



Practicality of the RODE Learning Model in Order to Improve Student Communication Skills

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ABSTRACT

The RODE Learning Model is designed to improve student's communication skills. The RODE learning model has four stages: *Read, Outline, Discussion* and *Evaluation*. This study aims to analyze the practicality of the RODE learning model in improving student communication skills in elementary school 2 science lectures involving 50 students as a research sample. The research data were collected using an instrument of observation sheets on the implementation of learning and observation sheets of student activities which were assessed by two observers and equipped with a record of obstacles encountered during the application of the RODE learning model. Data analysis techniques use quantitative and qualitative descriptive analysis. The results showed that the four stages of the model, namely Read, Outline, Discussion, and Evaluation, can be carried out correctly and reliably, and there are no obstacles that cannot be overcome. In general, student activities relevant to the RODE learning model have increased in each meeting. So it can be concluded that the RODE learning model is practical because it can be carried out according to the lecture implementation plan, and student activities are relatively active. The obstacles that arise can be overcome properly.

INTRODUCTION

In the era of the industrial revolution 4.0 (4IR), the learning framework of the 21st century requires students to have the knowledge, skills, expertise, and proficiency (Greenhill & Petroff, 2010). The learning process must be engaging for students and be able to equip them with the life and work skills—including communication skills—needed to fulfill the demands of the 21st century (Anggraeni et al., 2019; Hairunnisa et al., 2022; Ridha et al., 2022). Therefore, communication should be taught explicitly, allowing students to identify aspects or modes of scientific communication, describe the role of communication in science, and reflect on the relationship between knowledge production and scientific communication (Nielsen, 2013). Communication has an essential role in learning because it can change the learning situation for the better and can explore the abilities already possessed by students (Wangsa et al., 2017). The essence of the teaching and learning process is the communication process, where the delivery of information from sources of information through specific channels of the media to the recipient of information (Putra et al., 2018). Three main factors influence learning outcomes: cognitive ability, achievement motivation, and quality of learning. The quality of learning involves the quality of the learning process. In this case, it is necessary to apply a learning model (Yusmarni et al., 2019). The Read Outline Discussion Evaluation (RODE) learning model is an innovative learning model



designed to make learning more efficient and optimal in training student communication skills.

In implementing the RODE learning model, students become the center of the learning process. Students now serve as the primary source of learning rather than teachers; as a result, learning activities call for increased student participation. Learning activities are closely related to practicality. The practicality that is measured is the ease of use and aspects of the presentation of the material. The ease of use aspect includes understanding the material and the language used (Rahayu et al., 2019). Learning that is meaningful gives students opportunities to learn and makes it possible for them to comprehend what they are learning (Anggraeni et al., 2019). Students are given situations and essential roles in acquiring the knowledge and skills necessary to achieve the learning outcomes specified in the learning objectives. Students are encouraged to demonstrate active and collaborative performance that integrates the different abilities students have.

In order to be applied in the learning process, a learning model must be valid both in content and construct validity (Akker et al., 2007; Astutik & Prahani, 2018; Hunaidah et al., 2019). The results of the previous study stated that the RODE model was declared valid by three validators: experts in the fields of education, the field of physics, and the field of educational research and evaluation. The validity of the contents of the RODE learning model includes very valid criteria with a score mode of 3.67. The results of the validation of the contents of the RODE learning model are reliable based on the Percentage of Agreement of 85.71% and strengthened by the Cronbach Alpha coefficient of 0.838 are classified as high-reliability criteria. The constructive validity of the RODE learning model includes very valid criteria with a score mode of 3.67. The results of the construct validation of the RODE learning model are reliable based on a Percentage of agreement of 85.71 % and strengthened by a Cronbach Alpha coefficient of 0.831 with high-reliability criteria (Arikunto, 2016; Borich, 1994; Fraenkel et al., 2012; Kusuma, 2022). This shows that the RODE learning model meets aspects of needs and updates (state of the art), has a solid theoretical and empirical foundation, and is consistent between the constituent components of the model.

