the world and attitude towards themselves and the world around them. In the case of successful adaptation, in contrast to the group of "unadjusted", the surrounding world is perceived as benevolent, fair and controllable, and the self-image is of an unconditionally positive nature. For "unadjusted" respondents, the world is perceived as competitive and not fair enough, and in the case of anxiety towards digitalization — as dangerous and uncontrollable, and the self-image is characterized negatively.

Based on the circular model of basic values by S. Schwartz, we identified significant differences in the value sphere of groups with different psychological adaptation to digitalization. The value sphere of respondents adapted to digitalization is distinguished by the expression of the social focus of values, balanced with the values of personal development, freedom from anxiety and self-defense, and is characterized by the high significance of the values of self-overcoming and the significance of the values of change. This is consistent with the results of the study of the relationship between the basic values identified in the concept of S. Schwartz with involvement in ICT activities, in particular, with the provision on the significance of the values of change [17]. This means that the more significant the values of preservation (traditions, conformism, personal and public safety), the less pronounced the readiness for innovative forms of learning using digital technologies and the more difficult it is for an individual to accept new forms of communication in online learning. The identified connection between basic values and the characteristics of psychological adaptation to digitalization only at the theoretical level based on the provisions of S. Schwartz's theory suggests cause-and-effect relationships in which values act as a cause of adaptation. Such an assumption requires further research.

Our results are further evidence of the inconsistency of the myth about the total superiority of the younger generation over the older generation in mastering digital technologies in various spheres. Age differences in psychological adaptation to various aspects of digitalization in the professional and educational spheres were found, indicating that the significance and, as we assume, the meaning of the activity, determined by the content of the value sphere of the individual, determine the a person's readiness to master new digital technologies as cultural means of carrying out activities and,

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thus, the productivity of psychological adaptation to the digitalization process. Adaptation to innovative digital technologies in the communicative and educational spheres, relevant to the developmental tasks of the age stage, occurs more successfully at a young age, and in the professional and family spheres during middle maturity.

The limitations of the study are associated with the need to study the cause-and-effect relationships of the success of psychological adaptation to digitalization with the value structure of consciousness, taking into account a more complete range of conditions and factors influencing the implementation of the subject's activities. We see prospects for further research in studying the connections between goal-setting, conditioned by the value sphere, regulation and control of activities, coping strategies and the nature of adaptation to digitalization.

Conclusions

1. The nature of psychological adaptation to the digitalization of society as a complex systemic process reveals heterogeneity and unevenness both in relation to various parameters of digital adaptation and in relation to various social spheres.

2. A connection has been established between the basic beliefs and social beliefs of an individual and the success of psychological adaptation to digitalization. Successful adaptation is associated with beliefs in the goodwill, fairness and controllability of the world, while difficulties in adaptation are associated with the perception of the world as dangerous, competitive and not fair enough.

3. The results confirm the hypothesis about the connection between basic values and the success of psychological adaptation to digitalization. The values of self-overcoming, oriented towards a social focus, including the well-being of people around and universalism as understanding, recognition, tolerance and protection of the well-being of all people and nature, combined with the value of openness to change in the form of active choice based on the values of independence of thoughts and actions, determine the structure of the value sphere of an individual in case of successful adaptation. In the case of low adaptation, on the contrary, the values of self-affirmation and self-exaltation are significant, as well as the values of preservation in the conditions of increasing anxiety associated with digitalization.

4. Age-related features of psychological adaptation to digitalization are associated with the tasks of age development and the importance of social spheres and activities — in the period of youth, compared with middle maturity, the success of adaptation to digitalization is higher in the communicative and educational spheres, and in middle maturity — in the professional with a high level of digital anxiety.

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The Role of Value Orientation in Satisfaction of Basic Psychological Needs and Academic Adaptation of Students

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This study aims to clarify the role of value orientation in the satisfaction of basic needs and academic adaptation of students. It will allow us to set goals, which help to achieve psychological well-being. The study involved (N=390) students of pedagogical profiles of the university (35% men, 65% women), aged 17—22, average age 19,85, SD=3,17. The following methods were used in the study: A scale of satisfaction of basic needs (M.M. Johnston, S.J. Finney, 2010); a "Portrait value questionnaire" (S. Schwartz, 2012); a methodology for diagnosing academic adaptation (R.M. Shamionov, M.V. Grigorieva, E.S. Grinina, A.V. Sozonnik, 2022) and a questionnaire to establish socio-demographic characteristics. It is established that the preservation and openness values are positive predictors of satisfaction of basic psychological needs as an personal autonomy, competence and connection with others. The positive effect of preservation values and the negative effect of openness on variations in academic adaptation is mediated by satisfaction of basic needs for autonomy and competence, which respectively enhance or reduce these effects.

Keywords: values; satisfaction of basic psychological needs; academic adaptation.

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Роль ценностных ориентаций в академической адаптации студентов в связи с удовлетворенностью их потребностей в автономии, компетентности и связанности с другими

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Представлены результаты работы, направленной на выяснение роли ценностной направленности в удовлетворенности базовых потребностей и академической адаптации студентов. Полученные материалы проясняют цели, направленность на которые способствует достижению психологического благополучия обучающихся. В исследовании приняли участие студенты педагогических профилей университета (N=390, 35% мужчин, 65% женщин) в возрасте 17—22 лет, средний возраст — 19,85, SD=3,17. Использованы следующие методики: Шкала удовлетворенности базовых потребностей (M.M. Johnston, S.J. Finney, 2010); «Портретный ценностный опросник» (Ш. Шварц, 2012); методика диагностики Академической адаптации (Р.М. Шамионов, М.В. Григорьева, Е.С. Гринина, А.В. Созонник, 2022) и анкета на установление социально-демографических характеристик. Установлено, что ценности сохранения и открытости являются положительными предикторами удовлетворенности базовых психологических потребностей в автономии, компетентности и связанности с другими. Положительный эффект ценностей сохранения и отрицательный эффект ценностей открытости на вариации академической адаптации опосредованы удовлетворенностью базовых потребностей в автономии и компетентности, которые соответственно усиливают или снижают эти эффекты.

Ключевые слова: ценности; удовлетворенность базовых психологических потребностей; академическая адаптация.

Introduction

Satisfaction of basic psychological needs (in autonomy, competence and relatedness) is the most important indicator of a person's psychological well-being [11; 23; 24]. Previously, it was found that all three basic psychological needs remain important for maintaining a sense of well-being (social, emotional, psychological) throughout life [26]. There is evidence that values in general and role coherence of values (my values as a partner and as a friend) are associated with the experience of satisfaction of basic needs, and this re-

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lationship is mediated by the clarity of the Self-concept of young people [27]. In other words, the stability of values (in different role situations) can be considered as the basis for the psychological well-being of an individual. On the other hand, satisfaction of basic needs (in the family) contributes to the choice of more authentic grounds for self-esteem [13] and is associated with academic motivation [17].

The value orientations of a person act as an important regulator of the activity and nature of a person's daily behavior. Therefore, the study of the contribution of individual values and groups of values (value orientation) to variations in satisfaction of basic needs allows us to assess not only the degree of value determination of satisfaction of basic needs and their consistency / inconsistency, but also the effects of socialization in terms of their impact on the subjective well-being of the individual.

