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A Technology-Enhanced Coaching Model for Professional Readiness in Psychology Education

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ABSTRACT

Purpose of the study: This study aims to develop and empirically evaluate a technology-enhanced, coaching-based learning model to strengthen psychology students' competencies in providing motivational support, addressing gaps in experiential training and improving graduates' professional readiness.

Methodology: The research employed a quasi-experimental design with one hundred twenty psychology students. The experimental group participated in a structured pedagogical intervention that integrated interactive coaching workshops, video-recorded role-playing simulations of client sessions, etc. Professional readiness was assessed using validated scales measuring professional self-identity, professional competence, client motivation support skills, and coaching self-efficacy. Statistical analysis included descriptive statistics, Student t-test, analysis of variance, correlation and regression analyses, and mediation analysis using Hayes' PROCESS macro.

Main Findings: Participants in the experimental condition demonstrated statistically significant and substantial improvements in professional self-identity, coaching self-efficacy, and competence in providing motivational support compared to the control group. The effect sizes were large. Mediation analysis confirmed that enhanced professional competence fully mediated the positive effect of the training on motivational support skills.

Novelty/Originality of this study: This research contributes to the fields of educational technology and instructional design by introducing an evidence-based, scalable pedagogical model. It positions coaching not as a supplementary activity but as a core instructional methodology, systematically supported by accessible digital tools to enhance reflective learning and feedback. The proposed model offers a practical framework for competency-oriented curriculum redesign in higher education, readily adaptable to hybrid and fully online learning environments, with applicability extending beyond psychology to other professions requiring motivational support skills.

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1. INTRODUCTION

The contemporary landscape of higher education is characterized by a dual imperative: the rapid integration of digital technologies and an increasing demand for graduates who are not only knowledgeable but also professionally competent and ready for practice. This shift necessitates moving beyond traditional, lecture-centric models towards pedagogical approaches that are active, experiential, and leverage technology to bridge

theory and practice. The rapid digital transformation of higher education and the growing demand for practice-oriented professional training have highlighted significant limitations in traditional psychology curricula [1]-[3]. These programs typically prioritise theoretical knowledge delivered through lectures and passive learning methods, while providing insufficient competency-based, experiential training in key areas such as client motivational support. As a result, this creates a significant gap between the goals of professional preparation and the outcomes of traditional instructional design, leaving professional self-identity, reflective skills, and practical confidence required for effective psychological practice in contemporary settings [4].

To address this critical gap in curriculum design, this study proposes, develops, and empirically tests an innovative technology-enhanced coaching-based learning model. This model positions consultative-coaching strategies not as supplementary activities but as the core pedagogical framework for developing professional self-identity and competence [5]-[7]. It is built on active and experiential methods (role-plays, case studies, structured reflection) and is explicitly enhanced by accessible digital tools such as Google Forms, video-recorded sessions, and LMS modules to facilitate scalable, reflective practice [8]-[10].

A gap analysis of the existing literature reveals a dual deficit this study addresses. Scientifically, while the value of coaching in motivation is acknowledged, there is a lack of research on structured, technology-based learning models specifically for client motivational support training in psychology. Practically, this results in a curriculum gap, as traditional programs lack systematic frameworks to integrate coaching and educational technology into core instruction. Therefore, this study aims to develop and empirically test an innovative technology-enhanced coaching-based learning model to address these interconnected gaps.

The primary aim of this study was to empirically substantiate the efficacy of consultative and coaching strategies in shaping the professional readiness of future psychologists for client motivational support. To achieve this, the research pursued three integrated tasks: first, to assess participants' initial level of professional readiness using validated methodologies; second, to develop and implement a dedicated training program structured around consultative and coaching strategies; and third, to analyze the impact of these pedagogical approaches on cultivating students' professional self-identity and competence. Guided by this framework, the study tested three core hypotheses: (H1) that applying consultative and coaching strategies significantly increases students' professional self-identity; (H2) that integrating these strategies into the educational process contributes to developing the professional competence required for motivational support; and (N3) that implementing such interactive teaching methods improves students' overall professional readiness compared to a standard program.

The proposed model therefore represents a pedagogical innovation specifically designed for higher education contexts: it is competency-oriented, easily transferable to hybrid and fully online formats, and scalable through low-cost educational technologies – making it applicable beyond psychology training. The novelty of the study lies in its empirical validation of a structured pedagogical model that integrates advisory and coaching strategies into the educational framework, aimed at fostering the professional readiness of aspiring psychologists. The research culminated in the development and implementation of an innovative, technology-enhanced coaching-based learning model founded on principles of experiential learning, autonomy, and intrinsic motivation, and explicitly supported by educational technology. The findings not only deepen understanding of professional self-identity formation but also provide a replicable pedagogical framework and practical recommendations for curriculum redesign in higher education.

