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The Students' Characters Analysis in Physics Learning Process

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Abstract

The character affects a person's quality of life. Having a good character is expected to have the ability to improve his/her quality of life. This study aims to describe the characters of students, namely responsibility, curiosity/creativity, honesty, tolerance, perseverance, and discipline. This descriptive research utilizes indirect communication techniques in collecting data. The data collection tools used are in the form of character questionnaires. The student character questioners are developed based on validated character indicators with a value of 81% with decent character. Based on the results of the analysis of the character questionnaires data that was filled out by the students, it was found that the characters of responsibility, creativity, honesty, perseverance, and discipline were classified began to develop, and the character of tolerance was classified as seen. However, in general, the character of students is classified as began to develop.

Keywords: the characters of students, character questionnaires, physics learning

INTRODUCTION

Education is an effort to develop students who have intelligence, personality, and noble character. Sunaryo (2017) states in line with the purpose of education that can make the formation of individual behavior dynamic and character that can avoid adverse factors in life, then the education process must always anticipate many things that allow it to happen distortion of the goals of education itself. It is stated in the Act No. 20, 2003 regarding National Education System article 3 that the national education has the function to develop the ability and shape the character as well as the civilization of a dignified nation in order to enrich the life of the nation, to develop the potential of students to become individuals who believe and devote to God Almighty, have good character, be healthy, knowledgeable, capable, creative, independent, and become citizens who are democratic and responsible. Therefore, education must also prioritize the character-building to be able to compete and interact with society with good ethics and character (Dewi 2015).

Samani and Hariyanto (2011) state, besides, the character is also one's way of thinking and behaving to live and cooperate. With good character, a person will have the ability and moral capacity to face difficulties and challenges.

The degradation of characters found in the field today is hugely alarming. This can be seen from the disturbing events that are happening around the society, such as the rampant cases of corruption, brawls between students, the use of addictive substances that can damage the mind and the body, and many others. If this situation is left unchecked, it will certainly damage the young generation, which is known to be the successor to the development of Indonesia in the future.

According to Salahudin and Alkrienciehie (2013), the solution to the character crisis is by reintroducing the core character values at school. The learning activities at school can help shape character, personality, and habits to improve the quality of life (Suradi 2017). The character development of students in school shows positive results. Character development helps students to improve social skills, manage conflict resolution, and reduce anxiety in the classroom (Wiggan & Watson 2016). It is caused by the effect of individual grouping characteristics. The individual characteristics were grouped in demographics, personality traits, independence, self-competence, and school involvement (Keijzer et al. 2019).

Character-building in junior high school will provide a long-lasting positive impact. This is because, during this period, the students go through the transition phase, which is the change from children's stage into the early teenage stage. Hence, they usually want to show their true selves by imitating the behavior of their idols (Suradi 2017).

Meaningful physics learning is learning that provides stimulus to students so that students can organize their new experiences based on existing cognitive frameworks (Pramesti 2013). This is in line with studying physics at the university level, not only studying mathematics and scientific law, concepts, and definitions (Holbrow 2012) but also includes learning physics in a scientific context (Berge 2016).

Berge and Danielsson (2012) state, the most prominent characteristics in physics learning interactions include primarily executed through speech, drawing, and writing equations. Besides, verbal communication skills play an essential role in learning physics because it can change the learning situation for the better with emerging social interaction between students and students-teachers (Asih & Ellianawati 2019). Besides, the learning process of physics is not limited to only transferring the knowledge of physics, but during the learning process, there are also elements of character-building. The characters that can be found in the character-building process are as follows: respect, sense of justice, compassion, honesty, responsibility, discipline, perseverance, tolerance, patriotism, and others.

Therefore, this research aims to describe the characters possessed by students, which can be found in the learning process at school, especially in the physics learning process, which are the responsibility, curiosity/creativity, honesty, tolerance, perseverance, and discipline.

METHODS

This research is a descriptive study. The research aims to discover the characters of grade 7 students at an Islamic Junior High School with a total of 79 students. The description of students' character utilizes the indirect communication technique to collect the necessary data. The data collection tools used are in the form of character questionnaires. The student character questioners are developed based on validated character indicators with a value of 81% with decent character. The questionnaires consist of 48 questions using the Guttermann scale.

The answers from the students were calculated. The result of the calculation was then analyzed and classified according to TABLE 1 below.

TABLE 1. Classification of Students' Character

Range	Classification
25 - 43.75	Not seen
43.76 - 62.5	began to develop
62.6 - 81.25	Seen
81.26 - 100	entrenched

(Kemendiknas, 2010)

RESULT AND DISCUSSION

Character education is an education system that aims to instill specific character values to students in which there is a component of knowledge, awareness or will, and actions to carry out these values.

This research focuses on six characters of the students, which are based on Act No. 20, 2003. The six characters have been instilled in the students since the beginning of the physics learning process.

The data regarding student characters were collected from the student character questionnaires. The questionnaires itself comprise of 48 question items with positive and negative multiple choices. The questionnaires were developed based on the indicators in TABLE 2 as follows.

