

The Impact of the Special Education KKT Program on the Competence of UNY Students in 2025

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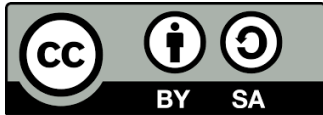
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Abstract

The Additional Education Authority Program in Special Education (KKT-PLB) at Universitas Negeri Yogyakarta (UNY) was developed to strengthen the qualifications and competencies of educators without formal backgrounds in special education. This study aimed to describe students' competency levels after completing the program, identify the competency dimensions that developed, and examine factors that supported or hindered competency development. A mixed-methods approach with a sequential explanatory design was employed. Quantitative data were collected using a competency questionnaire based on the program learning outcomes, while qualitative data were obtained from participants' experiences through a focus group discussion (FGD) and document analysis. Quantitative data were analyzed using descriptive statistics, whereas qualitative data were analyzed thematically. The overall mean competency score was 4.05 out of 5.00, categorized as good. The highest competency scores were observed for developing learning media appropriate for students with special educational needs (4.38), adapting learning materials to students' abilities (4.29), preparing adaptive lesson plans (4.24), conducting reflective evaluations of learning (4.19), and understanding the characteristics of students with special educational needs (4.14). Competency areas requiring further improvement included supporting twice-exceptional learners (3.52), evaluating curriculum implementation (3.76), understanding adaptive curriculum principles (3.90), differentiating disability-specific learning needs (3.90), and developing Individualized Education Programs (IEPs) (3.95). Overall, the KKT-PLB program contributed positively to students' competency development; however, field-based practice, case-based learning, mentoring, and continuing professional development should be further strengthened.



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INTRODUCTION

Inclusive education has become a major global issue in education because of the growing need to ensure that all learners, including students with special educational needs, have equitable access to quality education (Devi, 2022; Gordon-Gould & Hornby, 2023; Kenny et al., 2023; Shutaleva et al., 2023; Somad et al., 2024; Tonegawa, 2022; Zickafoose et al., 2024). The ongoing transformation of global education systems requires not only access to education but also teachers who are prepared to design learning processes that respond to diverse student characteristics, abilities, and individual needs. Special education teachers face increasingly complex challenges because they must be competent in understanding the characteristics of students with special educational needs, developing adaptive instructional

strategies, implementing differentiated instruction, managing inclusive classrooms, and continuously evaluating student progress. A systematic review indicates that teachers' professional competencies, classroom management skills, and differentiated instructional abilities are essential components of successful inclusive education practices (Calandri et al., 2025; Guo & Keles, 2026; Lindner & Schwab, 2025; Nketsia et al., 2025; Rapisa et al., 2026).

The development of inclusive education worldwide also demonstrates that the quality of educational services for students with special educational needs depends substantially on teachers' professional competencies (Makhambetova & Magauova, 2023; Prisiazhniuk et al., 2024; Shi et al., 2025; Shutaleva et al., 2023). Inadequate teacher preparation for understanding students' individual needs may create a gap between inclusive education policies and classroom practices. In contemporary education, teachers serve not only as facilitators of knowledge acquisition but also as designers of learning environments, developers of intervention strategies, and facilitators of students' academic and social development (Ansari & Rizvi, 2023; Healey & Healey, 2026; March et al., 2022; Wass et al., 2026; Zhao & Sang, 2025). Therefore, strengthening teachers' capacities through additional education programs, professional training, and continuing professional development has become an important strategy for improving the quality of inclusive education.

In Indonesia, strengthening teachers' competencies in special and inclusive education remains an important challenge (Anne & Rashid, 2024; Isnawati et al., 2025; Kusnandi, 2024). Differences in teachers' educational backgrounds, limited understanding of students with special educational needs, and difficulties in evaluating learning processes continue to present significant pedagogical challenges in inclusive education. Research by Wulandari and Hendriani (2021) revealed that the pedagogical competencies of teachers in Indonesian inclusive schools still require improvement, particularly in understanding students' needs and implementing adaptive instructional strategies. Furthermore, Pujaningsih (2019) emphasized that curricula for preparing special education teachers need to place greater emphasis on practical competencies, including assessment, intervention, and individualized educational support.

