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Evaluation of Digital Tools in the Preparation of Educational Psychologists for Career Orientation in the Era of Educational Digitalization

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Abstract. Educational psychologists play a critical role in guiding students' career orientation by helping them define personal and professional development trajectories, set goals, and monitor progress. This study explores the role of educational psychologists in career guidance and evaluates the potential of digital applications for their training. The research employed general scientific methods, including content analysis, surveys of the first-year students (analysis of academic motivation, assessment of the teachers' digital literacy, and evaluation of digital platforms in the context of their use as educational tools), and statistical analysis. The results showed that the choice of teaching most students (66,9%) was influenced by parents or guardians, the minority chose a profession with the help of educational psychologists (33,1%). Students who chose a profession with the help of psychologists were more academically motivated. Curso de Psicologia was rated highest for structured theoretical content, while DBT Diary Card and Skills Coach were most effective in simulating scenarios and developing emotional regulation skills. Lumosity and EdApp received positive evaluations for supporting cognitive functions, reflective thinking, and diagnosing decision-making. For effective education of high school students, it is essential to implement modern educational programs supported by efficient digital applications. It is also important to integrate the influence of parents, teachers, and well-trained psychologists to guide students in making informed decisions about their future careers. The apps that the teachers evaluated were effective for their teaching, but this does not exclude the possibility of using other effective digital applications for training future teacher psychologists. It is also worth checking the effectiveness of combining the influence of teacher psychologists and the use of digital applications for effective career choice by pupils.

Keywords: digital technologies; digital applications; educational phycologist training; career guidance; digital literacy skills; psychological education; student advisory planning

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1. Introduction

Educational psychologists' training should ensure the holistic development of cognitive, emotional, and professional qualities, enabling them to effectively perform assigned professional tasks digitalization in refers to the integration of computer technologies to create flexible, learner-centered environments that promote the acquisition of both theoretical knowledge and practical skills (Dolunay & Temel, 2024). In the context of training educational psychologists, digitalization facilitates access to diverse educational resources, fosters interactive learning and supports the development of key professional competencies.

Rather than being limited to static information delivery, digital tools such as learning management systems (e.g. Moodle, EdApp), gaming applications (e.g. Lumosity), and simulation platforms offer dynamic experiences that enhance student engagement and understanding (Curtis et al., 2023). For instance, incorporating gamification into training allows students to participate in scenario-based learning that mirrors real-life situations. This belongs to stretching their diagnosing and decision-making skills (Salim et al., 2023).

Importantly, educational psychologists must not only master these technologies but also guide their students in using them effectively for career exploration and self-development. Teachers play a critical role in this process, acting as mediators between digital tools and pedagogical goals. Teachers help students connect with their own competencies; career goals and labor market demands through curriculum design and mentorship (Curtis et al., 2023).

Based on teachers' professional actions, students' knowledge is adjusted, and complex and multifaceted topics are analyzed. The interaction between teachers and students influences the transformation of professional self-awareness and the acquisition of business communication skills (Laura et al., 2020). Educational psychologists' competence is aimed at improving the potential of future psychologists, which contributes to their self-realization and professional growth (Mampane, 2023).

Despite these advances, not all educators possess sufficient digital literacy, and there is a risk of overreliance on technology without pedagogical alignment. Therefore, systematic professional development for educators is essential to ensure effective integration. In sum, the digitalization of training for educational psychologists requires a strategic approach that blends pedagogical expertise with technological innovation to foster reflective, competent, and adaptable professionals (Maki et al., 2024).

The integration of digital technologies in the training of future educational psychologists facilitates a more personalized and student-centered approach to learning. This personalization supports the development of creative, analytical, and diagnostic skills, which are essential for non-standard professional scenarios (Kerry et al., 2023). Through the use of adaptative platforms and interactive tools such as Curso de Psicologia, DBT Diary Card and Skills Coach, Lumocity, and EdApp, students engage in simulated situations that closely replicate real-world

psychological tasks, thus enhancing motivation and fostering deeper cognitive engagement. These platforms offer opportunities for reflection, self-assessment, and practical application of theoretical knowledge, which collectively contribute to higher levels of professional competence.

The study presented in this paper aims to explore the specific role of educational psychologists in supporting the career orientation of 11th-grade students and to investigate how digital innovation can improve the quality of their professional preparation. The authors analyzed the empirical data on motivation and influencing factors in career choice. The research identifies the critical pedagogical and technological components that can optimize this training process.

However, while the benefits of digital tools are evident, there are notable challenges. These include unequal access to digital resources, variability in educators' digital competence, and the risk of superficial engagement with technology without adequate pedagogical integration. Furthermore, the sustainability of such approaches depends on institutional support, ongoing professional development, and systematic evaluation of digital interventions. Addressing these challenges is essential to ensure that the training of educational psychologists is both effective and adaptable to evolving educational contexts.

