



Keeping Teacher Professional Development Performance in Teaching: The Role of Interest Development in the Era of Technological Advance

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ABSTRACT

Objective: This study examines teachers' professional performance in more depth through interest development in the era of technological advancement. **Method:** The research approach uses a mixed-method research design with an explanatory research method. The population of this study were teachers of Teacher Professional Education (TPE) at Halu Oleo University. The number of respondents in this study was 340 people. The data collection process used questionnaires, discussion forums, and documents. **Results:** The results of the study indicate that 1) the clarity and structure aspects require improvement in the ability to develop teaching that combines material content with relevant character values in the digital era, 2) the practical relevance aspect requires the development of teaching skills that combine student learning experiences with learning objectives, 3) the cognitive activation aspect has been carried out by teachers well through periodic teaching evaluations, and 4) the collaboration interest aspect needs to be improved so that the problems faced by each teacher have more varied input for resolution. From the findings, it can be concluded that the cognitive activation aspect of interest development has affected the quality of teacher teaching. However, interest development is essential in achieving educational quality because, in professional development, teachers make various efforts to improve their skills or competencies to carry out teaching tasks. **Novelty:** The findings show novelty that contributes to the understanding of knowledge about the interesting aspect of teacher development as the most important part of improving the quality of teaching. Two important points of novelty are self-reflection and self-competence. Improvement must be carried out by developing science and technology so that the teaching can utilize digital technology as a learning resource.

INTRODUCTION

Along with the development of human civilization marked by the advancement of science and technology, it demands the quality of human resources. This cannot be separated from educational institutions that must produce quality graduates. Teaching staff or teachers with professional performance are needed to produce graduates. This means that teacher professionalism can follow the changes occurring along with the needs of potential graduates who must be relevant to work or industry demands. Thus, teachers have a vital role as the primary implementers of achieving educational goals and must pay attention to their professional identity in their performance. Teachers must understand the concept of their attribution identity, projection, development, and transformation (Berbegal et al., 2024).

This situation presents a significant challenge for teachers and can cause problems for those unable to keep up with the changes. In schools, teachers face the challenge of

Timely and relevant professional development (PD) in their work and effective in stimulating instructional change. This creates tension between external accountability demands, school improvement goals, and the diverse and context-dependent needs of teacher professional learning. Another problem currently faced by teachers from elementary to high school levels is the administrative burden so that problems related to the implementation of teaching and learning are less of a concern. This problem is also experienced by TPE teachers from elementary to high schools in the Halu Oleo University environment. This condition affects the quality of teacher performance, especially in implementing teaching and learning. Moreover, changes in science and technology that are developing very rapidly can affect the quality of professional performance of teachers.

From these problems, the research gaps that this research wants to highlight can be the answer to the problem findings. This research gap focuses on studying professional development through the internal factors of teachers. Thus, this research study can contribute to developing teacher professionalism based on the educational demands in the era of globalization. From the study of several previous studies and references, professional teachers have considerable competency quality challenges in the era of the Industrial Revolution 4.0 and the Environment 5.0 to perform according to these needs. Teachers must have educational competence, competence for technological commercialization, competence in globalization, competence in future strategies, and counselor competence to produce highly competent students (Hulu, 2023; Ismail et al., 2020; Zebua, 2023). Therefore, the TPE program is one of the programs that is used to improve teacher professional development. It means that teachers' continuous professional development helps them improve by acquiring new skills and improving their competence (AbdulRab, 2023; Mgaiwa & Milinga, 2024; Putri et al., 2024). Many other studies have concluded that professional development activities positively impact teacher achievement and performance (Aliya & Salsa, 2022; Ashari, 2020; Kuntarto & Sugandi, 2018). Even a study shows that teacher training and development in Indonesian school's impact service quality by increasing teacher competency, directly increasing teacher professional performance (Sibuea, 2023).

