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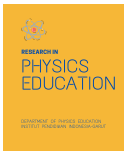

ARTICLE

Perceptions of physics teachers and students in Indonesian senior high schools toward the changes of National Examination to Minimum Competency Assessment

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Abstract

The National Examination is a refinement of learning evaluation carried out by elementary school to high school students, and is held every year, the implementation of this exam aims to improve the quality of education in Indonesia. Although the implementation is held regularly, the facts show that the quality of education in Indonesia is still low. In accordance with the results of PISA and TIMSS which show that Indonesia is in the bottom 10, it means that Indonesian students are still low in terms of literacy and science. This fact changed the evaluation of education which originally used the National Examination, was changed to a Minimum Competency Assessment. The rolling out of this new assessment since 2021 will certainly change the views of teachers and students on the learning they are doing. Therefore, this study aims to investigate the perceptions of high school students and teachers regarding various aspects of changes in classroom learning, especially physics subjects since the minimum competency assessment was launched. This study uses non-experimental quantitative methods with questionnaires and interviews data collection methods. The questionnaire data analysis used descriptive statistics while the interview data analysis used thematic analysis. By using purposive sampling technique, the participants in this study were 6 high school physics teachers and 172 high school students. The results of the study revealed that most of the students and teachers agreed with the change of the National Examination to the Minimum Competency Assessment in terms of juridical, pedagogical, and psychological aspects.

Keywords: Indonesian National Examination; Minimum Competency Assesment; physics learning

1. Introduction

The National Examination in Indonesia is a form of learning evaluation carried out by elementary school to high school students. The National Examination is a refinement of the final examination system which was originally called the State Examination in 1965, then its name changed to the School Examination in 1972, the National Final Stage Learning Evaluation in 1980, the National

Final Examination in 2001 and the National Examination issued in 2005(Gumilar and Ismail 2021; Hartanto 2013). The government's goal in holding the National Examination is so that Indonesia has a national standard of assessment. However, in Indonesian Law Number 20 of 2003 concerning the National Education system, it is stated that the school has the right to graduate students. Thus, the National Examination is not a determinant of education quality standards but as a national evaluation tool for the quality of education in the regions.

Although the implementation of the National Examination is held once a year, empirical facts show that the quality of primary and secondary education in Indonesia is still low. In accordance with the results of the PISA (Program for International Student Assessment) data, which is a national measurement of the evaluation of the education system in secondary education in the fields of science, mathematics and literacy in 2018, scientific literacy in Indonesia is ranked 70 out of 78 participating countries with a score of 396 (Fuadi et al. 2020). In a period of approximately 20 years since the release of scientific literacy results for students worldwide, Indonesia has always been in the lowest rank, this shows that the scientific ability of Indonesian students is still far below other countries (Shoimah 2020). In addition, based on the 2015 TIMSS (Trends International Mathematics and Science Study), Indonesia was ranked 45 out of 48 countries with 397 points, which means Indonesian students are also still low in terms of science (Astutik, Lesmono, and Adani 2019).

The empirical facts above change the direction of the policy for evaluating educational standards no longer using the National Examination. The latest fact is that the government through the Ministry of Education and culture has changed the National Examination into a Minimum Competency Assessment. The policy change is based on the results of discussions and surveys of various stakeholders in the education sector such as teachers and students (Novita, Mellyzar, and Herizal 2021). The Minister of Education and Culture explained that the material presented in the National Examination was too much, so students did not focus on learning competencies but tended to memorize various materials that were prioritized in the National Examination. This will burden students, teachers and parents, because the National Examination is a measure of student success in individual learning. So in terms of implementation, the National Examination has not met the government's objectives, because it only assesses cognitive abilities, while students' abilities can be seen from various other aspects such as in terms of affective and psychomotor (Sari et al. 2021). The change in the National Examination to a Minimum Competency Assessment will of course also change the sustainability of the learning system, one of which is in learning physics in high school. Based on other studies, it was explained that before the implementation of the Minimum Competency Assessment, teachers in the classroom tended to discuss physics material and questions that often appeared in the National Examination, so that there were differences in terms of the depth of the material. This tends to ignore the competency standards that have been set (Prasetyadi, Astutik, and Supeno 2021).