2. Literature Review

Educational psychologists play a vital role in supporting students' career decision-making by helping them identify personal strengths, values, and professional aspirations. Their function extends beyond passive consultation, requiring proactive engagement in career education and psychology development. Empirical data from a blended learning centre survey confirm that career orientation remains a pressing challenge among secondary school students, particularly those transitioning to post-secondary education (Muñiz Pujol et al., 2023).

High-quality career guidance depends on the development of competency-based curricula that emphasize professional values – cognitive, social prestige, and altruistic values, which are essential for informed career decision-making (Tūtlys et al., 2024). These values shape students' perceptions of meaningful work and contribute to long-term motivation and future career satisfaction. Moreover, individual student characteristics – such as socioeconomic background and field of study – interact with national education systems to influence career paths, with early-stage social filtering observed in more career-oriented systems (Capsada-Munsech, 2024).

The application of digital innovations offers new opportunities for addressing these complexities. For example, strategic career guidance platforms, powered by data modelling and macro-indicators, enable educational psychologists to match students' competencies and interests with evolving labor market demands (Barabash & Weigang, 2021). Furthermore, digital tools like "Kahoot" offer gamified environments that have been shown to improve students' engagement and understanding during career orientation sessions (Radohuz et al., 2023).

Similarly, psycho-pedagogical university courses and collaborative interactions with practicing psychologists foster awareness of one's own creative strengths and social motivations for pursuing a career in educational psychology (Ricchiardi & Torre, 2021; Gökay et al., 2024).

Despite these advances, there is a lack of standardized frameworks for digital career education, and many psychologists are underprepared to integrate data-driven tools into practice. To enhance the effectiveness of educational psychologists in career guidance, training programs must address both psychological theory and digital fluency, grounded in empirical practices and continuous institutional support.

3. Methodology

This section outlines the methodological framework adopted in the study. It presents research design, data collection procedures, instruments used for the study, information about participants and methods of data analysis. There is information about the validity and reliability of the questionnaires used. The structure of the methodology section includes key components – general methods design, empirical study design, sample information, ethical considerations and data analysis procedures.

3.1 Methods

The study applied a combination of general scientific methods – content analysis, comparative analysis and theoretical generalization – alongside empirical techniques involving statistical data proceeding. Quantitative data were obtained through structured questionnaires and analyzed using IBM SPSS Stastistics (version 27). Descriptive statistics (mean, standart deviation) and comparative analysis were used to interpret results, while reliability of the instruments was ensured by using previously validated scales (Martin (2001; Amin et al., 2021). Content validity was reviewed by a panel of experts in educational psychology and digital pedagogy prior to instrument deployment.

3.2 Design

The research methodology incorporates a mixed-methods approach with a strong empirical component, combining quantitative and qualitative procedures to ensure a comprehensive understanding of the studied phenomena. Data were collected via structured online questionnaires distributed among first-year university students and teachers involved in training future education psychologists. The methodology is composed of five interrelated components, each described below. All instruments, scales, and summary data are presented in the "Results" section of the paper.

3.2.1 Assessment of factors influencing career choice.

This component involved the use of a structured questionnaire, designed by proposed by Martin (2001) and adapted specifically for the current research context. The questionnaire enables the assessment of motivation using nine parameters, divided into two groups: boosters ("increasing") and guzzlers ("lowering"). Boosters affect thinking and assess respondents' characteristics such

as self-confidence, the value of school education, focus on learning, planning and control, and perseverance. Guzzlers assess the impact of demotivating factors such as anxiety, low control, avoidance, and self-sabotage. The Martin (2001) questionnaire was chosen due to its prior successful application in educational psychology settings and its capacity to differentiate motivational drivers and inhibitors relevant to students' career orientation. The results of this component are presented in Table 1 in the "Results" section.

3.2.2 Assessment of the teachers' digital literacy.

The digital literacy involved in educational psychologist training was assessed using the validated Digital Literacy Scale (using a valid questionnaire proposed in the work of Amin et al. (2021). This questionnaire includes 36 questions that evaluate several competencies and the readiness and inclination of future specialists to use digital technologies in the training process. Statistical analysis was performed using descriptive measures and scale reliability assessment (Cronbakh's Alpha 0.87).

The author's assessment of digital literacy includes the following criteria: 'communication' – the ability to read, write and interact effectively in a digital environment, including the ability to compose formal electronic documents. 'Copyright' covers students' awareness of plagiarism policy, responsible citation, and adherence to the principles of academic integrity in the learning process. The 'critical thinking' criterion shows students' ability to solve problems, combine information from different sources, and participate in complex tasks. Character reflects ethical behaviour in the online environment, including respect for privacy and the absence of negativity in communication.

