

# Analysis of Needs For Self-Assessment and Diagnostic Assessment of Differentiation Learning In Primary School

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**Abstract.** This research is motivated by learning in schools which is still teacher-centered, so that learning does not match students' interests and learning needs. The research aims to analyze teachers' needs in designing differentiated learning that accommodates all elementary school students' learning needs. The research method used in this research is descriptive qualitative. Researchers developed a questionnaire instrument that was given and filled out by prospective elementary school teacher students who were studying professional teacher education at universities in Semarang City. The results of the analysis of the questionnaire that had been filled out by respondents showed that prospective elementary school teachers still needed self-assessment and diagnostic assessment models for differentiated learning that could accommodate the learning needs of elementary school students. To be able to carry out differentiated learning, teachers need more detailed information about student profiles through student self-assessments and diagnostic assessments carried out by teachers so that learning will run effectively according to students' abilities, interests and learning abilities.

**Keywords:** self-assessment, assessment diagnostic, differentiated learning

## INTRODUCTION

The ability to carry out assessments is one of the basic abilities that must be mastered by a teacher. In accordance with Teacher and Lecturer Law No. 14 of 2005 Chapter I Article 1 (RI Law Number 14 of 2005), that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education through formal education, basic education and secondary education. As a profession, it is not enough for teachers to just know their ability to assess and evaluate, but teachers must understand and apply it well. Based on research conducted by Hajaroh and Adawiyah (2018).

The existence of the Republic of Indonesia Ministry of Education and Culture's Decree number: 56/M/2022 (2022) concerning guidelines for implementing the curriculum in the context of learning recovery is the basis for implementing the implementation of the independent curriculum by holistically increasing student competency to further encourage the realization of the Pancasila student profile. Implementing changes to educational policies, including the curriculum, is a long learning process so that the Government provides opportunities for educators and educational units to implement the Independent Curriculum according to their respective readiness. The readiness of educators and educational units certainly varies with various characteristics of the school environment, students and teachers. This implementation stage is

designed so that each educator can implement the Independent Curriculum according to students' learning needs. Educators in learning are expected to be able to accommodate students' differences and learning needs. To be able to determine students' needs and their readiness to learn, it is necessary to carry out self-assessments by students and initial cognitive and non-cognitive assessments known as diagnostic assessments (Assessment and Learning Center, Research and Development and Bookkeeping Agency, Ministry of Education and Culture, Research and Technology, 2021). Through collaborative self-assessment and diagnostic assessment, students can map their abilities and learning needs to design learning that is centered on student needs. Self Assessment and Diagnostic Assessment are included in assessment for learning. This assessment can be carried out at the beginning of the new academic year, at the beginning of the semester and at the beginning of the subject. Self-assessment carried out by students has an important role in the differentiated learning design carried out by teachers, including at the elementary school level. Meanwhile, the Diagnostic Assessment is prepared by the teacher in order to obtain information on students' learning readiness. This diagnostic assessment is carried out by the teacher based on the field of science taught to students.

Based on the results of the needs analysis of prospective elementary school teachers who are currently taking the professional teacher program,

as many as 65% of respondents said they needed it and 34% of respondents said they really needed the development of student self-assessment in differentiated learning. The needs of prospective elementary school teachers in developing diagnostic assessments were 54% of respondents who expressed the need and 46%. The results of this analysis increasingly show that prospective elementary school teachers need information on how to develop self-assessments and diagnostic assessments that support differentiated learning, especially at the elementary school level. The needs analysis also shows that 70% of teachers experience difficulties in understanding and compiling diagnostic assessments. In fact, teachers have never prepared self-assessments to support the learning they do, for reasons of time not allowing it and the limited ability of teachers in compiling self-assessments and diagnostic assessments to support learning that suits students' learning needs in differentiated learning.

Differentiated learning is an approach that accommodates students' learning needs which is increasingly being adopted in modern education, especially in elementary schools. This approach aims to adapt the learning process to students' individual needs, including their learning styles, interests and abilities (Tomlinson & Moon, 2013). One important aspect in implementing effective differentiated learning is self-assessment by students so that teachers get complete information about students' self-profiles in both cognitive and non-cognitive domains. Self Assessment allows students to be actively involved in the learning process and develop their metacognitive abilities (Panadero et al., 2017). Self Assessment is a process where students are involved in evaluating and reflecting on their own learning (Andrade, 2019), through this Self Assessment, students can identify their strengths and weaknesses, set relevant learning goals, and develop strategies to achieve these goals. In Self Assessment, students identify their strengths and weaknesses, determine learning goals, and develop strategies to achieve these goals. Self Assessment allows students to become active thinkers, develop metacognitive skills, and take responsibility for their own learning process. Self Assessment can increase student involvement in learning, students are actively involved in their own learning process. They become more aware of their strengths and weaknesses, and take a greater role in determining appropriate learning goals and strategies (Yan, 2020). Self Assessment can increase motivation and learning achievement, research shows that

Self Assessment can increase students' learning motivation and academic achievement (Andrade, 2019; Yan, 2020). When students engage in Self-Assessment, they feel more responsible for their own learning and motivated to achieve set goals. However, the development of the Self Assessment model in differentiated learning in elementary schools is still limited and not yet optimal and requires further research.