The roll-out of the Minimum Competency Assessment since 2021 will of course change the views of teachers and students on the context of the learning they are doing, including in learning physics. There have been several studies that discuss how students and teachers perceive the change of the National Examination to a Minimum Competency Assessment, but so far there is no empirical evidence that reveals how high school physics students and teachers perceive the change of the National Examination to a Minimum Competency Assessment and how it relates to classroom learning. Therefore, this study aims to investigate the perceptions of high school students and teachers regarding various aspects of changes in classroom learning, especially physics subjects since its inception.

2. Literature Framework

2.1 Reconsideration of Indonesian National Examination

The National Examination is one of the evaluation tools carried out in order to achieve an assessment of student competency standards nationally (Alawiyah 2015). The purpose according to the Decree

of the Minister of National Education of the Republic of Indonesia Number 153 of 2003 concerning the National Examination is to see the results of student achievement and determine the quality of education from the school, district, provincial, to national levels as well as to be accountable to the community for the implementation of education. Its function is as a device for controlling the quality of education, as a determinant of student graduation, and as a consideration for selection to enter higher education levels (Sulistyo 2014). In addition, the presence of the National Examination at the education level has caused protracted controversy and criticism, including when the National Examination undergoes policy changes every year and the value standards applied are increasing, this is inversely proportional to the quality of education in Indonesia, especially science which is decreasing every year—the empirical evidence is in accordance with PISA results (Hidayah 2013).

The implementation of the National Examination is also contrary to the Law on the National Education System Number 20 of 2003 where there are several actions that cannot be accounted for both legally based on the law and academically, including article 35 paragraph 1 of the Law on the National Education System explaining that graduates must have competencies consisting of 3 aspects, namely cognitive, affective and psychomotor, while the National Examination only assesses in terms of cognitive (Silverius 2010). Moreover, the Law on the Indonesian National Education System shows curriculum development in Indonesia must be based on the principle of pluralism in accordance with the potential of the region, education units and students, but these policy regulations are ignored by holding a National Examination that does not pay attention to the mental condition and abilities of each student. which varies cannot be equalized. Geographical location is also an obstacle in the implementation of the National Examination, the vast territory of Indonesia causes the difference between learning in cities and learning in remote areas. The quality of learning in cities is much better than in remote areas in several respects, such as facilities, curriculum and teaching staff, so the implementation of the National Examination with the same questions in all regions is discrimination for students in remote areas (Fatimatuzzahra, Puspita, et al. 2019).

2.2 Minimum competency assesment

The national evaluation system that replaces the National Examination is the National Assessment where it can evaluate the education system as a whole and is carried out periodically at all levels for mapping the Indonesian education system, the National Assessment is carried out at the middle level of education, namely grade five elementary school, grade eight junior high school, and eleventh grade of high school, it aims to provide an opportunity for the school to improve the learning system (Rustyawati, Agustin, et al. 2021). The Minimum Competency Assessment has two basic competencies, namely language literacy and numeracy. Language literacy is the key to deepening knowledge in order to understand information in everyday life. Language literacy means being able to understand what is read and written in the form of words, symbols and graphics. While numeration has a different meaning from the ability of mathematical competence, even though both are in the same knowledge clump. Numerical skills require someone to be able to apply mathematical rules in everyday life (Sani 2021). The results of the Minimum Competency Assessment will show the extent to which students are able to participate in learning, it will be a reference for teachers in implementing effective learning strategies, such learning is expected to help students master the concepts of all subjects (Rohim 2021).

The Minimum Competency Assessment is only followed by some students who are the sample representing the population of each education unit, this is applied because this evaluation does not assess students individually, but for evaluation of the government education system and school institutions (Pusmenjar, 2020). The Minimum Competency Assessment Questions are made based on language and numerical data, and contain three material components including cognitive processes, context and content (Rohim 2021; Kemdikbud 2020). The forms of evaluation questions vary widely, namely multiple choice, complex multiple choice, short entry, description, and matchmaking. This

evaluation question should include reasoning, finding information, and interpreting the text.

2.3 Literacy in the context of physics learning

Physics is closely related to scientific literacy, scientific literacy is needed by students to have the ability to solve problems based on science, technology and mathematics. To be able to achieve scientific literacy, a student must first have two basic literacies, namely language literacy and numeracy, language literacy will affect the understanding of material, concepts and information about students' physics, so the teacher's role is needed in integrating understanding complex vocabulary in science learning - physics to determine that the language applied in learning can be understood by students and based on science content standards(Sinyanyuri et al. 2022). While numeration is more related to mathematical equations or formulas, problem solving and problem solving in everyday life based on numbers and symbols because physics and science are also inseparable from calculations to find scientific evidence (Resti et al. 2021).