Citizenship includes responsibility for behaviour in the digital environment, understanding of laws, and cultural awareness. The curation criterion assesses students' ability to evaluate and contribute to reliable and meaningful content. The criterion 'Connectivity' assesses participation in online communities and initiatives that help develop active citizenship and cooperation. 'Creativity' helps assess students' ability to use digital tools to generate and exchange ideas in the learning process. The 'collaboration' criterion reflects students' participation in online group work, interaction with peers, and collaborative learning. Results are presented in Table 3 of the "Results" section.

3.2.3 Evaluation of educational applications

Teachers evaluated four selected digital applications – Curso de Psicologia, DBT Diary Card and Skills Coach, Lumocity, and EdApp, using a structured questionnaire proposed Lai et al. (2022). The choice of these applications was based on their relevance to psychological education, ease of use in classroom settings, and alignment with the competencies required for career-oriented support in psychology. The questionnaire includes 25 questions and evaluates digital platforms according to learning objectives, affective elements, behavior, design, technology, teaching and pedagogical aspects, presence/inclusion and interaction, and institutional environment. The criteria proposed by Lai et al. (2022), namely learning objectives, affective elements, behaviour, design, technology, teaching and pedagogical aspects, presence/inclusion and

interaction, and institutional environment, allow for the assessment of the use of digital platforms in student learning.

'Learning outcomes' measure the perceived effectiveness of technology use in improving knowledge acquisition, skill development, and academic performance. Affective elements examine the impact of digital tools on student motivation, attitude towards the subject, confidence, and satisfaction with the learning process. The 'behaviour' criterion assesses participation, interaction, and reflective practices observed during technology-assisted learning. The "design" criterion assesses the perception of the application's design and its impact on the usage process.

The 'technology' criterion concerns the perception of quality, reliability, feedback, and learning effectiveness. The 'teaching/pedagogy' criterion examines the quality of technology use for teaching, feedback, and learning effectiveness. 'Presence/community' reflects the degree of support for students' sense of connection with teachers and classmates. The 'Institutional Environment' criterion takes into account institutional support and technical infrastructure that ensures the successful integration of educational technologies.

3.2.4 Development of training approaches

The conceptual framework for improving the training psychologists was developed through content analysis and synthesis of scientific materials that reflect the principles of teaching educational psychologists (Dolunay & Temel, 2024; Ricchiardi & Torre, 2021; Ponomarenko & Zelenin, 2022; Zhou, 2024), as well as teacher and student survey results.

3.3 Sample and Data Collection

Data for the study was collected using a structured online questionnaire administrated via Google Forms. To link to the questionnaire, accompanied by an explanatory note and informed consent form, was distributed through institutional email channels. The survey targeted two key respondent groups: first-year students and educators involved in training future educational psychologists in the Republic of Kazakhstan.

A total of 319 individuals studied participated in the study. This included 302 students (202 female, 100 male) and 17 teachers (10 female, 7 male) all of whom had at least seven years of professional experience in higher education institutions. The student sample was drawn from various academic programs across multiple universities, ensuring diversity in academic background and regional representation.

The data collection took place during the first semester of 2023 (from September to December) in 2023. All instruments demonstrated acceptable internal consistency (Cronbach Alpha >0.8 for key subscales).

Confidentiality and ethical considerations were strictly maintained through the study. Participation was voluntary, and all respondents were informed of their right to withdraw at any time and were guaranteed that this does not negatively

impact on their future activities. The study was conducted in accordance with the National Research Ethics Committees (NREC) Guidelines for research ethnics in science and technology (The Norwegian National Research Ethics Committees, 2016), and ethnical approval was granted in compliance with institutional ethical standards. Formal approval was obtained from the ethics committee of the respective institutions (Approval No. 2023-PSY-EDU-09).

3.4 Data Analysis

The collected data was proceeded using IBM SPSS Statistics (version 27). The overall data analysis strategy included descriptive statistics (mean values, standard deviations), comparative analysis between subgroups, and reliability testing of measurement scales. This multi-method approach ensured the validity, transparence, and reproducibility of the study's findings.

4. Results

The first stage of the research focused on identifying key factors influencing students' career decision-making process. As shown in Table 1, the opinions of parents or guardians emerged as the most influential, with a mean score of 3.84 (SD = 1.07) on a 5-point Likert scale, indicating a high level of perceived influence.

In contrast, the role of school educational psychologists was rated lower, with a mean score of 3.33 (SD = 0.94), suggesting moderate but less dominant impact. A closer look at the categorical distribution of responses reveals that 66.9% of students reported that their profession was largely shaped by parental input, while 33.1% attributed their decision-making to professional guidance provided by school psychologists.