2. THE COMPREHENSIVE THEORETICAL BASIS

2.1. Theoretical Aspects of Counseling and Coaching Strategies

Counseling and coaching strategies constitute the cornerstone of effective interaction between a psychologist and a client, particularly within the context of motivational support. Plotkina & Ramalu [11], explored the self-determination theory, which elucidates the internal and external motivational factors influencing goal achievement. The conclusions drawn by the authors underscore the necessity of fostering the client's autonomy, which serves as the foundation for successful coaching. Against this backdrop, Williams [12], advocated for a holistic approach to coaching practices aimed at integrating cognitive and emotional dimensions into the client interaction process. While both works emphasize the significance of the client's subjective experience, their practical recommendations remain confined to broad guidelines, lacking specific instruments for future psychologists. The reviewed sources provide a theoretical framework for comprehending motivational mechanisms and establish a context for the development of practical methodologies. However, their insufficient empirical specificity requires further analysis.

The role of professional self-identity in psychological training. In the research conducted by Liu & Chen [13], the cultivation of professional self-identity is underscored as a pivotal element in the professional evolution of future psychologists. The authors emphasize that this self-identity is intrinsically linked to a sense of competence and confidence in one's own professional skills. Similarly, professional self-identity was the focal point of inquiry in studies concerning students' professional adaptation Simon [14], revealing that its development is profoundly

influenced by the quality of the educational environment. Nevertheless, it is worth noting that both aforementioned sources do not engage in a thorough exploration of the specific dimensions of coaching strategies within this context. Although these studies contribute to the understanding of the interplay between professional self-identity and competence, they fall short of providing a detailed analysis of its connection with client motivation support.

2.2. The Impact of Coaching Strategies on the Learning Process

Mehner et al. [15], endeavored to develop a scale for assessing the coaching strategies efficacy within educational settings. Empirical evidence has illustrated that students who actively engage in coaching methodologies experience a marked enhancement in professional self-assurance. Nonetheless, the study's limited sample size constrains the generalizability of its conclusions. Mehner [16], corroborates the affirmative influence of coaching techniques on the cultivation of soft skills, while underscoring the intricacies involved in quantifying long-term outcomes. Research substantiates the potential of coaching strategies for the advancement of professional competencies; however, it necessitates further empirical evidence in the context of training psychologists.ounseling

2.3. Integration of Motivational Support Into Training Programs

King & Fryer [17] underscored the significance of motivational support within the learning environment, accentuating its pivotal role in cultivating students' emotional resilience. However, this study primarily concentrated on medical professionals, thereby constraining its direct relevance to the context of psychologist training. Furthermore, Chang et al.[18] highlighted the necessity of tailored approaches to motivational support, though they failed to provide concrete recommendations for the incorporation of these strategies into training programs. Consequently, while these sources establish a conceptual framework for the integration of motivational support into psychologist training programs, they necessitate further refinement to align with the specific nuances of the professional context.

2.4. Methodological Aspects of Consultative and Coaching Strategies

Fleischhacker & Graf [19], conducted a comprehensive review of statistical methodologies for assessing the efficacy of coaching strategies. Their insights regarding the implementation of regression analysis and correlation techniques are particularly pertinent to the present study. Nonetheless, the absence of specificity concerning indicators of professional readiness constrains their immediate applicability within our context. Rivera [20], formulated a model for evaluating learning outcomes utilizing mixed methods. However, the methodological complexities inherent in the integration of quantitative and qualitative data necessitate further exploration. Therefore, while the aforementioned works establish a robust methodological foundation for statistical analysis, they demand substantial adaptation to the specifics of the phenomena under study and the contextual framework.

2.5. Coaching Strategies As Pedagogical Innovation and Technology-Enhanced Learning Models

Recent research in higher education emphasises the shift from traditional lecture-based training to active, experiential, and technology-supported learning models [21]-[23]. Coaching-based approaches align with these trends when systematically embedded in the curriculum as a core pedagogical strategy rather than isolated workshops [24]-[26]. Studies demonstrate that integrating simple digital tools (e.g., video feedback, online reflection platforms, and learning management systems) significantly increases engagement, self-regulated learning, and skill transfer in professional programmes [27]-[29]. However, empirical evidence of such technology-enhanced coaching models specifically in psychology education remains limited, confirming the need for the present study.

2.6. Educational Technology and Innovative Learning Models in Higher Education

The broader context for this study is the ongoing transformation in higher education pedagogy, marked by a shift from traditional instruction towards active, experiential, and technology-enhanced learning models [30]-32]. Research demonstrates that integrating accessible digital tools – such as video platforms for feedback, online forums for collaborative reflection, and learning management systems for structured module delivery can significantly increase student engagement, self-regulated learning, and the transfer of professional skills [33]-[35]. Coaching-based approaches align perfectly with these trends when they are systematically embedded in the curriculum as a core pedagogical strategy rather than offered as isolated workshops [36]-[38]. Such integration represents a move towards competency-oriented instructional design, where technology supports the iterative cycle of practice, feedback, and reflection essential for developing complex professional identities [39]-[41]. However, empirical studies specifically examining the design and efficacy of such structured, technology-enhanced coaching models within psychology education remain scarce, underscoring the innovative contribution of the present research.