The Minimum Competency Assessment Policy issued by the Ministry of Education is in line with the science-physics learning objectives set out in the 2013 curriculum, namely the formation of students with high scientific abilities, this goal will be achieved more effectively if this evaluation refers to language literacy and numeracy taught well in schools , understanding equations or formulas and students' concepts of physics will understand more quickly, so that no one thinks that physics is a difficult subject (Purwani, Sudargo, and Surakusumah 2018).

3. Research Method

3.1 Research design

This research was designed using a case study method with quantitative and qualitative approaches. The case study method is one of the research methods that can respond to a particular issue or phenomenon of an event to take into account its impact in a real situation. This research method is based on human perception and behavior based on different characters, beliefs and experiences (Eyisi 2016). The quantitative approach is an approach that aims to measure data and generalize the results from the sample to the population and focuses on numerical data (Feinstein and Kirchgasler 2015). In this study, researchers used a questionnaire or questionnaire to determine the level of perception of students and teachers. While the qualitative approach aims to gain a broad and in-depth understanding of a case, but it takes longer and is richer in the data obtained (Saleh 2017). The qualitative approach used in this study is a semi-structured interview, where the researcher has prepared interview guidelines but when the informant provides answers and new questions arise, the information from the informants can be explored in depth (Budijanto 2013).

3.2 Participants

The population is the whole of a combination of elements that have certain characteristics to be studied, while the sample is taking individual elements from the population in such a way that it can represent the population (Budijanto 2013). The population in this study were all students and teachers in high school. To take the sample, the researcher uses a purposive sampling technique, namely taking research samples based on certain considerations and goals (Suharsimi 2006). The sample in this study amounted to 6 schools representing public and private schools in one city in Indonesia. From the sample, participants were then selected, of which six physics teachers and 172 eleventh grade students in high school (M=16.2; SD=2.3).

3.3 Instruments

The data collection methods used are questionnaires and interviews, the questionnaire used is a closed-ended question whose answer choices are already available. The distribution of questionnaires

will be carried out directly and indirectly. Interviews in this study were conducted directly and indirectly with physics teachers and students who had filled out a questionnaire and were selected by the researchers to be interviewed. Meanwhile, the research instrument used was an interview guide consisting of 10 questions and a closed questionnaire sheet containing 22 items. The instrument was assessed by 2 competent experts in the fields of Physics and Physics Education. Based on the results of the assessment, this research instrument is suitable for use with revisions. The scores for each answer to the questionnaire can be seen in Table 1.

Table 1. Score for questionnaire

Positive questions	Negative questions	Score
Strongly agree	Strongly disagree	4
Agree	Disagree	3
Disagree	Agree	2
Strongly disagree	Strongly agree	1

3.4 Data analysis

The raw data obtained from the research results will be processed first, there are three data processing methods used in this study, namely editing, coding, and presentation or tabulation (Nasional 2008). The data analysis method used for the questionnaire data is descriptive statistical analysis, namely the analysis through the calculation of the average or percentage calculation (Feinstein and Kirchgasler 2015), the analysis of this questionnaire data will use the help of statistical applications in the form of Microsoft Excel or SPSS. Meanwhile, for data from interviews, the next step will be the thematic analysis (TA) or thematic data analysis. TA is a method of data analysis that is carried out systematically by focusing on compiling codes and themes (meaning) and referring to research questions, so that it can explain the phenomena that occur (26).

4. Result of the research

4.1 Students' perception of the change of National Examination

4.1.1 Physics learning in juridical aspect

In the juridical aspect, there are 6 questionnaire questions with 172 students participating. Based on the results of the analysis, as many as 6 percent of students stated strongly agree, 40 percent agree, 34 percent disagree, and 20 percent strongly disagree, where the percentage refers to 6 core statements in the questionnaire, namely the incompatibility of the National Examination with government regulations and school conditions that different, as well as the National Examination that is not in accordance with the applicable curriculum.

