



## **Need analysis for innovation in integrated learning models for micro-teaching course: Explanatory sequential design**

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*Received: 15 March 2024; Revised: 16 April 2024; Accepted: 17 April 2024*

**Abstract:** One of the keys to successful learning model development is conducting a comprehensive needs analysis on actual performance, desired performance, and causes of performance gaps. This research aims to analyze student performance needs so that they can become a credible basis for consideration when designing the syntax of learning experiences for integrated learning models for micro-teaching courses. Researchers used an explanatory sequential design when completing the study, so quantitative research became the main focus for data collection and analysis, which was emphasized by qualitative studies. There were 107 research respondents, namely 75 students, two lecturers, and 30 physical education teachers. Data on actual performance, desired performance, and causes of performance gaps on the variables of teaching skills, analytical thinking skills, academic integrity, and transformational leadership were collected using 12 statements. Qualitative data was collected using semi-structured interviews. Data were analyzed descriptively and with Kruskal-Wallis to test differences in actual performance and desired performance of the three groups of respondents. Meanwhile, for qualitative data, researchers used thematic analysis. The results of the Kruskal-Wallis test prove that there are no significant differences between the three groups of respondents in actual performance ( $0.365 > 0.05$ ) or desired performance ( $0.758 > 0.05$ ). Students, lecturers, and teachers agree that teaching skills, analytical thinking skills, academic integrity, and transformational leadership are important requirements in developing integrated learning models. Meanwhile, the causes of performance gaps are not limited to lack of training experience, lack of opportunity to analyze problems and make decisions, lack of role models, or lack of support from lecturers and colleagues in lectures. Thus, in developing the model, the performance tasks designed must be able to overcome this performance gap by increasing students' experience in operational and clinical exercises during lectures.

**Keywords:** needs analysis, micro-teaching model, integrated learning, teaching skills, analytical thinking, academic integrity, transformational leadership

**How to Cite:** Blegur, J., Ma'mun, A., Berliana, B., Mahendra, A., & Layao, M. M. (2024). Need analysis for innovation in integrated learning models for micro-teaching course: Explanatory sequential design. *Jurnal Keolahragaan*, 12(1), 50-66.  
doi:<https://doi.org/10.21831/jk.v12i1.71950>



### **INTRODUCTION**

To date, various researchers have succeeded in developing micro-teaching learning models to prepare prospective teachers and/or skilled teachers for teaching. We can start with the results of the development of the Innovative Micro Model (Zulaeha & Luriawati, 2010), the Learner-Centered Micro-Teaching Model (Kiliç, 2010), the Practicum-Based Microteaching Model (Zhang & Cheng, 2011), the Lesson Study Microteaching Model (Iksan et al., 2014; Şahin & Kılıç, 2020; Sukmawati & Purbaningrum, 2021; Utami et al., 2016; Zhou & Xu, 2017). The development of various models for micro-teaching lectures is very important because micro-teaching is an innovative training tool for students and prospective teachers (Thangaraju & Medhi, 2023), thus always being an important technique to bridge theory with practice and prepare students to teach in real classroom contexts (Hama & Osam, 2021). Prospective teachers simulate various roles in the classroom by learning teaching skills, both in opening and closing learning, so that the classroom teaching they organize can be effective and efficient in achieving learning goals. It means that micro-teaching contributes to increasing teaching competence and developing the teaching skills of prospective teachers and teachers to prepare them to



carry out teaching practice in real classrooms (schools) (Blegur & Lumba, 2022; Evangelou, 2022; Remesh, 2013; Wang, 2021).

The micro-teaching models that have been successfully developed previously have so far proven to have a positive impact on the teaching skills of prospective teachers. Unfortunately, the focus has not undergone significant development because it is still questioning and developing a micro-teaching model that is oriented towards mastering and improving teaching skills (Blegur, Ma'mun, et al., 2023). It is not wrong, but the lack of up-to-date development of this micro-teaching model shows another interesting fact: teachers have yet to be able to overcome physical education (PE) learning problems well and quickly. At least in the last two years alone, studies have succeeded in revealing various facts about the main problems of PE teachers. It includes the problem of teachers preparing lesson plans correctly, the problem of implementing teaching methods that do not match the curriculum and learning objectives, the problem of creating learning experiences that activate and delight students, the problem of developing credible assessment instruments in all domains of student learning outcomes, and the problem of implementing a comprehensive assessment of student learning outcomes (Mu'arifin & Narmaditya, 2022; Nugraha et al., 2022). Apart from that, another problem is that teachers still predominantly use command methods, and 80% are still teacher-oriented (Khairuddin et al., 2023), so opportunities for expressing students' learning experiences still need to be improved. Thus, the problem of PE learning is also related to the lack of professional teachers (Rozi et al., 2023) who can adapt to the various learning needs of students in every changing era.

Universities must be able to update the micro-teaching model to integrate skills supplements that help prospective teachers to always be active and participative in accelerating the demands of their work competency to respond to various problems of teaching competency from the findings of the study and changes in paradigms and learning approaches. To guarantee the development of a comprehensive micro-teaching model to answer the demands of student learning experiences, a careful needs analysis is needed to diagnose various performance tasks in developing an integrated learning model. Needs analysis is a preliminary study to obtain data on problems and then determine the appropriate steps in producing products to overcome problems (Handayani et al., 2019), such as validating curriculum objectives (Brown, 1995; Kaya, 2021), determining learning objectives, setting assessments, create course designs, and develop materials (Sari et al., 2020). It means that needs analysis is a process of identifying individual needs and specific needs of students (Park, 2022) that are following the characteristics of their learning development that support the achievement of curriculum goals. More specifically, needs analysis is usually designed to evaluate the gap between the current situation and the expected outcome, as well as possible solutions to overcome the gap (Ravaghi et al., 2023).