The competency challenges faced by teachers become increasingly complex when educators are required to address highly diverse learner profiles, including twice-exceptional learners, who simultaneously demonstrate exceptional abilities or talents and have disabilities or other special educational needs. Such conditions require teachers to be able to identify individual learner characteristics, develop Individualized Education Programs (IEPs), and make pedagogical decisions based on individual needs. The success of inclusive education is determined not only by individual teacher competencies but also by school support systems, curriculum readiness, educational policies, and collaboration among relevant stakeholders.

Previous studies have demonstrated that teacher professional development programs contribute to improvements in teachers' knowledge, skills, beliefs, and instructional practices. A meta-analysis of teacher professional development programs showed that professional learning initiatives can enhance teachers' capacity to support inclusive education, although the magnitude of improvement varies according to the competency dimensions being assessed. Research by Cho and Son (2020) also highlighted that special education teacher competencies should be strengthened through training curricula encompassing knowledge of special educational needs, instructional strategies, communication skills, collaboration, and

professional development. These findings indicate that improving teacher competencies requires programs that integrate theoretical knowledge with relevant practical experiences.

In response to these needs, Universitas Negeri Yogyakarta (UNY) developed the Special Education Additional Authority Program (KKT-PLB) to strengthen the qualifications and competencies of educators without formal backgrounds in special education. The program is implemented through collaboration between DPPK UNY and the Education, Youth, and Sports Office of the Special Region of Yogyakarta and comprises a two-semester curriculum totaling 40 credits. The competencies addressed by the program include understanding the characteristics of students with special educational needs, developing instructional materials, analyzing curricula, and implementing instruction according to students' individual needs. However, empirical evidence regarding the extent to which the program contributes to participants' competency development remains limited.

The limited evidence in previous studies indicates a research gap concerning competency-based evaluations of additional special education programs. Previous research has predominantly focused on the competency needs of special education teachers, barriers to implementing inclusive education, or the general effectiveness of professional development programs. However, relatively few studies have specifically examined how additional education programs contribute to participants' competency development following program completion. Moreover, studies integrating quantitative data on competency achievement with qualitative exploration of participants' experiences remain limited. Therefore, a comprehensive evaluation is needed to identify program achievements and determine the competency dimensions that require further improvement.

This study is important because the successful implementation of inclusive education depends substantially on the preparedness and competencies of educators. Evaluating the KKT-PLB UNY Program is therefore necessary to determine whether the program develops competencies aligned with the demands of inclusive education. Such an evaluation can provide information about participants' competency achievements while generating insights for curriculum improvement, instructional strategy development, mentoring systems, and continuing professional development. Previous research indicates that teacher competency development cannot rely solely on knowledge acquisition but also requires practical experience, mentoring, and opportunities to apply competencies in authentic educational settings.

The novelty of this study lies in its program learning outcome-based evaluation of the KKT-PLB UNY Program, integrating quantitative measurement with qualitative exploration through a sequential explanatory mixed-methods design. This approach enables the study to assess participants' competency levels after completing the program while explaining the supporting factors, challenges, and areas requiring program improvement based on participants' experiences. Therefore, this approach provides a more comprehensive evaluation than assessments based solely on quantitative measures.

Based on this background, this study aimed to describe participants' competency levels after completing the KKT-PLB UNY Program, identify the competency dimensions that had developed, determine areas requiring further strengthening, and examine the supporting and inhibiting factors associated with competency achievement. The study was expected to contribute theoretically to the literature on program evaluation in special and inclusive

education and practically to universities, program administrators, and educational policymakers seeking to strengthen teacher competency development. Furthermore, the findings may provide a basis for improving the KKT-PLB Program to better address the needs of students with special educational needs and the evolving demands of inclusive education.

METHOD

This study employed a sequential explanatory mixed-methods design to evaluate competency development among participants in the Special Education Additional Authority Program (KKT-PLB) at Universitas Negeri Yogyakarta (UNY). The quantitative phase was conducted first to assess participants' competency levels after program completion, followed by a qualitative phase to explain the quantitative findings and explore supporting factors, challenges, and participants' learning experiences. The study was conducted at UNY and involved participants who had completed the KKT-PLB Program.