This is inversely proportional to the implementation of the National Examination which aims to determine student graduation. This fact can take away the rights of teachers as evaluators where teachers assess students based on students' daily abilities on an ongoing basis. In this context, the National Examination assesses students based on the results of filling out questions so that it can encourage negative student behavior such as cheating. This is not in accordance with the real situation of students, as seen in the results of the following interviews with students:

> *"... but if according to the students' honesty it is not appropriate, because it has not been conditioned so sometimes it is not in accordance with the actual situation of students, some are good everyday but in the National Examination it is even worse and vice versa" (P1S3).*"

Based on the results of the interviews revealed another theme which is the reason many students agree with the change of the National Examination to the Minimum Competency Assessment,

namely because of the incompatibility of the implementation of the national education system law, which states that the evaluation of student learning outcomes is carried out by educators to monitor the progress of student learning outcomes. on an ongoing basis. In addition, another theme revealed from the results of the interview shows that the implementation of the National Examination is not completely wrong, there is a technical conformity of the National Examination with government regulations. Every school strives to always meet the government's demands for success in the ongoing National Examination. When viewed from the technical point of view of the implementation of the National Examination, the school has done it in accordance with the applicable government regulations, as revealed in the following interview:

> *"…the technicalities at this school that I know have been running smoothly and in accordance with the technical recommendations recommended by the government, we run the Exam system. National computer-based using a computer …(P1S1).*"

In another theme, it was also revealed that the Minimum Competency Assessment in accordance with the law reads that evaluations are carried out on students of educational institutions and programs on formal and non-formal channels for all levels and types of education as well as the national education system law which explains that the implementation of the Minimum Competency Assessment can evaluate all educational units, not only students who play a role in the Minimum Competency Assessment but also teachers, staff, and all elements of the school environment. Meanwhile, the National Examination only assesses student learning outcomes individually, as revealed in the following interview results:

> *"…then for the self-assessment I know that the Minimum Competency Assessment is more about the school system, whether the school evaluation is better or not, so the assessment is an assessment. Minimum Competence in groups if the National Examination is more individual (P3S1).*

4.1.2 Physics learning in pedagogical aspect

This aspect analysis consists of 12 questions with 172 students as respondents. The results stated that 7 percent of students strongly agree, 48 percent agree, percent disagree, and 15percent strongly disagree. For more details, it can be seen in Figure 2. The percentages above refer to the 12 statements in the questionnaire which are concentrated in 4 indicators, namely knowledge about minimum competency assessment in learning physics, comparison of the physics learning process for preparation for the implementation of the National Examination and minimum competency assessment, learning preparation. physics for the implementation of the minimum competency assessment, and evaluation of the results of the minimum competency assessment for classroom learning

If we dig deeper through the results of the interviews, there are several themes that are relevant to the background of why dominant students agree that the national exam is replaced with a minimum competency assessment. The first theme is that the minimum competency assessment can be used as an evaluation of the learning process in the classroom, including learning physics. This is in accordance with the interview excerpt as follows:

> *"…so the event is held in the eleventh grade of SMA, then it can also be a reflection of how the school must make improvements in the future…" (P4S3).*

Then the second theme obtained relates to the assessment dimension, where the minimum competency assessment can measure all aspects of the assessment including the assessment of physics subjects. this is in accordance with the following interview:

> *"…as socially, maybe it has the same character, because there is a statement that we have to answer at the end of the minimum competency assessment test session, it can be seen from the results we fill out the minimum competency assessment questions…" (P5S3).*

Furthermore, the third theme relates to the level (level) of problem difficulty, namely physics questions in the minimum competency assessment at the level according to the answers filled out by students. This triggers students to work on the minimum competency assessment questions correctly. This is in accordance with the following interview:

> *"…what I know when we work on physics questions in the minimum competency assessment that there are levels, so if we do the questions incorrectly, the level will go up or down based on the answers that are filled out…" (P5S1).*

The fourth theme relates to the suitability of the questions with the curriculum used in schools, namely there is a suitability of physics questions in the minimum competency assessment with the applicable curriculum, this is in accordance with the following interview excerpt:

> *"…the problem is the same as learning in class…(P6S1) …the problem is similar like practice in class…(P6S2)".*

The fifth theme is physics material for the preparation of a minimum competency assessment using a literacy approach. Students feel different things in class about the way the teacher provides physics material in the form of stories in everyday life. This can be seen in the interview excerpt as follows:

> *"…like many stories, the story is long, so from one story it can be several questions that are in the form of multiple-choice questions and essays…" (P6S3).*

The sixth theme is related to the physics learning process for minimum competency assessment, there are no additional hours. This is in accordance with the results of the following interview:

> *"There is no such thing as for this school, it is only in the form of instructions and then they are asked to prepare themselves..." (P7S3).*

The last theme is physics learning for the preparation of minimum competency assessment is not intense. This means that learning is carried out as usual, unlike the national exam which discusses national exam questions almost every day from year to year. This is as excerpted from the following interview:

> *"…for the minimum competency assessment, learning goes on as usual but it is more about the introduction of the question form…" (P8S1).*

4.1.3 Physics learning in psychological aspect

The psychological aspect consists of 4 questions with 172 respondents, the results are 5 percent of students stated strongly agree, 43 percent agree, 38 percent disagree and 14 percent strongly disagree. The percentage value of this aspect is taken from 4 items of questionnaire statements which are centered on one indicator, namely the impact of the implementation of the national exam and the assessment of minimum physical and psychological competencies.

The results of the interviews reveal the reasons why students agree with the replacement of the national exam as a minimum competency assessment. First, students are burdened with national exams. Both physically and psychologically because they have to take additional hours after learning is complete. Apart from that, students also have to study independently at home. This is in accordance with the following interview excerpt:

> *"… physically tired because there are extra hours, and the next day you still have to go to full school as usual, psychologically also burdensome because there is a fear of the results…" (P9S1).*

Furthermore, the second theme reveals that students are not burdened by the existence of a minimum competency assessment. In the minimum competency assessment, there is no standard minimum value so that the minimum competency assessment does not determine student graduation. This is in accordance with the following interview results:

> *"It is not burdensome because the minimum competency assessment is not to determine student graduation but to evaluate learning.." (P10S2).*

4.2 Physics teachers' perception of the change of National Examination

4.2.1 Physics learning in juridical aspect

The juridical aspect for teacher perceptions consists of 6 questions with 6 eleventh grade high school physics teacher respondents, the results are 16 percent of teachers strongly agree, 50 percent agree, 17 percent disagree and 17 percent strongly disagree. The percentage figures refer to the 6 core statements in the questionnaire, namely the incompatibility of the National Examination with government regulations and different school conditions, and the National Examination that is not in accordance with the applicable curriculum.

The reason why the choice of agreeing dominates can be seen in the theme of the interview where it is revealed that according to the physics teacher the government's policy on the national exam is not in accordance with the circumstances of every school. The country of Indonesia has different geographical conditions so that this gap makes the education received by students in urban areas and in certain rural areas will be different, especially in terms of facilities. This can be seen in the following interview excerpt:

> *"…not fully in accordance with the central government, because every school must be different and have their own provisions…" (P1S3).*

The second theme reveals that the government's policy on minimum competency assessment is inversely proportional to the national exam policy. Based on government policy, there is no provision for minimum standard scores for minimum competency assessments as can be seen from the following information from teachers:

> *"… if the AKM does not have a minimum score from the government, which is measured by students not only from the reasoning exam determined by the government, but also in terms of affective and psychomotor…" (P3S3).*

4.2.2 Physics learning in pedagogical aspect

In the pedagogical aspect there are 12 questions and 6 respondents' answers, the results of the analysis show 33 percent strongly agree, 33 percent agree, 17 percent disagree, and 17 percent strongly disagree. The results of the percentage of pedagogical aspects are generated from 12 core statements in the questionnaire which are concentrated in 4 indicators, namely knowledge about minimum competency assessment in physics learning, comparison of physics learning process for preparation for national exams and minimum competency assessments, preparation of physics learning for implementation of minimum competency assessments, and evaluation of the minimum competency assessment results for classroom learning.

The reason why teachers agree with the replacement of the national exam with a minimum competency assessment can be seen from several interview themes, namely first, the minimum competency assessment in the physics learning process helps teachers prepare students' skills related to literacy. In addition, the minimum competency assessment can also be used as preparation for the exam in class 12, as can be seen from the following information:

> *"…for exam preparation in class 12, so if the minimum competency assessment is directly prepared in class 12, I think if there is an exam school for grade 12 related to literacy and numeracy students already know…" (P4S3).*

Second, the minimum competency assessment can also assist teachers in assessing students, where the assessment system for students is divided into 3 dimensions, namely cognitive, affective and psychomotor. This is in accordance with the following interview:

> *"…what I know in the minimum competency assessment is that apart from students' cognitive, affective and psychomotor aspects, they are also assessed (P5S3)".*