To simplify needs analysis or validate performance gaps, Branch (2010) has pioneered three main areas, including measuring actual performance, confirming desired performance, and identifying the causes of performance gaps. First, the researcher first measures actual performance to identify the latest trends in the potential variables to be developed so that problematic actual performance data will be carefully localized from the respondent's perspective so that actual performance data becomes a platform for developing the model. Second, confirm the desired performance by capturing the respondents' aspirations about the various performances they need to support the development of their competencies because it is possible that as time goes by, some performance tasks are no longer relevant. Hence, the respondent's perspective about what performance tasks are needed is very important. Third, it is also essential to identify performance gaps so that solutions for developing micro-teaching models are oriented towards efforts to improve performance problems that were not resolved in previous performance task models or methods. Various model developments are often not resolved because they are not comprehensive during needs assessments. The cause of the work gap was not diagnosed from the respondent's perspective, even though the clinical experience of the respondent greatly determines the success of further model development.

Referring to the discussion, this research aims to analyze student performance needs so that they can become a credible basis for consideration when designing the syntax of learning experiences for integrated learning models for micro-teaching.

METHOD

Research Design

This research used an explanatory sequential design, so the researcher first conducted quantitative research, analyzed the results, and then developed the results to explain them in more detail with qualitative research (Creswell & Creswell, 2018) using the protocol from Ivankova et al. (2006). First is quantitative data collection, where researchers collected data about actual performance, desired performance, and causes of performance gaps as a form of analysis of model development needs. To reach respondents, researchers used an online questionnaire accommodating four statements on actual performance and desired performance, assessing respondents' responses through five Likert scales and four open-ended questions to identify the causes of performance gaps. Second, quantitative data analysis, namely the results of the online survey, then researchers analyzed it descriptively to determine the mean and standard deviation, minimum value, and maximum value and looked for differences in performance responses from different sample groups: students, lecturers, and teachers and conducted Kruskal-Wallis tests to look for differences in respondents' views on performance variables.

Third, connecting the quantitative and qualitative phases, based on the results of the quantitative analysis, the researcher then determined the informants/respondents to look for a more clinical meaning in the results of the online survey. In addition, researchers began to develop semi-structured interview guidelines to ensure that information that was not detected in the online survey could be explored. Fourth, qualitative data collection, namely, researchers began conducting interviews (both face-to-face and also using mobile phone media) and also triangulated respondents to test the credibility of the research data. Fifth, qualitative data analysis, the thematic analysis phase using the protocol of Lester et al. (2020) develop, successively prepare, and organize the data for analysis, transcribe the data, become familiar with the data, memoing the data, coding the data, move from codes to categories and categories to themes. In the final phase of the explanatory sequential design integration of the quantitative and qualitative results, the researcher interpreted and explained the two study results to complement each other.

Table 1. Explanatory Sequential Design

Quantitative data collection	Quantitative data analysis	Connecting quantitative and qualitative phases	Qualitative data collection	Qualitative data analysis	Integration of the quantitative and qualitative results
<ul style="list-style-type: none"> <li>Data collection using online surveys (n = 107)</li> <li>Use four statements/questions for each skill indicator</li> </ul>	<ul style="list-style-type: none"> <li>Descriptive analysis</li> <li>Test normality</li> <li>Kruskal-Wallis test to find differences between the three sample groups with the help of SPSS version 29</li> </ul>	<ul style="list-style-type: none"> <li>Determining informants using purposive techniques (n = 9)</li> <li>Develop semi-structured interview guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Conduct semi-structured interviews</li> <li>Triangulate data (respondents)</li> </ul>	<ul style="list-style-type: none"> <li>Prepare and organize data for analysis</li> <li>Transcribe data</li> <li>Become familiar with the data</li> <li>Record data</li> <li>Coding data</li> <li>Go from codes to categories and categories to themes</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and explain quantitative study results</li> <li>Interpret and explain the results of qualitative studies</li> </ul>

Respondent

Respondents involved in the quantitative study (first study) totaled 107 people. First, 75 people in the student category, men = 62 and women = 13 ( $M \pm SD = 21.8 \pm 1.2$ ). They are sixth-semester students of the Physical Education, Health, and Recreation Study Program, Faculty of Teacher Training and Education, Universitas Kristen Artha Wacana. Second, two people in the category of lecturers who teach micro-teaching courses, one man and one woman ( $M \pm SD = 42.5 \pm 17.7$ ). Only two lecturers were involved in the needs analysis because they were responsible for the micro-teaching course, which were the basis for the needs analysis for developing learning models. Third, 30 people in the teacher category, men = 25 and women = 5 ( $M \pm SD = 34.5 \pm 6.1$ ), respectively, from Elementary Schools at 36.7%, Junior High Schools at 46.7%, and Senior High Schools at 16.7%. Respondents were determined using convenience sampling techniques, where they are a group of individuals who easily participate in research or who are most easily accessible to researchers (Fraenkel et al., 2011; Scholtz, 2021). Thus, anyone who responds to filling out the online questionnaire via WhatsApp circulars or WhatsApp groups is designated as a respondent because they have a voluntary interest in research activities.

In the second study (qualitative), the respondents involved were nine people, four each from the student category (two men, two women), two from the permanent lecturer category from the previous study, and three men from the teacher category. They are determined using purposive techniques, which take into account certain objectives (Mahardika, 2015). Considerations for selecting respondents include those who have characteristics such as students who have a good academic profile and are involved in various intra- and extra-campus activities and lecturers who are effective in micro-teaching courses (because one aspect of the skills analyzed is teaching skills). Teachers are those who have leadership experience both in the community and as facilitators/motivating teachers because exploring the variables of analytical thinking, academic integrity, and transformational leadership requires a more clinical view and experience of the variables in needs analysis.

### **Instrument**

The instrument was developed from four indicators of the dependent variable for the development of an integrated learning model. These variables are teaching skills, analytical thinking skills, academic integrity, and transformational leadership. Considering that this research is a needs analysis, the validity and reliability of the instruments used have not been tested because the main aim is to diagnose performance gaps in developing integrated learning models for micro-teaching courses.