These findings indicate that a significant proportion of students make career related decisions without comprehensive professional counselling, which may lead to misalignment between their personal interests, abilities and labor market demands. Such reliance often lacks the structured support and evidence-based strategies that trainer career psychologists can offer. The data highlights the need to stretch the role and visibility of educational psychologists in schools, particularly in the phase of upper secondary education when pupils are making long-term decisions. Familiar perspectives need to be complemented by professional, data-informed guidance to ensure better career alignment and student satisfaction.

Table 1: Results of Statistical Analysis of Respondents' Answers Received During the Primary Survey About Factors That Influenced the Choice of Future Profession

Questions	Answers	
	Mean	SD
The choice of future profession was influenced by the following:		
parents/guardians' opinions	3.84	1.07
friends' opinion	2.83	0.38
opinion of a school educational psychologist	3.33	0.94
opinion of relatives who work in this field	3.67	0.47

I chose my future profession guided by the following:		
interest in the field of activity	3.83	0.69
career prospects	4.17	0.37
prospects of high wages	4.33	0.47
possibility of flexible work schedule, remote or hybrid form	3.17	0.69
Which factor was influential in the decision-making process regarding the choice of a future profession:		
individual work with educational psychologists — studying personal characteristics of character and behavior, searching for the most suitable professions for self-realization, considering individual characteristics	3.16	1.34
attending career counselling events and meetings	3.16	1.34
choice of profession influenced by teachers' opinions	2.33	0.94
The following factors played an important role when choosing a future profession:		
social media, movies, advertising	3.67	0.47
career consultations and webinars	2.66	0.94
labor market trends, demand for professions	3.33	0.47
forums, digital platforms, online resources	3.67	0.47

In conditions of unconscious career orientation, it is natural that students tend to exhibit lower levels of academic motivation and engagement. Such decisions, typically influenced by family expectations or social pressures, may not align with students' individual interests, values, or abilities, leading to reduced intrinsic motivation and uncertainty about their future goals and career. To explore this relationship in greater depth, the second stage of the study involved a detailed assessment of students' motivation levels in the context of their career decision-making.

This stage specifically aimed to determine whether there were measurable motivational differences between students influenced primarily by parents versus those who had received support from educational psychologists. The validated Student Motivation Scale be Martin (2001), adapted for this research context, was employed to capture both positive drivers ("boosters") and negative inhibitors ("guzzlers"). The results of this comparative analysis are presented in Table 2 and provide critical insight into the impact of guided career orientation on students' self-perception, goal setting and learning behaviors.

Table 2: Assessment of students' Motivation, Considering Factors That Influenced Career Orientation

Criteria	**Students whose career orientation was influenced by their parents**		**Students whose career orientation was influenced by educational psychologists**	
	Mean	**SD**	**Mean**	**SD**
Boosters				
Self-belief	2.81	0.75	4.24	0.40
Value of school education	3.43	0.48	4.19	0.42
Learning focus	3.41	0.49	4.85	0.39

Planning and monitoring	2.60	0.47	4.81	0.41
Persistence	2.57	0.49	4.59	0.49
Guzzlers				
Anxiety	4.01	0.63	2.41	0.49
Low control	4.23	0.41	2.22	0.75
Avoidance	2.84	0.40	1.20	0.40
Self-sabotage	2.21	0.39	1.18	0.41

The results revealed clear differences in motivational profiles of students who choice their career by recommendations of parents and those who connected with the guidance of educational psychologists. Students, who received career guidance from psychologists demonstrated higher overall motivation, with particularly strong scores in self-confidence (M = 4.24, SD = 0.40), learning focus, planning and persistence. In contrast, students whose choices were shaped by parental or social expectations reported significantly lower levels of motivational boosters, and higher levels of anxiety (M= 4.01, SD = 0.63).

The mean self-confidence score in this group was only 2.81, suggesting uncertainty and a lack of ownership over the decision-making process. This group's profile reflects externally imposed goals, which can undermine autonomous motivation and lead to academic disengagement. These findings underscore the practical importance of integrating professional psychological counselling into the educational process, especially at critical transition points such as the end of secondary school. Educators and educational psychologists can promote more informed and confident career choices, leading to improved academic outcomes and future career choice.

A survey was conducted to determine teachers' digital competence, the results of which are shown in Table 3.

