



# The Influence of the Leading Teacher Program on the Teachers' Pedagogical and Professional Competence

Yeni Luffiatun Fajariani<sup>1✉</sup>, Muthmainah<sup>2</sup>

Early Childhood Education, Yogyakarta State University, Indonesia<sup>(12)</sup>

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## Abstract

The Leading Teacher Program is a program to enable teachers to manage learning independently, reflectively, collaboratively, innovatively, and in a student-centered manner. However, in reality, many teachers have not received training in creative and innovative learning management. This study aims to analyze the influence of the Leading Teacher Program on the pedagogical and professional competence of Kindergarten teachers in Sleman Regency, Yogyakarta Special Region Province. The study used a quantitative approach. The subjects of the study were 74 Kindergarten leading teachers in Sleman Regency, Yogyakarta Special Region Province. During the training, teachers were actively involved in discussions and completed assigned tasks. The instruments used to collect data were the Leading Teacher Program Questionnaire, the Pedagogical Competence Questionnaire, and the Professional Competence Questionnaire, which had previously been tested for validity and reliability. The data analysis technique used was quantitative analysis. The results of the study showed that (1) there was a positive and significant influence of the leading teacher program on teachers' pedagogical competence, with a contribution of 68.2%. (2) There was a positive and significant influence of the leading teacher program on teachers' pedagogical competence, with a contribution of 62%. The research concludes that the better the implementation of the teacher-in-charge program, the better the pedagogical and professional competencies of kindergarten teachers. Teachers are able to understand the objectives of curriculum development, creatively process learning materials, routinely reflect on their performance, and continuously learn and develop themselves in line with technological developments.

**Keywords:** *Driving Teacher Program, Pedagogical Competence, Professional*

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✉ Corresponding author:

Email Address: [yenifajariani51@guru.paud.belajar.id](mailto:yenifajariani51@guru.paud.belajar.id) (Yogyakarta, Indonesia)

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## Introduction

Early Childhood Education, particularly Kindergarten, plays a fundamental role as the primary foundation for developing competitive human resources in the global era. The quality of its educators directly determines the quality of education at this level. Teachers in Indonesia are required to be professionals, as stipulated in Law Number 14 of 2005 on Teachers and Lecturers, which defines teachers as professional educators with the primary task of educating, teaching, guiding, directing, training, assessing, and evaluating students. Regulatory frameworks, including Government Regulation 19 of 2005 concerning National Education Standards, explicitly require educators to possess the academic qualifications and competencies necessary to act as learning agents. Fulfillment of teacher competencies significantly impacts the improvement of early childhood education outcomes. Therefore, ensuring that Kindergarten teachers master the required

competencies is not merely an administrative necessity, but an absolute prerequisite for achieving national education goals (Erika et al., 2024)

Efforts to improve the competency of kindergarten teachers face obstacles, such as gaps in academic qualifications. Despite the requirement to have a bachelor's or diploma IV (S1) degree, many kindergarten teachers do not yet have a diploma from the Early Childhood Education Teacher Education Program or Kindergarten Teacher Education Program. This non-linear qualification gap represents a structural problem. These inadequate academic qualifications have a cascading effect, hindering teachers from participating in certification programs. Certification is a crucial requirement for obtaining professional allowances, which teachers can then use to fund further study and enhance their professional skills (Yustina & Sari, 2021)

In the Special Region of Yogyakarta, there is a failure to integrate a contextual curriculum based on local culture. The results of a sample study of 70 kindergarten teachers throughout Yogyakarta show worrying data: 91.5 percent of teachers have not developed learning themes based on local culture. This failure has complex root problems: (1) Lack of Special Training: There is no specific training designed to equip teachers with the methodology for developing learning themes based on local culture; (2) Limited Teacher Knowledge: Teachers have minimal knowledge regarding the substance of local culture that can be integrated into the kindergarten curriculum; (3) Stagnant Creativity: Teachers are fixated on patterned theme development patterns from previous years (for example, circling important dates on the calendar), so they have difficulty developing new culture-based themes; (4) Weak Institutional Support: Lack of strong policies from institutions to firmly emphasize the instillation of noble cultural values in the learning process (Maryatun et al., 2021).

