

COLLABORATIVE CHARACTER DEVELOPMENT OF PRIMARY SCHOOL STUDENTS IN LEARNING USING THE RADEC MODEL

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Abstract. The collaboration is crucial in the world of education and work, to teach it there needs to be implications for innovation through appropriate learning models. The RADEC learning model is one of the solutions to the difficulties of developing collaborative character. This study aims to determine the form of student collaboration characters using the RADEC learning model. This research involved 34 students in an elementary school in the city of Bandung. Qualitative descriptive method used in this study. Researchers as key instruments and data collection techniques used by observation. This study obtained findings, among others, that the character of student collaboration appears in the form of indicators that appear in students.

Keywords: Collaborative, Character Development, Primary School, Student, RADEC

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INTRODUCTION

Various learning models have been developed and have been implemented by many practitioners. The researchers looked at the influence of these various models on their impact on learning outcomes. Several learning models provide significant learning results and have led many other practitioners to follow in the footsteps of these learning designs. As a teacher and educational practitioner, choosing a learning model is not arbitrary. There are many considerations that must be adjusted in selecting the model, one of which is the main one, namely the characteristics of the students.

The objectives of a lesson can also determine the learning model that a teacher will choose. In this research, the author aims to see the influence of the Radec model on the development of students' collaborative character. This research aims to show that the RADEC learning model can have a positive effect on the development of collaboration skills in students. The application of the Radec model is to stimulate students' need and desire to interact with friends and work together to achieve common goals. This cooperative learning motivates students to work well in their groups. In the journal, Ika Ari states that cooperative learning is a teaching system where students work in small groups for the same goal by helping each other to learn (Acikgoz in Sengul and Katranci, 2012: 1).

Why RADEC? In Pratama, it is stated that the RADEC (Read-Answer-Discuss-Explain and Create) learning model was initiated by (Sopandi et al., 2019). The RADEC learning model is a learning model that uses its stages as the name of the model itself, namely Read or read, Answer or answer, Discuss or discuss, Explain or explain, and Create or create (Saragih et al., 2020).

Massive, multifaceted technological expansion is being felt by individuals from all walks of life. The significant influence of technology is felt, including in the field of education. Various changes and quality improvements related to technology are implemented starting from the smallest scope such as the learning process to the curriculum framework which is closely related to technology. Without feeling lulled by the ease of access to technology, there needs to be a balance between the progress of the times and human quality. Currently, everything is closely related to the term 6C including critical thinking, communication, collaboration, citizenship, creativity, and connectivity.

However, unfortunately, the use of digital technology such as gadgets has various positive and negative impacts on young children. One of the negative impacts can be addiction. Gadget addiction will increase the prevalence of the risk of attention deficit disorder and hyperactivity

because gadget addiction affects the excessive release of the hormone dopamine, causing a decrease in the maturity of the Pre Frontal Cortex (PFC) (Paturel, 2014, p33-34). This is supported by previous research cited by Tufail, Khan, and Saleem (2015, p71) that technological developments have negative consequences that cause physical and psychological damage to humans such as symptoms of ADHD (attention deficit hyperactivity disorder). The various impacts that arise from the use of digital in early childhood are certainly also influenced by the various roles of parents towards children (Murti, 2019).

A person's character cannot be separated from the education and parenting patterns of parents at home. A person's character is formed from what he learns at school, in the family at home, and in society. These three areas constitute a system. A student will not have good character if one of his places of actualization is problematic. A school that is conducive to instilling character education will not be effective in shaping students' character if the home situation is not conducive and there is moral chaos in society.

