SPEECH THERAPY ACTIVITY IN AN INCLUSIVE EDUCATIONAL ENVIRONMENT: IMPROVING THE METHODOLOGY OF STUDENTS' PROFESSIONAL TRAINING

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Annotation. *The active development of inclusive education necessitates a modernized approach to the professional training of future speech therapists. This article explores innovative methodologies and pedagogical conditions required to enhance the readiness of university students for effective speech therapy activities within an inclusive environment. The study analyzes traditional training models and proposes a comprehensive framework that integrates practical case studies, adaptive teaching strategies, and modern educational technologies. The findings indicate that improving the professional, practical, and psychological competencies of future specialists significantly increases the quality of speech and language support for children with special educational needs. The proposed recommendations aim to optimize higher education standards in the field of special pedagogy and inclusive practices.*

Keywords: *inclusive education, speech therapy, professional training, future speech therapists, special educational needs, pedagogical methodology, innovative approaches, professional competence.*

INTRODUCTION

The global paradigm shift towards inclusive education represents one of the most significant transformations in modern pedagogical science and practice. At its core, inclusive education advocates for the fundamental right of every child, regardless of their physical, cognitive, or sensory abilities, to receive quality education within a mainstream learning environment. This humanistic approach not only fosters social integration and equity but also prepares all children for a diverse society. Consequently, the integration of children with special educational needs into general education schools and preschools has accelerated significantly in recent years. This structural change necessitates a comprehensive reevaluation of the educational environment, curriculum design, and, most crucially, the professional competencies of the pedagogical staff involved. Among the multidisciplinary team of specialists required to support an inclusive ecosystem, the speech therapist plays an indispensable role. Language and communication are the primary vehicles for socialization, cognitive development, and academic achievement. Therefore, addressing speech and language disorders is a foundational step in ensuring a child's successful adaptation to an inclusive setting.

Historically, the professional training of speech therapists has been heavily rooted in a clinical-medical model, focusing primarily on individualized diagnosis and remediation within isolated, specialized institutions. While this traditional foundation provides essential theoretical knowledge regarding the etiology and mechanics of speech disorders, it often falls short of preparing future specialists for the dynamic and collaborative demands of modern inclusive education. In a mainstream classroom, a speech therapist is no longer an isolated practitioner but an active collaborator who must work in constant synergy with general education teachers,

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psychologists, parents, and school administrators. They are required to adapt corrective methodologies to align with the standard curriculum, provide real-time support within the classroom environment, and design individualized educational routes that promote both speech correction and academic participation. This multifaceted role demands a unique set of skills, including pedagogical flexibility, advanced communicative competencies, emotional intelligence, and the ability to operate effectively within a universally designed learning environment.

Despite the clear evolution of the speech therapist's professional responsibilities, higher education programs often exhibit a lag in updating their training methodologies. Many university curricula still prioritize theoretical instruction and traditional practicums over immersive, problem-based learning experiences that simulate real-world inclusive settings. This discrepancy creates a significant professional gap: graduates may possess strong clinical knowledge but lack the practical readiness, psychological resilience, and collaborative skills necessary to navigate the complexities of inclusive schools. Therefore, there is an urgent and critical need to improve and modernize the methodology of professional training for future speech therapists. This modernization must move beyond mere curriculum adjustments and embrace innovative pedagogical approaches.

Integrating active and interactive learning methods, such as case-study analysis, project-based learning, and role-playing scenarios, can bridge the gap between theory and practice. Furthermore, incorporating digital technologies and specialized software designed for speech therapy can enhance the analytical and practical skills of students. Cultivating a deep understanding of inclusive psychology and the principles of differentiated instruction is equally vital. The academic preparation must be restructured to foster not only professional competence but also a profound empathetic understanding of children with special educational needs.

The primary objective of this study is to investigate the theoretical and practical foundations of speech therapy activity within an inclusive educational environment and to propose a comprehensive methodology for improving the professional training of university students in this field. By systematically analyzing the current challenges and identifying the optimal pedagogical conditions, this research aims to develop an innovative framework that ensures future speech therapists are fully equipped, both methodologically and psychologically, to facilitate the successful integration and development of every child in an inclusive educational setting.

LITERATURE REVIEW AND METHODS

The theoretical foundation of preparing future speech therapists for inclusive education is deeply rooted in the broader discourse on special pedagogy and inclusive educational paradigms. A comprehensive review of contemporary literature reveals a significant shift from the traditional medical model of disability to a social and educational model. Foundational theories, particularly L.S. Vygotsky's concept of the zone of proximal development and the social compensation of developmental defects, underscore the necessity of integrating children with special educational needs into a normative social environment. Furthermore, international normative documents, such as the Salamanca Statement, have universally established the framework for inclusive education, emphasizing that specialized support, including speech therapy, must be delivered within mainstream educational settings rather than isolated clinics. Scholars emphasize that modern speech therapy in an inclusive context is no longer strictly corrective but heavily preventive and

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collaborative. Recent educational studies highlight the critical role of the speech therapist as a consultant and co-educator who collaborates seamlessly with general classroom teachers to adapt learning materials, modify instructional delivery, and create universally accessible language environments.