This phenomenon is quite interesting to study in more depth related to teacher interest development in improving their professional performance with the dynamics of problems of improving the quality of education, welfare problems, or education delivery systems that have policy changes. Interest development refers to self-development and encouraging one's potential (Renninger & Hidi, 2022; Sims et al., 2023). So, teachers must influence the planning and initiation of teacher professional development (Hauge & Wan, 2019). Teacher professional development is a reciprocal concept in harmony with social and personal responsibility. PD also reforms teaching practices that meet current needs (Hayes et al., 2024; Pringle et al., 2020). So, educational institutions must be able to align the duties and rights of teachers with their institutional positions, as well as bridge teachers in facing the challenges of professional development in the era of globalization (Shi, 2022).

From several previous research studies and the problems found, professional development for quality performance in providing teacher education is significant. Thus, the gap in this study is seen in interest development, which is part of teacher professional development, so its positive impact on teacher performance can be understood. Performance in this study is related to teacher teaching competency, which teachers must possess as required in Law No. 14 of 2005 on Teachers and Lecturers.

However, professional development for lecturer performance today is not only related to the four competencies they must possess according to the regulations in the law. However, competence or mastery of technology is a requirement. So, the novelty that needs to be studied more deeply in the interest development aspect of TPE teachers includes the need for professional development, which is caused by the development of globalization. Interest development is a factor involved in activities to improve the professional development of teachers.

This study examines teachers' professional performance in more depth through interest development in the era of technological advancement. Thus, how is teachers' professional performance quality through interest development? This study aims to determine teachers' professional performance in education through developing their interests. The study's results are expected to contribute to the professional development of teacher performance through interest development. In practice, educational institutions can balance the rights and development of teacher duties so that quality education can be implemented according to the needs of the era of technological advancement.

RESEARCH METHOD

General Background

The research approach uses a mixed-method research design with an explanatory research method. This study uses a mixed method, first collecting quantitative data and then collecting qualitative data. This study helps researchers understand why something happens (Creswell, 2012; Creswell & Creswell, 2018; Creswell, J.W., Clark, 2017). This study aims to determine how teachers maintain their professional performance in teaching through developing interests.

Participant

The population of this study was TPE (Teacher Professional Education) teachers at Halu Oleo University. The researcher used a proportional random sampling technique, which takes samples randomly from all population members without considering the strata in the population. The number of respondents in the study was 340 people. The selection of TPE in-service teachers is designed to improve the professional competence of teachers already in teaching positions so that teachers who take part in TPE have a higher understanding and skills in pedagogy and classroom management. In addition, teachers who undergo TPE tend to commit to continuous professional development. In other words, selecting TPE in-service as respondents provides a more representative picture of interest development as part of professional development toward performance quality. The following is presented in

Table 1. Demographics of respondents.

Demographic	%
Gender	
Male	30.00%
Female	70.00%
Teaching Education Level	
Elementary School	61.50%
Junior High School	19.40%
Senior High School	19.10%

Instrument

The questionnaire is an instrument used to collect data. Using instruments as a data collection tool is considered adequate in large numbers and quickly. The researcher also held a discussion forum to strengthen the questionnaire's data and help researchers analyze the data. Researchers also use documents taken from theory and journals to support the data. The questionnaire was compiled using the Likert Summated Rating (LSR) with the following alternative answers:

- SA: Strongly Agree, with a score of 5.
- A: Agree, with a score of 4
- QA: Quite Agree, with a score of 3
- D: Disagree, with a score of 2
- SD: Strongly Disagree, with a score of 1

The questionnaire of interest development in professional development performance has four dimensions, namely 1) clarity and structure, 2) practical relevance, 3) cognitive activation, and 4) collaboration. The instruments used in this research have been used in previous research and published in journals (Richter & Richter, 2023). hus it can be said that the instrument used is valid and reliable.