In recent decades, the problem of value conditioning of human behavior has become very popular in sociological and psychological research. For a long time, value measurements have been carried out all over the world. It is believed that values are universal, although there are a number of objections regarding the universality and universality of values that are used for world measurements [3]. In addition, tools devoid of known "cultural" limitations are also beginning to appear, for example, to assess adherence to traditional values in their understanding, which exists in the subjective experience of a person [31]. In addition, researchers often question the ability of existing methods for assessing the values of an individual and a group to predict consistent behavior. Nevertheless, from the previously presented data, at least the Sh method. Schwartz's PVQ-RR predicted all variables of value-relevant behavior best [9], although it was found that different values predict behavior differently [28]. In our opinion, values, being appropriated in the

process of socialization as "guiding" ideas of life and behavior, included in the subjective system of representations, influence the "desired" strategy of life, which can be adjusted by various circumstances, but at the same time form a kind of criteria base for evaluating thoughts and ways of their implementation. However, the unification of life carries the risk of reducing cultural diversity and variability, and reduces the possibilities of creativity [6].

The values prevalent in a society change in accordance with changes in its life and depending on social, socio-economic and socio-political processes taking place not only within the boundaries of a particular culture, but also within the framework of the interactions of civilizations. Therefore, as the researchers note [1; 6; 10; 14], there were serious changes in the value orientations of various groups of the population over the past 30-40 years in Russia. The most serious changes are taking place in youth groups. So, O.A. Belobrykina and K.L.Lidin (2021) draw attention to the trends of changing collectivism to individualism, altruism to selfishness, stability and orderliness to dynamism and illusory freedom [1]. In Russian science, there is also a trend towards strengthening the liberal values of students [10], according to which there is a decrease in the importance of the values of family life, interesting work, public recognition, creativity and even self-confidence, and at the same time strengthening the values of freedom and life wisdom. These data are supported by studies of the values of success in life, according to which success is associated with values of a subjective and personal nature (mental state and personal success) and social significance (power and recognition) [12]. These data also indicated a certain strategy of "achieving" the success using egocentricity and power. Meanwhile, there are also data indicating that young people continue to focus on family, love, material

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security, their hedonistic values, as well as the values of freedom, career, self-actualization take the second place [1; 18]. These values hardly correlate with those attributed to Russian civilization (beauty, generosity, mercy, kindness, spirituality, morality) [14].

Satisfaction of basic needs as an indicator of one's psychological well-being is associated with achievements in social life, professional activity, and education. However, according to our assumption, the versatile activity of students and its effectiveness depend on the satisfaction of basic needs and certain values. Obviously, certain values carry patterns of behavior fixed in culture that are most effective in terms of adaptation and self-realization of a person in appropriate conditions.

The definition of value predictors of satisfaction of basic psychological needs and academic adaptation of students will allow them to establish the goals, which contribute to the achievement of psychological well-being of young people in the educational system.

The purpose of the study is to determine the nature of the correlation between students' value orientations and satisfaction of their needs for autonomy, competence and their connection to the process of academic adaptation.

Hypothesis. The values of openness and preservation are significantly related to the satisfaction of basic needs and academic adaptation of students.

Research objectives: 1) identify the level indicators of values and basic needs; 2) identify the values that are most important for satisfying the basic needs of students; 3) establish the role of higher-order values (openness, preservation, self-overcoming and self-affirmation) in meeting the basic needs and academic adaptation of students.

Procedure, methods and techniques

390 students of pedagogical profiles of the university (35% men, 65% women), age — 17—22 years, average age — 19.85, SD=3.17 were recruited for this study.

Methods. The survey method was used in the study. The following methods were applied: The scale of satisfaction of basic needs [25], adapted by us, was used to assess the degree of satisfaction of the need for autonomy, competence and connection. The questionnaire included 21 items, proportionally distributed on three scales. The Cronbach's alpha is 0.72 for the autonomy scale, 0.69 for the competence scale; 0.70 for connection. The scales demonstrated good psychometric indicators, were closely interrelated (correlation coefficients ranged from 50 to 70 at $p<0.01$) and were previously used in studies [30]. To assess the severity of the significance of individual values and their groups, Schwartz's Portrait Value Questionnaire was used (2012) (PVQ-R2). The questionnaire included 57 items, each was rated from 1 to 6 points according to the degree of "similarity" with a person with a particular characteristic. The points of the questionnaire were distributed proportionally according to 19 scales-values, which were divided into 4 groups (self-overcoming, self-affirmation, preservation and openness to the world). To assess the degree of academic adaptation of students, the method of diagnosing academic adaptation was used (R.M. Shamionov, M.V. Grigorieva, E.S. Grinina, A.V. Sozonnik, 2022). The methodology included 44 items distributed on 7 scales: cognitive, emotional, motivational, psychophysiological, communicative and personal components and an integral scale of academic adaptation. The Cronbach's alpha for the integral scale is 0.81. A questionnaire was used to assess sociodemographic indicators.

Data processing methods. The primary data were processed using the IBM SPSS Statistics + PS IMAGO PRO statistical program, which included the IBM AMOS program for modeling, using structural equations. The study also used the method of

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correlation analysis, the method of regression analysis (step method).

Results

Initially, we calculated descriptive statistics (Table 1). As can be seen from the results, the most pronounced indicators of values of loyalty to the group, self—affirmation in the group, as well as independence (freedom of expression and action).These values Sh. Schwartz [22] refers to two segments of the value circle (groups of values, orientations): openness to change and self-overcoming. The least expressed values were the tradition and the power(an influence through the control of other people and material resources), as well as modesty as an insignificance of an individual.

The analysis of the contribution of specific values to variations in satisfaction of needs allowed us to see the differences in combinations of value determinants and quantitative indicators of the variance covered. It is necessary to take into account the joint determination of satisfaction of basic needs on the part of values located on opposite sides of the value circle, such as

Table 1

Descriptive statistics and correlation analysis of indicators (according to Pearson)

Parameters	M	SD	Autonomy	Compe-tence	Connection
Independence, Thoughts	4,94	0,79	0,39**	0,29**	0,27**
Independence,Actions	4,99	0,81	0,42**	0,39**	0,30**
Stimulation	4,23	0,87	0,20**	0,24**	0,24**
Hedonism	4,65	0,89	0,19**	0,15**	0,33**
Achievement	4,53	0,85	0,28**	0,26**	0,26**
Power, Dominance	3,14	1,10	0,04	0,11*	0,03
Power, Resources	3,45	1,04	0,04	0,01	0,04
Reputation	4,53	0,95	0,15**	0,09	0,13*
Security Personal	4,60	0,83	0,19**	0,23**	0,25**
Security Social	4,80	0,99	0,29**	0,23**	0,26**
Tradition	3,55	1,24	0,20**	0,32**	0,24**
Conformity, Rules	4,08	1,02	0,17**	0,27**	0,16**
Conformity, Interpersonal	4,09	1,06	-0,03	0,012	0,14**
Modesty	3,82	0,89	-0,05	0,02	-0,01
Universalism, care for others	4,21	1,05	0,17**	0,22**	0,20**
Universalism, care for nature	4,74	1,02	0,09	0,11*	0,16**
Universalism, Tolerance	4,48	0,92	0,11*	0,13*	0,21**
Benevolence, Caring	5,13	0,83	0,27**	0,37**	0,38**
Benevolence, A sense of duty	5,03	0,83	0,31**	0,29**	0,35**
Autonomy needs	5,13	0,87	1	0,74**	0,61**
Competence needs	4,67	0,93	0,74**	1	0,60**
Connection needs	5,09	0,83	0,61**	0,60**	1
Academic adaptation	5,26	0,74	0,62**	0,67**	0,47**

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independence and traditions while organizing students' social activity.