Teachers play a crucial role in today's education system. They are not only tasked with teaching students, but with the changing times, they are also required to be able to do many things, such as innovating in learning, optimizing student abilities by designing student *-centered* and differentiated learning, developing appropriate assessments for students, and conducting learning evaluations. Teachers also play a role in guiding students towards achieving educational goals (Aspi & Syahrani, 2022).

Education evolves with the times. What was extraordinary in the past, along with technological advancements, will become commonplace today. Therefore, teachers must continuously innovate to create something new. Various efforts are being made to build and develop the quality of education in Indonesia, one of which is through teacher quality improvement programs through training or education. (Schnitzler et al., 2021).

The objectives of National Education, as stipulated in Law No. 20 of 2003 concerning the National Education System, state that the goal of national education is to develop intellectual, spiritual, and emotional intelligence, while simultaneously fostering noble character and the health of its students. Teachers also face the challenge of developing independent, creative, and multifaceted students. Being an independent, creative, and skilled individual is a fundamental foundation for students in their present and future lives. Teachers are required to possess the competencies to guide students toward national education goals and compete in an increasingly advanced era. The quality of education is greatly influenced by the quality of the teaching staff.

Teachers, the spearhead of education, play a crucial role, serving as the primary fulcrum that determines whether or not systematic and structured learning takes place. Qualified and professional teachers are believed to be able to produce a generation of high-quality and dignified citizens, capable of facing global competition. (Rahmayanti & Sutarna, 2022). Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers, states that a teacher is a professional educator whose main task is to educate, guide, teach, assess, train, and evaluate students starting from early childhood education, primary education, secondary education and formal education.

The role of teachers today is not only as a provider of information but must also be able to act as facilitators, motivators and also guides who always strive to maximize all the potential possessed by participants. (Putri & Arifin, 2021). Data obtained from the Central Statistics Agency

in 2018 showed that 72.81% of kindergarten teachers had a bachelor's degree at their educational institution. This undoubtedly impacts the quality of teachers and their competencies.

The role of a teacher requires four competency standards to be possessed, namely: pedagogical, professional, social and personality. (Notanubun & Zainuddin, 2019) . These four competencies influence each other and support each other to become a good teacher. A teacher's ability to understand students, design and implement learning, develop students and evaluate student learning outcomes is the definition of pedagogical competence. Understanding students is very necessary for a teacher in relation to *individual differences*, namely the differences in character of each student, each of whom is a unique individual. Pedagogical competence is divided into several parts, including the following: (1) Understanding students in more depth (2) Carrying out learning designs. (3) Implementing learning (4) Designing and evaluating learning and (5) Developing students as actualization of various student potentials.

The quality of a teacher can be seen from their mastery of four competencies. These competencies support and strengthen each other to create the ideal teacher. Pedagogical competency is an absolute must for teachers and is what distinguishes them from other professions. To further develop a teacher's pedagogical competency, they must diligently develop themselves. Another equally important competency is the ability to master learning, known as professional competency.

Professional competence is the ability of teachers to master learning materials more broadly and deeply. This competence includes mastery of subject curriculum material and scientific substance that covers the learning materials and mastery of the structure and methodology of science. Professional competence includes: (1) Mastery of material, concepts, structures and scientific thought patterns that can support the learning mastered (2) Mastery of competency standards and basic competencies for each subject or field mastered (3) Carrying out creative development of mastered learning materials (4) Carrying out continuous professional development by carrying out reflective actions (5) Using technology in communicating and carrying out self-development (Fitriani, 2020) .

Based on the results of initial observations, it was found that Early Childhood Education Programs (ECEP) teachers have not mastered professional competencies in implementing learning. Some teachers still do not manage learning creatively by using interesting methods or creating differentiated learning. (Saripudin, 2019) , stated that professional competency in ECEP teachers is still relatively low as seen in how to package and develop the teaching and learning process in early childhood through play activities in the learning process. Some teachers still use the same learning media or methods for children such as only using 1 type of LK (Worksheet) or doing the same activity for all children or some teachers do not have the awareness to continuously upgrade their abilities continuously by participating in various training so that their competence can increase.