Table 1. Dimension and questions for interest development in professional development performance

Dimension	Items for Questions
1 Clarity and structure	<ol style="list-style-type: none"> 1. Do you clearly understand and design learning objectives? 2. Do you conduct teaching activities in a way that is easy to understand? 3. Do you use teaching time efficiently? 4. Do you always explain the teaching agenda clearly at the beginning of the meeting? 5. Do you could design comprehensive and interconnected teaching in a meaningful way?
2 Practical relevance	<ol style="list-style-type: none"> 1. Do you provide a discussion of teaching content with real examples and practices? 2. Is the teaching you do your current professional practice? 3. Are the teaching activities you do relate to the discussion of problems in your daily professional life? 4. What do you learn from this teaching that applies to your professional practice?
3 Cognitive activation	<ol style="list-style-type: none"> 1. Is the knowledge you have previously used to perform quality (teaching) performance? 2. Do you carry out tasks in a structured manner and conduct comprehensive evaluations? 3. Can you reflect on your professional duties in teaching activities? 4. Is the feedback you receive from your performance an indicator of your professional development? 5. Does the teaching you do offer opportunities to develop work routines? From the work activities you do provide a way for 6. Do you want to develop the quality of your performance in the future?
4 Collaboration	<ol style="list-style-type: none"> 1. Do you collaborate with colleagues to intensively discuss teaching or performance issues? 2. Does your work activity offer opportunities to work on assignments with colleagues? 3. Do you enjoy working in small groups?

Technique Data Analysis

The quantitative data analysis technique uses quantitative descriptive statistical analysis (Arzak & Prahani, 2023; Rizki et al., 2023), which is taken from the results of distributing the questionnaire. The descriptive statistics presented are in the form of percentages and averages, which are presented using tables according to the criteria in the analysis of interest development. The qualitative data analysis technique is used to narrate the data from the questionnaire that has been processed using descriptive statistics. The following is the research procedure in Figure 1.

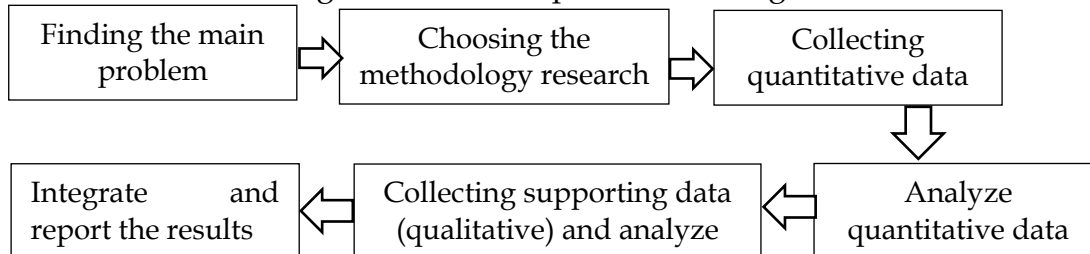


Figure 1. Procedure of research.

RESULTS AND DISCUSSION

Results

The data from the questionnaire analysis are presented in the form of a graph below according to the dimensions of the interest development analysis to determine the perspectives of TPE teachers on professional performance. The results of the data analysis found that internal factors originating from teachers are the most important part of producing quality teacher professional performance, primarily through the aspect of developing teacher interest. This means that the development of this interest becomes a motivation that impacts teacher performance. So, this finding answers the focus of the research problem. Each dimension needs to strengthen interest development so that the quality of teacher professional performance can be improved. Overall, from the percentages that have been presented, interest development is an essential aspect of developing teacher professionalism. This is related to the performance that teachers want to achieve to meet current global needs and the demands of professional competence that teachers must have. Even professional development impacts collaborative work and student learning.