Table 2 shows that the main predictors of satisfaction of the need for autonomy are the values of preservation — support for traditions, public safety, interpersonal conformity (negative). Only one of the values, an independence in action, is its predictor. Based on the beta coefficient (0.371) and R² (0.19), this value makes the greatest contribution to meeting the need for autonomy. These data indicated that in realizing the need for autonomy, the value of personal focus "outweighs" the values of social focus, which may indicate the individualistic mentality of students.

Satisfaction of the need for competence (Table. 3) it is explained by a set of values belonging to different sectors of the value circle: preservation (values of traditions, interpersonal conformity (negative)), self-affirmation (power over resources, success), self-overcoming (dedication to the group (benevolence-care)) and openness to change (independence in actions).

Table 5 shows that satisfaction with the need for connection with others is conditioned by the values of loyalty to the group, hedonism, independence in actions, power over people (negatively) and modesty (negatively). It follows from these data that the desire to take care of others, moderate hedonism, independence and adherence to traditional values contribute to the realization of the need for relationships with others through activity in accordance with them, while the values of power over people and modesty, on the contrary, frustrate it.

As can be seen from Table 2—4, the value orientations (groups of values) "openness to change" (independence in actions) and "preservation" (tradition, conformity) are universal predictors for satisfaction of various psychological needs — in autonomy, competence and relatedness, despite the relatively small values of the coeffi-

Table 2

Predictors of satisfaction with the need for autonomy

Parameters	B	SD	β	t	p	ΔR²
Constant	2,55	0,32		7,98	<0,001	
Self–direction Action	0,42	0,06	0,37	6,95	<0,001	0,19
Tradition	0,11	0,04	0,14	2,88	0,004	0,02
Conformity, Interpersonal	−0,12	0,04	−0,14	−2,77	0,006	0,01
Security Social	0,13	0,05	0,14	2,53	0,010	0,02
F=25,33; p<0,01; R²=0,23						

Table 3

Predictors of satisfaction with the need for competence

Parameters	B	SD	β	t	p	ΔR²
Constant	2,06	0,36		5,71	<0,001	
Benevolence —Care	0,27	0,07	0,23	4,02	<0,001	0,13
Tradition	0,20	0,04	0,25	4,94	<0,001	0,04
Self–direction Action	0,20	0,07	0,16	2,85	0,005	0,03
Conformity–Interpersonal	−0,18	0,05	−0,20	−3,87	<0,001	0,03
Power Resources	−0,16	0,05	−0,17	−3,07	0,002	0,01
Achievement	0,19	0,07	0,17	2,69	0,008	0,02
F=15,33 p<0,01; R²=0,25						

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Table 4

Predictors of satisfaction with the need for connectivity

Parameters	B	SD	β	t	p	ΔR²
Constant	2,68	0,38		7,03	<0,001	
Benevolence, Care	0,18	0,06	0,17	2,89	0,004	0,13
Hedonism	0,22	0,06	0,22	3,88	<0,001	0,04
Tradition	0,14	0,04	0,20	3,73	<0,001	0,02
Independence, Action	0,14	0,06	0,13	2,31	0,022	0,01
Power Dominance	−0,10	0,04	−0,13	−2,45	0,015	0,01
Modesty	−0,10	0,05	−0,10	−2,05	0,041	0,01
F=15,33; p<0,01; R²=0,21						

cients of determination (R²) in regression equations (Tables 2—4).

Table 5 shows that the academic adaptation of students is associated with satisfaction of the need for autonomy and competence. At the same time, satisfaction of the need for competence makes a more significant contribution to the academic adaptation of students. The step-by-step model does not include satisfaction in connection with others due to the low indicator B and the high standard error index (respectively, the insignificant Student criterion).

To test the hypothesis about the direct and indirect effects (directions of connections and variables-moderators) of values on academic adaptation, we conducted structural equation modeling. The dimensions of the model show an acceptable result, all co-variances and variances of exogenous variables are statistically significant. The sample size in the analyzed case is sufficient (A.D. Nasledov, 2020). As can be seen from the figure, the most powerful is the direct effect of satisfaction of needs for autonomy and competence on variations in academic adaptation. The contribution of values to adaptation is insignificant, but it is quite noticeable in terms of satisfaction of psychological needs. The cumulative contribution of values and satisfaction of basic needs in the variation of academic adaptation of students is 50%, which indicates a significant determination. The figure also shows that satisfaction of the need for connection with others does not have a direct effect on academic adaptation.

Discussion

The values of modern students do not only indicate their target orientation, but also work as a powerful regulator of students' behavior [9; 22], since the importance of values is associated with a lack of realization of certain needs [8, p. 148]. As a result of the study, it was found that young people have the most pronounced values of self-overcoming and openness to

Table 5

Satisfaction of basic needs as a predictor of students' academic adaptation

Parameters	B	SD	β	t	p
Constant	2,32	0,17		14,03	<0,001
Competence	0,37	0,04	0,46	8,55	<0,001
Autonomy	0,24	0,05	0,28	5,09	<0,001
F=180,232; p<0,01; R²=0,48					

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CMIN=,329; df=1; CMIN/DF=,329/df; p=,566;
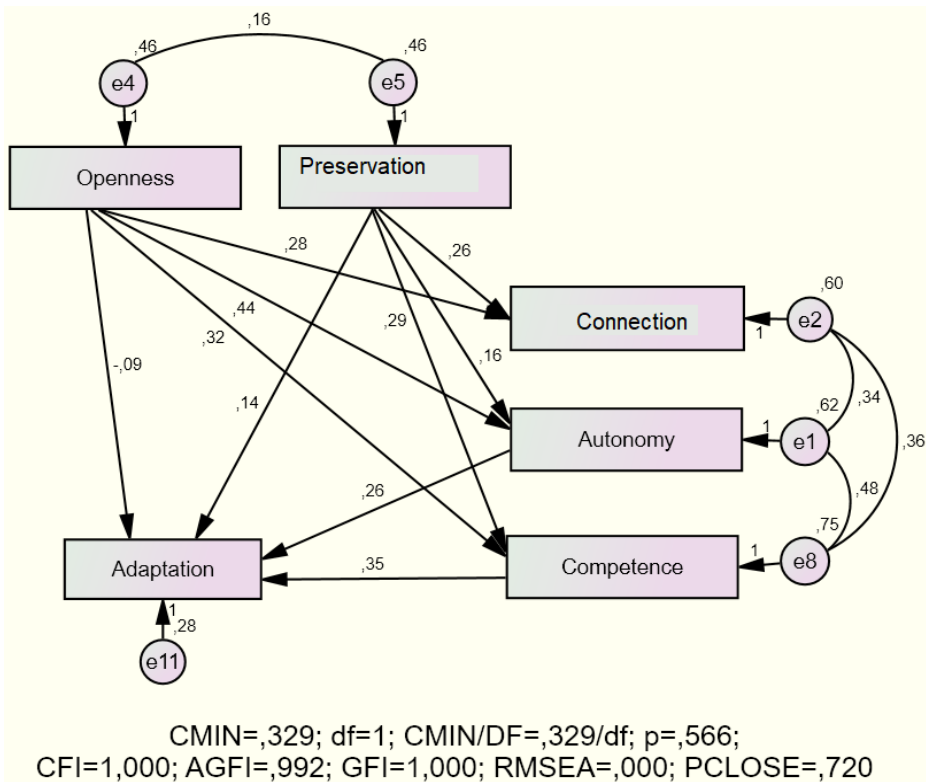CFI=1,000; AGFI=,992; GFI=1,000; RMSEA=,000; PCLOSE=,720