The study population consisted of students participating in the KKT-PLB UNY Program in 2025. Participants were selected using purposive sampling based on program completion and relevant experience in applying special education competencies. Quantitative data were collected using a competency questionnaire developed based on the KKT-PLB program learning outcomes, whereas qualitative data were collected through focus group discussions (FGDs), interviews, and document analysis. The qualitative phase included 28 participants who participated in FGDs exploring competency development, program implementation experiences, supporting factors, barriers, and areas requiring improvement. The questionnaire assessed competencies related to understanding the characteristics of students with special educational needs, adaptive instructional planning, development of learning media, curriculum analysis, Individualized Education Programs (IEPs), and learning evaluation. Content validity was assessed based on the alignment between questionnaire items and the KKT-PLB program learning outcomes, while reliability was assessed to determine the internal consistency of the instrument. The credibility of the qualitative findings was strengthened through data source and methodological triangulation.

Quantitative data were collected by administering the competency questionnaire after participants had completed the KKT-PLB Program. Qualitative data were subsequently collected through FGDs, interviews, and document analysis to further explain the quantitative findings. Quantitative data were analyzed descriptively using mean scores and competency achievement categories. Qualitative data were analyzed thematically through transcription, coding, categorization, and interpretation of emerging themes related to competency development and its supporting and inhibiting factors. Quantitative and qualitative findings were integrated during the interpretation stage, with the qualitative findings used to explain patterns identified in the quantitative results.

RESULTS AND DISCUSSION

The results of the analysis show that the overall competency of students participating in the KKT-PLB Program is at an average of 4.05 out of a scale of 5.00 and is included in the good category. These findings show that the program has made a positive contribution to the mastery of the competencies that are the target of learning. However, the achievements between

indicators are not evenly distributed, so the evaluation needs to be directed not only at average achievements, but also at areas of competence that are still relatively low.

Table 1. Competency achievements of students participating in the KKT-PLB UNY Program

No.	Competency indicators	Average	Interpretasi
1	Developing learning media according to the needs of students with special needs	4,38	Excellent
2	Adapting the material to the students' abilities	4,29	Excellent
3	Build adaptive learning tools	4,24	Excellent
4	Conducting learning reflection	4,19	Good
5	Understanding the characteristics of students with special needs	4,14	Good
6	Individual Learning Programs/PPI	3,95	Good
7	Principles of adaptive curriculum	3,90	Good
8	Differentiation of learning needs based on disability characteristics	3,90	Good
9	Evaluation of curriculum implementation	3,76	Good
10	Students' understanding is twice exceptional	3,52	Pretty good
—	Overall average	4,05	Good

Source: Primary Data Processed by Researchers (2026)

Remarks: Assessment scale 1–5. The categories on the indicators follow the interpretation of the results of the research measurements.

The five highest achievements show the strength of the program in competencies that are practical and directly related to learning planning. The ability to develop learning media obtained the highest score (4.38), followed by the ability to adjust the material (4.29) and develop adaptive learning tools (4.24). This shows that the learning experience in the program is relatively effective in building students' ability to translate students' needs into learning designs.

On the other hand, the lowest score was found in students' understanding of twice exceptional (3.52). This score indicates that topics that require more specific knowledge about the combination of special needs and potential talents still need strengthening. Other areas that are relatively low are evaluation of curriculum implementation (3.76), principles of adaptive curriculum (3.90), differentiation of learning needs based on disability characteristics (3.90), and PPI (3.95). This pattern is important because learning adaptability requires not only the skills of making devices, but also the ability to conduct assessments, determine individual needs, implement, and evaluate interventions.

An average competency of 4.05 indicates that the KKT-PLB Program has achieved positive results at the overall level. These findings are consistent with the literature that places professional knowledge, differentiated teaching, and learning management skills as core competencies in inclusive education [1]. In the Indonesian context, relatively high results on media development and material adjustment can be seen as an important development because teacher competency barriers are often related to difficulties in understanding learners' needs and adjusting learning [2].