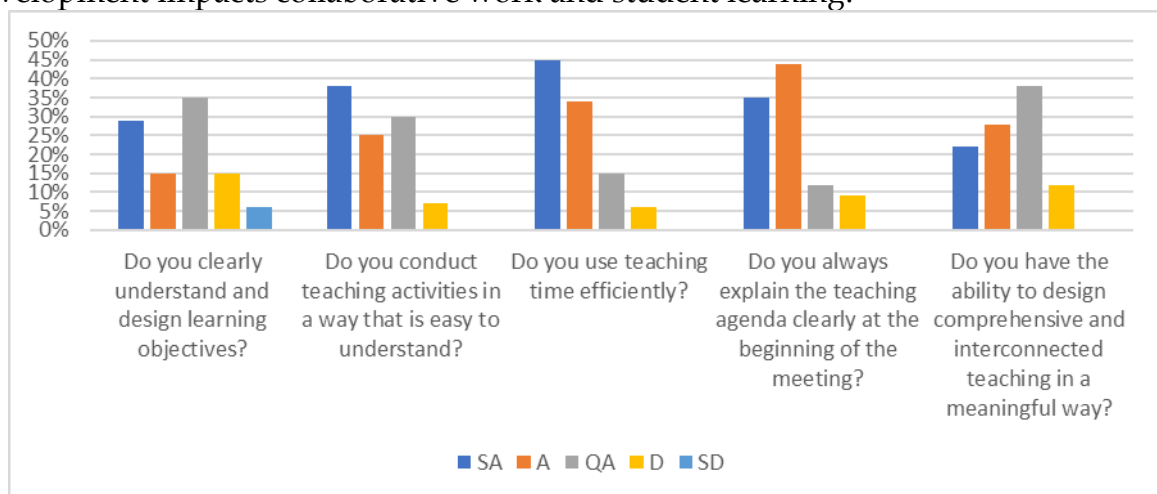


Figure 2. Clarity and structure for interest development in professional development performance.

In Figure 2, it is known that teachers have performed well in teaching activities because they are carried out clearly and easily understood by students, and even the teaching time available is used efficiently to achieve learning objectives. In addition, teachers also always explain the objectives and learning activities at the beginning of the meeting so that students can easily follow the learning activities. Meanwhile, the clarity and structure aspect that needs to be improved is the skill in designing learning objectives relevant to current developments and designing more comprehensive teaching with the character values to be achieved so that learning activities in the classroom become more meaningful. This means that students not only gain knowledge but also develop thinking patterns.