Fig. 1. The model of path analysis: Chi-squared (CMIN), degrees of freedom (df), comparative fit index (CFI), adjusted fit quality index (AGFI), fit quality index (GFI), standard error of approximation (RMSEA)

change, which correlates with the data obtained in the study by N.V. Murashenkova, V.V. Gritsenko and M.N. Efremenkova [15]. In addition, the values of safety and reputation demonstrate high importance. These data show in favor of the willingness of young people to change, but without risk, with a certain degree of security (both at the level of the individual and society as a whole), and at the same time, the values of overcoming one's own interests for the sake of others are of great importance. It would seem that the high importance of the group's interests corresponds to the peculiarities of the youth subculture, but the presence of a correlation with age (r=0.173; p<0.01) indicates a deeper inclu-sion of this category of values in the lives of young people in future. Meanwhile, the least significant values of self-affirmation (r=–0.118; p<0.05) and preservation (r=0.244; p<0.01) also correlate with age. This suggests that self-affirmation values are significant for the younger part of the sample, and the importance of preservation values increases with age. Therefore, it is impossible to agree with the conclusion about the "liberalization" of students' values to the detriment of traditional values, made in the work of A.N. Kotlyarevich (2023) [10]. There is an obvious shift in the values of preservation and overcoming to later stages of socialization. At the same time, the trend towards the values of openness

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to change is very pronounced in the youth sample in the province [20].

The importance of values representing an important (guiding) area of self-realization for young people is a factor of adaptation [5] and subjective well-being, including satisfaction of basic needs for autonomy, competence and connection with others [23]. However, different values have different effects on the satisfaction of basic needs and academic adaptation.

According to the theory of self-determination, the need for autonomy is characterized by the desire for independence, for actions in accordance with one's choices and one's personality as a whole. As a result of regression analysis, we have established a direct correlation between the value of independence in action (openness to change), which has the greatest power of determination, and support for traditions, public safety; as well as a reverse correlation between the value of interpersonal conformity and satisfaction of this need. In other words, the satisfaction of the need for students' autonomy is due to the importance of values that relate primarily to two opposite axes of the value circle (according to Sh. To Schwartz).

The regression analysis indicated the complexity of the value determination of satisfaction of the need for competence, since they cover values from very different areas: self-overcoming, preservation, and self-affirmation. Satisfaction of the need for effective solutions to the problems is associated with the value of dedication to the group, which, obviously, is perceived primarily as a support group. At the same time, the value of interpersonal conformity rather prevents this. In other words, only the importance of "one's own" group, but not in general humanity (avoiding harm to other people) is associated with satisfaction of this need. In addition, there is a connection between the value of traditions (positively) and power over resources (negatively),

which also relates to opposite poles (according to Schwartz). On the one hand, this indicates that the psychological well-being of young people is hindered by a focus on influence through control over resources, whether material or social, and is facilitated by adherence to traditional values. In the light of the research results of A.L. Temnitsky (2022) [19], according to which well-being is associated more with the activity side of self-affirmation, with work activity, and dedication, such a connection does not seem accidental: young people do not rely on control in solving their problems, but to a greater extent on the support of the group and following traditions. On the other hand, this need is related to loyalty to the group, but not conformity to the established rules in the group, which rather reflects the ambiguous cultural orientation towards individualism-collectivism in Russian society [29].

Finally, satisfaction of the need for connection with others is also associated with the value of loyalty to the group, independence in actions and the pursuit of pleasure. At the same time, the values of power over others and the recognition of the insignificance of an individual in life (modesty, which is obviously not welcome in group relationships) prevent the satisfaction of this need.

As can be seen from the presented results, in all three cases, the values of independence in actions and traditions are indispensable predictors of satisfaction of basic psychological needs. It would seem that being values of the opposite orientation, they would have to compete, but not in this case. Obviously, cultural, family and religious traditions remain important for satisfying the psychological needs of young people (in the pursuit of independence). Such a joint prediction of satisfaction of needs does not seem accidental to us, since freedom of action, being one of the most significant values, does not compete with the values of traditions, but is comple-

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mented by them. The data obtained are partially consistent with the results of studies in which it was found that among modern students, the importance of values that ensure the stability of society, security, and the absence of chaos (traditional values) is associated with the importance of development, empowerment, self-realization, and transformation (values of openness) [2].

As a result of structural equation modeling, an empirically validated model was obtained. From this model it can be seen that the values of openness and preservation, belonging to the two opposite poles of the value circle, are crucial for the satisfaction of basic needs. This situation is not accidental at all, since the realization in life of aspirations for novelty, independence, changes, so pronounced in student youth [7], and traditional values — values of safety, adherence to norms and traditions — can create a significant area of psychological well-being of an individual. However, these values play a small but opposite role in shaping academic adaptation, which is obviously more sensitive to the values of preservation and following a certain pattern. These data are partially consistent with the results of research, which found that a high degree of adaptation is demonstrated, among other things, by students characterized by acceptance of norms, values, and requirements prevailing in the university and the study group [4].

The theoretical explanatory principle of these empirical results can be the principle of anisotropy [16] and the principle of diachrony [21], according to which the dynamic equilibrium in the personality system is ensured by the heterogeneity and diversity of changes occurring at different levels of its components.

Conclusion

Values are the regulators of human behavior. Their analysis is important from the point of view of determining the goals through which one realizes himself in one direction or another. It follows from the results of the study that social activity, which is based on relevant values, contributes to achieving satisfaction of basic needs. On a psychological level, this means that striving for meaningful goals in students' daily lives is the basis of their satisfaction, on a socio-psychological level, that certain values turn out to be leading to the realization of activity outside the context of their expression. Obviously, it is precisely those values that we have established with the help of regression analysis that correspond to the norms and attitudes learned in the process of socialization of the individual, as ensuring a comfortable existence. Despite the declaration of the low importance of traditional values, they act as an immutable predictor of satisfaction of the basic needs of students, which indicates their real place in the regulation of social activity and behavior. In addition, this indicates the adequacy of behavior to the relevant norms learned in the process of socialization of the individual. Another conclusion is that the satisfaction of basic needs is associated with the heterogeneity of value determination. It is obvious that for each need there is its own set of different values, the changes of which, despite their involvement in some areas, provide activity, thanks to which one or another need is satisfied.

As a result of modeling by structural equations (the path model), the effects of satisfaction of psychological needs for competence and autonomy determining academic adaptation, directed links of values to academic adaptation (direct from the values of preservation and inverse from the values of openness) with insignificant effect and the moderating effect of satisfaction of the need for autonomy and competence of direct connection of values and academic adaptation are established. From the re-

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sults obtained, it is impossible to talk about a direct causal correlation between values and academic adaptation. However, the role of certain values (openness and preservation) in variations of academic adaptation is more significant than others (self-overcoming and self-affirmation).

The practical conclusion from the results obtained is that the psychological well-being of students can be supported through inclusion in such forms of social activity that allow them to realize the values of openness to change and dedication to the group, but within the framework of traditional morality and following traditional attitudes. However, it should also be taken into account that social activity organized according to the principles of formal obligations and "following the course" is more likely to frustrate it.