From each performance (there are three performances, namely actual performance, desired performance, and causes of performance gaps), only one statement item is developed, so there are 12 statement items/questions. For example, the item measuring actual performance in the aspect of teaching skills is "*Students' current teaching skills are not yet comprehensive, so they are not yet able to carry out analytical, innovative, collaborative, communicative, humanist and supportive learning.*" Meanwhile, the statement item to confirm the desired performance in the teaching skills aspect is "*As a prospective teacher, I must have comprehensive teaching skills to be able to provide analytical, innovative, collaborative, communicative, humanist and supportive learning for students.*" The final statement item to identify the causes of performance gaps in the teaching skills aspect is "*What is the reason that students' current teaching skills are not yet comprehensive so they are not able to carry out analytical, innovative, collaborative, communicative, humanist and supportive learning?*" For actual performance and desired performance, respondents responded on a five-point Likert scale (strongly agree-disagree). Meanwhile, for the causes performance gaps, respondents were given the freedom to answer according to their experience in the online questionnaire.

In qualitative studies, researchers are still oriented towards the statement items and questions in previous studies; only the questions are more oriented towards the rationalization and operationalization of the four aspects of analysis. For example, "*Why are teaching skills important for teacher students? Rationalize and give examples? Are you (student) unable to adapt to the concept of thinking to solve problems in the learning process? How do we overcome the causes of student performance gaps (lack of confidence in leading a group) in the learning process?*" Because of its nature to confirm and complement previous studies, the questions/statements that researchers ask are very dynamic between one respondent and another because they adapt to the results of respondents' responses in previous online surveys.

### **Data Analysis**

Quantitative study data analysis used descriptive statistics and the Kruskal-Wallis test. The entire data collection process uses the help of Google forms, Microsoft Excel, and SPSS version 29. Qualitative studies will follow up on quantitative findings so that the interview data will complete the meaning of actual and expected performance and also the causes of performance gaps in the four research variables. The qualitative data were analyzed thematically using the protocol of Lester et al. (2020), namely preparing and organizing the data for analysis, transcribing the data, becoming familiar with the data, memoing the data, coding the data, moving from codes to categories and categories to themes.

**RESULT AND DISCUSSION**

As explained in the explanatory sequential design from Creswell & Creswell (2018) and Ivankova et al. (2006), the results of the quantitative study will be reported first, followed by the qualitative study.

**Quantitative Data Collection and Analysis**

***Measuring actual performance***

If we trace the results of the analysis, the average of all respondents (n = 107) agreed that students' actual performance was not optimal in the four research variables (see Table 2), both the teaching skills variable (4.0±0.3), the analytical thinking skills variable (3.9±0.3), academic integrity variable (3.7±0.4), and transformational leadership variable (3.8±0.3). Simply, all assessment or research variables received a score of >3.0 from the three groups of respondents, namely from the assessment of the students themselves, lecturers as course instructors, and teachers as individuals who had directly observed students' performance while in practical classes.

Actual performance measurements prove that students' teaching skills are not yet comprehensive, so they have not optimally implemented analytical, innovative, collaborative, communicative, humanist, and supportive learning. Likewise, students' analytical thinking skills and academic integrity are low, so they can not differentiate and organize problems carefully before creating and implementing solutions while also behaving honestly, trustworthy, fairly, respectfully, responsibly, and bravely in responding to various unethical behaviors in academic and non-academic communities. Not only that, student transformational leadership is not good enough, so students are not able to build a vision, develop work teams, be supportive, empower, think innovatively, be role models, and be charismatic in a learning community.

**Table 2.** Description of Actual Performance

Statement	Category	N	Min.	Max.	M±SD
Students' current teaching skills are not comprehensive yet, so they are not yet able to provide analytical, innovative, collaborative, communicative, humanist, and supportive learning.	Students	75	1.0	5.0	3.7±1.2
	Lectures	2	4.0	5.0	4.5±0.7
	Teachers	30	1.0	5.0	3.7±1.1
Current students' analytical thinking skills are low, so they are not able to differentiate and organize problems carefully before creating and implementing solutions.	Students	75	1.0	5.0	3.5±1.2
	Lectures	2	4.0	5.0	4.5±0.7
	Teachers	30	1.0	5.0	3.6±1.0
Students' current academic integrity is low, so they are not yet able to behave honestly, truthfully, and fairly and have respect, responsibility, and courage in responding to various unethical behaviors in the academic and non-academic communities.	Students	75	1.0	5.0	3.2±1.4
	Lectures	2	4.0	5.0	4.5±0.7
	Teachers	30	1.0	5.0	3.5±1.2
The current transformational leadership of students is not good, so they are not able to build a vision, develop work teams, be supportive/provide support, empower, think innovatively, be role models, and be charismatic in a learning community.	Students	75	1.0	5.0	3.4±1.2
	Lectures	2	4.0	5.0	4.5±0.7
	Teachers	30	1.0	5.0	3.5±1.0

***Confirm desired performance***

Just like measuring actual performance, the results of the analysis to confirm the desired performance on the four variables still receive great attention (see Table 3), where, on average, all respondents provide the view that teaching skills, analytical thinking skills, academic integrity, and transformational leadership as desired performance (≥4.5). Furthermore, after localizing the four performance variables desired in preparing prospective teacher competencies, the three groups of respondents agreed that students must have comprehensive teaching skills so that they are can provide analytical, innovative, collaborative, communicative, humanist, and supportive learning for students (4.8±0.4). To support updated teaching skills over time, students must have high analytical thinking skills to help them distinguish and organize student learning problems carefully before creating and implementing solutions (4.7±0.3).

Teachers' behavior also influences the problem of student apathy without integrity, so when conducting learning, prospective teachers or even teachers must have high academic integrity so that they are able to behave honestly, trustworthy, fairly, have respect, be responsible, and have the courage to judge measure and evaluate students' learning experiences (4.6±0.1). As individuals who are responsible for improving class performance and student performance, prospective teachers must also have good transformational leadership so that they are able to build a vision, develop work teams, be

supportive, empower, think innovatively, be role models, and be charismatic in transforming students' learning experiences. (4.7±0.3). Thus, in an effort to develop an integrated learning model in micro-teaching courses, performances such as teaching skills, analytical thinking skills, academic integrity, and transformational leadership need to be integrated comprehensively and contextually in various student performance tasks (learning experiences) so as to support the preparation of candidates. Teachers who are competent in organizing learning in the 21st-century according to student needs, not teacher needs.