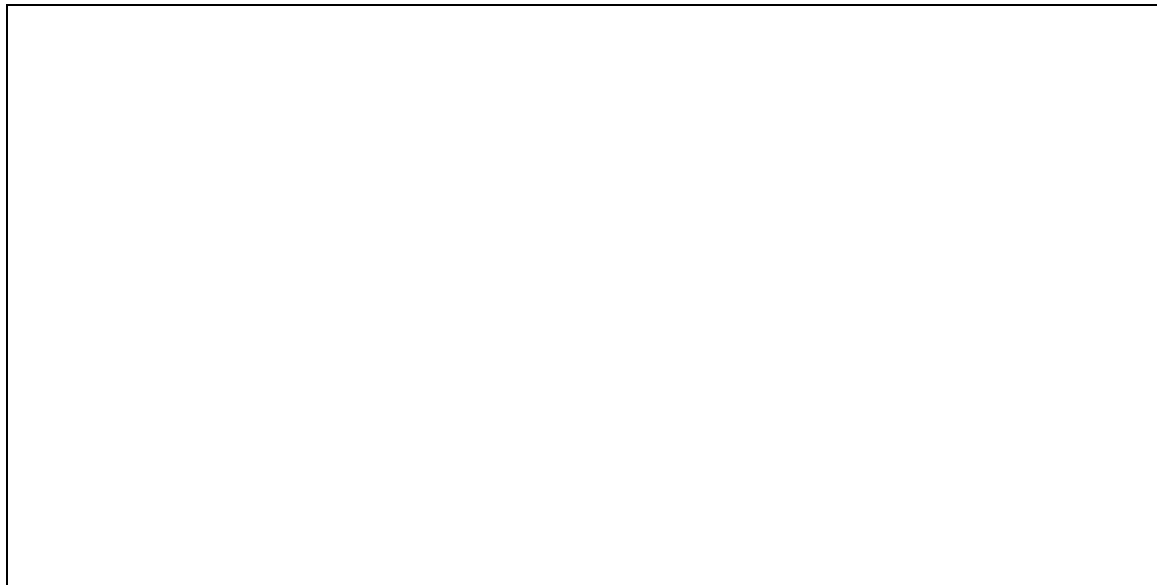


Figure 3. Practical relevance for interest development in professional development performance.

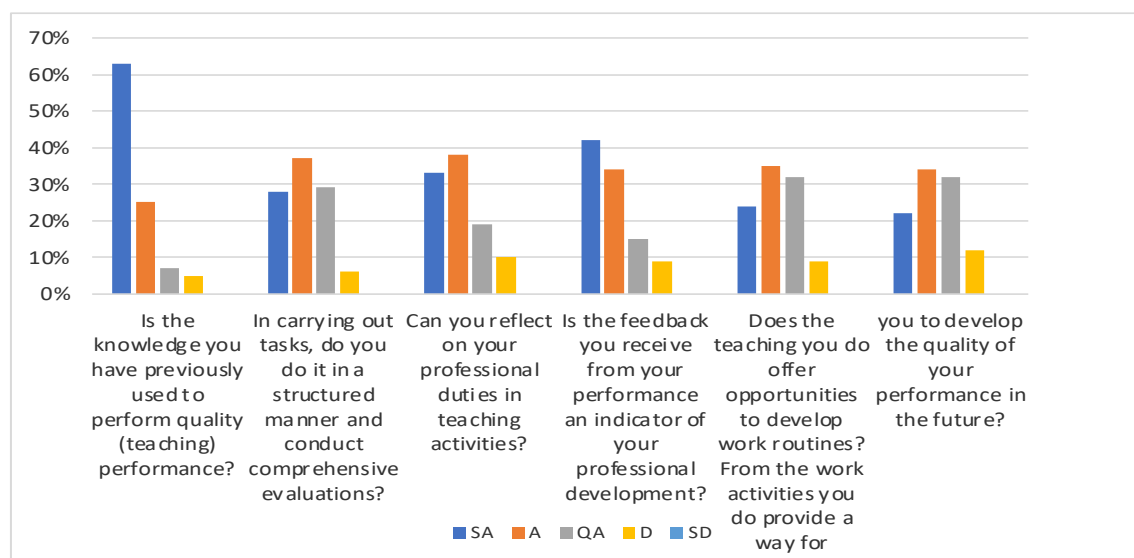


Figure 4. Cognitive activation for interest development in professional development performance.

Figure 3 shows that teachers practice teaching professionally, which is oriented towards professional performance to produce quality learning relevant to needs. Meanwhile, the practical relevance aspects that teachers must consider are as follows: 1) teaching must be carried out under the context of students' learning experiences and real lives so that the character values to be achieved can be understood comprehensively. 2) Teachers must build basic concepts related to the meaning of holistic teaching professionals so that they can be used to find problems faced in teaching activities.

Figure 4 shows that cognitive activation is an interest development aspect that teachers have carried out very well. This can be seen from the percentage level that dominates the answers that strongly agree with the questions given. This means that teaching performance involves previous knowledge and teaching activities in a structured manner. In addition, teachers evaluate teaching according to the feedback received to develop teaching activities at the next meeting.