TABLE 2. Student Characters Indicators

Character	Description	Indicator
Responsibility	The attitude and behavior of a person to carry out their duties and obligations, which one should do, towards oneself, society, environment (natural, social and cultural), the country and God Almighty.	To complete both individual and group assignments well within the appointed time.
Honesty	The behavior that is based on efforts to make oneself as a person who can always be trusted in words, actions, and work.	To avoid cheating or plagiarism when completing every task, to tell the truth, and to return and report found property.
Tolerance	Respecting differences in religion, ethnicity, opinions, attitudes, and actions of other people.	To respect different opinions, to provide opportunities for others to share their opinion, and to be kind to everyone.
Curiosity / Creativity	The attitudes and actions that always strive to find out more deeply and extensively from something that is learned, seen, and heard.	To always be curious and ask the teacher and peers about the subject and to bring up new creative ideas.
Perseverance	The behavior that shows earnest effort in overcoming various learning difficulties, assignments, and to complete the tasks as well as possible.	To never give up in facing difficulties in learning, to get used to continual learning and to practice all that has been learned.
Discipline	The actions that exhibit orderly behavior and compliance with various rules and regulations.	To always follow the school activity, to arrive on time, to finish the task on time, and to obey the rules.

The result obtained after administering the questionnaires to students is the data as follows.

TABLE 3. Data of the Character Questionnaires Result

Character	Percentage	Classification
Responsibility	59.72	began to develop
Honesty	59.9	began to develop
Tolerance	68.06	seen
Curiosity/Creativity	53.47	began to develop
Perseverance	47.91	began to develop
Discipline	61.11	began to develop
Average	46.23	began to develop

Based on TABLE 3, it can be seen that the students' characters are generally quite good. Furthermore, out of the six characters, there is only one character classified as seen, which is tolerance in 68.06%.

The tolerance character, which is classified, began to develop, indicates that students were able to respect different opinions and were willing to work with others from different backgrounds. During the learning process, students will always interact and engage with their peers and teachers who have different abilities, perspectives, and attitudes. Therefore, students must have the character of tolerance so that they can respect their peers and teachers. Moreover, it is expected that when the students become part of society, they can accept differences so that conflicts will not arise due to these differences.

The responsibility character of the students is classified began to develop. Thus, it can be said that the students did not have a high sense of responsibility towards the task given to them, whether it is individual or group assignment. Students still procrastinated and relied on their peers to complete the assignment. This is an essential point for the teachers and tutors at schools to provide more examples and guidance on how to be more responsible. Besides, implementing the punishment and reward method can be done as a way to foster a sense of responsibility.

Honesty is the character of students who can be trusted both from their words and actions. The character of honesty is in the began to develop. This character mainly concerns with cheating in assignments or during the exams, returning the found property that does not belong to them, and telling the truth even with possible backlash from their peers. The began to develop classification indicates that guidance is still needed for the students to be more honest.

The indicator of curiosity/creativity character in this study aims to find out whether students have additional ideas or motivation when working on the task. The students' character of curiosity/creativity is classified as began to develop. This means that students' interest in the subject during the learning process was not optimal. Students' interest can be observed from the responses and reactions to the lesson even though a high sense of curiosity can improve learning outcomes (Novellya 2019). A high level of curiosity will encourage students to think and find solutions on how to solve the problems, which will increase student learning outcomes.

For the perseverance character, the researchers want to get an idea of whether the students have a sense of unyielding when facing problems and difficulties in the learning process or not. The students' perseverance character is considered began to develop. Therefore, guidance is still necessary so that the students can improve their sense of perseverance. This is because as we enter the era of globalization, competition in the workforce demands students to be persistent and unyielding. By having a high level of perseverance, students will not give up too easily.

As for the character of discipline, the aim is to discover if the students can make good use of their time and opportunities as well as obeying the existing rules. One of the ways to achieve the goal of national education is through the sense of discipline toward the existing rules in schools. This is in line with the article (Suradi 2017), which stated that the junior high school period is the ideal time to instill disciplinary character, which will be an unforgettable experience for the students. The character of the discipline must be trained by collaboration between parents and teachers. In schools, teachers apply existing regulations. While at home, parents play an active role by providing good role models (Handayani et al. 2018).

One of the successes of applying character education can be seen from academic behavior and learning outcomes. With good character, they tend to have good learning outcomes (Supliyadi et al. 2017). Students who have character are characterized by awareness of the potential knowledge and abilities they have. Noble characters possessed by students are characterized by students having an awareness to do their best according to their abilities (Suyitno 2012). So that character greatly affects a person's quality of life. By having a good character, one is expected to have the ability to improve his/her quality of life.

The students' characters can be embedded and attached. It 'is be become personalities.so the school should give direction to the students' parents, and the school should provide role models, habituation, and monitoring on the students' daily activities through their parents (Muttaqin et al. 2018).

CONCLUSION

Character greatly affects a person's quality of life. By having a good character, one is expected to have the ability to improve his/her quality of life. The students' characters in the learning process, especially in science, include responsibility, honesty, tolerance, curiosity/creativity, perseverance, and discipline. In general, the students' characters in Islamic Junior High School are in began to develop the category. Hence, there is a fundamental need for further guidance to improve the character of the students continuously.

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