2.7. Unresolved and Under-Researched Issues

The conducted literature review substantiates the pertinence of the investigated topic, establishing its theoretical and methodological foundation. At the same time, the discerned gaps, particularly the insufficiency of empirical data and the constraints associated with the adaptation of existing methodologies, clearly justify the pressing necessity for the present research. The conducted literature analysis distinctly revealed an inadequate empirical specification of the influence of coaching strategies on the development of professional self-identity among future psychologists. Furthermore, there exists a scarcity of research concentrating on the integration of motivational support within the curricula for psychologists, particularly in light of their practical applications. Additionally, there is a notable limitation in data regarding the long-term impact of these approaches on students' professional evolution. Therefore, the current study endeavors to address the said research gaps through rigorous statistical modeling within the framework of a structured educational intervention.

3. RESEARCH METHOD

3.1. Types and Procedures of Research

The study employed a quasi-experimental design comparing an experimental group exposed to a technology-enhanced coaching-based learning model with a control group following the standard curriculum. The intervention was structured using an input–process–output framework to develop professional competencies in counseling and motivation support. Conducted during the 2024/2025 academic year, the study consisted of three stages: (1) participant selection and baseline assessment of professional readiness using validated instruments; (2) implementation of the intervention through experiential learning activities, including interactive coaching workshops, role-playing with video feedback, case analysis, and guided reflection using digital tools; and (3) final assessment to measure changes in professional readiness. The control group received conventional lecture-based instruction without experiential or technology-supported elements. Comparative analysis of pre- and post-test results was used to evaluate program effectiveness and inform recommendations for improving psychology education programs.

3.2. Sample Formation

The study involved 120 psychology students from the Ukrainian State University named after Mykhailo Drahomanov, selected through stratified sampling based on academic year, gender, and initial professional competence. Participants were randomly assigned to experimental and control groups to ensure group homogeneity. The sample consisted of 65% women and 35% men, aged 19–24, all of whom had basic counseling knowledge but no prior coaching experience. Inclusion criteria included senior-year enrollment, regular attendance, and willingness to participate, while those with prior professional experience were excluded. The experimental group participated in a one-semester program integrating counseling and coaching approaches, whereas the control group followed the standard curriculum. Program effectiveness was assessed by comparing pre- and post-test results. A sample size of 120 ensured 95% statistical reliability (Cohen's $d \approx 0.5$). The study adhered to ethical standards, including informed consent, confidentiality, and voluntary participation in accordance with the Ethical Code of the Psychologist and the Helsinki Declaration.

3.3. Data Collection Methods

The Professional Identity Scale (PIS) was employed for the study, facilitating an assessment of students' awareness regarding their prospective roles as psychologists. This tool was instrumental in elucidating fundamental facets of self-identity, encompassing professional beliefs, values, and motivations. The data derived from this scale constituted the foundation for analyzing the relationship between self-identity and other studied indicators [42]. The Professional Competence Scale (PCS) was utilized to evaluate the students' capacity to execute professional functions in alignment with contemporary standards. This methodology afforded a quantitative assessment of mastering essential skills, including consultative and analytical proficiencies. The analysis of the scale's outcomes enabled the identification of strengths and deficiencies in the participants' professional training [43].

The Client Motivation Support Inventory (CMSI) was implemented to measure the preparedness of students to engage with clients' motivational dimensions. Grounded in the principles of self-determination theory, this instrument provided an in-depth examination of both external and internal motivational influences. The collected data illuminated the impact of motivational support on the quality of client interactions [44]. The Coaching Self-Efficacy Scale (CSES) was utilized to ascertain the students' confidence in leveraging the knowledge and skills they acquired. This methodology evaluated the efficacy with which participants applied coaching strategies in practical scenarios. The results of the scale served as a basis for analyzing the influence of coaching methodologies on students' professional development [45].

3.4. Statistical Data Processing

Statistical analyses were conducted using methods ensuring reliability, validity, and depth of interpretation. Instrument reliability was assessed using Cronbach's alpha, with values above 0.7 indicating acceptable internal consistency. Structural validity was examined through exploratory or confirmatory factor analysis, depending on the analytical framework. Descriptive statistics (means, standard deviations, medians, and modes) and frequency distributions were used to summarize participant responses. Group differences in professional readiness were examined using independent-samples *t*-tests, while one-way ANOVA assessed differences across academic years. Effect sizes (Cohen's *d* and η^2) were calculated to determine practical significance, and the False Discovery Rate (FDR) correction was applied to control for Type I error. Mediation analysis (PROCESS Macro, Model 4) examined whether professional competence mediated the effect of training on motivational support. Correlation analyses (Pearson and Spearman) explored relationships among variables, and multiple as well as logistic regression analyses were conducted to assess the influence of demographic factors and coaching proficiency on professional readiness and self-identity.

Data collection was conducted using Google Forms. Mathematical data processing was carried out using SPSS software and the Python programming language. Visualization of results was performed in the form of tables and graphs, reflecting the main patterns of the studied variables, with the involvement of Matplotlib and Seaborn libraries.