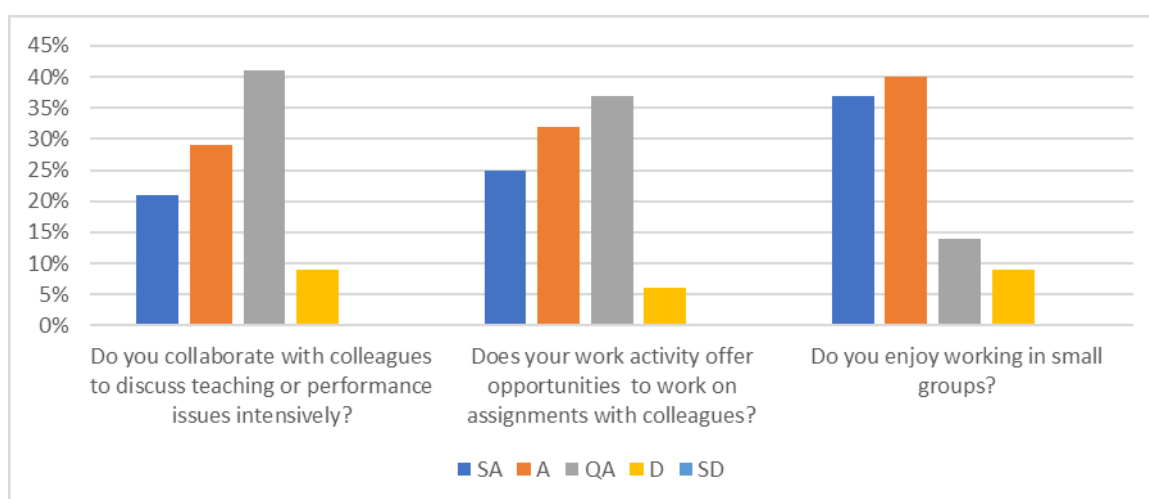


Figure 5. Collaboration for interest development in professional development performance.

Figure 5 found that teachers still have shortcomings in carrying out collaborative activities. The three questions show that discussions of teaching problems have not been maximized, so collaborative activities related to teaching management or solving teaching problems have not been carried out intensively. However, when viewed from working in groups, it shows a good level of interest.

Discussion

Findings on the clarity and structure aspect found the importance of improving teacher skills in designing comprehensive learning objectives so that they can be linked to real-life contexts as a form of responding to the challenges of globalization. Moreover, changes in social life in a society that has experienced many changes along with the development of knowledge and technology have demanded quality human resources. This means teachers have a significant role in organizing quality teaching and learning. So, teachers must understand the relationship between knowledge and practice as quality preparation. Organizing quality education with current conditions is oriented towards transferring knowledge and can also build students' thinking patterns under their character.

The practical aspect found that TPE teachers must pay attention to student learning experiences. Teachers who prepare teaching and learning in the context of students' lives are a way for teachers to teach students independent learning and self-development (Darling-Hammond et al., 2024; Thomas, 2019). The cognitive activation aspect shows that the fascinating development of TPE teachers is excellent, and this can be seen from their professional teaching performance activities. The discussion forum data strengthens this finding, which found that TPE teachers try to carry out teaching activities according to their competence and knowledge. Even the teachers evaluate the teaching activities that have been carried out according to feedback from students and the learning outcomes at the meetings that have been held. As is known, cognitive activation in teacher professional development is one dimension of the quality of teaching. From the results of previous studies, it is relevant to the current findings that cognitive activation is a significant factor in the quality of student learning processes (Fauth et al., 2019; Kleickmann et al., 2020).

For the collaboration aspect, it was found that collaborative values are actions that everyone, teachers and students, need. Through collaboration, the success of achieving teaching goals can be achieved well. Teachers must be able to carry out collaborative activities with colleagues and apply this concept in the classroom so that students can build teamwork values. Collaboration can be used to build a fair school pattern (Griffiths et al., 2021). Thus, it can be said that teacher collaboration may be closely related to their teaching and professional learning (de Jong et al., 2022). Moreover, collaboration problems often arise due to internal organizational problems, such as time and working conditions.