Government Regulation No. 19 of 2005 explains the National Education Standards, the explanation of Article 28 paragraph (3) point a states that pedagogical competence is the ability to manage student learning, design and implementation of learning, evaluation of learning outcomes and development of students to actualize their various potentials, while professional competence in the National Education Standards, the explanation of Article 28 paragraph (3) point c is the ability to master learning materials broadly and deeply which allows guidance for students to meet the competency standards set out in the National Education Standards. The importance of professional ECEP teachers is a necessity because professional ECEP teachers will develop the *golden age* . According to NAEYC (*National Association for the Education of Young Children*), early childhood is children aged between 0 and 8 years who receive educational services in child care centers, family child care *homes* , public and private preschools, kindergartens and elementary schools.

*The Golden Age* is known as a child's first 1,000 days, which is a sensitive period for children's learning, starting from the time they are in the womb until the first 1,000 days of life. Early childhood or childhood is a period that requires extra attention because it is a period that is fast and easy to observe and measure. If developmental obstacles occur, intervention will be easy to achieve perfect maturity. During this period, truly professional educators are needed, knowing how to educate and teach children well according to their developmental level. However, in reality, the professionalism

of ECEP teachers as educators is still debated. In the field, there are still many ECEP teachers who do not meet educational standards and only have minimal education, which affects their pedagogical competence. A survey conducted by Manalu (2022) stated that only 42.5% of ECEP teachers have a linear education or equivalent to a BA/D-IV ECEP, 30% have education other than BA ECEP (non-linear), 12.5% are high school graduates, then the rest have a D-II education.

The reality faced in the current era is that not all teachers have these competencies well, various innovations have been carried out by the government with the aim of improving the quality of teachers in Indonesia. One of the innovations carried out by the government to improve the quality of teachers is by launching the Teacher Mover Program (TMP). This program is present as one of the efforts of the Government, especially the Ministry of Education of the Republic of Indonesia, in facilitating teachers to improve their competencies well. The Teacher Mover Program (TMP) is designed with various training activities in it such as *Learning Management System* (LMS) assignments, *Focus Group Discussions* (FGDs), differentiated learning, program development that impacts students, sharing good practices that have been carried out in schools is expected to be one of the efforts to improve the pedagogical competence and professional competence of teachers in the implementation of learning. The Teacher Mover Program (TMP) is a flagship program of the Ministry of Education and Culture launched by the Minister of Education of the Republic of Indonesia, Mr. Nadiem Makarim, within the framework of the Merdeka package. The Teacher Mover Program itself is included in the 5th episode in the series of launching the Merdeka Curriculum.

According to the Ministry of Education and Culture, a Leading Teacher is a learning leader who encourages the holistic growth and development of students, actively and proactively developing other educators to implement student-centered learning. Furthermore, a leading teacher also serves as a role model and agent of transformation in the educational ecosystem to realize the profile of a Pancasila Student, namely to produce individuals who are: faithful, devoted to God Almighty and have noble morals, globally diverse, cooperative, creative, critical, and independent. (Mansyur & Bunyamin, 2021). The Teacher Mover Program is one of the government's flagship programs, launched with the aim of educating teachers to become learning leaders, utilizing a variety of materials that can also improve communication skills. According to its official website, the Teacher Mover Program is designed to produce as many agents of transformation as possible within the education ecosystem. Through the Teacher Mover Program, the Ministry of Education and Culture provides opportunities for the nation's best teachers to bring about real change in Indonesian education. (Lubis, 2023).

In relation to the above, the government must address the problems of education, including the issue of teacher competency, involving continuous teacher professional development, integration of digital technology, strengthening of contextual curriculum, and project-based learning. Implementation can be done in the following ways: (1) The Central and Regional Governments must work together to create a full scholarship scheme for S1 Teacher Education for Kindergarten teachers who currently have non-linear status. This scheme must be accompanied by a post-graduation service contract, in order to address the qualification deficit which is the root of the problem of professionalism and certification; (2) The government is obliged to coordinate the planning of teacher needs nationally to ensure the distribution and placement of teachers in Special Regions in accordance with relevant academic qualifications.

Based on the background, the author is interested in researching the extent to which the Leading Teacher Program (LTP) can influence the improvement of teacher quality in implementing learning and increasing teacher professionalism.