3.5. Visual Overview of the Learning Intervention Model

The sequence and core components of the technology-enhanced coaching-based learning intervention are summarized in Figure 1. The flowchart illustrates the progression from initial assessment (Input), through the cyclical Process of experiential learning activities supported by technology, to the final evaluation of developed competencies (Output).

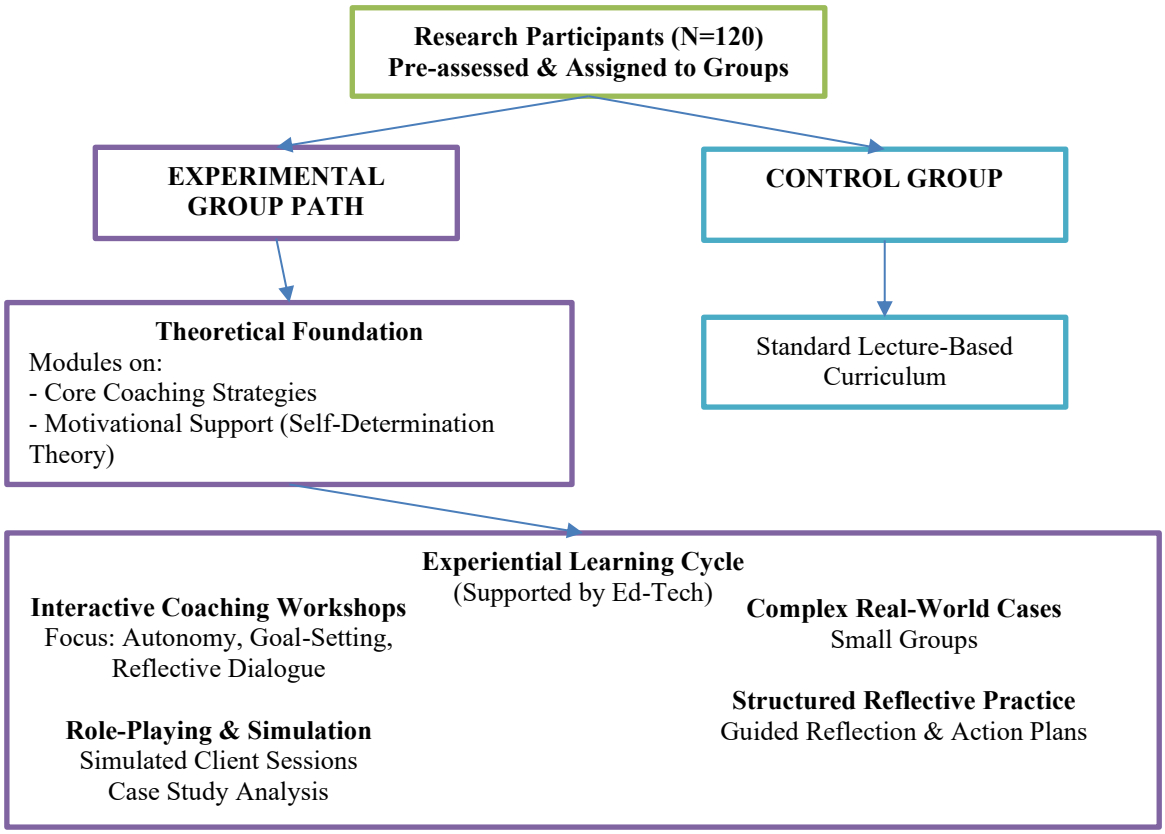

Figure 1. Flowchart of the technology-enhanced coaching-based learning model

4. RESULTS AND DISCUSSION

Empirical research findings were elucidated, encompassing descriptive statistics, as well as comparative analyses of distinct groups, and examinations of interrelationships among pivotal variables. The employed statistical methodologies facilitated a thorough evaluation in terms of efficacy of integrating consultative and coaching strategies into the training of future psychologists. Before the in-depth data analysis, an internal consistency (reliability) assessment of the psychometric instruments utilized was conducted employing the

Cronbach's alpha coefficient. All scales exhibited a high degree of reliability, thereby confirming the consistency of the resultant data (Table 1).

Table 1. Reliability check of data collection methods

Scale/Indicator	Mean value (M)	Standard deviation (SD)	Median (Md)	Mode (Mo)	Cronbach's alpha (alpha)
Professional self-identity (PIS)	4.25	0.78	4.30	4.50	0.89
Professional Competence (PCS)	3.90	0.65	3.85	3.70	0.85
Client Motivation Support (CMSI)	4.10	0.72	4.15	4.20	0.91
Coaching Skills Effectiveness (CSES)	4.05	0.81	4.10	4.00	0.88

Note: The values on the scales are represented on a 5-point evaluation system (from 1 – low to 5 – high level).
Source: consolidated by the author.

Table 1 illustrates a high degree of reliability of the employed methodologies, as evidenced by the Cronbach's alpha coefficient ranging from 0.85 to 0.91, thereby confirming their internal consistency. The highest mean values were recorded on the professional self-identity scale (M=4.25) and the client motivation support scale (M=4.10), signifying a substantial prevalence of these indicators within the studied cohort. The distribution of data is close to normal, given that the medians and modes exhibit negligible deviation from the mean values. At the same time, standard deviations (0.65–0.81) indicate a moderate variance in respondents' evaluations, underscoring the stability of the obtained measurements.