Limitations. This study aims to establish connections and their orientations and tests the supposed effects of values on satisfaction of basic needs and academic adaptation of students. Therefore, in subsequent studies, it is necessary to pay attention to the establishment not only of the characteristics of the value orientations of students with different levels of adaptation, but also to the degree of fulfillment of values in the learning process as the basis of psychological well-being and academic adaptation. In this study, it was found that satisfaction with the need for autonomy and competence is more significant than satisfaction with the need for connection with others, which also requires additional research on the socio-psychological determination of student adaptation. Finally, it is necessary to clarify whether satisfaction of psychological needs is a mediator between values and academic adaptation or not.

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Impact of Commitment to Psychological Well-being among Students Who are Undergoing Long-Distance Relationship

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The phenomenon of long-distance relationships among students that have developed in this era is an opportunity that allowed them to thrive optimally in maintaining their relationships. However, in fact, LDR for students is still a challenge in itself because it requires a greater effort that can affect the achievement of individual psychological well-being. Psychological well-being is a necessary condition for individuals, including students who are in long-distance relationships so that they are able to maintain relationships optimally. Psychological well-being can be achieved by the presence of various factors, one of which is commitment. This study aims to determine the relationship between commitment and psychological well-being in students who are in long-distance relationships. The method used in this research is correlational quantitative. 587 students are undergoing long-distance relationships to become participants in this study with the accidental sample as the sampling technique. This study used two scales The Revised Commitment Inventory and the Ryff Scale of Psychological Well-being. The hypothesis test results with the Pearson correlation were 0,987 with sig = 0,000 (p<0,01), which means that the research hypothesis was accepted. Commitment contributed 97,4% to psychological well-being. This research shows that commitment is a very strong factor related to achieving psychological well-being in students who are in long-distance relationships. Commitment is essential in helping students to maintain relationships with existing different conditions while maintaining their psychological well-being and still carrying out their academic role optimally.

Keywords: commitment; psychological well-being; students who are undergoing long-distance relationships.

Влияние преданности на психологическое благополучие студентов, состоящих в отношениях на расстоянии

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Феномен отношений на расстоянии среди студентов, характерный для нашего времени, позволяет научиться оптимально управлять отношениями. Однако на самом деле отношения на расстоянии для студентов все еще проблематичны, поскольку требуют больших усилий, которые могут повлиять на достижение индивидуального психологического благополучия. Психологическое благополучие является необходимым условием для людей вообще и для студентов в частности, чтобы оптимально поддерживать отношения. Психологическое благополучие может быть достигнуто при наличии различных факторов, одним из которых является преданность. Цель данного исследования — установить взаимосвязь между верностью и психологическим благополучием у студентов, находящихся в отношениях на расстоянии. Метод, использованный в данном исследовании, — корреляционно-количественный, в исследовании приняли участие 587 студентов, состоящих в отношениях на расстоянии, случайная выборка. В данном исследовании использовались две шкалы: доработанный опросник преданности и Шкала психологического благополучия Райфа. Результаты проверки гипотезы с помощью корреляции Пирсона составили 0,987 при sig = 0,000 (p<0,01), соответственно, гипотеза подтвердилась. Преданность составила 97,4% в психологическом благополучии. Данное исследование показывает, что преданность является очень сильным фактором, связанным с достижением психологического благополучия у студентов, состоящих в отношениях на расстоянии. Преданность помогает студентам поддерживать отношения при различных условиях, сохранять психологическое благополучие и продолжать оптимально заниматься учебой.

Ключевые слова: верность; психологическое благополучие; студенты, состоящие в отношениях на расстоянии.

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Introduction

Human beings, as social creatures, inevitably need to establish connections with other living beings. Therefore, entering into romantic relationships becomes a desire for every human. Generally, the inclination to engage in romantic relationships emerges during adolescence, but it further develops during emerging adulthood, which is a period of identity exploration, especially in the context of love, work, and education [13]. Emerging adulthood refers to the developmental stage focused on ages 18 to 29, but developmentally, the years between ages 18 and 24 seem to be very different than between 25 and 29 [33]. College students fall within the age range of 18 to 24, according to data from the Statistics of Higher Education of the Ministry of Education and Culture [37].

One phenomenon related to romantic relationships among college students is the long-distance relationship (LDR). LDR entails a romantic relationship between partners who are physically separated by distance, such as residing in different cities, provinces, islands, or even countries [25]. Research has shown that many individuals face the challenge of maintaining relationships with partners from different universities [10]. This situation often leads college students to engage in LDRs. The prevalence of LDRs continues to rise, indicating a significant shift. A survey conducted by Rahmawati and Chozanah [41] of 1,000 participants in Indonesia found long-distance relationships only had a 58% success rate. Djupe in 2023 [19] also found that 75% of students have been in a long-distance relationship. This study also found that one strong reason for college students to engage in LDRs is the demand to pursue experiences in life trajectories diverge. Based on the research from the Center Long Distance Relationship Research (CSLDR) in 2021, there is 2,9% of couples in the United States or 3,75 million couples in a long-distance relationship. In addition, it was found that 32,5% of relationships are at the university level [48]. According to "Long Distance Relationship Statistics" by Guldner, shows that approximately 70% of college students were in a long-distance relationship at some point during their college years. The survey also found that 58% of long-distance relationships are successful with the average duration of the relationship in 2023 being 14 months [44].

Love relationships in Indonesian culture are often arranged and based on patriarchal rules that stress the importance of partners belonging to the same cultural background and place of residence. Furthermore, these relationships create strong bonds not only between the couples but also between their respective families [7]. Dating different religions, races, and ethnicities is still dominantly opposed in Indonesian cultural traditions, as it will undermine the regeneration of the local culture of the individual's family. This is why most dating couples tend to have the same local cultural background and are bound by cultural and religious rituals [23; 40]. This basis is what makes individuals in a dating relationship tend to maintain their relationship even though they are in LDRs.

Romantic relationships experienced by college students in LDRs may contribute to their personal growth, the discovery of meaning and purpose in life, and the enhancement of prosocial skills [24]. However, in reality, LDRs can lead to complex challenges that may encompass ambiguity and uncertainty in communication, resulting in relationship strain and emotional issues between partners [10]. Couples in LDRs face challenges to remain connected at a distance that impacts relationship maintenance behaviors and also often leads to psychological and emotional distress [9; 35]. Additionally, college students in LDRs may experience distrust and fear of being left behind, leading to increased emotional pressure in their efforts to maintain closeness with their partners [8], particularly when engaged in long-distance relationships.

The phenomenon of college students in LDRs not only involves physical distance but also extends to deep-seated issues related to partner control, especially when the partners are separated by islands. The lives of college students in LDRs are also intertwined with encounters with new individuals that impact their relationships, potentially evoking specific forms of relationship insecurity [22]. The LDRs experienced by college students often demand more substantial effort, particularly in terms of finances, especially when

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the distance is considerable. Additionally, LDRs can create personal conflicts that disrupt daily life as a student, making it difficult for individuals to engage in relationships because they often feel isolated and lonely due to partner-imposed limitations [29]. These factors can lead to a lack of openness and honesty, an underdeveloped self-concept, and a fear of personal growth. It can be seen as a representation of poor psychological well-being. Research has found that psychological distress in long-distance relationships can cause relationship stress and lead to increased anxiety, depression, sleep problems, pain, decreased physical functioning, and lower satisfaction with social role participation [12].