Third, the subjects and questions of physics in the minimum competency assessment refer to the applicable curriculum. This shows that this evaluation is very much in line with the use of the curriculum chosen by the school. This is in accordance with the following quote from the interview theme:

> *"…in the minimum competency assessment there are questions that are in accordance with the curriculum in the form of multiple choice, short entry, long entry, true and false, matchmaking and others, the questions already have their respective levels. respectively (P6S3)".*

Furthermore, the fourth theme is why the minimum competency assessment is appropriate to replace the national exam because the process of studying physics for the preparation of the minimum competency assessment is not as frequent as when preparing for the national exam. This can be seen from the excerpts from interviews with physics teachers as follows:

> *"The preparation for learning here is not too intense, so there is no special preparation for students to carry out minimum competency assessments, so the preparation is purely student knowledge...(P8S1)".*

4.2.3 Physics learning in psychological aspect

The results of the psychological aspect of the questionnaire analysis consist of 4 questions centered on one core indicator, namely the impact of the implementation of the national exam and the minimum physical and psychological competency assessment filled out by 6 respondents resulting in a percentage value of 16 percent strongly agree, 50 percent agree, 17 percent disagree and 17 percent strongly disagree. The percentage of this aspect is taken from 4 items of questionnaire statements centered on one indicator, namely the physical and psychological impact of the implementation of the national examination and minimum competency assessment.

If you analyze the results of teacher interviews, there are 2 reasons (themes) why teachers agree to replace the national exam with a minimum competency assessment when viewed from a psychological perspective. First, teachers are burdened with national exams. Second, teachers are not burdened with minimum competency assessments. This is as seen in the following interview excerpt:

> *"…then the students must also reach the grades that have been determined by the government, automatically all the lesson concepts must be conveyed to students and must be truly understood by students, but again it is the responsibility of the students. our answer as a teacher is like this…(P9S1)".*

5. Discussion

From the data obtained, it is found that the majority of students and teachers agree with the replacement of the National Examination with a Minimum Competency Assessment in terms of juridical, pedagogical, and psychological aspects. In the juridical aspect, the National Examination is

not in accordance with the government's policy regarding the minimum grade standard for student graduation that the assessment is the authority of the teacher. This is in line with other studies which state that the right of teachers to evaluate is taken away by the government with the enactment of the National Examination (Budijanto 2013).

From the school's point of view, the standards set by the government for the National Examination including physics subjects are burdensome for certain schools, especially schools located in rural areas. This is due to the lack of facilities in the school so that students cannot explore further about the material presented by the teacher related to the National Examination including Physics. This is in line with research (Oktavia 2019) which reveals that education in Indonesia is not evenly distributed. Students object to the setting of minimum standards which seem to state that the National Examination only assesses students individually. On the other hand, students and teachers have to be extra in learning, including Physics, by attending extra lessons in addition to the regular lessons. These demands cause students and teachers to feel physically and psychologically tired and cause anxiety. This phenomenon is in line with previous research which revealed that most students feel anxious in facing the National Examination because of the application of the minimum score standard (Maisaroh and Falah 2022). This standard in the National Examination burdens students so that there is a lack of confidence and causes students to do negative things such as looking for or buying answer keys and cheating. the greater the desire to cheat(Silaen et al. 2020).

On the other hand, the Minimum Competency Assessment as a substitute for the National Examination is welcomed by students and teachers because there is no demand for minimum standard scores that must be achieved. In addition, not only students who take the Minimum Competency Assessment but also teachers and all school members can participate in the government's evaluation of education in Indonesia. This is in line with other research which states that in the context of the Minimum Competency Assessment, the assessment cannot be said to be individual because it evaluates groups of educational units cheat (Novita, Mellyzar, and Herizal 2021).

In the pedagogical aspect, the Minimum Competency Assessment can evaluate the physics learning process in the classroom and can measure all aspects of the assessment both in the cognitive, affective, and psychomotor dimensions. This finding is in line with other findings which suggest that there are several main things that are tested and become an assessment in the Minimum Competency Assessment, namely cognitive, affective and psychomotor (Maisaroh and Falah 2022). In addition, this finding is also equivalent to other findings which explain that the Minimum Competency Assessment and character survey are not only valid for cognitive assessments, but also affective and psychomotor (Yuliandari and Hadi 2020).