To evaluate the efficacy of the training program, a comparative analysis of the professional readiness of students in both the experimental and control groups was undertaken. The application of Student's t-test for independent samples (to compare groups after intervention) and for dependent variables (to analyze "before" and "after" changes within each group) facilitated a comprehensive examination of the results. This approach enabled the identification of statistically significant changes (Table 1). Additionally, a one-way analysis of variance (ANOVA) was executed to assess the influence of the curriculum based on the students' academic year of study.

Table 2. Comprehensive descriptive statistics of professional readiness indicators before and after the intervention, including effect size metrics

Group	Time	PIS (M±SD)	95% CI	ΔM	%Δ	Cohen's d	IQR
Experimental	Pre	3.8±0.5	[3.65,3.95]	—	—	—	0.7
	Post	4.6±0.4	[4.48,4.72]	+0.8	+21.1	1.45	0.5
Control	Pre	3.9±0.6	[3.75,4.05]	—	—	—	0.8
	Post	4.0±0.5	[3.88,4.12]	+0.1	+2.6	0.18	0.7

Note: *p < 0.05, **p < 0.01, ***p < 0.001.
Source: consolidated by the author

Table 2 presents comprehensive descriptive statistics for professional readiness indicators. Alongside mean differences (ΔM), we report 95% confidence intervals (precision of estimates), percentage change (%Δ, relative improvement magnitude) and IQR (robust dispersion measure less sensitive to outliers). The statistically significant gains with large effect sizes (Cohen's d > 1.4) in the experimental group across all professional readiness indicators demonstrate the substantial impact of the active, experiential learning process central to the coaching-based model. In contrast, the minimal changes in the control group underscore the limitations of traditional, passive instructional methods in developing these competencies. Correlation and regression analyses were employed to examine the interrelationships between the components of students' professional readiness and other variables. Pearson's correlation analysis facilitated the identification of significant linear relationships between professional self-identity and confidence in the application of coaching strategies (Table 3). The Spearman's correlation coefficient was utilized to investigate non-linear dependencies between the indicators.

Table 3. Correlation matrix of professional readiness indicators (Pearson's coefficient)

Indicator	PIS	PCS	CMSI
PCS	.72*** [.62, .80] (p<.001)*	-	-
CMSI	.68*** [.56, .77] (p=.002)*	.65*** [.52, .75] (p=.003)*	-
CSES	.75*** [.66, .82] (p<.001)*	.69*** [.58, .78] (p<.001)*	.71*** [.60, .79] (p<.001)*
FDR-adjusted p-values shown. Values in square brackets = 95% CI.			

Note: ***p < 0.001.
Source: consolidated by the author.

As can be seen in Table 3, all indicators of professional readiness have strong positive correlations ($p < 0.001$). The results confirm that the development of one aspect of professional readiness, such as professional self-identity or competence, contributes to the improvement of other components. All correlations remained significant (*p*<.01) after FDR correction. Coefficients of determination (r^2) ranged from .42 to .55, indicating shared variance between key constructs. These data emphasize the interconnectedness and integrity of the process of forming professional readiness in future psychologists.

The strong, positive correlations between professional self-identity, competence, and coaching self-efficacy (all *r* > .68) suggest that these constructs develop synergistically within an interactive learning environment. Furthermore, the finding that academic year is the primary predictor ($\beta = 0.34$) of readiness supports the cumulative, developmental nature of competency acquisition facilitated by the proposed model. Moreover, multiple regression analysis was conducted to determine the impact of individual characteristics (age, gender, academic year) on the level of professional readiness (Figure 2).

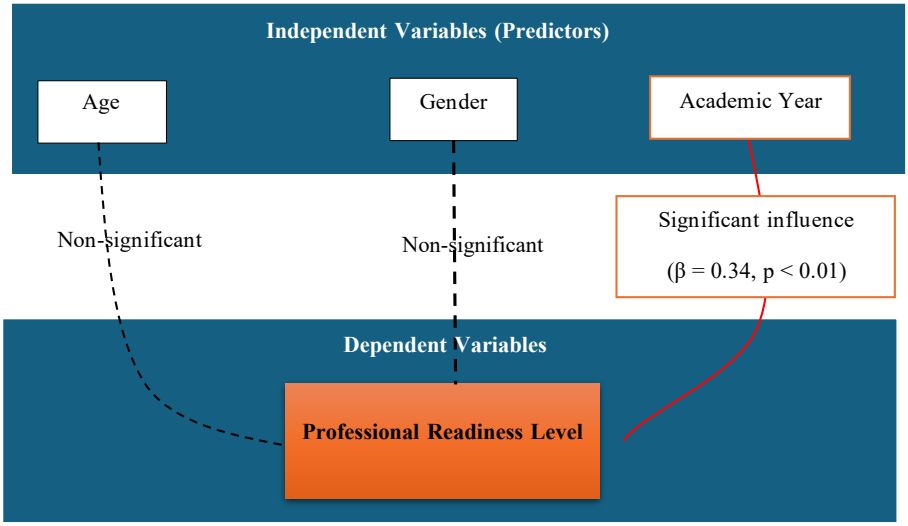

Figure 2. Results of multiple regression analysis to determine the impact of individual characteristics on the level of professional readiness
Source: consolidated by the author.