Psychological well-being can be understood as a state where individuals accept everything within themselves and exhibit self-control in their surroundings. They are capable of building relationships with others and their social environment even in challenging circumstances [43]. In this context, college students in LDRs face and navigate through complex conditions [10]. This requires them to maintain and motivate their partners effectively, allowing the relationship to endure [46].

Psychological well-being in individuals is formed from six dimensions [43]. The first dimension is autonomy, referring to the ability to be independent in performing tasks and responsibilities, which is particularly relevant for college students in LDRs. The second is environmental mastery, which pertains to the ability to cope with various environmental demands, including those different from their partner's environment. The third is personal growth, involving the ability to continue growing as an individual despite facing challenges while being in a distant relationship. The fourth is positive relations with others, which refers to the ability to maintain positive relationships with others even in the context of an LDR. The fifth is purpose in life, encompassing the ability to maintain and pursue life goals while navigating the challenges of a distant relationship. The sixth is self-acceptance, involving positive recognition and acceptance of oneself, including both positive and negative aspects, as well as the conditions experienced as a college student in an LDR [43].

College students in LDRs need to have a strong sense of psychological well-being, cause low psychological well-being tends to exhibit low self-esteem and emotional instability [34]. In turn, it might contribute to less positive relationship experiences [16] and indicate their higher psychological vulnerability [30]. Furthermore, it can lead to mental health problems such as elevated levels of depression and anxiety that hinder their lives as students [42]. Conversely, high psychological well-being tends to promote positive self-attitudes, independence in learning, positive social relationships with others, a sense of purpose in life, and optimal personal development [18].

The attainment of psychological well-being doesn't occur automatically but is influenced by various factors according to Ryff including age, gender, socioeconomic status, culture, social support, evaluation of life experience, and locus of control (LOC) [2] well as commitment [47]. This study aims to focus on the context of commitment in LDRs experienced by college students. This is manifested through a high dedication to the relationship, belief in the partner, and a commitment to achieving common goals [4; 5]. Commitment is a cornerstone for successful relationships amidst the complexity of potential conflicts.

Commitment refers to the fundamental reasons individuals participate in a romantic relationship, motivating them to engage and find ways to sustain the relationship [36]. Commitment is crucial for romantic relationships as it closely relates to individual sacrifices [28] in building communication and trust in their partners [50]. This enables individuals to navigate the dynamics of a long-distance relationship. Commitment has two aspects: dedication, which represents the desire to remain united and committed to the partner, and constraint commitment, which is associated with factors that contribute to the longevity of a relationship [36]. Individuals with low commitment in a relationship are likely to have reduced interactions with their partners, which can predict potential separation [21]. Conversely, individuals with high commitment in a relationship tend to develop a strong psychological connection with their partners, enabling them to actively engage and maintain the relationship over a long period [45].

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College students in LDRs are susceptible to conditions that can lead to conflicts affecting the success of their relationship [32]. Therefore, college students in LDRs need to understand themselves and possess strong commitment. Commitment forms the foundation of a relationship and is crucial in maintaining the psychological well-being of college students in LDRs. When individuals have strong commitment, they can proactively prevent and reduce depression symptoms related to anxiety levels [1]. Low commitment, on the other hand, can disrupt an individual's psychological well-being, as it is associated with inconsistent behavior maintenance for relationship satisfaction [27].

A study conducted by Tan, Ho, and Agnew [47] found a significant positive relationship (p=0,003) between commitment and psychological well-being, particularly related to conflict management for relationship maintenance. Another study by Agnew, Hadden, and Tan [3] demonstrated a positive relationship between commitment and psychological well-being, particularly in terms of predicting maintenance processes (self-disclosure, accommodation, sacrifice), leave behavior, and readiness for commitment within ongoing involvements (p=0,001). However, the study by Cassepp-Borges et al [17] did not find a direct relationship between commitment and psychological well-being, but commitment remains a factor that mediates relationship satisfaction. College students in LDRs may experience relationship-related stress, although this may not directly affect health and psychological well-being. Therefore, the phenomenon of LDRs with their positive and negative impacts presents an area of focus that warrants investigation. This could lead to the development of resources that can support college students in LDRs amidst the increasing cases and holistic phenomena that affect individuals, their partners, and their surroundings.

Thus, this study aims to explore the relationship between commitment and psychological well-being among college students in long-distance relationships. This research hypothesizes that there is a positive relationship between commitment and psychological well-being among college students in LDRs. Higher commitment levels among college students in LDRs are associated with higher levels of psychological well-being. Conversely, lower commitment levels are linked to lower levels of psychological well-being among college students in LDRs.

Method

Participants

The population in this study are students in Indonesia who undergo LDR because of higher education pursued outside the city or the island. The sampling technique uses accidental samples with the criteria, of active students aged 18—24 years who are undergoing LDR, and the length of undergoing LDR is at least 6 months. The data that has been collected resulted in 587 participants who fit the criteria. All research participants were first asked to fill out an informed consent sheet related to research procedures based on the Indonesian Psychological Association code of ethics. Inform consent contains statements about the description of the research and the involvement of participants. In addition, participants chose the option to agree (if willing) and ignore or leave blank (if refusing participation). If willing, then participants were directed to fill in their identity and continued with filling in the research scale. The overall demographic data of the participants are presented in table 1.

Procedure

Measurements in the study used two psychological scales, namely the commitment scale and the psychological well-being scale. Before the scales were distributed, the construct validity test was first carried out, and the content validity test, namely through expert judgment conducted by two experts (1 expert in the field of psychology and 1 expert in the field of language). After that, the research design was presented to be assessed for feasibility by three reviewers. The next stage, licensing and making informed consent sheets was carried out. The research was done in the form of a questionnaire distributed in the form of a Google form.

Instruments

Commitment Scale

The commitment scale was measured using The Revised Commitment Inventory based

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Table 1

Demographic Data of Participants

Participant Classification	Information	Frequency	Percentage
Gender	Male	97	16.5
	Female	490	83.5
Age	18 years old	37	6.3
	19 years old	108	18.4
	20 years old	151	25.7
	21 years old	123	21
	22 years old	84	14.3
	23 years old	55	9.4
	24 years old	29	4.9
Length of LDRs	<1 year	80	13.6
	1 year	85	14.5
	2 year	92	15.7
	3 year	111	18.9
	4 year	115	19.6
	5 year	48	8.2
	6 year	30	5.1
	7 year	26	4.4

on the commitment aspects by Owen et al [36], which include dedication and constraint commitment. This scale was then translated by the researcher into Indonesian and adjusted based on the participants' context. The commitment scale consists of 25 items with both favorable and unfavorable statements. An example item from this scale is: "*I want this relationship to endure, regardless of the difficult times we face*". The response options for this scale use a Likert scale model with four response categories: Very Appropriate (VA), Approriate (A), Not Approriate (NA), and Very Inappropriate (VI). The Cronbach's Alphas for dedication and constraint commitment are 0,855 and 0,863, respectively.

Psychological Well-being Scale

The psychological well-being scale was measured using the Ryff Scale of Psychological Well-being (SPWB), based on the psychological well-being dimensions by Ryff [43]. These dimensions include autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. The psychological well-being scale consists of 38 items with both favorable and unfavorable statements. An example item from this scale is "*I am confident in my opinions even when they differ from my partner's opinions*". The response options for this scale use a Likert scale model with six response choices: Very Approriate (VA), Approriate (A), Quite Approriate (QA), Less Approriate (LA), Not Approriate (NA), and Very Inapproriate (VI). Cronbach's Alpha values for all dimensions of psychological well-being raged from 0,889—0,892.