In addition, the physics material taught is in accordance with the applicable curriculum so that it is easier for teachers to apply physics questions in the Minimum Competency Assessment. This has an impact on how to deliver Physics material using a literacy approach. In this context, the literacy approach used by teachers to teach physics in the classroom can be fulfilled if the evaluation uses a Minimum Competency Assessment. This is in line with other findings which explain that the Minimum Competency Assessment in the context of physics pays attention to three important points, namely finding information, understanding, and evaluating or reflecting (Sani 2021). Teachers can package these three points by using physics questions that are integrated with stories or readings, graphs, tables and others. This is in line with the findings of other research (Maorin, Pasha, and Ananda 2022) which states that the physics questions in the Minimum Competency Assessment are literacy-based. It aims to require students to think critically. For example, students are provided with a graph of the relationship between density and volume of various fluids, after seeing and analyzing these relationships. Another example, which is a literacy-based physics problem, is a teacher teaching vector material in high school that is packaged in such a way using stories of children going to school or parabolic motions using stories of children playing basketball.

Then when viewed from the learning process carried out, the preparation of the Minimum

Competency Assessment does not take as much time as the National Examination. In the context of the National Examination preparation activities, learning Physics in class is more focused on discussing the Physics National Examination questions in previous years. Meanwhile, the preparation for the Minimum Competency Assessment of students focuses more on science-based physics questions in the aspects of literacy and numeracy. This is in line with the findings of Agustin and (Sari et al. 2021) who emphasized that the focus of student learning in class is to work on literacy and numeracy-based physics problems in a scientific context, so that it can also improve students' scientific literacy skills. In addition, the Minimum Competency Assessment does not include additional physics learning hours such as the National Examination. Students also do not have to take private lessons outside of school to get the maximum Minimum Competency Assessment score because the Minimum Competency Assessment is carried out according to the student's abilities.

Unlike the case with the National Examination, in the psychological aspect the Minimum Competency Assessment does not pose a burden to students and teachers physically or psychologically because there are no additional lessons that students must take and there is no burden of thinking about achieving minimum scores. Students and teachers can focus more on completing learning outcomes according to government standards and objectives that seek to improve literacy skills, including scientific scientific literacy. In addition to several waivers that can be obtained by students and teachers, the Minimum Competency Assessment is a challenge for students and teachers because it has only been carried out once in Indonesia. Of course, there are still many characteristics that must be studied in the Minimum Competency Assessment in order to improve the quality and equity of education in Indonesia, especially in the context of literacy.

6. Conclusions

From the results of the analysis and discussion in research on the perceptions of high school physics students and teachers in one city in Indonesia towards the change of the National Examination to the Minimum Competency Assessment, two conclusions can be drawn.

Firstly, the majority of students agree with the change of the National Examination to a Minimum Competency Assessment in terms of the juridical, pedagogical and psychological aspects. When viewed from the juridical aspect, students agree with the existence of a Minimum Competency Assessment because it is in accordance with applicable government regulations including the law on the National Education System. Then in the pedagogical aspect, the Minimum Competency Assessment can be an evaluation tool for physics learning, can measure all aspects of the assessment, as well as the suitability of the Minimum Competency Assessment with the applicable curriculum. Furthermore, in the psychological aspect, students assume that the Minimum Competency Assessment is not a burden either physically or psychologically.

Secondly, the teacher's perception of the change of the National Examination to the Minimum Competency Assessment when viewed from the juridical, pedagogical and psychological aspects, most of them agreed with the Minimum Competency Assessment because it was in accordance with applicable government regulations and the government did not determine the minimum standard for the Minimum Competency Assessment. In the pedagogical aspect, the teacher explains that the Minimum Competency Assessment can be an evaluation process, can assess all aspects of learning, the discussion in the Minimum Competency Assessment refers to the applicable curriculum, and the preparation is not too intense. In terms of psychology, teachers also do not feel burdened by the Minimum Competency Assessment.

With the implementation of the Minimum Competency Assessment by the government in the world of education, it is certainly a new thing for the school community, especially students and teachers. This has implications for learning physics in the classroom, there are many changes made by the school to maximize preparation for the implementation of the Minimum Competency Assessment. Teachers must be good at adapting to these changes. For example, teachers must use

literacy and numeracy approaches in the learning process of physics in the classroom. If the teacher uses these two approaches in class when physics is taking place, students will not only be given a Minimum Competency Assessment preparation but will also practice their scientific literacy skills.

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