## Methodology

The research used a quantitative approach. The subjects were 74 Kindergarten level driving teachers in Sleman Regency, Yogyakarta Special Region Province. The driving teacher program is a program designed to make teachers have pedagogical and professional competencies. Pedagogical competency relates to the competency of managing learning in the classroom, and professional

competency relates to the ability to master learning materials broadly and deeply that enables guidance of students to meet the established competency standards. The data collection technique used a questionnaire, namely: (1) the driving teacher program questionnaire with 5 indicators consisting of 17 items; (2) the pedagogical competency questionnaire with 8 indicators consisting of 14 items; and (3) the professional competency questionnaire with 5 indicators consisting of 15 items. Alternative answers to the questionnaire used a Likert Scale. Before being distributed to the research sample, a questionnaire trial was conducted on the same population (but not the research sample) of 30 teachers. Based on the trial results, all items in the questionnaire were declared valid and reliable. Data analysis techniques used: quantitative descriptive analysis to describe respondents and research variables, prerequisite tests using regression, and hypothesis testing using regression analysis techniques.

## Results and Discussion

The implementation of the Leading Teacher Education (LTE) involves two main components: online learning (independent and with a facilitator) and offline activities (workshops and individual mentoring). For large-scale offline activities, the Center for Leading Teachers (CLT) of the Special Region of Yogyakarta utilizes facilities available in Sleman Regency. The key location for the workshops is the Yogyakarta Education Quality Assurance Center (EQAC), located in Kalasan, Sleman. In addition to workshops, individual mentoring is an essential component conducted periodically in each school. This mentoring is facilitated by practicing teachers. The Leading Teacher Education program is implemented over approximately six months for the core curriculum, encompassing online learning, individual mentoring, and a series of workshops. The LTE curriculum is structured into key modules, such as Module 1: Paradigm and Vision of Leading Teachers, and Module 2: Student-Centered Learning Practices. A crucial aspect of LTE is its emphasis on Real Action. Prospective Leading Teachers not only learn leadership theory but are also required to implement real, measurable changes in their school environments. This transformation from theoretical input to impact-based output is the primary focus of program evaluation.

### Research result

This study collected data from three questionnaires measuring the teacher-led program, pedagogical competence, and professional competence. The quantitative descriptive analysis consisted of primary data on each variable, as shown in the table 1.

**Table 1 Results of Descriptive Statistical Analysis**

	N	Minimum	Maximum	Mean	Standard Deviation
Leading Teacher Program	74	51 .00	68 .00	60.9730	5.60326
Pedagogical Competence	74	45 .00	60 .00	53.4054	5.23926
Professional Competence	74	54 .00	72.00	64.1081	5.72322

The categorization of respondents' answers is based on several criteria. Variable tendencies are categorized into three categories, namely high, medium, and low, using the following formula:

**Table 2. Variable Tendency Categories**

Category	Score Range
Low	$X < M - 1SD$
Currently	$M - 1SD \leq X < M + 1SD$
Tall	$M + 1SD \leq X$

Categorization into three groups aims to determine the subjects' general position. Based on the categorization of each variable, the following results were obtained.

### Leading Teacher Program

A score range of 1-4 was obtained from respondents using data from the teacher-driven program variable. *The* teacher-driven program variable was then categorized based on respondents' scores. The categorization results are summarized in the following table:

**Table 3. Research Results Categories of the Leading Teacher Program Variables**

Category	Score Range	F	Presentation
Low	$X < 55.37$	19	25.70 %
Currently	$55.37 \leq X < 66.58$	40	54.1 %
Tall	$X > 66.58$	15	20.3 %

Based on the categories of respondents' answers in Table 13, out of 74 respondents, 19 or 25.70 % of the total respondents were in the low category, while 40 or 54.10 % of the total respondents were in the medium category. Furthermore, 15 or 20.30 % of the total respondents were in the high category. These results indicate that most of the respondents were participants in the Teacher Leader Program. gave a moderate score in filling out the Teacher Leader Program questionnaire.

### Pedagogical Competence

A score range of 1-4 was obtained from respondents using data from the pedagogical competency variable. *The* pedagogical competency variable was then categorized based on the scores obtained from the respondents. The categorization results are summarized in the following table:

**Table 4. Categories of Research Results of Pedagogical Competence Variables**

Category	Score Range	F	Presentation
Low	$X < 48.17$	17	23 %
Currently	$48.17 \leq X < 58.64$	38	51.4 %
Tall	$X > 58.64$	19	25.7 %

Based on the categories of respondents' answers in the table 14, of the 74 respondents, it is known that 17 respondents or 23 % of the total respondents are in the low category, then 38 respondents or 51.4 % of the total respondents are in the medium category. Furthermore, 19 respondents or 25.7 % of the total respondents are in the high category. Based on the categorization, it can be seen that most of the respondents are participants in the Teacher Leader Program. gave a moderate score in filling out the Pedagogical Competence questionnaire.