Results

The raw data collected via Google Form (online) were validated and analyzed using SPSS 21. The means, standard deviations (SD), and Pearson's product-moment correlation of coefficients were calculated between commitment and dimension of psychological well-being among students who are undergoing LDRs and are presented in tables 2 and 3.

From the Pearson product-moment correlation test (table 2), it is found that the correlation coefficient between commitment and psychological well-being is 0,987 (p=0,000), signifying a significant positive relationship between commitment and psychological well-being among

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students in LDRs. This demonstrates that commitment is a strong influencing factor in psychological well-being among students in LDRs.

Furthermore, based on the results of the correlation test between each aspect of commitment with each of the dimensions of psychological well-being in Table 3, it show that the dedication aspect is significantly positively related to all dimensions of psychological well-being because it has a significance value of less than 0,01. Likewise, the constraint commitment aspect has a significant positive relationship with all dimensions of psychological well-being (p<0,01). The results of dedication and constraint commitment are so similar because both of them may have

an impact on psychological well-being. The difference is that dedication focuses on individual intrinsic desires while commitment constraints focus on external factors that can influence the individual. However, constraint commitment alone is not sufficient to maintain a healthy relationship, and it has historically been far less associated with relationship quality than dedication is.

The data in table 4 shows that commitment as a significant predictor of psychological well-being in students undergoing LDRs. Adjusted R^2 is found to be 0,974, indicating that commitment explains 97,4% of the variance in psychological well-being.

Table 2

Correlation between Commitment and Psychological Well-being

		Psychological Well-being
Commitment	Pearson Correlation	0.987**
	Sig. (1-tailed)	0.000
	N	587

Note: **p<0,01 level of significance, *p<0,05 level of significance.

Table 3

Correlation between Aspects of Commitment and Dimensions of Psychological Well-being

	Mean (SD)	1	2	3	4	5	6	7	8
Dedication	29.45 (4.747)	1							
Constraint Commitment	43.16 (5.388)	0.753**	1						
Autonomy	13.89 (3.578)	0.634**	0.637**	1					
Environmental mastery	14.42 (3.924)	0.755**	0.756**	0.554**	1				
Personal growth	11.41 (3.733)	0.739**	0.755**	0.440**	0.620**	1			
Positive relation with others	11.79 (3.868)	0.677**	0.665**	0.414**	0.546**	0.483**	1		
Purpose in life	13.55 (5.254)	0.719**	0.730**	0.335**	0.523**	0.696**	0.451**	1	
Self-acceptance	15.94 (4.366)	0.712**	0.735**	0.499**	0.550**	0.548**	0.492**	0.524**	1

Note: **p<0,01 level of significance, *p<0,05 level of significance.

Table 4

**Regression Analysis of Commitment and Psychological Well-being
among Students in LDRs**

Criterion	Predictors	β (Unstandardized coefficients)	β (Standardized coefficients)	t value
Psychological Well-being	Commitment	2.055	0.987	147.460**

Note: R^2=0,974, Adjusted R^2=0,974, **p<0,01 level.

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Furthermore, specifically the data in table 5 shows that:

1. Dedication and constraint commitment are the significant predictors of autonomy. Adjusted R^2 is found to be 0,460, indicating that dedication and constraint commitment explain 46% of the variance in autonomy.

2. Dedication and constraint commitment are the significant predictors of environmental mastery. Adjusted R^2 is found to be 0,651, indicating that dedication and constraint commitment explain 65,1% of the variance in environmental mastery.

3. Dedication and constraint commitment are the significant predictors of personal growth. Adjusted R^2 is found to be 0,636, indicating that dedication and constraint commitment explain 63,6% of the variance in personal growth.

4. Dedication and constraint commitment are the significant predictors of positive relation with others. Adjusted R^2 is found to be 0,512, indicating that dedication and constraint commitment explain 51,2% of the variance in positive relation with others.

5. Dedication and constraint commitment are the significant predictors of purpose in life. Adjusted R^2 is found to be 0,598, indicating that

dedication and constraint commitment explain 59,8% of the variance in purpose in life.

6. Dedication and constraint commitment are the significant predictors of self-acceptance. Adjusted R^2 is found to be 0,597, indicating that dedication and constraint commitment explain 59,7% of the variance in self-acceptance.

An interesting finding from the regression analysis is that individuals who have good dedication will be encouraged to continue to unite and maintain trust with their partners during LDRs which lead to positive achievement of each dimension of psychological well-being formed in love life as a form of responsibility from a dating relationship. In addition, the results show that individuals can make positive things that can be the reason for the relationship to last during LDRs.

The clustering results in table 6, show that most men's commitment is in the moderate category (N=44/45,5%), and women in the high category (N=251/51,2%). For psychological well-being, most males were in the low category (N=49/50,5%), and females in the high category (N=262/53,5%).

Based on age, the commitment of most 18-year-old participants is in the low category

Table 5

Regression Analysis Aspects of Commitment and Dimension of Psychological Well-being among Students in LDRs

Criterion	Predictors	β (Unstandardized coefficients)	β (Standardized coefficients)	t value
Model 1: Autonomy	Dedication	0.268	0.356	7.720**
	Constraint Commitment	0.245	0.370	8.011**
Model 2: Environmental mastery	Dedication	0.355	0.429	11.572**
	Constraint Commitment	0.316	0.433	11.692**
Model 3: Personal growth	Dedication	0.311	0.395	10.437**
	Constraint Commitment	0.317	0.457	12.085**
Model 4: Positive relation with others	Dedication	0.331	0.406	9.271**
	Constraint Commitment	0.258	0.359	8.194**
Model 5: Purpose in life	Dedication	0.435	0.393	9.868**
	Constraint Commitment	0.423	0.434	10.907**
Model 6: Self-acceptance	Dedication	0.336	0.366	9.181**
	Constraint Commitment	0.372	0.460	11.535**

Note: Model 1. R^2=0,461, Adjusted R^2=0,460, **$p < 0,01$ level, Model 2. R^2=0,652, Adjusted R^2=0,651, **$p < 0,01$ level, Model 3. R^2=0,637, Adjusted R^2=0,636, **$p < 0,01$ level, Model 4. R^2=0,514, Adjusted R^2=0,512, **$p < 0,01$ level, Model 5. R^2=0,599, Adjusted R^2=0,598, **$p < 0,01$ level, Model 6. R^2=0,598, Adjusted R^2=0,597, **$p < 0,01$ level.

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(N=18/48,7%), 19-year-olds in the low category
(N=53/49,1%), 20-year-old participants in the
medium category (N=58/38,4%), 21-year-olds
in the high category (N=59/48%), 22-year-olds
in the high category (N=30/35,7%), 23-year-olds
in the high category (N=23/41,8%), and 24-year-
olds in the high category (N=18/62,1%). For the
achievement of psychological well-being, most
of the 18-year-old participants were in the low
category (N=22/59,5%), 19-year-olds in the
low category (N=57/42,8%), 20-year-old par-
ticipants in the medium category (N=62/41,1%),
21-year-olds in the high category (N=66/53,7%),
22-year-olds in the high category (N=32/38,1%),
23-year-olds in the high category (N=24/43,6%),
and 24-year-olds in the high category
(N=17/58,6%).