Assessments have tended to be carried out to measure student learning outcomes. In this context, assessment is positioned as if it were a separate activity from the learning process. The use of assessment is not just about knowing the achievement of learning outcomes, what is more important is how assessment can improve the achievement of learning outcomes, what is even more important is how assessment can improve students' abilities in the learning process. Assessment should be carried out through three approaches, namely (a) Assessment of learning is an assessment carried out after the learning process is complete. The completion of the learning process does not always occur at the end of the year or when students complete their education at a certain level. Each educator carries out an assessment which is intended to provide recognition for the achievement of learning outcomes after the learning process is complete, which means the educator carries out an assessment of learning.

Based on conditions in the field, elementary school teachers and prospective teachers really need information on the development of self-assessment and diagnostic assessment to support learning that suits students' learning needs in differentiated learning. So the results of this development will be very useful for elementary school teachers and prospective teachers as a reference for designing and implementing differentiated learning that accommodates all students' learning needs based on self-assessment through self-assessments carried out by students and diagnostic assessments carried out by teachers. The collaboration of these two assessments will really help teachers in general, especially teachers in elementary school, in designing innovative, interesting and fun learning according to students' learning needs.

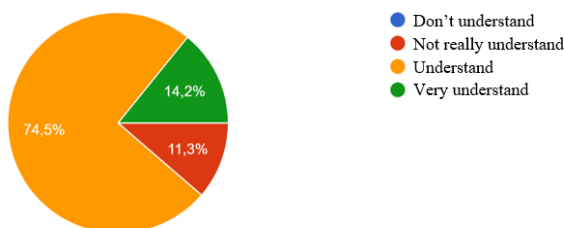
## METHODS

The research method used in this research is descriptive qualitative. Researchers determined prospective elementary school teacher who were

undertaking professional teacher programs at PGRI University Semarang and Semarang State University as respondents. The research was carried out in April, even semester 2023-2024. The subjects of this research were all students of the Teacher Professional Program at PGRI University Semarang and Semarang State University for the 2023-2024 academic year. Data collection techniques in this research used questionnaire techniques, interview techniques and documentation studies. The selection of these two universities took into account that both of them are universities in the city of Semarang as organizers of the Teacher Professional Program (PPG), especially elementary schools. Next, the researcher distributed questionnaires filled out by students, then the researcher followed up with limited interviews with respondents and also observations at school to get real information in the field. Next, the researcher carried out an analysis based on teaching module product documents, interview results and questionnaire results to obtain information on the need for self-assessment and diagnostic assessment development to support learning that suits students' learning needs in differentiated learning.

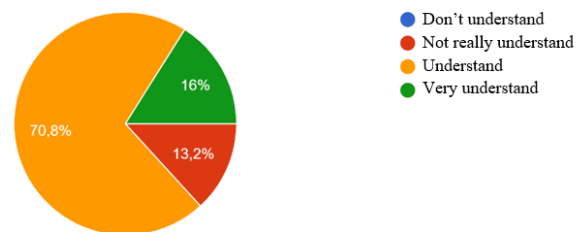
## RESULTS AND DISCUSSION

This research began with the development of a questionnaire instrument containing the needs of elementary school teachers and prospective teachers in designing differentiated learning. Researchers developed a questionnaire on teacher needs in designing differentiated learning with 30 statement items. This questionnaire was distributed and filled out by students of the elementary school teacher profession program who are currently studying at PGRI University Semarang and Semarang State University. These 2 universities were chosen because they are LPTKs that implement professional teacher programs, especially in the city of Semarang. Based on the questionnaire, teacher needs in designing differentiated learning are as follows:



**Figure 1.** Respondents' understanding of the purpose of assessment for learning

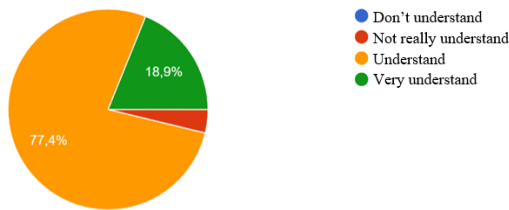
Respondents' understanding of the purpose of self-assessment for differentiated learning from 106 respondents, 14.2% of respondents said they really understood, 74.5% said they understood, 11.3% said they didn't understand. The results of this item were followed up by researchers by interviewing respondents and obtaining information that prospective elementary school teachers understood the purpose of self-assessment but had never implemented it due to limited references and examples of self-assessment for students who support teachers in designing differentiated learning. Next, the researcher cross-checked the teaching modules developed by prospective elementary school teachers in Field Experience Practice (PPL) I and II activities and obtained information that on average, prospective elementary school teachers did not have a self-assessment completed by students as a basis for teachers in designing differentiated learning.