Table 3: Assessment of Digital Literacy of Teachers Who Are Involved in Training Future Educational Psychologists

Questions	**Answers**	
	Mean	**SD**
Communication		
I can easily read online content from the screen.	4.06	0.66
I prefer to take prints of online reading materials for better reading.	3.29	0.77
I can type quickly using both hands.	3.59	0.51
I know how to write formal emails.	4.35	0.79
I am well aware of email sending and formatting options.	3.71	1.16
I interact through online audio-video calls.	3.82	0.39
Online listening through headphones and speakers is troublesome for me.	1.94	1.09
Copyright		
I know my university's online plagiarism policy.	4.24	0.56
I know the consequences of using copyrighted work online without permission.	4.41	0.51

I give acknowledgement/reference in my online work while using collusion (copying from fellow students).	4.24	0.44
I use Turnitin or other similar software to check and avoid unintentional plagiarism.	3.12	0.93
Critical Thinking		
My university assigns me online activities relating to real-life problems.	3.47	0.51
I can find different pieces of information online and put them together to solve a problem.	3.53	1.01
I have an online reflective journal to write.	2.59	0.80
Character		
In the online world, I do not use and share others' personal information, pictures, conversations, etc., without their consent.	3.06	0.83
I avoid posting negative online comments and poking into others' discussions and chatting.	4.24	0.75
I remain neutral and tolerant during online discussions.	3.41	0.80
Citizenship		
I respectfully communicate with others while using technology.	3.76	0.75
I know the consequences of violating cyber laws in the digital world.	3.65	1.17
I accept and follow the terms and conditions for accessing any information.	3.94	0.90
I respect the cultural differences in the online world and respond accordingly.	4.06	1.03
Curation		
I search for material from renowned websites.	4.06	1.20
I try to add value to the existing pieces of information available online.	3.41	1.00
I play my part in adding to and updating online information.	3.53	1.01
Connectedness		
I am involved in different online communities for volunteer work.	2.88	0.93
I participate in different online projects at the national level.	3.53	0.72
I am actively involved in different online campaigns for community development.	3.47	0.80
I actively participate in online polls/surveys.	3.71	1.16
I encourage and help my community to post their problems and issues on social media to get attention.	3.94	1.09
Creativity		
I write online blogs giving new ideas and perspectives.	2.94	1.09
I like to post new information on my social media account(s).	3.41	1.00
I develop my videos and post them online.	2.71	0.59
I have creative ideas but do not know how to use them online.	2.71	0.99
Collaboration		
In the online world, I work with others in groups.	3.59	0.71
Working in online groups helps me to learn from others.	4.41	0.80
I work online with my peers to find solutions to the problems.	3.59	0.51

The survey conducted among 17 university instructors involved in the training of future educational psychologists assessed their digital literacy levels using a structured and validated instrument. The results indicated that the overall digital literacy level was above average, with the highest scores observed in email communication (M = 4.35, SD = 0.79), awareness of plagiarism policies (M = 4.24,

SD = 0,75). These findings suggest that instructors possess not only the technical skills needed for digital engagement but also an understanding of ethical and professional conduct in virtual learning environments.

In addition to evaluating general digital competence, teachers were asced to access the relevance and usability of selected educational applications – Curso de Psicologia, DBT Diary Card and Skills, and Lumocity/ EdApp – based on multiple pedagogical and technological criteria adapted from Lai et al. (2022). The platforms were evaluated in terms of learning outcomes, affective engagement, usability, technical support and technical enhancement.
Among these applications the highest overall rating was taken for Curso de Psicologia (M = 3.62), particularly for its contribution to student engagement and content delivery (Table 4). Lumosity and EdApp were also rated favorably for their interactive features and cognitive training functions.

These results not only validate the importance of digital platforms in enhancing the training process for educational psychologists but also highlight the readiness of educators to integrate such technologies meaningfully. The findings support prior literature emphasizing that **digital competence is a key prerequisite for implementing effective, student-centered learning in professional psychological education** (Dolunay & Temel, 2024; Ponomarenko & Zelenin, 2022). As digital transformation in education continues, the ability of instructors to critically assess and apply educational technologies will remain central to the preparation of competent and adaptable educational psychologists.

Table 4: Assessment of Digital Applications Based on a Survey of Teachers Who Use Them in the Process of Training Future Educational Psychologists

Questions	Curso de Psicologia		DBT Diary Card and Skills Coach		Lumocity/ EdApp	
	Mean	SD	Mean	SD	Mean	SD
Learning Outcomes (LO):						
The way [the technology] was used in this course helped students to learn more about the subject	4.35	0.70	4.29	0.59	4.18	0.64
The way [the technology] was used in this course helped students to perform better in this subject	4.06	0.56	3.94	0.66	3.88	0.70
The way [the technology] was used in this course increased students' skills in the subject area	4.12	0.93	4.06	1.09	4.12	1.11
The way [the technology] was used on this course has improved students' level of knowledge in the subject area	4.24	0.97	4.12	1.11	4.00	1.12
Affective Elements (AE):						
The way [the technology] was used in this course enhanced students' attitudes towards the subject	2.94	1.14	2.98	1.09	2.88	1.05
The way [the technology] was used in this course helped to improve students' confidence in this subject	3.06	0.97	3.00	1.06	3.06	1.14