Furthermore, from the length of undergo-
ing LDR commitment, most participants who
underwent LDRs for less than one year were
in the low category (N=29/36,2%), age 1 year
in the medium category (N=35/41,2%), par-
ticipants age 2 years in the high category
(N=46/50%), age 3 years in the high category
(N=68/61,3%), age 4 years in the high category
(N=66/57,4%), age 5 years in the high category
(N=41/85,4%), age 6 years in the high category
(N=27/90%), and age 7 years in the high cat-
egory (N=26/100%). For the achievement of
psychological well-being, most participants
who underwent LDRs for less than one year
were in the low category (N=33/41,2%), aged
1 year in the medium category (N=36/42,4%),
participants aged 2 years in the high category
(N=41/44,6%), age 3 years in the high category
(N=65/58,6%), age 4 years in the high category
(N=67/58,2%), age 5 years in the high category
(N=37/77,1%), age 6 years in the high category
(N=24/80%), and age 7 years in the high cat-
egory (N=25/96,2%).

Table 6

Clustering Commitment and Psychological Well-being Based on Demographic Data

Description	Commitment						Psychological Well-being					
	Low		Medium		High		Low		Medium		High	
	N	%	N	%	N	%	N	%	N	%	N	%
Gender												
Male	17	17.5	44	45.4	36	37.1	49	50.5	38	39.2	10	10.3
Female	50	10.2	189	38.6	251	51.2	84	17.1	144	29.4	262	53.5
Age												
18 years old	18	48.7	11	29.7	8	21.6	22	59,5	12	32.4	3	8.1
19 years old	53	49.1	37	34,2	18	16,7	57	52.8	41	38	10	9.2
20 years old	46	30.5	58	38.4	47	31.1	41	27.1	62	41,1	48	31.8
21 years old	23	18.7	41	33.3	59	48	18	14.6	39	31.7	66	53.7
22 years old	25	29.8	29	34.5	30	35.7	24	28.6	28	33.3	32	38.1
23 years old	15	27.3	17	30.9	23	41.8	12	21.8	19	34.6	24	43.6
24 years old	5	17.2	6	20.7	18	62.1	4	13.8	8	27.6	17	58.6
Length of LDRs												
<1 year	29	36.2	27	33.8	24	30	33	41.2	29	36.3	18	22.5
1 year	32	37.6	35	41.2	18	21.2	29	34.1	36	42.4	20	23.5
2 year	2	2.2	44	47.8	46	50	21	22.8	30	32.6	41	44.6
3 year	6	5.4	37	33.3	68	61.3	7	6.3	39	35.1	65	58.6
4 year	15	13	34	29.6	66	57.4	21	18.3	27	23.5	67	58.2
5 year	2	4.2	5	10.4	41	85.4	2	4.2	9	18.7	37	77.1
6 year	1	3.3	2	6.7	27	90	1	3.3	5	16.7	24	80
7 year	0	0	0	0	26	100	0	0	1	3.8	25	96.2

Note: N = Frequency, % = Percentage.

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Discussion

Based on the conducted research regarding the relationship between commitment and psychological well-being among students in LDRs, the following results indicate a strong and significant positive relationship between the independent variable (commitment) and the dependent variable (psychological well-being). This suggests that an increase in commitment corresponds to an increase in psychological well-being among students in LDRs. This finding is consistent with the study by Du Bois et al. [12], which asserts that commitment to maintaining a relationship in LDRs predicts an individual's psychological well-being.

The research findings imply that the psychological well-being of students in LDRs is influenced by their level of commitment. The descriptive analysis indicates that commitment contributes significantly, accounting for 97,4% of the effective contribution. This indicates that commitment is a strong factor influencing the increase in psychological well-being among students in LDRs. A research [15] found that commitment in LDRs has an impact on psychological well-being, by investigating the mechanisms that explain relationship quality and attachment between partners. Additionally, the study by Tran, Judge, and Kashima [49] supports the notion that commitment is essential for psychological well-being, as it correlates with an individual's satisfaction.

The research results demonstrate that students who maintain commitment in LDRs possess a high level of autonomy. This enables them to focus on their academics while separated from their partners and then shift their focus back to their relationship upon reuniting. This finding aligns with the study by Kluwer et al [31], suggesting that high autonomy leads to good adaptive behavior and motivates relationship behavior. Furthermore, the research reveals that high commitment in LDRs is associated with a high level of environmental mastery. In this case related to human adaptation and human responses to environmental [11; 38], which could reduce the likelihood of relationship dissolution, which could have negative effects on individuals.

The study also highlights that committed students in LDRs have a relatively strong capacity for personal growth. This is in line with the findings of Borowa et al [14], which suggest that individuals are ready to commit because they have a good understanding of personal reflection experiences that provide insight into individual and relational needs. Consequently, individuals can maintain existing relationships while remaining open to new experiences.

Hatamleh et al [26] assert that individuals committed to relationships are vital for nurturing strong and enduring relationships among individuals which aid in adaptation and allow them to build social relationships with others. This is consistent with the findings of this study, as students committed to LDRs exhibit a high ability to develop positive relationships with others. The idea that commitment in LDRs contributes to the development of strong relationships within groups [39].

The research further indicates that committed students in LDRs tend to have high levels of self-acceptance. This internal commitment helps build self-concept clarity to face conflicts and difficulties in the relationship, providing emotional stability to sustain a better-quality relationship [20]. On the other hand, the study identifies that committed students in LDRs have low levels of shared purpose in life. This may be attributed to factors preventing these students from having a clear sense of life purpose. Research suggests that lack of trust has also been associated with low emotionality, physical, and other forms of sacrifice that may cause conflict as a form of disagreement or contradiction due to differences in goals, aspirations, values, and daily life problems [6]. Research from Bald and Sirsch [8] similarly found that diverse experiences in LDRs can shift an individual's focus to personal goals, altering their future relationship orientation.

In conclusion, it can be inferred that higher commitment among students in LDRs correlates with higher psychological well-being. Therefore, committed students in LDRs are capable of maintaining their relationships while actively fulfilling their academic roles. This conclusion is supported by the significant positive relationship between commitment and psychological well-being found in the research. An interesting insight from this study is that the presence of commitment in students engaged in LDRs does

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not always translate to a strong sense of shared
life purpose. This is evident from the finding that
39,5% of participants exhibited low levels of
shared life purpose.

While the research was conducted following
proper procedures, it is acknowledged that limi-
tations were encountered during its execution.
Many participants inquired about the alignment
of their status with the set criteria, which over-
whelmed the researchers and led to difficulties
in providing individual responses.

Conclusion

Based on the conducted research, it can be
concluded that there is a significant positive re-
lationship between commitment and psychologi-
cal well-being among students in LDRs. Specifi-
cally, the level of commitment was categorized

as high, while the level of psychological well-
being was categorized as moderate. More spe-
cifically, it can be concluded that commitment
has a significant positive relationship with each
dimension of psychological well-being among
students in LDRs. This study also demonstrates
that the commitment variable contributes 97,4%
to psychological well-being. Thus, commitment
emerges as a very strong factor influencing the
psychological well-being of students in LDRs.

For future researchers, it is suggested to
further explore and investigate the life purpose
of students in LDRs, as well as to identify other
factors that influence psychological well-being
among individuals in such relationships. This
could provide deeper insights into the interplay
of various factors and their impact on the well-
being of individuals in LDR.

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