Character education assessment is carried out in a non-test form through observation; anecdote; task; reports and so on. Educators provide conclusions/considerations regarding the achievement of indicators or even a value. These conclusions/considerations can be stated in a qualitative statement and have the meaning of a character development process as follows: a) BT: Not yet visible, students have not shown initial signs of behavior stated in the indicators; b) MT: Starting to appear, has started to show initial signs of behavior stated in the indicators; c) MB: Starting to develop, has shown various signs of behavior stated in the indicators and is starting to be consistent; d) MK; Developing a culture, students consistently show the behavior stated in the indicators consistently (Aini et al., 2021). Based on the explanation above, it can be concluded that realizing education with character is being able to instill character values in students as a foundation for the formation of a quality generation that is able to live independently in everyday life. So that later we can become human beings who have principles of truth that can be accounted for. Therefore, the essence of character education in the context of education in Indonesia is values education, namely education of noble values originating from the culture of the Indonesian nation itself in order to develop the personality of the younger generation. (School, 2017). The indicators of collaboration character are as follows:

Table 1. Observation Guide of Student' Collaboration Skill

Indicator 1: Collaborative Attitudes and Character	
Descriptor	Code
Students play an active role in discussing with their groups.	A
Students look for the source of problems on student worksheets	B
Students convey ideas for solving problems on student worksheets	C
Students are open-minded and accept the opinions of their members when discussing solving problems on student worksheets	D
Students complete their assignments on time and are responsible	E
Indicator 2: Active collaborative behavior	
Students accept to enter the specified group	F
Students discuss the division of tasks to solve problems on student worksheets	G
Students ask questions about assignments or material that they do not understand and help if there are difficulties in their group	H
Indicator 3: Skills	
Students make conclusions in student worksheets	I
Students present the results of their work in front of the class	J

The grand design of character education can be described as follows: a) Character education is based on a philosophical foundation that originates from religion, the National Constitution, the 1945 Constitution, and educational policies contained in Law no. 20 of 2003 concerning the National Education System. b) Noble values in learning are conveyed using appropriate learning

theories, in accordance with the level of psychological development of students, taking into account the socio-cultural values of society or the students' backgrounds. c) Experiences, both real and fictional, can be a source of inspiration in character education (Barnawi & M. Arifin, 2016: 50-51).

METHOD

The research's location is at one of the state elementary schools in Bandung City. This research used a qualitative approach with descriptive methods. This research involved 34 students in one of the elementary schools in the city of Bandung, further referred to as research subjects. The author explains various findings through observation questionnaires to explain the development of the character of collaboration in learning using the Radec model. The researcher acts as a key instrument and in addition to data collection, observation techniques are used. The findings obtained were analyzed using techniques Miles & Huberman (1992). The instrument in this research was an observation sheet consisting of ten indicators regarding the character of collaboration in students. The observation sheet is filled with points ranging from 1-4, in more detail, 1 means not yet developed (BB), 2 means starting to develop (MB), 3 means quite developed (CB), and 4 means it has become entrenched (SM).

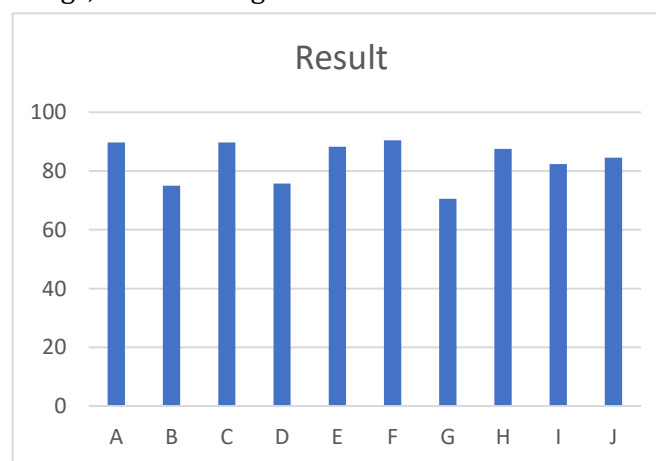
Table 2. Criteria for student collaboration skills (Widyoko, 2009)

Values	Category
>80	very collaborative
>60-80	collaborative
>40-60	quite collaborative
>20-40	less collaborative
< 20	not collaborative

RESULTS

Collaborative Skill Development of Elementary School Students Using the RADEC Learning Model

Based on the findings, the following results were obtained.