The diagram illustrates the results of the regression analysis, reflecting the influence of three key factors on the level of professional readiness of future psychologists. The academic course ($\beta = 0.34$, $p < 0.01$) proved to be the main predictor, indicating a higher level of readiness of senior students for motivational support. These data confirm the hypothesis about the gradual accumulation of knowledge and skills in the learning process. Age and gender did not show a statistically significant impact ($p > 0.05$), which refutes common stereotypes about gender or age differences in the formation of professional readiness. This marked improvement in motivational support skills in the experimental group can be directly linked to the practice-based, reflective activities (e.g., video-analysis of role-plays) that provided safe yet authentic application scenarios. The lack of influence of demographic characteristics allows us to focus on universal learning methods that do not require adaptation for individual groups. The dynamics of changes in CMSI in the control and experimental groups are presented in Figure 3.

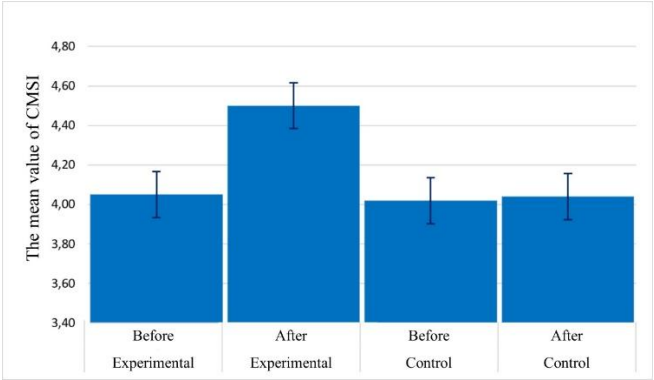

Figure 3. Dynamics of changes in CMSI in the control and experimental groups
Source: consolidated by the author

The efficacy of the implemented strategies was demonstrably significant. Within the experimental cohort, the CMSI score (Client Motivation Support Inventory) exhibited an increase from 4.05 to 4.50 points, whereas the control group experienced negligible alterations, ascending from 4.02 to 4.08 points. The disparity of 0.42 points between the groups after the intervention, combined with narrow standard errors (SEM < 0.12), substantiates the statistical significance and reliability of the findings. Given the above, the program markedly enhanced the readiness for motivational support within the experimental group.

To elucidate the mechanism underlying the training's impact on motivational support, we tested a theoretical mediation model (Fig. 3). The analysis revealed that professional competence (PCS) functioned as a critical pathway through which the intervention influenced client motivation support (CMSI). Specifically, the training program significantly enhanced students' professional competence ($\beta = 0.65$, $p < .001$), which in turn substantially predicted their ability to provide motivational support ($\beta = 0.63$, $p < .001$).

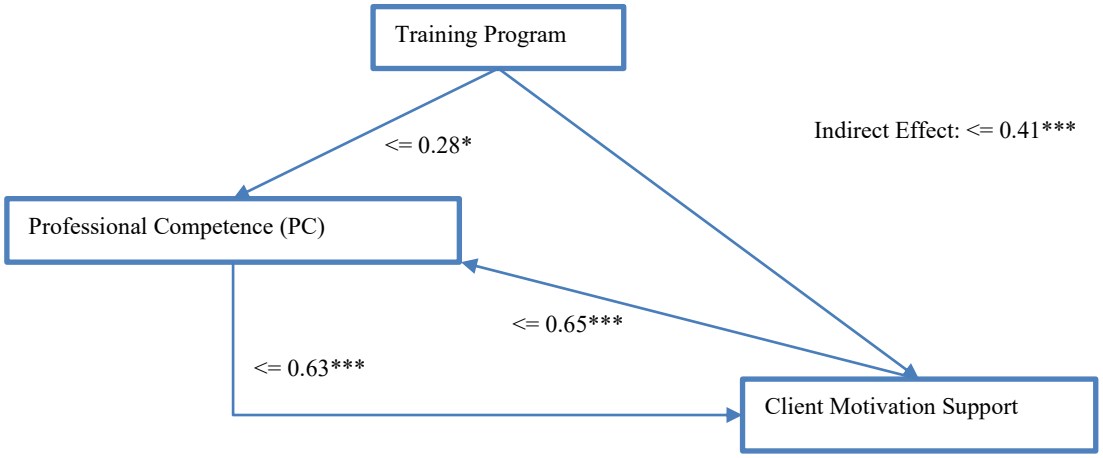

Figure 4. Professional Competence as a Mediator Between Training Intervention and Client Motivation Support (Path Diagram of the Mediation Effect)
Source: consolidated by the author.

