
Identification the 2013 Curriculum Teacher's Book to Determine the Character Values of Class X Students on Circular Motion Material

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Abstract. The character of school students is currently in the declining category. This is due to the lack of emphasis on the time of the learning process and affects the level of success of the functions and objectives of national education. This study aims to determine the characters that are not embedded in the physics learning process for class X material for circular motion. The research method used is a qualitative method with the type of documentation research. The researcher uses a documentation study because the subject used is a 2013 curriculum teacher's book for class X circular motion. After studying the circular motion material, it is known that there are 18 characters that must be instilled during the physics learning process. However, these 18 characters are not fully embedded because there are some characters that are missing and will have a continuous negative impact on students. Due to the imperfection of this research, in the future, in the textbook of physics learning teacher class X on Circular Motion in the 2013 curriculum and its subsequent development, more attention should be paid to the character of students so that all these characters are fulfilled in order to create a good generation.

Keywords: Character, Learners, Physics Learning

Introduction

Education is a process focused on the academic and social-emotional needs of gifted and high-potential learners who have a purpose (Phelps & Lewis, 2015; Pratama, Firman & Neviyarni, 2019; Hermana et al., 2021). To achieve the goals of education, a learning process is needed. Learning is a series of activities of the body soul to obtain a change in behavior as a result of the experience of the individual in interaction with his environment that concerns cognitive, affective and psychomotor (Sari & Wulandari, 2020; Ahamad et al., 2021; Arkhipova & Podshivalova, 2021). The affective realm includes five levels of ability, namely receiving, answering, or reacting, assessing, organization and characterization with a value or value complex (Andriani & Rasto, 2019; Sanborn, 2023). The aspects that need to be instilled make the brain work hard and its priority to learn.

To achieve these results, we need to think deeply about how we want to reshape organizations to learn about sustainability, in what terms and why. We must ask: Who is responsible and how do we ensure the inevitable learning is long lasting (Alfauzan & Tarchouna, 2017; Falsarone, 2022; Stewart, 2022). This means that all related subjects

need to think about the learning objectives for the next continuity, not just for now the learning objectives must always be continued and even the results can be developed with their education, achievements, and creativity; and, above all, the grounding and stabilization that they provide at the emotional, mental, and family levels (Meier et al., 2021; Karatas & Aktan, 2022). Basically the goal of achieving cognitive, affective, and psychomotor aspects of learning method used also adjusts the subject matter or material (Luszczynska, 2021; Maureen et al., 2022). In order not to overlap in its achievement, it is divided into each subject at each level of education.

This level of education is prepared to distinguish the way teachers assess each related aspect. This is done to realize and its relationship to primary, secondary and tertiary education (Glerum et al., 2020; Scott & Bajaj, 2023). Thus, the way education systems are providing vocational education and training depends on the combination of school and work-based education (Vugt et al., 2022; Yilmaz et al., 2021). In the realm of education, preparation for the world of work, it is necessary to have increased investment in quality education to ensure that there is a sufficient pool of skilled people (Ava, 2020; Teo et al., 2022). A new era of physics encompasses the progress that has been made in the past half-century in understanding the weak, electromagnetic, and strong interactions to the basic facts of physics are available elsewhere (Jalinus et al., 2019; Setiaji & Dinata, 2020; Bare & Sari, 2021). Physics also deals with the structure of everyday life and binds to substances, particles, forces, efforts, and so on.

Especially in physics learning which includes things that occur in life, many of the previous studies have expressed their opinions about physics. Learning in physics education leads to the teaching of abstract and complex physics topics such as force and motion, learning theory, and pedagogy in relation to the teaching of physics (Nordin & Osman, 2018; Ahamad et al., 2021; Saudelli et al., 2021). To assist in physics learning, teachers and related parties prepare textbooks to support curriculum improvement in physics education (Mustu & Sen, 2019). One of them, physics laboratory experiments using a computer interface experiments set that provide real-time results are interesting and effective experiments in student supervision (Demircioglu, 2022; Fatmaryanti et al., 2022; Sukmak & Musik, 2022). This shows that facilities and infrastructure, learning methods, learning models play an important role in the education system.