**Figure 2.** Respondents' understanding of the benefits of self-assessment

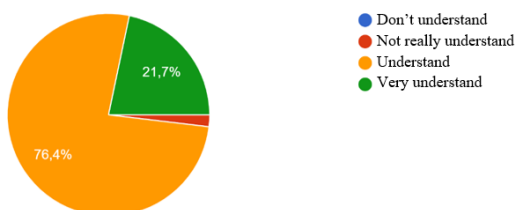
Respondents' understanding of the benefits of self-assessment for differentiated learning from 106 respondents, 16% of respondents said they really understood, 70.8% said they understood, 13.2% said they didn't understand. The results of this item were followed up by researchers with interviews with respondents and obtained information that prospective elementary school teachers understood the benefits of self-assessment in differentiated learning so they got information on student self-assessment but had never implemented it due to limited references and examples of self-assessment for students who support teachers in designing differentiated learning. . Next, the researcher cross-checked the teaching modules developed by prospective elementary school teachers in Field Experience Practice (PPL) I and II activities and obtained information that on average prospective elementary school teachers had not utilized the self-assessment completed by students as a basis

for teachers in designing differentiated learning.



**Figure 3.** Respondents' understanding of the purpose of diagnostic assessment

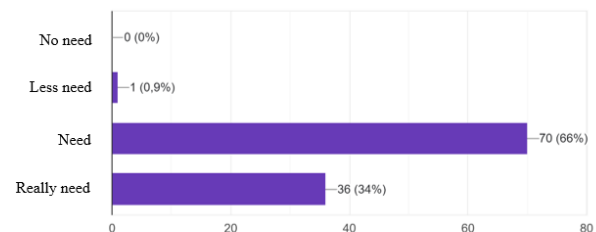
Respondents' understanding of the purpose of diagnostic assessment for differentiated learning from 106 respondents, 18.9% of respondents said they really understood, 77.4% said they understood, 3.7% said they didn't understand. The results of this item were followed up by researchers by interviewing respondents and obtaining information that prospective elementary school teachers understood the purpose of diagnostic assessment but had never implemented it due to limited references and examples of diagnostic assessment development developed by teachers that supported the design of differentiated learning. Next, the researchers cross-checked the teaching modules developed by prospective elementary school teachers in the Practical Field Experience (PPL) I and II activities and obtained information that on average prospective elementary school teachers had used diagnostic assessments, but very minimally and on average they only informed students' learning styles. as a basis for designing differentiated learning.



**Figure 4.** Respondents' understanding of the benefits of diagnostic assessment

Respondents' understanding of the benefits of diagnostic assessment for differentiated learning from 106 respondents, 21.7% of respondents said they really understood, 76.4% said they understood, 1.9% said they didn't understand. The results of this item were followed up by researchers with interviews with respondents and obtained information that prospective elementary school teachers understood the benefits of

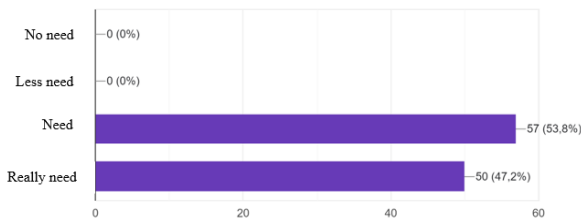
diagnostic assessment in differentiated learning so that the learning carried out by teachers could accommodate students' learning needs but had not yet fully implemented the diagnostic assessment. They only asked students about their learning habits, and also limited references and examples of diagnostic assessments for teachers, so teachers are not yet confident in developing these instruments. Next, the researcher cross-checked the teaching modules developed by prospective elementary school teachers in the Practical Field Experience (PPL) I and II activities and obtained information that on average, prospective elementary school teachers had used diagnostic assessments, but very minimally and on average only received information on students learning styles. as a basis for designing differentiated learning.