As visualized in Fig. 4, the indirect effect (training → PCS → CMSI) accounted for 59.4% of the total impact ($\beta = 0.41$, 95% CI [0.29, 0.55]). Notably, while the direct training-to-CMSI path was weaker ($\beta = 0.28$, $p = .003$), the mediator's role proved dominant. This pattern confirms that professional competence development is the primary mechanism through which consultative-coaching strategies enhance motivational support capabilities.

The empirical evidence supports the efficacy of the proposed intervention not only as a psychological tool but, more critically, as a pedagogical innovation for competency-based higher education. By systematically integrating consultative-coaching strategies and accessible educational technology into the core curriculum, this study directly addresses the identified gap in experiential training for future psychologists and provides a model for instructional redesign.

The obtained results substantiate the study's hypotheses and, more importantly, provide strong evidence for the proposed instructional model's efficacy in fostering the professional preparedness of future psychologists. The marked increase in professional self-identity and competence within the experimental group, compared to the control, underscores the positive impact of this structured pedagogical intervention. These findings on competency development align with existing educational research. They are consistent with studies highlighting the significance of targeted, experiential interventions in shaping students' professional identity [46] and corroborate evidence on the role of coaching-based pedagogies in enhancing intrinsic motivation and professional self-awareness [47].

The study's outcomes are further supported by literature emphasizing learner autonomy [48] and are resonant with broader evidence from instructional design confirming the effectiveness of blended learning methodologies for developing practical competencies [49], [50]. This convergence suggests the model successfully integrates established principles of active learning. It is noted, however, that the effectiveness of such pedagogical approaches can be moderated by learners' individual differences [51], [52], a variable not central to the present investigation but relevant for future adaptive design.

Some discrepancies exist with studies reporting a more moderate impact of coaching strategies on professional competence [53]. These may be attributed to key differences in instructional context, such as the level of student experience (e.g., undergraduate vs. senior students in this study) or the degree of facilitator training in

coaching methodologies [54], which is crucial for faithful implementation. These contrasts highlight the importance of specific design and contextual factors in pedagogical model transferability.

Critically, this technology-enhanced coaching-based model contributes directly to the field of learning design by demonstrating how scalable, experiential environments can be created. It aligns with research on blended learning designs that integrate interactive digital components for professional competency development [55] and leverages multimedia tools like video feedback in ways supported by learning science to enhance cognitive processing and skill retention [56]. The model's inherent adaptability for hybrid or fully online formats addresses a pressing need for flexible curriculum design [57]. By embedding coaching as a core instructional methodology, it operationalizes theoretical frameworks into actionable pedagogical strategies [58], offering a replicable blueprint for competency-oriented curriculum redesign across diverse higher education contexts. Finally, discrepancies with older studies championing traditional methods [59] can be contextualized by the historical lack of widespread adoption of the interactive, technology-supported pedagogies that define the current innovative landscape.

Hence, the data acquired substantiate the viability of employing integrated consultative and coaching methodologies in the training of future psychologists. However, to account for discrepancies with previous studies, further investigation is imperative, particularly concerning the influence of individual student characteristics and the role of educators in the application of such strategies. This will enhance our comprehension of the mechanisms through which innovative teaching methods affect professional readiness.

The findings of the study elucidated the mechanisms through which consultative and coaching strategies influence the development of professional readiness among future psychologists, particularly by strengthening their professional self-identity and competence. Theoretically, these findings affirm the relevance of incorporating the principles of self-determination into educational frameworks, thereby broadening the existing paradigms of professional development for students in psychological specialties. The applied assessment tools, in particular the professional self-identity scale and the scale for evaluating the efficacy of learning coaching strategies, demonstrated their validity within an interdisciplinary context. This paves the way for the further refinement of measurement instruments.

The practical significance of the study lies in the formulation and successful pilot testing of a curriculum that yielded a substantial enhancement in students' professional readiness. The integration of coaching strategies into the educational framework, facilitated through training sessions, role-playing exercises, and case studies, effectively fostered the development of skills in goal setting, reflection, and the formation of autonomous professional decisions. It was found that such methods not only stimulate the growth of theoretical knowledge but also cultivate practical readiness for interaction with clients in real professional environments.

The data indicate the feasibility of adapting the developed methodology for other specialties where motivational support skills are critically important. The continued implementation of this program has the potential to significantly elevate the quality of specialist training within educational programs that emphasize practical activities. Our study also proposes an effective approach to evaluating educational interventions, suitable for integration into internal quality assurance systems within higher education institutions.

The findings demonstrate that the technology-enhanced coaching-based model effectively bridges the theory-practice divide in professional education, offering a replicable framework for curriculum modernization. The strategic use of simple digital tools (video recording for feedback, online forms for structured reflection, LMS for module delivery) was instrumental in scaling the interactive and reflective components of the training. This makes the model readily adaptable for hybrid or fully online formats, addressing contemporary demands for flexible and resilient curricula.