In every aspect related to the realm of education there are several shortcomings that cannot be denied. This is shown in the high school teacher's book class X curriculum 2013 circular motion material, there are still character values that are not embedded. The characters are religious, tolerance, honesty, disciplines (Mayer & Wet, 2018; Hackmann et al., 2022). The next character value is creative, strive, care for the environment, social care (Gerard et al., 2021; Skoglund et al., 2022). Furthermore, character values that need to be instilled during the learning process are respect for achievements, peace-loving, homeland-loving, responsible, independent, democratic, friendly/communicative, fond of reading (Hatchimonji et al., 2022; Hibbert, 2021; Jorgensen, 2023). From the 18 character values, the researcher took several characters that will be discussed, these characters are religious, national spirit, love of homeland, cherish achievements, peace-loving, environmental care, social care.

Research on the analysis of character values in physics learning that has been carried out by Putri et al. (2019); Ong (2022); Wong (2020), explained that education plays an important role in developing the potential of students, so that students have the character and skills needed to contribute to the world of education and globally. Therefore, character education is needed from an early age to become the initial foundation of the younger generation in responding to the current era of progress. Such character education will provide a good and advanced generation. This has caused

researchers to be interested in identifying the negative impacts due to the ingravation of some character values, especially in physics learning.

This research was conducted with the aim of being able to find out the negative impact of not attaching character values to circular motion material. The character values in question are religious, national spirit, love for the motherland, respect for achievement, love for peace, care for the environment, care for the social. Well, this is the formulation of the main problem that will be discussed by researchers. This could become an ongoing problem that not only affects circular motion matter but other physical matter would also be affected, due to the absence of a foundation in the first place. With this research, it is hoped that the characters that appear in students can really be identified properly. Therefore, this study aims to examine physics teacher's books to determine the impact of character values that are not instilled in students.

Methods

The research method used is a qualitative method. The type of research is in the form of a documentation study by collecting data from documents such as books, journals, photos, videos. This qualitative research aims to explain a phenomenon as deeply as possible by collecting data as deeply as possible, which shows the importance of the depth and detail of the data studied.

The sampling technique in this study was to study the physics teacher's book for class X on circular motion. The variable taken is the character of students who are not contained in the book. Character variables that were not found were religious, national spirit, love for peace, love for the motherland, care for the environment, care for social, appreciate achievement.

With the research instrument used is documentation. A document is a record of an event that has passed. Documents can be in the form of writings, drawings, or monumental works of a person (Thalib, 2022). In this study, researchers used documentation studies by collecting literature that was relevant to the topic under study. The physics teacher's book curriculum 2013 class X SMA circular motion material is the main document that will be reviewed first and a reference from the relevant previous research.

The data analysis technique used was document analysis, the teacher's book was reviewed first to identify some character values that were not found in the high school physics teacher's book on circular motion material and mapped it out in table 2, by grouping several aspects analyzed, namely the content of the material, questions and assignments. After searching for relevant literature and case sources, in the teacher's book which was reviewed by analyzing the content of the material, questions, and assignments, 18 characters were obtained that had to be instilled during the learning process. Then the characteristics of students who are not embedded in learning will be discussed by linking them to relevant previous research. Data collection procedures carried out in the form of literature study. This literature review is different from a literature review, carried out by reviewing written sources in the form of documents, namely books and reinforced by relevant relevant sources. The first activity carried out is to explore the characters that are and are not found in content analysis, question analysis, and task analysis. Furthermore, the characters that were not found were identified as the impact that occurred on students, to support this, the researcher collected documents and references in the form of books and journals related to the research.

Results and Discussion

The character of students is currently decreasing along with the advancement of the era which has an impact on the field of education. According to the opinion of Baehaqi & Murdiono (2020); Hermino & Arifin (2020); Hidayati et al. (2020), there are 18 student characters that are important to instill in the learning process, namely religious, tolerance, discipline, honest, hard work, independent, love peace, love the motherland, care for the environment, care socially, respect achievement, democracy, communicative/friendly, love to read, curiosity, national spirit, creativity, and responsibility. Character values are very important in the learning process because they help shape one's personality and personality (Sopacua et al., 2020). In addition to academic knowledge, character values help develop social skills, ethics, responsibility, integrity, discipline, cooperation and perseverance (Pamungkas et al., 2021; Sadykhan et al., 2022; Zaim et al., 2020). According to Bare & Sari (2021); Jamaluddin et al. (2022); Suyitno et al. (2019), here are some reasons why character values are important in the learning process:

1. Moral and ethical formation: Character values help students develop an understanding of what is right and wrong. They help students understand the importance of integrity, honesty and responsibility in all aspects of life.
2. Develop social skills: Values such as cooperation, empathy, respect for differences, and effective communication help students build healthy relationships with their peers. This is important for working together in groups, solving problems together, and creating an inclusive learning environment.
3. Encouraging discipline and responsibility: Character values help students understand the importance of discipline, persistence, and responsibility in achieving their goals. They help students learn to manage their time, work hard, and overcome challenges that may arise in the learning process.
4. Forming a positive personality: Learning character values helps to form a positive personality and prepares students to face the real world. They help students develop a positive attitude, optimism, fortitude, and mental toughness in the face of life's challenges.
5. Improving the quality of life: Character values are not only relevant in educational contexts, but also in everyday life. Establishing strong character values helps students become better individuals, which influences relationships with others, personal success, and overall happiness.

In order to support the formation of character values, schools and educators can implement learning strategies that involve discussions, role modeling, collaborative projects, and provide constructive feedback on student behavior. Character values have a very important role in the curriculum. Bringing character values into the curriculum helps students develop the attitudes, skills, and values that are important for their lives outside of school (Komalasari & Saripudin, 2018; Montessori et al., 2021). According to Ozkan & Umdü (2021); Rosa et al. (2021); Wahjusaputri & Nastiti (2022), here are some reasons why character values are important in the curriculum:

1. Formation of a balanced personality: A curriculum that includes character values assists students in building a balanced personality. They learn about the importance of social skills, ethics, integrity and responsibility. Thus, the curriculum can help students become individuals who are responsible, ethical, and have high social sensitivity.
2. Facing the real world: Students need to prepare themselves to face the diverse and complex real world. A curriculum that integrates character values helps students

- understand the consequences of their actions, consider their impact on others, and develop good attitudes towards the environment around them.
3. Build social skills: A curriculum that includes character values helps students develop the social skills needed to interact with others effectively. They learn about cooperation, effective communication, joint problem solving, and respect for differences. These social skills will come in handy in their future personal and professional lives.
 4. Strengthen positive attitudes: A curriculum that teaches character values can help students strengthen positive attitudes, such as optimism, perseverance, and mental toughness. When students learn about the importance of facing challenges with a positive attitude, they become better able to overcome obstacles and stay motivated to achieve their goals.
 5. Forming good citizens: A curriculum that promotes character values helps students understand and appreciate the values of democracy, human rights, justice, and active participation in society. They learn to be responsible citizens, be aware of social issues, and contribute to positive change in their communities.

Integrate character values into the curriculum, it is important to develop and implement teaching strategies that include direct experience, reflection, role modeling, and relevant and contextual learning. In addition, involving parents and the community in learning character values can also strengthen the implementation of these values in students' daily lives. In the 2013 high school physics teacher's book, the circular motion material obtained is arranged in table 1. What is covered in table 1 can be seen that there are several aspects that are analyzed, namely the content of the material, questions, and tasks. Look at table 1, there are 18 characters that need to be instilled in the learning process of physics class X curriculum 2013 circular motion material. The three aspects analyzed will see characters that are embedded or not embedded during the learning process of physics of circular motion material.

Table 1. Results of Identification of Character Values of Circular Motion material

Character	Analysis		
	Content (Materials)	Question	Task (Projects)
Religious			
Honest	(110)	(111, 112, 113)	
Tolerance	(110, 111, 113)		(116)
Discipline	(111, 113)	(111, 112)	(116)
Strive	(110, 111, 112, 113)	(111, 112, 113, 114)	(116)
Creative	(112)		(116)
Self-sufficient	(110, 111, 113)	(110, 112, 113, 114)	(116)
Democratic	(110, 113)		(116)
Curiosity	(109, 110, 111, 112, 113)	(111, 112, 113, 114)	(116)
National Spirit			
Love of the Motherland			
Rewarding Achievements			
Friendly/Communicative	(110, 112)		(116)
Peace-Loving			
Love to Read	(110, 112)	(111, 112)	(116)
Caring for the Environment			
Social Care			
Responsibility	(110, 112, 113)	(111, 112, 113, 114)	(116)