The strengths of learning media, material adjustments, and adaptive learning tools also show that the program has helped students connect special education concepts with learning practices. These findings support the results of research on the competency needs of special education teachers that place individual instructional support, communication, teaching

attitudes, cooperation, and professional development as important components [6]. The KKT-PLB program is thus not only relevant as a qualification fulfillment mechanism, but also as a vehicle for the formation of practical competencies.

However, lower scores in double exceptional, curriculum evaluation, adaptive curriculum, need differentiation, and PPI show a gap between the ability to design learning in general and the ability to make highly individualized learning decisions. These findings are in line with the study on the implementation of the Individualized Education Plan which shows that teachers still face challenges in terms of knowledge, skills, and especially evaluation [10]. Therefore, strengthening KKT-PLB needs to move from material-based learning to case- and practice-based learning.

Qualitative deepening showed that participants felt increased knowledge, adaptive learning design ability, media development, professionalism, and practice readiness. At the same time, participants needed more field practice, case studies, mentoring, continuous development forums, and training. These findings reinforce the evidence that teachers' professional development can improve knowledge and skills, but the sustainability of support and opportunities to apply competencies remains important [7].

From the perspective of program evaluation, quantitative and qualitative findings show that program impact should be understood as a continuous process. Good average achievement does not mean that all competencies have been mastered equally. Low areas can actually be the basis for curriculum improvement and learning strategies. Sequential explanatory design helps research connect the measure of achievement with the explanation of participants' experiences so that recommendations are not only based on scores [9].

The practical implications of the research are the need to strengthen three components. First, field practice and case studies need to be added, especially in the case of students with complex needs. Second, PPI materials, adaptive curriculum, learning evaluation, and twice exceptional need to be provided in a more applicative manner. Third, it is necessary to develop mentoring and post-program professional development forums so that the competencies obtained do not stop in the context of lectures. This direction is in line with the finding that the competency development of special education teachers requires a combination of knowledge, practical skills, and professional support [1,6,7].

CONCLUSION

This study concluded that the Special Education Additional Authority Program (KKT-PLB) at Universitas Negeri Yogyakarta (UNY) contributed positively to the development of participants' competencies in special education practices. The overall competency achievement had a mean score of 4.05 out of 5.00, which was categorized as good. The strongest competency dimensions included participants' abilities to develop learning media appropriate for students with special educational needs, adapt learning materials to students' abilities, prepare adaptive lesson plans, conduct reflective evaluations of learning, and understand the characteristics of students with special educational needs. However, several competency areas required further strengthening, particularly those related to supporting twice-exceptional learners, evaluating curriculum implementation, understanding adaptive curriculum principles, differentiating learning needs according to disability characteristics, and developing Individualized Education Programs (IEPs). These findings indicate that although the KKT-PLB Program contributed to

participants' competency development, further improvement is needed to strengthen their preparedness to address diverse and complex learning needs in inclusive education settings.

Future research should employ longitudinal designs to examine how KKT-PLB participants apply their competencies in actual educational settings, particularly in relation to teaching practices and their long-term contributions to inclusive education. Further studies could also broaden the research scope by involving participants from different institutions, comparing similar professional development programs, and examining the relationships among training components, practical experience, mentoring systems, and teacher performance outcomes. In addition, the KKT-PLB Program should further strengthen field-based practice, case-based learning, mentoring activities, and continuing professional development to support the sustainable application of competencies acquired during the program in authentic educational settings.

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CONFLICT OF INTEREST

The author states that this research was conducted without any commercial or financial relationship that can be interpreted as a potential conflict of interest.

AUTHOR CONTRIBUTION

The author fully contributes to the formulation of the main idea, the collection of library data, the analysis and interpretation of the primary text of the character, and the preparation of the manuscript. All authors have agreed on the final version of the manuscript

GENERATIVE ARTIFICIAL INTELLIGENCE USAGE STATEMENT

The author states that generative artificial intelligence (AI) was used in the preparation of this manuscript. The author acknowledges the use of generative AI to help improve language clarity and improve the grammatical structure of the manuscript. The use is done in compliance with the applicable ethical guidelines regarding the use and disclosure of generative AI in scientific research. Each author has made a substantial intellectual contribution to this work. The entire content of the manuscript has been carefully reviewed to ensure its accuracy, and the author is solely responsible for the integrity and final content of the manuscript

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