The way [the technology] was used in this course enhanced students' motivation to learn	3.76	0.83	3.82	0.88	3.88	0.86
The way [the technology] was used in this course made learning more enjoyable	4.35	0.86	4.29	0.85	4.24	0.75
Behavior (B):						
The way [the technology] was used in this course increased students' participation	3.41	1.06	3.47	1.07	3.35	1.22
The way [the technology] was used in this course increased my ability to reflect upon students' learning	2.76	1.09	2.82	1.07	2.76	1.15
The way [the technology] was used in this course enhanced students' overall engagement	3.88	0.49	3.76	0.56	3.65	0.61
Design (D):						
The way [the technology] was used in this course enhanced the overall design of the subject	3.65	0.93	3.54	0.84	3.59	0.94
The way [the technology] was used in this course enhanced the subject content	3.24	1.03	3.27	1.09	3.29	0.99
Technology (T):						
[The technology] used in this course was of high quality	3.65	0.70	3.53	0.62	3.65	0.70
The functionality of [the technology] used in this course helped students to learn the subject	4.06	0.90	3.94	0.90	3.82	0.95
[The technology] used for learning in this course was easy to use	4.06	1.30	4.06	1.14	3.94	1.09
[The technology] used for learning in this course was reliable	4.12	1.17	3.94	1.09	4.06	1.03
[The technology] was helpful in supporting learning in this course	3.94	1.25	4.06	1.30	4.00	1.32
Teaching/Pedagogy (TP):						
The way [the technology] was used in this course increased students' overall perceptions of the teaching quality	3.35	1.11	3.35	0.93	3.29	0.99
The way [the technology] was used in this course enhanced teaching	2.94	1.30	2.88	1.27	2.94	1.20
The way [the technology] was used in this course enhanced feedback processes	3.47	0.94	3.53	0.80	3.53	0.80
Presence/Community (PC):						
The way [the technology] was used in this course enhanced students' sense of connection with the teacher	3.12	1.17	3.06	1.20	3.06	1.20
The way [the technology] was used in this course enhanced students' sense of being present in the class	2.94	0.90	3.06	0.66	3.00	0.61
The way [the technology] was used in this course enhanced students' sense of connection with other students	3.06	0.90	3.12	1.11	3.18	1.01

Institutional Environment (IE):						
There was good technical support for the use of [the technology] in this course	3.88	0.78	3.82	0.81	3.76	0.75

The analysis of survey data provided insights into teachers' applications used in the training of educational psychologists. The assessment was based on 25 standardized criteria adopted from Lai et al. (2022) encompassing learning outcomes, engagement, usability, technical reliability, and pedagogical value.

Curso de Psicologia received favorable evaluations for its contribution to theoretical knowledge acquisition and structured content delivery. Teachers rated its reliability at 4.12 and technical support at 3.88, with an overall effectiveness score of 3.62. Qualitative feedback indicated that the application was particularly valuable for delivering core concepts in a clear and sequenced manner, supporting student comprehension in psychological theory modules.

DBT Diary Card and Skills Coach demonstrated strong performance in areas related to student engagement and awareness-building, received scores above 4.0 for ease of use (4.06), reliability (3.94), and pedagogical usefulness in ensuring the educational process (4.06 points). The platform's technical component was assessed at 3.82 points, indicating adequate infrastructure support. Teachers noted that this tool was especially effective for simulating real-life therapeutic contexts, helping students to reflect real-life therapeutic contexts, helping students to reflect on emotional regulation, clinical assessment, and intrapersonal skills.

Lumocity/EdApp, which were used primarily for developing cognitive and critical thinking skills, also received positive evaluations. Techers emphasized the comfort and organization of training activities (rated 4.24 points), platform reliability (4.06 points), simplicity (3.94 points), and the overall usefulness for supporting cognitive development (4.00). The overall technical score for these platforms was 3.76, while the total effectiveness rating was 3.56. In qualitative terms, teachers reported that these platforms encouraged reflective thinking, pattern recognition, and decision-making – skills highly relevant for psychological diagnostics.

These findings suggest that while all platforms demonstrate acceptable levels of technical and pedagogical quality, they differ in their functional emphasis: Curso de Psicologia is more suited for theoretical learning; DBT Diary Card and Skills Coach for applied psychological practice; and Lumocity EddApp for cognitive and metacognitive training. However, further research is needed to triangulate these results with student performance data and long-term learning outcomes to determine their sustained impact on professional development.

Based on specific trends, the authors developed training mechanisms for future educational psychologists using digital technologies (Figure 1).