**Figure 5.** Respondents' needs regarding the development of self-assessment

Respondents' need for the development of self-assessment in differentiated learning from 106 respondents, 34% said they really needed it, 66% said they needed it and only 0.9% of respondents said they didn't need it. The results of this item were followed up by the researcher by conducting interviews with respondents who needed self-assessment, and obtained the self-assessment information needed, namely self-assessment of students who are really used to assessing themselves both cognitively and non-cognitively, so it will be very useful for teachers as a basis for differentiated learning design that suits students' learning needs. Next, the researcher cross-checked the teaching modules developed by prospective elementary school teachers in Field Experience Practice (PPL) I and II activities and obtained information that on average, prospective elementary school teachers did not have a self-assessment completed by students as a basis for teachers in designing differentiated learning. This condition shows that the needs of teachers and prospective teachers in developing self-assessment that supports differentiated learning is

highly anticipated by teachers so that it will become a very useful reference for teachers.



**Figure 6.** Respondents' needs regarding the development of diagnostic assessments

Respondents' need for the development of diagnostic assessments in differentiated learning from 106 respondents, 47.2% said they really needed it, and 53.8% said they needed it and none of the respondents said they didn't need it. The results of this item were followed up by the researcher by conducting interviews with respondents who needed a diagnostic assessment, what kind of diagnostic assessment they wanted, and obtained the required diagnostic assessment information, namely an initial assessment that could truly diagnose students' learning needs in both cognitive and non-cognitive domains so that it would be very useful for teachers as basics of designing differentiated learning that suits students' learning needs. Next, the researcher cross-checked the teaching modules developed by prospective elementary school teachers in the Practical Field Experience (PPL) I and II activities and obtained information that on average, prospective elementary school teachers had used diagnostic assessments, but very minimally and on average only received information on students learning styles as a basis for designing differentiated learning. This condition shows that the needs of teachers and prospective teachers in developing diagnostic assessments that support differentiated learning are highly anticipated by teachers so that it will become a very useful reference for teachers.

Based on the research results, it shows that prospective elementary school teachers really need the development of self-assessment and diagnostic assessment for differentiated learning, especially at the elementary school level. This collaborative assessment will be the basis for differentiated learning, this is relevant to what Wahyuni (2022) said that differentiated learning is an instructional approach where teachers adapt content, processes, products and learning environments to meet students' individual learning needs (Wahyuni, 2022). The development of self-

assessment and diagnostic assessment is also relevant to the main aim of differentiated learning, namely to provide effective and meaningful learning experiences for all students, regardless of their differences in abilities, interests and learning styles (Astuti et al., 2021). Differentiated learning is very effective in meeting diverse learning needs in the classroom, learning carried out in the classroom adapts content, processes, products and learning environments, teachers can create a more inclusive and meaningful learning experience for all students. Differentiated learning is designed by teachers to meet students' learning needs, both cognitive and non-cognitive (Garcia, 2016). Differentiated learning will be very effective if the teacher has complete information about the student's self-profile (Newman, 2012). Teachers can design student self-profiles by developing self-assessments and diagnostic assessments to obtain information on students' learning needs.

According to Tomlinson, differentiated learning involves adapting the curriculum, teaching, and learning environment to meet the needs of all students, regardless of their differences in abilities, interests, or learning styles (Tomlinson, 2017). The differentiated learning steps recommended by Tomlinson to implement differentiated learning in academically diverse classes are as follows: (1) Assess students' readiness, interests and learning profiles, use an initial assessment to determine the level of readiness, interests and learning styles of each student, examples of application using interest questionnaires, diagnostic tests, and classroom observations. (2) Plan differentiated lessons, plan lessons by considering variations in content, processes, and products, examples of their application. Provide reading materials with various levels of difficulty, using various teaching strategies such as group discussions, experiments, and projects. (3) Adapt content, provide material in a variety of formats and levels of difficulty to accommodate all students, for example simpler texts for students who need extra support and more complex texts for more advanced students. (4) Adapt the process, use various teaching strategies to meet various student learning styles, examples of applying project-based learning for students who learn kinesthetically, and short lectures followed by discussions for students who learn auditorily. (5) Customize the product, give students choices in how they demonstrate their understanding, examples of application: Students can choose to create a poster, presentation, write an essay, or create a video project. (6) Supportive

learning environment, create a supportive, inclusive and safe learning environment for all students, examples of implementation are organizing classrooms with group and individual work areas, providing additional teaching materials, and ensuring a positive classroom atmosphere.

## CONCLUSION

Conditions in the field is that it has not yet developed student self-assessment and teacher initial formative assessment for designing learning. Prospective elementary school teachers really need the development of self-assessment and diagnostic assessment for differentiated learning, especially at the elementary school level. The development of this assessment will be very useful in designing teaching modules that accommodate all students' learning needs, both cognitive and non-cognitive, in differentiated learning.

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