**Table 3.** Description of Desired Performance

Statement	Category	N	Min.	Max.	M±SD
As prospective teachers, students must have comprehensive teaching skills so that they are able to provide analytical, innovative, collaborative, communicative, humanistic, and supportive learning for students.	Students	75	1.0	5.0	4.6±0.7
	Lectures	2	5.0	5.0	5.0±0.0
	Teachers	30	3.0	5.0	4.7±0.5
As prospective teachers, students must have good transformational leadership so that they are able to build a vision, develop work teams, be supportive/provide support, empower, think innovatively, be role models, and be charismatic in transforming students' learning experiences.	Students	75	3.0	5.0	4.6±0.6
	Lectures	2	5.0	5.0	5.0±0.0
	Teachers	30	3.0	5.0	4.6±0.6
As prospective teachers, students must have high academic integrity so that they are able to behave honestly, trustworthy, and fairly and have respect, responsibility, and courage in assessing, measuring, and evaluating students' learning experiences and outcomes.	Students	75	3.0	5.0	4.6±0.6
	Lectures	2	4.0	5.0	4.5±0.7
	Teachers	30	4.0	5.0	4.7±0.5
As prospective teachers, students must have high analytical thinking skills to help them distinguish and organize student learning problems carefully before creating and implementing solutions.	Students	75	3.0	5.0	4.6±0.5
	Lectures	2	5.0	5.0	5.0±0.0
	Teachers	30	4.0	5.0	4.6±0.5

**Identify the causes of performance gaps**

After measuring actual performance and confirming desired performance, researchers will also report the causes of performance gaps. Performance gaps are useful in collecting and explaining factors that contribute to students' actual performance not being optimal in the four investigation or research variables. Unlike actual performance and desired performance, in the report on the causes of performance gaps (see Table 4), the researcher only asked questions with open answers via Google form so that the research results summarized various open answers from the three categories or groups of respondents. After that, the researcher continued with several semi-structured interviews to look for the contextual meaning of various causes of performance gaps.

The causes of performance gaps inventoried highlight various student performance tasks that have not been optimally directed towards operational practices to improve their four skills. For example, the use of a learning model still needs to be updated so that it is more based on developing performance tasks that are relevant to developing teacher competency. For this reason, the development of a learning model should ideally be comprehensive to promote a number of skills in one learning period. Such as supporting students in carrying out teaching exercises using assessment instruments or rubrics by optimizing students' roles in peer-assessment, supporting a culture of leadership in micro groups by providing opportunities for students to formulate their vision and team development efforts and familiarizing them with analyzing various information into important data to help they resolve various performance improvement phenomena.

**Table 4.** Description of the causes of performance gaps

Question	Students' version	Lecturers' version	Teachers' version
What causes students' current teaching skills not to be comprehensive...?	Learning approaches that are unfocused on analytical, collaborative, communicative, humanistic, and supportive, errors in choosing teaching methods, lack of provision of knowledge and skills to train thinking abilities, and limited field experience.	The main causes are the quality of human resources (lecturers), students, learning methods, and infrastructure support. Learning is still monotonous, and lack of applying existing skills.	Not mastering methodology and didactics as well as learning models, less effective lecture hours for courses that train teaching skills, and not having experience and not looking for enough information to improve teaching abilities.
What is the reason why students' thinking skills are low...?	The use of teaching methods that do not support the development of analytical thinking skills, lack of special	The cause is the quality of the students themselves; students have not been able to adapt to the concept of problem-solving	Lack of problem-based learning, lack of analytical thinking practice, too fixated on factual knowledge,

<p>What causes the current academic integrity of students not to be low...?</p>	<p>training in problem-solving, only memorizing information rather than understanding it in depth, and a lack of practical experience that supports the development of analytical skills. Educators or the environment provides no support; there is no exemplary behavior; students do not have self-confidence, high-performance pressure, lack of understanding of academic ethics, lack of interaction with others, and lack of respect for each other.</p>	<p>thinking, and students have not been able to understand what a problem is and how to make decisions to solve the problem, so students' thinking skills do not develop. The reason is that students themselves can not follow the learning concepts carried out by lecturers and adapt to the campus environment. Sometimes, students cannot control themselves in terms of their academic integrity, so they are unable to behave honestly, fairly, and responsibly.</p>	<p>dependence on technology so it is easy to copy-paste, lack of encouragement for independent thinking, high-stress levels, and always using the same problem-solving standards for each student. Getting students used to integrity in their duties and responsibilities in college, high academic pressure, lack of academic ethics education, a widespread culture of plagiarism, lack of strict sanctions, lack of work ethic and intrinsic motivation, too strong a expected, and no role model of integrity for students through real action.</p>
<p>What causes the transformational leadership of students currently not to be good...?</p>	<p>Lack of practical experience in managing a team, lack of opportunities to practice leadership in real situations, uncertainty in developing an inspiring vision, lack of support and mentorship from the academic environment, low thought processes, and not being able to overcome fear when expressing opinions and making decisions.</p>	<p>The leadership spirit does not yet exist in students, so they are not able to control themselves. Students' leadership spirit must be developed in learning. Students must be equipped with the concepts of transformational leadership and the application of learning methods that require innovative thinking.</p>	<p>Because they have not experienced this at university, lack lecturers' ability to build learning to create innovative work, lack leadership education, lack support from the environment, fear failure, lack leadership training opportunities and role models, and lack personal integrity.</p>

## Qualitative Data Collection and Analysis

### *Measuring actual performance*

Interview data on students' actual performance on the confirmed teaching skills variable is still limited because students are hampered in various ways, such as mastery of material content, and have not done much innovation, as stated by MUS (student/male/23 years). According to him, *"My mastery of teaching skills is still 20%, for example I am starting to believe or have the courage to appear in front. The remaining 80%, I have not mastered, such as learning materials, modifications and innovations in the learning process. For this reason, until now I am still continuing to learn to strengthen and deepen my knowledge that will support my profession as a teacher in the future."* Due to the lack of various skills when teaching, students tend to be monotonous when teaching, making the class passive and students become bored. It was stated by CPMR (lecturer/female/31 years old) that *"Prospective teachers currently teach or lead using monotonous methods, which makes students bored, bored and have no enthusiasm for participating in the learning process."* Operationally, in teaching practice at school, teachers also confirm that students are still not optimal in carrying out their learning, such as when they open learning. According to YB (teacher/male/39 years), *"I see that there are still many students who lack teaching skills. First, they warm up directly to this material, not conveying the learning objectives. Second, they are lacking in designing the learning process."*