### Professional Competence

A score range of 1-4 was obtained from respondents using the emotional regulation variable data. *The* professional competency variable was then categorized based on the scores obtained from the respondents. The categorization results are summarized in the following table:

**Table 5. Categories of Research Results of Professional Competence Variables**

Category	Score Range	Amount	Presentation
Low	$X < 58.385$	16	21.6 %
Currently	$58.385 \leq X < 69.831$	42	56.8 %
Tall	$X > 69.831$	16	21.6 %

Based on the categories of respondents' answers in Table 15, out of 74 respondents, 16 or 21.6 % of the total respondents were in the low category, while 42 or 56.8 % of the total respondents were in the medium category. Furthermore, 16 or 21.6 % of the total respondents were in the high

category. The categorization results show that the majority of respondents participating in the Teacher Leader Program gave a moderate score in filling out the Professional Competence questionnaire.

### Coefficient of Determination

The coefficient of determination is used to measure how far the model can explain the variance of the dependent variable. (Ghozali, 2018) . The coefficient of determination value is between zero and one. The closer the coefficient of determination is to 1, the greater the influence of the independent variable on the dependent variable. The results of the coefficient of determination ( $R^2$ ) are presented in Table 6 below.

**Table 6. Results of the Determination Coefficient**

Variables	R Square
Leading Teacher Program > Pedagogical Competence	0.682
Leading Teacher Program > Teacher Professional Competence	0.620

Based on the results of the determination coefficient test above, the  $R^2$  ( *R Square* ) value of the regression model is used to determine the extent to which the independent variable is able to explain the dependent variable. Based on the table above, it is known that <sup>the  $R^2$  value</sup> on pedagogical competence of 0.682, this means that 68.2% of the variation in the dependent variable, Pedagogical Competence, can be explained by the variation in the independent variable, namely the Leading Teacher Program. While the remaining (100% - 68.2% = 31.8%) is influenced by other variables outside this study.

With a teacher professional competency of 0.620, this means that 62% of the variation in the dependent variable, Teacher Professional Competence, can be explained by variations in the independent variable, the Teacher Leader Program. Meanwhile, the remaining (100% - 62% = 38%) is influenced by other variables outside this study.

### Simple Linear Regression Analysis

Simple linear regression analysis is an analysis used to measure the strength of the relationship between one independent variable and one dependent variable, and also to show the direction of the relationship between the independent variable and the dependent variable. The following are the results of a simple linear regression analysis presented in the table below.

**Table 7. Simple Linear Regression Results**

Variables	B
Leading Teacher Program > Pedagogical Competence	
Constant	6,323
Leading Teacher Program	0.772
Leading Teacher Program > Teacher Professional Competence	
Constant	15,073
Leading Teacher Program	0.804

Based on the results of the simple linear regression analysis in the table above, the following regression model was obtained for the influence of the driving teacher program on pedagogical competence:

$$Y = 6.323 + 0.772X$$

Based on the simple linear regression model above, the following information was obtained.

1) The constant is 6.323, which means that if there is no change in the value of the independent

variable (Teacher Leader Program), then the value of the dependent variable (Pedagogical Competence) is 6.323. 2) The regression coefficient on the Leading Teacher Program variable is 0.772 and is positive, meaning that if the Leading Teacher Program variable increases by 1 point significantly, then the Leading Teacher Program variable will increase the value of the Pedagogical Competence variable by 0.772.

Based on the results of the simple linear regression analysis in the table above, the following regression model was obtained for the influence of the driving teacher program on pedagogical competence:

$$Y = 15.703 + 0.804X$$

Based on the simple linear regression model above, the following information was obtained.

1) The constant is 15.703, which means that if there is no change in the value of the independent variable (Teacher Leadership Program), then the value of the dependent variable (Teacher Professional Competence) is 15.703. 2) The regression coefficient on the Leading Teacher Program variable is 0.804 and is positive, meaning that if the Leading Teacher Program variable increases by 1 point significantly, then the Leading Teacher Program variable will increase the value of the Teacher Professional Competence variable by 0.804.