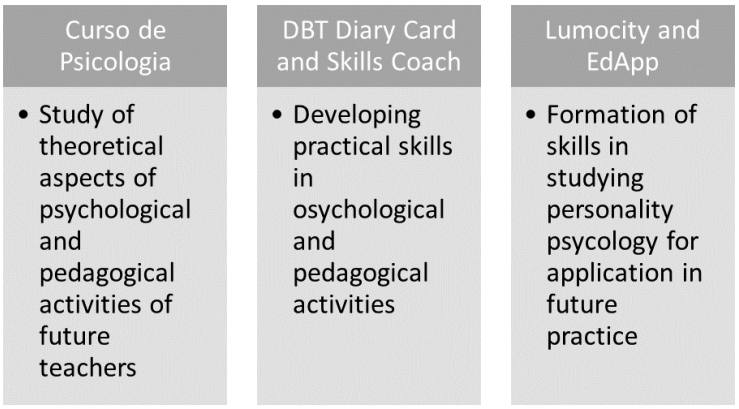

Figure 1: Training Mechanisms for Future Educational Psychologists

The integration of digital applications into the training of future educational psychologists can be effectively grounded in constructivist and experimental learning theories, which emphasize active engagement, reflection, and real-world application. In this context the Curso de Psicologia platform is practically useful for structuring theoretical content in a systematic and accessible format. It supports the development of foundation knowledge in psychological concepts, enabling students to engage with key topics such as cognitive development, behavioral models, and learning theories in a self-paced, interactive environment.

Survey responses indicated that teachers rated this platform highly for its contribution to theoretical comprehension, with an average score of 4.24 for enhancing subject knowledge. On the other hand, the DBT Diary Card and Skills Coach application aligns with principles of applied psychology and skill-based learning. It allows students to engage in practice-based scenarios involving emotional self-monitoring, client communication, and cognitive-behavioral interventions. Teachers highlighted this app's capacity to stimulate real-life psychological tasks and rated it 4.06 for pedagogical usefulness and 3.82 for technical performance. These results suggest a significant impact on the development of core psychological and pedagogical competencies, such as analytical reasoning, reflective practice, and emotional awareness.

The combination of these applications demonstrates how digital tools can be used not only to deliver content but also to enhance metacognitive abilities, simulate professional roles, and build competence in psychological diagnostics and intervention planning. Their effectiveness, as supported by empirical evaluation in this study, indicates that well-integrated digital platforms can play a central role in modernizing and improving pedagogical psychology education.

5. Discussion

This study confirms the influence of specialized specialists on the effectiveness of career orientation for students and the need to improve the training process for future educational psychology students. The success and development of the coming generation of students depend on their competence level, awareness of psychology and career orientation, and the results of their work with adolescents. Training future educational psychologists may involve different

methods and organizational mechanisms. Nevertheless, the primary goal of this process is to form competent and comprehensively developed specialists capable of continuous learning, improving skills, and mastering new knowledge (Luzik et al., 2023).

This study shows that the success of educational psychologists is linked to their digital literacy, competence in working with students, and development of communication skills and emotional intelligence. The implementation of digital technologies in higher education can potentially be accompanied by problems. The most problematic aspects remain the level of teachers' digital competence and institutional support for digital education (Wagner et al., 2024). This study partially correlates with the conclusions of Wagner et al. (2024), as the survey results reflect the existence of certain difficulties in teaching digital environments.

The innovative educational platform Kimochi, with practical advice and guidance from psychologists at leading educational institutions, helps students understand how the profession they have chosen for career growth will meet the needs of the global market (Kumar et al., 2024). According to Llewellyn et al. (2021), participation in the K-Club (a digital platform aimed at forming focus groups for three career stages: early career, junior teachers, mid-career teachers, and senior teachers) was a clear understanding of the participants' career goals. Shiba et al. (2022) showed the positive impact of using digital applications for career guidance. The researchers point to the effectiveness of using the Career Guidance Application (GDA) to help students in grades 9-11.

This application allows students to select subjects to study, access information about subjects required for admission to higher education institutions and undergo a comprehensive career guidance process that includes the social, financial, and personal characteristics of their chosen professions. Kusumanegara et al. (2024) and Astuti et al. (2022) have demonstrated the effectiveness and importance of digital career guidance and counselling for high school students, as it allows them to see the diversity of professions and provides flexible access to career planning support. Somenko et al. (2023) studied the effectiveness of using artificial intelligence to develop career plans.

Recommendations algorithms based on the output capabilities of the HermiT application help psychologists and students understand how to apply their competencies, abilities, and experience in professions that are currently in demand in the labour market (Dascalu et al., 2024). Gunwant (2022) studied the features of expert systems for career planning. Khurumova & Pinto (2023) found that students at higher education institutions in Portugal rarely seek help from expert career guidance groups and are more inclined to use online career guidance services.