Actual performance on the analytical thinking skills variable also still needs attention. However, in interviews with students, MUS (student/male/23 years) expressed his positive view that: *"I am very sure that it is good. I know how to read the shortcomings in the class and also the shortcomings in myself."* Even though students gave good views, more detailed explanations were less complete, such as the process of differentiating, organizing, and attributing data. Furthermore, CPMR (lecturer/female/31 years old) is of the view that *"Students' thinking skills are not very good because they have not been able to identify problems and find solutions to these problems. For example, when a lecturer gives an assignment to teach or do an assignment, students are not able to explain or provide solutions according to the questions or cases given by the lecturer."* The teacher also conveyed the same experience regarding students' analytical thinking. As stated by IF (teacher/male/36 years) that *"...when I provide input in their teaching, they respond well. But when they teach, it is very different, they are still glued*

*to the text of the book.*" This means that students' ability to analyze information is still limited because they are dependent on copying information from both teacher explanations and textbooks, so analytical and operational efforts toward information and data are very limited. However, information and data from teachers and books need to be analyzed to innovate useful actions to support teaching performance.

According to students, actual performance on the academic integrity variable is also still lacking. HN (student/female/22 years) said, *"Integrity in me is still lacking. For example, when working on assignments, sometimes the work is plagiarized from Google, sometimes it is often copied from a friend's work, because of a high sense of laziness."* In general, lecturers gave the same view, where CPMR (lecturer/female/31 years) stated that *"Academic integrity is currently still lacking, because in the learning or lecture process sometimes students still do assignments by copying and pasting and may take the whole thing from internet and relying on other people's thoughts rather than your own. "Students nowadays only want to receive it instantly."* Meanwhile, according to YB (teacher/male/39 years), the problem of Integrity in assessing learning outcomes is as follows: *"...sometimes we teachers also miss out in assessing learning outcomes, because we have to separate students based on ability, based on the material they want to be taught. If we equalize, then that is where we are not honest in giving an assessment. We have to be able to sort out which students can do this material and which ones can't, and then we innovate by giving them different kinds of movements so that the learning process feels good to all students. So that is where we give a fair assessment."*

Students expressed the view that the actual performance on the transformational leadership variable was good but needed to be developed. For example, stated DB (student/male/23 years old), *"... it has started to appear, because I have started to learn to modify a lesson and when I express an opinion, it is no longer based on what I think, but what other people think. think about it too."* In line with students' thoughts, IF (teacher/male/36 years old) said that students' transformational leadership was quite good because the school also created an atmosphere to support this, as in the following statement: *"... the school has created an interest and talent program. When I give them a task, they carry out the task well. For example, every Saturday we direct the children to practice flag ceremonies, then secondly about learning product design. I gave them the task without any direction, but they did it. They show responsibility with the tasks given so that the self-development program runs well."* Meanwhile, on the other hand, AJFL (lecturer/male/56 years old) expressed his opinion regarding the actual performance of transformational leadership, such as *"That is one of our weaknesses in the learning process, because we do not continue to train them to become transformational leaders. Examples in PE learning, praying as well as teachers, marching as well as teachers, continuing to give examples as well as teachers and others. From trivial things, students are not taught to become leaders in the future."*

### ***Confirm desired performance***

Respondents' views from interviews regarding desired performance in teaching skills are as follows. MUS (student/male/23 years old): *"When we teach, we really teach according to what the school and students need. There are teachers who, when it comes to the subject matter, sit in the room and give the material, and ask the students to take notes, which is not good. Because what students need is understanding and rationalization, if they only write and read, students can also study at home. We (teachers) should teach students thinking intelligence. Especially nowadays, children easily access information, so we must be able to master skills so we can carry out learning well."* Course lecturers also highlighted the classroom atmosphere; for example, CPMR (lecturer/female/31 years) argued that *"...teachers must have an active role in teaching in order to create a good atmosphere and attract students' expected to learn and move."* Meanwhile, teachers expressed the view that skills are very important to ensure that every student has equal access to learning. The following is YB's opinion (teacher/male/39 years old) regarding the desired performance regarding teaching skills: *"If the teacher does not have the skills, he will teach monotonously so that students become bored, then all students have equal abilities so that learning objectives are difficult to achieve because in one class Children have different characteristics so teachers must have skills and must innovate. He must modify learning to be able to respond to differences in student characteristics so that learning objectives can be achieved."*

Respondents also view analytical thinking skills as a skill needed to help students distinguish and organize student learning problems carefully before creating and implementing solutions. For example, MUS (student/male/23 years old) believes that *"We must have good analytical thinking skills, because*



*when we see so many students at school, we have to memorize their characters. Oh, student A's way of thinking is like that, student B's way of thinking is like that, some are slow and some are fast. After that, we help slow students so that they train their way of thinking. For example, in learning football, there is a student who is slow to dribble the ball, so we enlarge his experience while encouraging him to change his technique."* Furthermore, SYB (student/female/23 years old) *"It is important because we as prospective teachers must be able to differentiate between what is good and what is not good or when analyzing something. When we cannot differentiate, the concept will also be problematic, so we will not be able to create something useful for students."* Furthermore, according to AJFL (lecturer/male/56 years old) *"Physical education is learning through movement activities. So if students receive learning without good analysis, then this will hurt students when carrying out their movement tasks."* Analysis is not only used when the teacher starts the lesson but is also useful during the lesson and at the end of the lesson. Therefore, JMAP (teacher/male/36 years old) said that analytical thinking skills are important. In his opinion, it is as follows: *"When we face a problem, what kind of solution do we think about? We must have the ability to think to solve a problem."*