### Hypothesis Test Results

Hypothesis testing is used to determine whether the independent variable influences the dependent variable and how significant its influence is in the regression model. This study uses simple linear regression analysis and a t- test for significance . By using a sample of 74, independent variable 1 and a significance level of 5%, the ttable obtained is  $(\alpha/2; nk) = (0.025; 73) = 1.992$ . The following are the results of the hypothesis test data processing that has been carried out as follows:

**Table 8. Hypothesis Test Results**

Variables	Thitung	Sig.
Leading Teacher Program > Pedagogical Competence	12,426	0.000
Leading Teacher Program > Teacher Professional Competence	10,837	0.000

Based on the results of the t-test, presented in the table above, it was obtained that the Leading Teacher Program variable has a significance value of 0.000, this value is smaller than 0.05. Meanwhile, for the calculated t, the value obtained was  $12.426 > t$  table (1.992), so the leading teacher program variable has an effect on the pedagogical competence variable. So the first hypothesis, H1: The Leading Teacher Program variable has a partial significant effect on the "accepted" Pedagogical Competence variable.

The influence of the driving teacher program on teacher professional competence has a significance value of 0.000, this value is smaller than 0.05. Meanwhile, for the calculated t value obtained is  $10.837 > t$  table (1.992) so the Driving Teacher Program variable has an effect on the teacher professional competence variable. So the second hypothesis, H2 : The Driving Teacher Program variable has a partial significant effect on the "accepted" Teacher Professional Competence variable.

### Discussion

#### The Influence of the Leading Teacher Program on the Pedagogical Competence of Kindergarten Teachers

Based on the research results, the driving teacher program on pedagogical competence in kindergarten teachers that has been carried out through the results of the questionnaire and then conducting a t-test shows that there is a positive influence between the driving teacher program on the pedagogical competence of kindergarten teachers. The results of data processing t-count value  $(12.426) > t$  table ( 1.992 ) and sig 0.00 <0.05, this means that Ho is rejected and Ha is accepted. This

means that if the driving teacher program is carried out well it will have an impact on the pedagogical competence of teachers. This is in line with research conducted by (Yustina & Sari, 2021) that the Driving Teacher Program as intensive training and professional development that is actively followed by teachers is effective in improving pedagogical abilities.

In line with research (Jannah & Naufal, 2023), which explains that frequently participating in teaching practice programs can improve teachers' pedagogical skills. Teaching practice is also an agenda item in the Leading Teacher Program workshop. Teaching practice begins with teaching preparation, namely preparing a Lesson Implementation Plan (LIP), whose material is contained in modules covering differentiated learning and social-emotional learning. During the teaching implementation stage, practicing teachers will visit participating schools in the Leading Teacher Program to tutor participants and provide feedback on their teaching practice.

In the teaching process, teachers need to receive evaluation and feedback (Prabowo & Wulandari, 2022). Practicing teachers accompany the leading teachers during their teaching practice to provide feedback and input, and jointly evaluate the implementation of the teaching practice. This is one factor that can improve the quality of teachers' teaching, which will undoubtedly impact their pedagogical competence.

The results of the determination test showed that the influence of the driving teacher program on pedagogical competence of 68.2 %. This means that the independent variable of the teacher driving program has an influence on the dependent variable of pedagogical competence of 68.2 % and the remaining 31.8 % is influenced by other variables not included in this study. Another variable that influences teacher pedagogical competence is the existence of updates to the curriculum and educational policies initiated by the school (Pinnow & Bridges, 2022).

Teaching experience, especially in challenging or diverse contexts, can enhance teaching effectiveness and demonstrate a teacher's high level of professional competence. Teachers with diverse teaching experiences tend to be more adaptable and innovative in their practice (Whitcomb, 2020). This is also inseparable from school support and ongoing coaching for teacher professional development. Coaching integrated into daily classroom practice can substantially improve teaching quality (Besser et al., 2022).