Based on the images regarding data processing from the results of these observations, ten indicators regarding the character of collaboration during the learning process using the RADEC model were obtained. The first indicator obtained was that 90% of students actively discussed with their group of friends. Meanwhile, for the second indicator (75%), seven students did it incorrectly (19%), while two students did not do it (6%). The third indicator obtained was that 90% of students were able to convey ideas in solving problems in the student worksheet. In the fourth indicator, it was found that 75% of students were able to accept the opinions of their members when discussing solving problems in the worksheet.

The fifth and sixth indicators show the development of significant collaboration indicators among students, namely completing assignments on time and also being willing to divide into groups. These two indicators give students experience in collaborating well with anyone and at any time. The seventh indicator shows a percentage gain of 70 percent, where students are less able to divide tasks when working in groups. However, no one seemed to dominate during group discussions. In fact, the eighth indicator reached a fairly good percentage when children wanted to ask their friends if there was material that they did not understand during the discussion of the student worksheet provided.

Students' ability to make conclusions and presentations is of course highly trained with this Radec learning model, which shows a figure of almost 90%. Of course, this must continue to be trained so that these characters and indicators can continue to become entrenched. In the final stage of Radec's learning model is creation, student cooperation or collaboration is really trained and developed because through creation each group has its own characteristics and uniqueness. They must work together well to produce the best creations from other groups in their class.

DISCUSSION

Teachers play an important role in teaching these collaboration skills. This can be learned through the application of materials, processes, and the selection of assessment methods that lead to students' critical thinking training, thereby giving rise to self-confidence to express opinions and implement their skills (Ortega-Sánchez et al., 2020). With the implication of the RADEC model, this is a response to demands for innovative action on teachers in integrating learning components such as methods, strategies, models, and media (Yulianti et al., 2022:48). More than that, the basic point is reflective thinking skills to make decisions according to beliefs, actions and responsibilities (Ennis, 2011; Wijayanti et al., 2020; Susilawati et al., 2020: 11). Everyone basically has the potential for objective critical thinking through training and development efforts (Lambertus, 2009). This is a preparation for students to face the 21st century. This skill requires practice such as answering questions that are in line with high-level thinking questions (Kartimi & Liliyasi, 2012).

Mainstreaming collaborative activities in the learning process is both urgent and a concrete effort from the teacher's side. These skills already exist within students, but their strengths and weaknesses can be influenced by exogenous stimuli (Aisyah et al., 2020: 785). Agree that, the conditions that influence creativity are time, opportunity, encouragement, facilities, environment, relationship between parents and children, and how to educate (Muqodas, 2015: 26). Schools as institutions and teachers as educators play a crucial role, at least the most dominating stimulants are teachers and the school environment. Based on these findings, RADEC-based learning bridges students in developing crucial competencies, one of which is collaboration skills. This activity begins with the reading stage, students look for information contained in books, the internet, or from other sources. The next stage is answering, students are obliged to answer pre-learning questions individually. These questions are discussed with small groups in the discussion stage. After that, move on to large groups to explain to each other the results of the discussion at the explained stage. During the creation stage, students in small groups decide on the work they want to create. Starting from this syntax, the learning undertaken by students encourages the formation of knowledge, character, and skills. Evidence of this skill focuses on a series of processes in creating creative and innovative products based on the results of activities that have a directed purpose (Weisberg, 2006). Classroom learning has clear directions and objectives stated at least in the learning implementation plan. The implications of the RADEC model in the classroom are not immediately used, it aims to bring up collaboration skills.

The RADEC learning model is an alternative learning model that suits Indonesian conditions (Sopandi, 2017). This model is the latest breakthrough in education willing to achieve 21st century competencies, character and literacy accompanied by preparation for exams held by schools or universities. Radec's learning stages are simple and meaningful that provide a positive contribution because they are in accordance with the characteristics of students in Indonesia today by sharing the challenges of the current era, including the recent release from the pandemic. Where the character of collaboration really needs to be honed well to catch up with more than

two years of online learning. The syntax of the RADEC learning model is as follows (Sopandi, 2017):