Apart from teaching skills and analytical thinking skills, the desired performance confirmation also targets academic integrity because prospective teachers must be able to guarantee themselves with a set of behaviors with integrity in supporting the quality of learning. Let us say SYB (student/female/23 years old) who has the following opinion about academic integrity *"...for example, if we are not honest, when we become teachers we will definitely apply the same thing to students, because it is already within us."* According to AJFL (lecturer/male/56 years old), *"If a teacher doesn't have good integrity, how will he teach students well? This is just manipulative."* Furthermore, according to CPMR (lecturer/female/31 years old), *"Prospective teachers must have good integrity so that it becomes the basis for guiding students' own behavior and also in carrying out the learning process."* Integrity is important to help teachers carry out fair, honest, and responsible learning by respecting each student's learning achievements in their way. Furthermore, according to YB (teacher/male/39 years old) regarding integrity, *"I instill that we must value time and love work so that when we are at school we need to use that time as best as possible. Second, love your work so that the learning process is not haphazard."* Teachers see integrity by adhering to a sense of ownership (highest commitment) to their work; this also encourages them to do various positive things to improve the quality of learning by maximizing responsibility according to the time given.

Respondents also wanted transformational skills to support their learning in the classroom. For example, SYB (student/female/23 years old) stated that *"The teacher stands in front and becomes an example of a leader for the students, so that we want to be shaped into leaders."* Furthermore, DB (student/male/23 years) added *"...now in modern times, when we become teachers we must have transformational leadership because modifying or creating a new learning method is very important because helping the transformation of the model helps power catch the students in understanding the material we present."* Lecturers also strengthen students' views about the importance of transformational leadership. According to AJFL (lecturer/male/56 years), *"... do not let people say that we are not insensitive to change. We now know that the students who are present now when the teacher teaches movement already know better when they learn on the internet, on YouTube, and all sorts of things so that if the teacher does not understand this, today's students can actually teach the teacher again, so the teacher must transform themselves to be more competent when teaching."* In addition, JMAP (teacher/male/36 years) stated transformational leadership as follows: *"Leadership is very important because it helps us have a sense of responsibility to do things professionally. "There are no instant leaders, but from various experiences such as being involved in organizational activities, secretarial committees, and so on, we develop a vision and ambition to encourage us to always look for solutions when we encounter problems."*

### ***Identify the causes of performance gaps***

The respondents' various answers to the four variables then reduced the researchers to several main issues, which were important points in causing the gap in student performance. Groups of students, lecturers, and teachers report that the problem of performance gaps lies in learning approaches, models, and methods that are not yet innovative, analytical, collaborative, communicative, humanistic, and supportive, including not yet maximizing mastery of teaching methods and didactics. As stated by MUS (student/male/23 years old), *"In lectures, the lack of experience for presentations, not optimizing*

*learning in groups, and not allowing us to argue so it doesn't support us in practicing teaching skills. Even though the group division was something I didn't know, other friends could help me. And vice versa, I can share the information I know with other friends."* In particular, teachers highlighted the lack of effective lecture hours that train teaching skills and students highlighted the lack of innovation and lecturers' mistakes in choosing teaching methods. One of them was IF (teacher/male/36 years old) who expressed his opinion that *"My concern is that perhaps these prospective teacher friends, they are not actively involved either in the community or within their scope as students. Lecturers must provide examples of what fun learning looks like and must demonstrate it so they do not focus on theory. If the focus is only on textbooks, then students will carry this into practice so that the learning they bring will not look monotonous or stiff."*

In the case of student's analytical thinking skills problems, they still rely on learning experiences that only memorize information. They are not accustomed to being independent in understanding and developing their analytical thinking experience through making problem-solving decisions. As stated by SYB (student/female/23 years old), *"For this reason, when the lecturer enters the room, the lecturer provides the most opportunities to learn. For example, we were given material, divided into groups to carry out learning."* Listening to the answer above, the experience and practice of analytical thinking are not maximized, where students have not been given cases or phenomena that force them to be able to dissect important and unimportant information, organize data, and look for solutions or other perspectives displayed data. The phenomenon experienced by students was also expressed by YB (teacher/male/39 years old) *"Students are not taught, they are not accustomed to thinking analytically. For example, if you want to compile/design a formulation of learning objectives, learning objectives."* Fostering analytical thinking is not just providing information or giving instructions to students to study certain material but rather cultivating students in a culture of analytical thinking. For example, students solve problems based on certain data or provide various data, and then they formulate data that is important and useful in completing the solution. For this reason, the practice of analytical thinking is generally found in modern problem-based and project-based learning. They achieve a goal by analyzing a variety of problematic data (to be anticipated) and useful data (to be reinforced) in designing a performance task.

Shifting to the cause of the gap in academic integrity, there is the fact that lecturers have not optimally created a classroom environment that supports students' behavior with integrity. This condition is further complicated by students who cannot control themselves in terms of their academic integrity, so they are unable to behave honestly, fairly, and responsibly. For this reason, habituating students' behavior with integrity in their lecture duties and responsibilities can anticipate performance gaps, while lecturers provide examples of integrity for students through concrete actions. According to CPMR (lecturer/female/31 years old), the cause of the performance gap is *"Perhaps behavior like (academic disintegrity) is already patterned. It has become a pattern, and the influence of friends may also be so great that they have no intention of starting their own business."* JMAP (teacher/male/36 years) further added, *"Well, sometimes this integrity can also be influenced based on situations and conditions, so I said earlier that there is experience that when students go to college, they have to get used to having integrity in various tasks and responsibilities."* The two views above consistently highlight environmental patterns and conditions where various practices of academic disintegrity are not paid attention to so that students develop various learning practices. It means that in future model development, an environmental design that trains academic integrity is very important, such as carrying out self-assessment and peer-assessment practices and then being evaluated by lecturers.