From a socio-cultural context, the place where teachers teach also influences pedagogical abilities, including differences in educational expectations and values held by the community (Besser et al., 2022). Good socio-cultural values in teaching will create a positive bond or relationship between teachers and students, which can increase student motivation and engagement, resulting in more effective pedagogical activities (Cohen & Hill, 2022). Interviews with several leading teachers revealed that the reason for the still-moderate results is the varying abilities of each teacher in applying the material received during the Leading Teacher Program in their respective school environments.

Qualified early childhood education teachers have better pedagogical competence than non-preschool education teachers (Herlina, 2022). Non-linear early childhood education teachers have low pedagogical competence due to gaps in experience and training (Abdillah, 2023). Certified or academically qualified teachers generally demonstrate higher levels of competence compared to their uncertified or less formally educated counterparts (Raihan et al., 2024). Mismatched qualifications and non-linear educational backgrounds have been identified as barriers to achieving optimal levels of competence (Abdillah, 2023). Institutional, regional, and socio-economic factors are significant influences on the development and implementation of teacher competence (Ha et al., 2025).

### **The Influence of the Leading Teacher Program on the Professional Competence of Kindergarten Teachers**

Based on the research results, the driving teacher program on the professional competence of kindergarten teachers which has been carried out through the results of the questionnaire and then conducting a t-test shows that there is a positive influence between the driving teacher program

on the professional competence of kindergarten teachers, the results of the data processing t-count value ( 10,837 ) > t table ( 1,992 ) and sig 0.00 < 0.05, this means that  $H_0$  is rejected and  $H_a$  is accepted.

The results of the determination test showed that the influence of the teacher-driven program on teacher professional competence was 62 %, with the remainder influenced by other variables not included in the study. (Christenson & Pohl, 2020) stated that another factor influencing teacher professional competence is teacher participation in ongoing and relevant practice-based training programs. Training that focuses on developing specific skills and effective teaching strategies has been shown to be more effective than one-off training.

The availability of digital resources and modern technology plays a crucial role in supporting effective teaching. Access to adequate technology and teaching aids can expand teaching methods and increase student engagement (Desimone & Garet, 2021). In addition to digital resource facilities, teacher well-being is also a factor influencing professional competence (Papay, 2023)

The level of formal education and the relevance of academic background influence teachers' professional competence. Certified and early childhood education teachers generally demonstrate higher professional competence compared to those with non-certified or non-linear educational backgrounds (Wati, 2023). Professional development programs, including structured mentoring, workshops, and competency-based training, have been identified as important factors in improving teacher competence. Effective training is characterized by sustainability, contextual relevance, and comprehensive coverage of professional skills (Raihan et al., 2024). Institutional factors (e.g., working conditions, administrative support), regional disparities, and socioeconomic status influence the development and application of competencies (Ha et al., 2025). Higher academic qualifications, particularly in early childhood education, are correlated with higher professional competence. Continuous, contextual, and ongoing training programs significantly improve pedagogical and professional skills. This aligns with theories advocating lifelong learning and reflective practice in teacher development (Tutupary et al., 2023). Therefore, professional development programs should be designed to be comprehensive, sustainable, and contextually relevant, incorporating blended learning approaches and multi-stakeholder collaboration to effectively enhance teacher competencies across pedagogical, professional, social, and personal domains (Ulfah et al., 2023).

## Conclusion

Based on the results of the discussion, it can be concluded: First, there is a positive and significant influence of the Leading Teacher Program on the pedagogical competence of kindergarten teachers in Sleman Regency. This shows that the better the implementation of the leading teacher program, the higher the pedagogical competence of kindergarten teachers who participate in the leading teacher program. If teachers are able to apply all the materials received during the PGP implementation, improve various method techniques, are given the widest possible opportunity and space to develop themselves and the curriculum, and receive full support from the surrounding environment well, it will improve pedagogical competence. The leading teacher program can increase the pedagogical competence of kindergarten teachers by 68.2%. Second, there is a positive and significant influence of the leading teacher program on the professional competence of kindergarten teachers in Sleman Regency. This shows that the better the implementation of the leading teacher program, the higher the professional competence of kindergarten teachers who participate in the leading teacher program. If teachers are able to understand each development objective well, always innovate to process learning materials creatively, reflect on their performance regularly and are able to continue learning to develop themselves according to technological developments, it will improve professional competence. The driving teacher program was able to increase the professional competence of kindergarten teachers by 62.0%.

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