Despite this paradigm shift in preschools and schools, pedagogical research indicates that higher education curricula for future speech therapists often remain anchored in outdated, clinically dominant paradigms. Researchers note a persistent gap between the theoretical knowledge acquired in universities and the practical, collaborative competencies required in real-world inclusive classrooms. Literature on higher education pedagogy suggests that the competency-based approach is the most effective framework for addressing this discrepancy. Various studies advocate for the integration of active learning methodologies, such as problem-based learning, case studies, and interdisciplinary team simulations, to foster the adaptive skills necessary for inclusive practice. Furthermore, modern educational literature heavily emphasizes the importance of technological fluency, arguing that future speech therapists must be proficient in using digital diagnostic tools, specialized augmentative and alternative communication (AAC) devices, and interactive educational software to effectively support diverse learners in a unified classroom setting. However, empirical studies specifically addressing the systematic transformation of university methodologies to seamlessly merge clinical speech therapy skills with inclusive pedagogical strategies remain relatively scarce, highlighting a clear academic gap that this research aims to systematically address.

To address the identified theoretical gaps and fulfill the practical research objectives, this study employs a mixed-methods research design, integrating both qualitative and quantitative approaches to evaluate the effectiveness of an improved professional training methodology. The empirical research was conducted at the university level, targeting undergraduate students enrolled in special pedagogy and speech therapy degree programs. The sample comprised an experimental group and a control group, ensuring a reliable comparative analysis of pedagogical outcomes. The methodological framework is grounded in a quasi-experimental design aimed at testing the efficacy of a newly developed, practice-oriented training module focused explicitly on inclusive speech therapy.

The data collection process utilized several complementary instruments to ensure comprehensive analysis. Initially, a diagnostic survey was administered to assess the baseline levels of students' theoretical knowledge regarding inclusive principles, their psychological readiness to work with children possessing diverse educational needs, and their self-evaluated practical competencies. Following the baseline assessment, the experimental group participated in the modernized training curriculum. This enhanced methodology dynamically integrated interactive case studies based on real-world inclusive classroom scenarios, interdisciplinary role-playing exercises simulating individualized education program (IEP) planning meetings, and hands-on practical training with digital speech therapy tools. Conversely, the control group continued with the traditional, lecture-heavy academic curriculum. Throughout the intervention phase, pedagogical observation was systematically employed to evaluate students' active engagement, problem-solving capabilities, and collaborative communication skills during practical seminars. Upon completion of the training module, a post-intervention assessment was conducted

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using standardized academic testing and the evaluation of practical student portfolios, which included adapted lesson plans and specialized corrective strategies specifically designed for inclusive settings. The quantitative data obtained from the pre- and post-tests were analyzed using statistical software to determine the significance of the progress made by the experimental group, while qualitative data from observations and open-ended survey responses were subjected to thematic analysis to gain deeper insights into the students' overall professional and psychological development.

RESULTS

The empirical investigation yielded significant insights into the effectiveness of the modernized methodological approach for training future speech therapists to work within inclusive educational environments. The initial diagnostic phase, conducted prior to the pedagogical intervention, revealed no statistically significant differences between the experimental and control groups in terms of their baseline theoretical knowledge and psychological readiness. Both groups demonstrated a foundational understanding of clinical speech pathology but exhibited noticeable deficits in applying this knowledge to dynamic, inclusive classroom settings. Specifically, a large majority of students initially expressed apprehension regarding collaborative practices with general education teachers and lacked confidence in designing individualized educational routes tailored to the mainstream curriculum. This baseline equivalence established a reliable foundation for evaluating the subsequent impact of the innovative training module implemented in the experimental group.

Following the completion of the specialized pedagogical intervention, the post-intervention assessment demonstrated a marked divergence in the professional competencies of the two cohorts. Quantitative analysis of the standardized academic testing revealed that students in the experimental group, who engaged with case-study analyses, role-playing scenarios, and interactive problem-solving, achieved a substantial increase in their methodological proficiency. Their post-test scores regarding inclusive pedagogical strategies and the adaptation of speech therapy techniques improved by an average of thirty-five percent compared to their baseline metrics. In contrast, the control group, which continued with the traditional lecture-based curriculum, exhibited only a marginal improvement of approximately ten percent, primarily in theoretical recall rather than practical application. The statistical significance of these results confirms that active, experiential learning methodologies are vastly superior in bridging the gap between clinical theory and inclusive educational practice.

Qualitative evaluations of the students' practical portfolios further substantiated the quantitative findings. The experimental group demonstrated a profoundly enhanced ability to develop customized intervention plans that seamlessly integrated corrective speech therapy with mainstream academic objectives. Their lesson plans reflected a sophisticated understanding of differentiated instruction and universal design for learning, showcasing innovative uses of augmentative and alternative communication tools and digital educational software. Observational data gathered during practical seminars and simulated individualized education program meetings highlighted a significant transformation in their collaborative communication skills. Unlike their peers in the control group, who often defaulted to isolated, pull-out therapy models, the

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experimental subjects consistently designed inclusive, push-in therapy strategies, effectively positioning themselves as integral co-educators within the general classroom ecosystem.