Lastly, the gap in transformational leadership performance is also motivated by the lack of real experience or situations where students play a transformative role in group leadership. It is as stated by DN (student/male/23 years old) that *"In the lecture context, most lecturers are more based on the material they read, what they listened to, and their experience or what they learned but less to expand or what they are looking for new things to say."* In line with the students, YB (teacher/male/39 years) said, *"This student does not yet understand how important self-transformation is in this case in order to become a teacher in the future."* Apart from that, AJFL (lecturer/male/56 years old) *"... these students, if we do not burden them with leadership tasks, they are also not very serious, so it seems that they are studying just to get grades."* The three views above underline that the gap in transformational leadership performance includes a lack of transformation of lecturers' teaching models and methods that encourage the transformation of students' understanding and experience in developing their leadership so that

students have not been able to develop an inspiring vision, lack support and mentorship, and have not been able to master themselves. Even though through various learning practices, opportunities to train student leadership are actually wide open, unfortunately, lecturers do not develop enough learning to create innovative work by improving leadership education, simulating students in various leadership-based performance tasks so as to update students' concepts and experiences regarding the significance of transformational leadership in development teaching competence.

**Integration of the Quantitative and Qualitative Results**

Referring to actual performance data (see Table 2) and desired performance (see Table 3), the researcher then reviewed it by carrying out a different test. The results of the Kolmogorov-Smirnov normality test prove that the teacher group has actual performance data that is normally distributed (0.075). In contrast, the other two groups have the opposite; the data is not normal (<0.05). Meanwhile, the desired performance Sig value for the three sample groups is <0.05, so the three data groups are not normally distributed.

**Table 5.** Tests of Normality

	Actual performance			Desired performance		
	Students	Lectures	Teachers	Students	Lectures	Teachers
Statistic	0.175	0.260	0.152	0.311	0.260	0.395
df	75	2	30	75	2	30
Sig.	0.001	0	0.075	0.001	0	0.001

Referencing to the results of the normality test (see Table 5), the researchers carried out the Kruskal-Wallis test (non parametric) to see whether there were differences in views of actual performance and desired performance in the aspects of teaching skills, analytical thinking skills, academic integrity, and transformational leadership from the three groups of respondents. The Kruskal-Wallis test results prove that the Sig value for actual performance is 0.365 (>0.05), and the Sig value for desired performance is 0.758 (>0.05). The conclusion is that there is no significant difference in actual performance and desired performance between the three categories or groups of respondents, namely students, lecturers, and teachers.

**Table 6.** Kruskal-Wallis Test

	Actual performance	Desired performance
Kruskal-Wallis H	2.014	0.553
df	2	2
Asymp. Sig.	0.365	0.758

The meaning of results of the qualitative analysis also confirms that students, lecturers, and teachers together agree that student's actual performance in the aspects of teaching skills, analytical thinking skills, academic integrity, and transformational leadership is not good, so these skills are still a need and concern in developing learning models at universities, one of which is through micro-teaching courses. Apart from that, students, lecturers, and teachers also agreed together that as prospective teachers, students must have comprehensive teaching skills, analytical thinking skills, and high academic integrity as well as good transformational leadership so that when they become teachers they will be able to carry out analytical learning, innovative, collaborative, communicative, humanistic and supportive of students, able to distinguish and organize student learning problems carefully before creating and implementing solutions, able to behave honestly, trustworthy, fair, respectful, responsible and brave in assessing, measure and evaluate student learning experiences and outcomes, and be able to build a vision, develop work teams, be supportive/provide support, empower, think innovatively, be a role model and be charismatic in transforming student learning experiences.

Apart from that, various performance gaps are caused by the lack of availability of the latest models or model innovations that encourage students' active participation in various performance tasks that support increasing their teacher competency. Practically, the three groups of respondents also jointly highlighted the application of micro-teaching learning models and lectures, which must also be updated by applying various opportunities and experiences to students so that they can spend more time doing analytical and critical exercises in developing their teaching skills. , analytical thinking skills, academic

integrity, and transformational leadership. Facilitating group collaborative learning so that they can develop a vision for the future, formulate strategies for developing teams, become role models, and think innovatively. Apart from that, distributing various teaching skills into more detailed training forms and empowering self and peer assessment are several alternatives to support a collaborative, communicative, humanist, and supportive spirit among fellow students and lecturers to increase the effectiveness and efficiency of teaching and learning analytical thinking training, academic integrity training, and transformational leadership training.

Researchers have concluded from the results of online surveys and semi-structured interviews that there is a need to update the development of learning models to improve teaching skills, analytical thinking skills, academic integrity, and transformational leadership of prospective teachers. The need for updating performance tasks in model development can take into account various performance gaps that have not been accommodated in previous micro-teaching models so as to produce more comprehensive and integrative teacher performance tasks in overcoming various problems in PE learning.

Just mention the problems experienced by eight PE teachers who taught African refugee students. The findings of this study highlight the large differences in student learning styles in Africa. Hence, teachers need to use a variety of strategies to minimize the disruption they experience when first introduced to students (Baldwin, 2015). Other actual performance problems are also related to teachers' inability to teach skills well, lack of ability to prepare tools, mismatch of curriculum content with the educational environment (Ahmad Oudat, 2016), lack of teacher work commitment, teachers teaching without planning (Osborne et al., 2016). Preparing planned and futuristic devices is important for teachers, so they need to analyze the various skill needs that their students need now and in the future. Thus, the teacher's limitations in preparing tools are evidence that teachers still have problems optimizing their analytical thinking skills. Meanwhile, the problem of teachers' work commitment can be related to their transformative leadership because teachers have not maximized their role in transforming the learning classes they have started and transforming their performance before becoming supportive and empowering partners, becoming role models for their colleagues and students.

Actual performance problems in the literature review also highlight aspects of teaching skills, where teachers are still limited in mastering the core knowledge of PE subjects, have not maximized credible assessment instruments, and PE teachers also still have difficulty managing their classes (Veloo & Md-Ali, 2016). Even teachers are still monotonous when carrying out their lessons (Pantović et al., 2018). It makes it difficult for PE teachers to provide planned and structured lessons to develop meaningful student learning experiences. They also spend more time engaging students in unproductive activities and less time teaching, which translates into poor lesson preparation and a lack of subject understanding among teachers (Ahmed & Godiyal, 2021). Cases such as monotonous learning, poor mastery of PE material, carrying out structured learning, and not using students' learning time effectively are manifestations of problems with teachers' teaching skills. Meanwhile, teachers' difficulties in using various student performance assessment instruments have the potential to cause them to be trapped in problems of academic disintegrity because they give students performance grades that are dishonest, unfair, or irresponsible to their students.