The first stage is read, students read information from various sources including books, other printed information sources and electronic information sources such as the internet. In order to guide students in understanding the information provided with pre-learning questions. This stage of course really pays attention to the needs that exist in Indonesia, namely the literacy level, students read information from reading materials that have been prepared by the teacher in accordance with the goals and indicators that have been created. The higher the students' literacy skills, the higher their HOTS skills (Nourdad, N., Masoudi, S., & Rahimali, 2018). Answer, students answer pre-teaching questions based on the knowledge gained from Read activities. Pre-teaching questions are arranged in worksheet form. This stage is intended to show that before starting learning in class students can first understand the material to be studied. So that when in class students and teachers only focus on learning things that students do not understand and learning can run effectively (Pratama, 2019). Discuss, students study in groups to discuss their answers to pre-teaching questions. At this stage, it is outlooked that students can participate actively in learning, because students already have sufficient provisions for discussion so that they can build HOTS, namely analytical thinking skills (C4). Based on research by Murphy, P., Meredith, R., Ramani, G., & Silverman (2014) who concluded that critical-analytical skills can be built through challenging discussions or conversations. Explain, carry out presentation activities. The teaching materials presented include all cognitive aspects of learning indicators that have been formulated in the lesson plan. At this stage students can improve their evaluation skills in accordance with the revised edition of Bloom's taxonomy at level C5. Students carry out communicative learning, namely students. It can assess their friends by responding to the results of discussions from other groups. This can certainly increase HOTS in elementary school students. Create, teachers facilitate students to learn to use the knowledge they have mastered to produce creative ideas or thoughts. At this stage students are invited to express their creative ideas in creating a work. This can certainly increase HOTS in elementary school students because based on the revised edition of Bloom's Taxonomy, Creation (C6) is the highest level of students' high-level thinking skills.

Education has a very important contribution in creating individuals who are intelligent and have quality human resources. The rapid development of technology in the current era of industrial revolution 4.0 requires the education sector to always innovate and adapt to existing technological developments. The industrial revolution 4.0 in the education sector is referred to as 21st century learning (Sidi, 2020). Education has an important role in preparing the young generation who have fulfilled their qualifications according to the challenges that exist in the 21st century. These challenges include skills in critical thinking and skills in solving problems (Febrianti et al., 2021; Supeno et al., 2019; Supeno et al., 2020) skills in communication and collaboration (Pramesti et al., 2020; Puspitaningrum et al., 2018; Wati et al., 2019); skills in creative thinking and creativity (Astutik et al., 2020; Trilling & Fadel, 2009). The teacher not only plays a role as someone who provides knowledge in the learning process, but also plays a role in providing skills that can help students in learning. One of several skills mentioned earlier, collaboration skills are important skills for students to have (Sunbanu et al., 2019).

Collaboration is a learning process carried out in groups to discuss differences in views and knowledge through discussion activities such as giving suggestions, listening and observing the progress of the discussion, and respecting existing differences of opinion (Greenstein, 2012; Trisdiono et al., 2019). Collaboration skills are students' skills in working together to achieve one goal in the process of solving a problem (Council, 2011; Fitriyani et al., 2019; Hughes & Jones, 2011). Another opinion states that collaboration skills are students' skills in conducting dialogue to exchange thoughts or ideas (Lelasari et al., 2017). The active role of students in class adds to the meaningfulness of the learning process (Kusumaningpuri & Fauziati, 2021:104). Creativity benefits students in various aspects and facets. High student creativity will create better ideas in the form of a coalition of information, previous knowledge, and experience while students are active in school, family environment, or society (Sidabutar, 2021:5380).

CONCLUSION

This research found that students' collaborative character can be learned through RADEC learning. The findings of this research can be used as a reference that the RADEC model can develop students' collaborative character. As an effort to implement advanced learning, the teacher's role is needed to facilitate students during the learning process. This research has limitations such as time (relatively short), research subject (aimed at one class with certain variations), and research orientation (referring to only two skills). Recommendations for further research can be carried out in learning time with longer meetings, involving more diverse students, and with a wider scope of research orientation.

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