In Table 1 which has presented character values grouped in the material content, questions, and assignments section, there are 18 character values that need to be achieved when learning physics in circular motion material are religious, honest, tolerance, hard work, care for the environment, social care, love for the homeland, love for peace, national spirit, love to read, democratic, responsibility, discipline, creative, appreciate achievement, communicative. For character values that are not achieved, it can be seen in Table 2. Character values that are not achieved are what will be discussed in this study.

Table 2. Results of identification of unembedded character values in circular motion material

Character	Analysis		
	Content (Materials)	Question	Tasks (Projects)
Religious	not embedded	not embedded	not embedded
National Spirit	not embedded	not embedded	not embedded
Love of the Motherland	not embedded	not embedded	not embedded
Rewarding Achievements	not embedded	not embedded	not embedded
Peace-Loving	not embedded	not embedded	not embedded
Caring for the Environment	not embedded	not embedded	not embedded
Social Care	not embedded	not embedded	not embedded

After being mapped based on aspects of material content, questions, and project tasks. There are 7 characters that are not embedded in the material of circular motion. These character values can be seen in Table 2, which includes character values that are not embedded are religious, national spirit, love of homeland, respect for achievements, peace-loving, environmental care, and social care.

After looking through Table 1, there are 18 characters that must be instilled in the learning process in order to create good character for each student. As written in the national education system law number 20 of 2003 explains that the function of national education is to develop abilities and form a dignified national character and civilization in order to educate the nation's life, aims to develop the potential of students to become human beings who have faith and piety in god almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Nasution, 2018). In line with the opinion of Nasution, there are several pillars of character that must be instilled in students, namely the love of god and all His creation, independence and responsibility, honesty or mandate and wisdom, respect and courtesy, benefactor, helpful and mutual aid, confident, creative, and hardworking, leadership and justice, kind and humble, as well as tolerance, peace and unity (Muslich, 2022).

By looking at the opinions of some of the previous authors, the characters that should be instilled are quite a lot and very important role in the present and subsequent lives. This is a tough challenge both from internal factors of students and also external factors. The student's internal factors can be his family environment, the student's mentality, and the drive to learn from himself (Anggraini et al., 2022). Meanwhile, external factors are his association with peers outside the home, school and the environment around the school (Husna et al., 2020). So that schools also play an important role in students' lives. To fulfill this role, the school provides teachers as educators to teach character education to students. Making people intelligent and smart, it may be easy to do, but making people to be good and wise people, seems much more

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difficult or even very difficult. Thus, it is very natural to say that moral problems are acute problems or chronic diseases that accompany human life whenever and wherever (Sudrajat, 2011). And this is a special concern in educational units.

In table 1 of the circular motion subsection, you can see eighteen character values that must be met in the material content, questions, and tasks are religious, honest, tolerance, discipline, hard work, creative, independent, democratic, curiosity, national spirit, love of the homeland, respect for achievements, friendly/communicative, peace-loving, fond of reading, environmental care, social care, and responsibility. Of the eighteen character values, there are 7 character values that are not embedded in the material content, questions, and project assignments that students have carried out on circular motion materials, namely religion, national spirit, love for the homeland, respect for achievements, peace-loving, environmental care, and social care. It is for this untreated character that it will cause a negative impact on the student.