Our study complements the topic of using applications and digital services for career guidance, supplementing the use of various applications with the work of psychologists and educators in counselling graduates on choosing a direction for further study. The human factor is quite important in choosing a profession, as it

is important to consider one's abilities and inclinations when choosing a career. Parents or guardians cannot always recommend professions relevant to their children. According to Ponomarenko & Zelenin (2022), students sometimes focus more on obtaining a diploma than on acquiring knowledge and applying it in their future professional activities. Such results can often be associated with excessive pressure from parents regarding the choice of higher education institutions and other factors.

According to Gao (2020), educational institutions should make full use of digital technologies for students' career guidance. Comprehensive work with graduates will improve student retention rates and motivation to learn, with the aim of understanding the specifics of future work, rather than simply obtaining a diploma. This is facilitated by work starting in the upper grades, which combines the work of psychologists and teachers, the use of digital applications, and independent work by upper-grade students in choosing their further education.

Research shows that there are many applications and opportunities for future career guidance, but it is still necessary to concider the importance of the personal characteristics of senior high school students and professional counselling on career choices. Career guidance provided to students by a psychologist-educator is crucial in helping them explore their potential for building a successful scientific career.

Identifying the characteristics of career choices made by adolescents is part of the work of an educational psychologist, which requires special attention to the individual, their preferences, interests and worldview. Therefore, it is important to teach future educational psychologists the basics of using a wide range of interactive digital platforms and applications that will assist in the processes of career guidance, diagnosis, and personality analysis. For effective career guidance in the training of future educational psychologists, it is important to study various career guidance platforms and psychological characteristics of individuals that indicate students' aptitudes for professional activity.

In this context, it is important to combine the use of digital platforms for training teacher psychologists, such as the CHASIDE application recommended by Acosta Orozco et al. (2024), as well as other platforms, with practical work with older school-age children from different schools to understand various aspects of personality. Career guidance recommendations from a psychologist, the choice of an application or online guide for studying the characteristics of professions, and the opportunity to understand the characteristics of a profession contribute to a rational choice of higher education.

5.1 Practical value

The study results provide opportunities for the effective use of the Curso de Psicologia, DBT Diary Card and Skills Coach, Lumocity, and EdApp applications in the training of future educational psychologists.

5.2 Theoretical value

The study's results show effective mechanisms for using applications in

curriculum development for future educational psychologists.

6. Conclusions

The study results confirm that the effective involvement of educational psychologists in the learning process positively influences the motivation of first-year students. Quantitative data from the teacher survey revealed that more than 78% of respondents observed an increase in students' engagement and career decision-making confidence following structured interventions supported by digital platforms.

The average evaluation score of the digital application, Curso de Psicologia, was 4.12 for reliability and 3.62 for usefulness in theoretical learning. Similarly, the DBT Diary Card and Skills Coach had a high impact on students' practical skills development, receiving an overall effectiveness rating of 3.59 (maximum of five points). Platforms such as Lumocity and EdApp, used to train analytical and cognitive skills, received high ratings for assebility (4.24 points) and engagement (4.00 points). These results demonstrate the possibility of effectively using digital platforms for student learning.

The assessment of teachers' digital literacy competence, rated above average (mean score: 3.8), indicates their readiness to adopt these platforms in real-world educational settings. Furthermore, the survey participants emphasized the importance of using digital applications for career choice and reflective thinking. To enhance the quality of educational psychology training, institutions should implement structured digital literacy programs and interactive, evidence-based applications in training curricula.

Emphasis should be placed on active learning environments that include gamification elements, high-quality communication, and collaboration with psychologists and teachers not only as providers and controllers of knowledge, but as mentors for choosing a profession. These approaches foster knowledge acquisition and the development of career counseling skills, ethical decision-making, and emotional intelligence. In turn, the training program for future educational psychologists should include the development of skills in counseling high school students to choose a profession that suits them.

The practical contribution of this study lies in the design and piloting of mechanisms for the strategic integration of digital applications into the psychological-pedagogical education process. Future research can be conducted in two directions. The first direction focuses on the comparative analysis of different digital applications in the educational process of future educational psychologists; and their differences in impact on learning. The second direction is to study the effectiveness of using digital applications for the career guidance of high school students. Particular emphasis should be placed on the effectiveness of supporting diverse student needs, promoting an inclusive career orientation, and ensuring sustainable professional development.

6.1 Implications

The contribution of the study lies in investigating the effectiveness of using certain digital tools for teaching students who are future educational psychologists, updating their curricula, and the importance of cooperation between educational psychologists and senior high school pupils for rational career choice. It is important for parents to understand the importance of a professional approach to choosing a future career for their children.

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