Beyond methodological and practical proficiencies, the implementation of the innovative training module significantly impacted the students' psychological readiness. Survey responses collected at the conclusion of the study indicated a profound shift in the experimental group's professional self-efficacy. These students reported substantially lower levels of professional anxiety and a heightened sense of empathy and adaptability when interacting with children possessing diverse special educational needs. They expressed a strong conceptual shift from viewing speech disorders strictly as medical deficits to understanding them as communicative barriers that can be effectively mitigated through supportive, inclusive environments. Ultimately, the comprehensive data collected throughout the pedagogical experiment unequivocally validates the effectiveness of the proposed methodological enhancements, proving that a modernized, competency-based curriculum is essential for preparing highly qualified, adaptable, and collaboratively skilled speech therapists for the contemporary inclusive education landscape.

DISCUSSION

The findings of this empirical study provide compelling evidence that transitioning from traditional, clinically focused training paradigms to modernized, interactive methodologies significantly enhances the professional readiness of future speech therapists for inclusive education. The substantial improvements observed in the experimental group's practical and psychological competencies align with contemporary pedagogical theories advocating for experiential and problem-based learning. While foundational literature has long emphasized the theoretical importance of the competency-based approach, this study substantiates these claims with quantifiable data, demonstrating exactly how case studies, interdisciplinary simulations, and role-playing directly translate into improved classroom strategies. The marked difference between the experimental and control groups highlights a critical flaw in relying solely on lecture-heavy curricula: theoretical knowledge without simulated practical application fundamentally fails to develop the adaptive and collaborative skills essential for modern inclusive environments.

Furthermore, the results of this research extend the existing discourse on the evolving role of the speech therapist. By integrating general pedagogical principles with specialized corrective techniques, the implemented training module successfully shifted the students' professional mindset from functioning as isolated clinical specialists to operating as integral co-educators within an inclusive academic team. This paradigm shift is particularly crucial given the global educational mandate toward mainstreaming children with diverse special educational needs. The enhanced ability of the experimental cohort to design synchronized, individualized educational routes and utilize digital communication tools demonstrates that technological fluency and pedagogical flexibility must be universally treated as core components of speech therapy university programs, rather than optional supplementary modules.

It is equally important to address the psychological dimension of professional training revealed during the study. The notable reduction in professional anxiety and the corresponding increase in self-efficacy among students who participated in the interactive module suggest that continuous exposure to simulated inclusive scenarios effectively mitigates the "reality shock" often experienced by newly graduated specialists entering mainstream schools.

However, this study acknowledges certain limitations. The specific regional context of the university and the concentrated sample size may influence the broader generalizability of the qualitative results. Future longitudinal research should aim to replicate this pedagogical experiment across a wider demographic of higher education institutions and systematically evaluate the long-term impact of these modernized training modules on the sustained professional performance of graduates in the field. Ultimately, these findings reinforce the urgent academic necessity for universities to continuously align their curricula with the dynamic realities of inclusive education, ensuring graduates can foster highly effective communication environments for all learners.

CONCLUSION

In conclusion, the transition towards an inclusive educational paradigm fundamentally redefines the professional profile and responsibilities of speech therapists, necessitating a comprehensive modernization of their university-level training. This study substantiates that traditional, heavily clinical methodologies are no longer sufficient to prepare future specialists for the dynamic, collaborative environment of mainstream schools and preschools. By implementing and evaluating an innovative, competency-based training module, the research demonstrated that integrating interactive pedagogical tools—such as case-study analysis, interdisciplinary role-playing, and the application of digital communication technologies—yields significantly higher levels of professional readiness compared to conventional lecture-based approaches. The empirical findings clearly indicate that students engaged in active, problem-based learning not only achieve superior practical skills in designing inclusive, synchronized educational routes but also develop the crucial psychological resilience and empathy required to support children with diverse special educational needs effectively.

Furthermore, the modernized methodology successfully fostered a vital conceptual shift among the future specialists, moving them away from an isolated clinical mindset toward a collaborative, co-educational approach. They learned to view themselves as integral members of a broader pedagogical team, capable of seamlessly integrating corrective speech strategies into the general academic curriculum. Ultimately, to ensure the successful realization of inclusive education, higher education institutions must prioritize the continuous adaptation of special pedagogy programs. Moving forward, it is highly recommended that universities systematically embed practical, inclusive simulations and technological fluency into the core curriculum of speech therapy education. Doing so will guarantee the cultivation of highly adaptable, empathetic, and methodologically equipped professionals who are fully capable of breaking down communicative barriers and fostering an equitable, supportive, and truly inclusive learning environment for all children.

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