The value of religious character is the most basic character in living life. Religious character is also related to religion, in the content of the material, questions, and assignments of the circular motion material project if the student is not directed to a religious character then when starting the lesson the student does not start the lesson by praying, ignoring religious norms which will also have an impact on his social relationship with other creations of god. When starting learning the teacher needs to direct his students to start by praying and expressing gratitude to god, because His blessings and graces classroom learning can be carried out as in previous days. If without His power how can the matter of circular motion proceed smoothly and how can the project be for example, the practicum is carried out well. Furthermore, introducing diversity to students can foster a spirit of student tolerance to better view existing differences more wisely. Teaches students that although others have different religions or tribes, human beings are actually the same and should not be discriminated against (Ridwan & Mudiono, 2017). Especially on the issue of diversity between students, it can also be related to social care and peace-loving. In the content section of the material, questions, and project assignments, if the character of social care and peace-loving is not embedded, the student will feel that he does not need other people. Meanwhile, in the circular motion material, students are required to interact with each other with their other friends. For example, in circular motion there are student projects that require students to work together, teamwork / group work. The teacher will divide the team/group between students and provide a topic of circular motion problems that will be discussed in each group, and students will work together to solve the topic of circular motion problems that have been given by the teacher. And it also encourages students to communicate well and create a social care and peace-loving character between students on circular motion material.

The application of the character of the spirit of nationality can usually be exemplified by the passion of the student to learn, the drive to achieve the goal in himself or herself. The spirit of nationality needs to be instilled so that students are encouraged to become real change as the goal and function of national education. In the circular motion material, part of the material content, questions, and project tasks does not have the character of the national spirit. This has a negative impact on the enthusiasm of students who will be lazy in learning circular motion material. For example, students will be lazy in understanding formulas, doing assignments and questions that have been given by the teacher, students tend to prefer to cheat on their friends without enthusiasm to complete tasks and circular motion material problems (Ardhuha et al.,

2019). And at the time of group work students who are not instilled with the spirit of nationality will also underestimate their group and only accept it when the results are obtained. The spirit of nationality can also be directed through learning videos of circular motion materials that lead to the application of laws based on local wisdom. Local wisdom can be illustrated by the circular motion formula on tractor tires in rice fields.

The implementation of character values that are not embedded next in the content section of the material, questions, and tasks is to care for the environment and love the homeland. The value of such characters will have a negative impact if it is not embedded in the material of circular motion. This can be shown by the absence of the application of circular motion experimental tools based on local wisdom such as circular motion on the wheels of rice tractors. Physics learning only relies on simulations from foreign sources which are less effective because they are not carried out directly (Ramdani & Artayasa, 2020; Zulfa & Haryanto, 2021). And the implementation of the character of appreciating achievements that are not embedded in circular motion material is that students will not appreciate the work of friends who have tried to find solutions or solutions to project tasks such as practicums or experiments. This refers to the nature of plagiarism which is simply plagiarizing, cheating, copying a friend's property without thinking about the effort his friend has made in finding answers to the topic of circular motion material. It can be predicted that this continuous impact will make students know nothing about circular motion material both in formulas and theory.

Research on the analysis of character values in physics learning that has been carried out by (Putri et al., 2019; Ong, 2022; Wong, 2020), explained that education plays an important role in developing the potential of students, so that students have the character and skills needed to contribute to the world of education and globally. In the previous researchers, character development was needed to contribute to the achievement of educational goals and functions. Therefore, character education is needed from an early age to become the initial foundation of the younger generation in responding to the current era of progress. Such character education will provide a good and advanced generation. This character is important because it is intertwined with the morals and ethics of each individual. This has caused researchers to be interested in identifying the negative impacts due to the indefiniteness of some character values, especially in physics learning.

To overcome these negative impacts, a comprehensive evaluation of each related subject is carried out such as teachers, students, the surrounding environment, and the government. Integration can be carried out in the substance of the material, learning approaches and methods, as well as the developed evaluation model (Khoiriyah et al., 2021). Not all the substance of the subject matter is suitable for all the characters to be developed, it needs selection of the material and synchronization with the character to be developed. In principle, all subjects can be used as a tool to develop all the characters of learners, but in order not to overlap and neglect one of the characters to be developed, it is necessary to carry out mapping based on the proximity of the material to the character to be developed. The integration of character education can not only be done in the subject matter, but teaching techniques and methods can also be used as a tool for character education.

Conclusion

The results showed that the physics teacher's book on the 2013 curriculum material for class X SMA still had a lot of character values that were not included in the learning process. Characters that are not embedded are religious, national spirit, love for the motherland, respect for achievement, love for peace, care for the environment and care for the community. These missing characters will have a negative impact on students because the 2013 curriculum must have 18 characters. For this reason, it is hoped that in the future the physics teacher's book in high school can have all the characters and can be applied to produce a better generation.

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