For instructional designers and educators, this model provides a blueprint for competency-oriented redesign. Positioning coaching not as a supplementary workshop but as a core instructional methodology fosters a deeper integration of professional identity formation with practical skill acquisition. The scalability of the model, reliant on low-cost or existing institutional technology, enhances its practical applicability across diverse higher education contexts and even beyond psychology – to any field requiring competencies in motivational support, reflective practice, and autonomous goal-setting (e.g., education, healthcare, social work, management).

Beyond its psychological efficacy, this model offers a blueprint for scalable pedagogical innovation. Its scalability is intrinsically linked to the use of accessible learning technology. Unlike traditional coaching, which can be resource-intensive, this model leverages institutional Learning Management Systems (LMS), video recording for feedback, and digital reflection tools to create a replicable and sustainable learning environment suitable for larger cohorts [60]. This aligns with research on digital coaching and online mentoring, which highlights the importance of structured, technology-supported interactions for skill development [61]. However, our model extends this concept by fully embedding coaching methodology into the curriculum fabric, moving beyond isolated mentoring sessions towards a continuous developmental framework. This design makes it readily adaptable for hybrid or fully online formats, addressing a critical need in modern higher education for flexible, resilient curricula [62]. For educators and instructional designers, it demonstrates how low-cost technology can be strategically used to support competency-oriented redesign.

In the course of this study, we encountered several limitations that warrant consideration when interpreting the results. Firstly, the quasi-experimental design, while fundamentally sound, does not allow for the complete exclusion of the influence in terms of uncontrolled external variables on the data obtained. Secondly, the study was carried out on a cohort of psychology students, which constrains the ability to generalize the findings to other specialties or a broader demographic. Moreover, despite the utilization of validated methodologies, the inherently subjective nature of certain self-reported scales may compromise the completeness and objectivity of the collected information. Finally, the short-term nature of the intervention precluded an assessment of the long-term effects of integrated strategies on the participants' professional development. Additionally, the study's reliance on specific, albeit accessible, digital tools (Google Forms for reflection, video recording for feedback) may introduce a limitation regarding technological accessibility and familiarity. In contexts with limited digital infrastructure, variable internet access, or low digital literacy among students or faculty, the implementation and effectiveness of the technology-enhanced components could be constrained. The data acquired are confined to the context of the academic environment and a specific sample, namely psychology students aged 20–25 years without clinical experience. This limitation renders it impossible to extrapolate the findings to clinical practice or the general population.

Drawing on this study's findings, we propose targeted recommendations to improve psychology training. Curriculum integration should systematically embed interactive coaching strategies like role-playing and case studies from early study stages, alongside dedicated modules for professional identity development and structured reflection to foster autonomy. Technology-enhanced delivery can be optimized using Learning Management Systems (LMS) to host interactive content and digital portfolios, while short 'micro-coaching' modules could reinforce skills across courses. For future research and evaluation, longitudinal studies are needed to assess long-term impact, complemented by developing validated assessment tools. Research should also examine the efficacy of specific educational technology components (e.g., video vs. text feedback) and optimal blended designs. Finally, monitoring and adaptation through tracking graduates' professional practice and adapting scales to diverse cultural contexts will ensure sustainability and broader applicability of the training model.

5. CONCLUSION

The proposed study is of paramount importance in light of the growing need to enhance the preparedness of future psychologists for addressing the motivational dimensions of their clients. This becomes especially crucial within the framework of contemporary sociocultural challenges. Therefore, this study contributes to the fields of educational technology and instructional design by demonstrating how a structured, technology-enhanced coaching-based learning model can be effectively integrated into higher education curricula to bridge the theory-practice gap and foster competency development. The data obtained convincingly substantiate the efficacy of integrating consultative and coaching strategies into the educational paradigm. Such integration not only markedly increases the students' professional readiness but also fosters the development of essential competencies necessary for the successful motivational support of clients. The implementation of consultative and coaching strategies has significantly increased the professional readiness of future psychologists. In the experimental group, the mean score on the professional self-identity scale increased from 3.8 ± 0.5 to 4.6 ± 0.4 ($p < 0.01$), while the professional competence scale grew from 4.1 ± 0.6 to 4.8 ± 0.5 ($p < 0.01$). Conversely, the control group exhibited negligible and statistically insignificant changes ($p > 0.05$). Correlational analysis revealed a strong relationship between self-identity and confidence in employing coaching strategies within the experimental group ($r = 0.68$, $p < 0.01$). Therefore, the proposed program effectively cultivates professional readiness and may serve as a paradigm for the ongoing enhancement of psychologists' training. This study contributes to the fields of educational technology and instructional design by demonstrating how a structured, technology-enhanced coaching-based learning model can be effectively integrated into higher education curricula to bridge the theory-practice gap and foster competency development. The findings of this study possess the potential to improve educational programs within higher education institutions, concentrating on the development of future psychologists' professional competencies. Future research avenues may encompass an exploration of the influence of individual student characteristics on the effectiveness of coaching strategies, the long-term retention of competencies developed through such technology-supported models, and the adaptation of methodologies to diverse educational contexts.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the preparation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried **out** entirely by the authors without the assistance of AI-based technologies.

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