The findings of this study indicate that of the four dimensions of interest development related to professional performance, it is an essential aspect in achieving quality education because, in professional development, there are various efforts by teachers who constantly improve their skills or competencies to carry out teaching. So, the novelty in this study raises the concept that teacher professional performance must be understood through interest development, a concept of self-reflection and self-development of teachers through performance results in the classroom. Teachers who understand their concept of self-development needs can easily follow the development of science and technology in the era of globalization. External factors originating from outside the teacher can be supporting aspects that strengthen how teachers develop themselves in fulfilling their professional competence as educators.

Thus, teachers must understand the contextual influence on professional development to provide specificity in self-development. The issue of professional development is an important part that must be considered by teachers and stakeholders in schools because schools as structured organizations are an important part of supporting continuous professional development for teachers (Admiraal et al., 2021; Mgaiwa & Milinga, 2024). So, teachers must understand the concept of professional development reform as part of globalization's challenges. It can relate to teacher's identity as professional personnel (McChesney & Aldridge, 2021; Cochran-Smith, 2021). Participation in professional development activities is important for teachers to continue to improve their knowledge and skills. However, differences in their character and work experience can affect the achievement of their professional development performance (Fairman et al., 2023).

Teacher professional development can not only impact the quality of teacher performance but also significantly impact student achievement, as previously studied

ongoing teacher PD increases student reading achievement. Thus, this study provides an overview that interest development through the perspective of TPE teachers related to professional performance is the answer to the challenges demanded in the Teachers and Lecturers Law Number 14 of 2005 and Government Regulation Number 19 of 2005, which states that teacher competencies include personality competencies, pedagogical competencies, professional competencies, and social competencies. However, professional development is oriented towards these and technological mastery competencies, and self-development is carried out according to life developments (Basri, 2019; Mpuangnan, 2024; Skantz-Åberg et al., 2022).

CONCLUSION

Fundamental Finding: The findings conclude that internal factors are factors that have a significant impact on teacher professional development to produce quality teaching performance. One aspect of the internal factors that influence teacher professional performance is interest development, which triggers teacher motivation in improving teaching competency. From this finding, interest development encourages teachers to adjust and build their competencies, especially in mastering the latest technology for teaching in the classroom. In addition, interest development plays a significant role in teachers' involvement in developing themselves through developments in science and technology. So, improving the quality of teacher performance development must be driven by their level of interest development so that they can utilize other supporting factors such as schools, stakeholders, or facilities provided by the school to provide various competency development activities. So, teachers cannot only meet the competency demands contained in the legislation but also have other competencies under the development of science and technology. **Implication:** The findings have implications for understanding teacher professional development that focuses on quality performance through the interest development aspect. Theoretically, this finding has implications for developing science and teacher professional performance to meet the challenges of the digital era and globalization. While practically, this finding has implications for the practice of professional development related to the real-life context of both the lives of teachers and students so that the results of their performance are not only focused on teaching purposes but also as a form of developing everyday life in facing various challenges and problems. **Limitation:** This study is still limited to analyzing teacher professional development performance understood through interest development in the era of technological progress and globalization through the teacher's perspective. The data used in studying the problem only focuses on the questionnaire, so the data study has not comprehensively touched on the percentage level of teacher professional performance achievement, which has not examined the relationship with student achievement. The data used in understanding teacher professional performance is only through four dimensions of interest development. So, this finding still does not describe the indicators of each dimension of interest development related to the development of teacher professional performance. Thus, this study has limitations in the interest development instrument for assessing the quality of teaching performance and data collection techniques that have not been developed and are only limited to questionnaires. So, this study can still develop variations in data collection techniques. **Future Research:** This study can continue through an in-depth analysis of the data obtained to produce professional performance assessment indicators through interest development, which is an aspect that comes

from the teacher himself. Further research can also measure the success of teachers' professional performance in organizing education in the classroom through student achievement and the results of supervision from the leader.

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