The study of Blegur, Lumba, et al. (2023) recently also proved that high school PE teachers find it more difficult to open and organize (online) learning. Meanwhile, elementary school teachers find it more difficult to cover learning. To be clear, the most difficult teaching skill for high school teachers is teachers implementing strategies to optimize student practice. On the other hand, what is most difficult for elementary school teachers is that teachers divide teaching tasks according to students' abilities. The actual performance conditions of various methods prove that PE teachers still have problems with their teaching skills, analytical thinking skills, academic integrity, and transformational leadership. This justification does not mean that there are no other publications that provide support for improving and improving teachers' teaching skills, such as teachers' skills in integrating students' analytical thinking skills to support improved learning outcomes (Blegur, Yustiana, et al., 2023), but rather that these data prove that along with the development of 21st-century learning needs, it creates various new challenges that teachers must immediately solve and accelerate with the latest skills so that they can continue to "exist" exploring various changes. In summary, teachers must always be analytical about various information and data about their student's learning needs; teachers must be able to guarantee the transformation of themselves and their learning class; teachers must also have integrity in assessing

themselves so that these three skills can help teachers provide meaningful and quality learning services for their students.

To be honest, there is quite a bit of literature that has justified the positive impact of micro-teaching, such as influencing pre-service PE teachers' positive attitudes toward the teaching profession (Abakay et al., 2016) as well as improving teachers' teaching skills (Blegur & Lumba, 2022; Evangelou, 2022; Remesh, 2013; Wang, 2021). However, currently, micro-teaching models cannot be seen simply as improving teaching skills, but need to be expanded so that improving teaching skills can be updated all the time when teachers are in their learning classes so that various problems that teachers encounter include problems when preparing lesson plans, problems the use of monotonous teaching models and methods (teacher oriented), the problem of developing assessment instruments (Khairuddin et al., 2023; Mu'arifin & Narmaditya, 2022; Nugraha et al., 2022) can be overcome by teachers periodically in order to maintain the quality of their students' learning. So, with the above needs (overcoming various learning problems that are fast and complex), what skills are suitable for anticipating and accelerating learning needs for teaching? Considering that competent educators are those who are able to make effective and efficient learning approaches, methods, and strategies using their expertise, personality, and social relations in order to explore students' potential optimally during the learning process as an effort to prepare students to be "alive and useful" in the future (Blegur et al., 2017).

At least three potential skills can be integrated into formulating the development of a micro teaching-learning model, namely analytical thinking skills, academic integrity, and transformational leadership. These three skills can help teachers to make their learning a success by analyzing various students' learning needs, being honest and fair, and being responsible for assessing and developing their competencies, as well as trying to transform themselves with various visionary, innovative ideas and becoming role models for students and colleagues. For example, analytical skills really help prospective teachers to be precise in formulating plans, building scientific arguments, and solving problems (Arnold & Wade, 2015; Muniri & Choirudin, 2022; Perdana et al., 2019). Academic integrity also really helps prospective teachers maintain their ethical behavior (Almutairi, 2022) and advance the search for knowledge and truth through intellectual honesty and establishing standards and clear and transparent practices to support fairness in interactions (Fishman, 2014; International Centre for Academic Integrity, 2021). Finally, transformational leadership helps prospective teachers individually or collectively improve their learning practices in the classroom while improving the quality and achievement of student learning (Jovanovic & Ciric, 2016; York-Barr & Duke, 2004). It means that when teachers encounter various obstacles, they are not apathetic and receptive, but are active and innovative in finding solutions to update their teaching performance so that they become worthy individuals in front of their students.

The results of this study have become an important basis for future research when innovating micro-teaching learning models. Data on actual performance desired performance, and the causes of performance gaps have provided a comprehensive landscape to be followed up into an innovative learning model by formulating various performance tasks that can provide learning experiences for prospective teachers to train their teaching competencies. In addition, the current research only limits the needs analysis to the four main variables (teaching skills-transformational leadership), thereby allowing several potential variables that support teacher competence to be diagnosed carefully from the respondent's perspective. For this reason, in analyzing future needs, researchers need to provide broader freedom through various open questions to respondents to convey the variables that are obstacles for them in providing 21st-century learning to their students while still paying attention to the three areas of needs analysis that have been offered by Branch (2010). This means that trying an exploratory sequential design approach is very relevant and has the potential to answer the limitations of this study and produce a different perspective on the need to develop micro-teaching learning models at universities.

## **CONCLUSION**

The research result concluded in three segments of performance needs analysis (such as measuring actual performance, confirming desired performance, and identifying the causes of performance gaps) that teaching skills, analytical thinking skills, academic integrity, and transformational leadership become important needs to prepare candidates teachers who are competent,

active and productive in updating their learning. This conclusion is a form of approval of the assessment from the three respondents' points of view, both students, lecturers, and teachers. Although the need to develop these four skills is important, it is also important to note the various aspects that are behind the performance gap so that in developing innovative formulas for micro-teaching learning models, future researchers can deliberately design various performance tasks that can accommodate the four skills in the needs analysis. For example, strengthening student learning experiences that are oriented towards analysis and problem solving, cultivating group learning that promotes visionary leadership, empowering and supporting team development in improving teaching skills, maximizing self and peer-assessment behavior in evaluating student learning experiences so that they can use authority and authority for responsible, productive and educational action.

This research contributes to the needs analysis method, in which to develop a comprehensive solution model, needs analysis of actual performance, desired performance, and causes of performance gaps is very important. That is not enough; capturing the views of respondents from various backgrounds is also very crucial, such as from students, lecturers, and teachers, so that the task performance in the resulting model truly represents the learning experience in a professional context (including school). Thus, task performance formulated in innovative learning models can answer the problem of performance gaps experienced by teachers, thus becoming an essential pioneer in formulating learning behavior and skills of prospective teachers in task performance that is predictive of 21st-century learning.

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