In addition to being valid, the learning model must also be able to be appropriately applied. This study aims to analyze aspects of the practicality of the RODE learning model in a lecture process. Practicality concerning the use of the created learning model. The practicality of a developed learning model is measured by assessing the implementation of learning in the form of lecturer activities and student activities by observers (Maulana et al., 2019; Miranti et al., 2021; Ridha et al., 2022; Rusdi et al., 2020). The practicality of the RODE learning model will be explained by presenting the results of the analysis of the implementation of the RODE learning model, analysis of student activities, and obstacles encountered during the application of the RODE learning model.

In this study, the results of the implementation of the RODE learning model will be presented to find out the practicality of the model. Practicality shows that the model lecturer can adequately implement each stage in the learning model following the learning support tools.

Table 1. Student and lecturer activities in the rode model.

Syntax	Student Activities	Lecturer Activities	Trained Indicators
<i>Read (R)</i>	<ol style="list-style-type: none"> 1. Pay attention to the lecturer's explanation and prepare to attend lectures 2. Merge into a working group 3. Read the students worksheet shared by the lecturer and identify the problems to be studied/discussed 4. Understand the rules of the game in learning contained in the students worksheet 5. Search and read learning resources and materials 	<ol style="list-style-type: none"> 1. Motivate students to arouse student involvement in the lecture process 2. Convey the purpose of the lecture and its assessment criteria. 3. Direct students to form groups of 4-6 members, distributing students worksheet and the necessary logistics. 4. Direct students to read the shared students worksheet 5. Guide students to explore learning resources & materials 	<p><i>Written communication:</i></p> <ol style="list-style-type: none"> 1. Explore and read learning resources and materials <p><i>Oral Communication:</i></p> <ol style="list-style-type: none"> 2. Listening
<i>Outline (O)</i>	<ol style="list-style-type: none"> 1. Take part in planning activities and complete tasks in groups 2. Research and compile data presenting data (diagrams, figures, and tables) 3. Study and discuss the data obtained 4. Formulating problem-solving alternatives 5. Formulate group problem solving 6. Choose a shape and compose a group presentation 7. Create a group presentation 	<ol style="list-style-type: none"> 1. Guiding students to divide assignments/work into groups 2. Facilitate students to complete assignments given to students worksheet 3. Guiding students to make alternative formulations of problem-solving according to the subject topic 4. Guiding students to compile hypotheses based on the results of the work of each group 5. Facilitate students to make group presentations 	<p><i>Written communication</i></p> <ol style="list-style-type: none"> 1. Create a Table / graph / chart of observations 2. Interpret the table/graph/chart of the data of the results of the experiment 3. Formulate conclusions <p><i>Oral Communication</i></p> <ol style="list-style-type: none"> 1. Listening 2. Respond to opinions 3. Ask a Question 4. Answering Questions
<i>Discussion (D)</i>	<ol style="list-style-type: none"> 1. Adhere to the agreed rules of the discussion game 2. Group representative students present the 	<ol style="list-style-type: none"> 1. Explain the rules of the game used in class discussions 2. Facilitate students in class discussion 	<p><i>Oral Communication</i></p> <ol style="list-style-type: none"> 1. Explain the procedure of the Experiment/observation

Syntax	Student Activities	Lecturer Activities	Trained Indicators
	results of the work of each group. 3. Provide explanations and questions about the results of work/to other groups 4. Answering questions or responding to statements given by other groups regarding the topic of the lecture 5. Pay attention to the lecturer's explanation, and dare to ask questions or provide additional explanations about the lecture topic. 6. Provide an assessment of the work of the presenter group according to the established rules	activities 3. Guiding students to be appreciative during the discussion 4. Guiding students to assess the results of group work that is presented 5. Lecturers check students' understanding of the lecture topic.	2. Listening 3. Respond to opinions 4. Ask a Question 5. Answering Questions 6. Delivering Conclusions
<i>Evaluation (E)</i>	1. Deliver conclusions about the subject matter that has been discussed 2. Submit an assessment of the work of each group 3. Accept and appreciate the achievements of group work 4. Pay attention to the explanation of the lecturer interpreting the task/topic of the next meeting lecture	1. Guiding students to evaluate group presentations and lecture processes. 2. Reward the group that gets the highest score based on the reflection of the activity and the results of the group's work 3. Give the topic of the lecture at the next meeting.	<i>Oral Communication:</i> 1. Delivering Conclusions 2. Listening

RESEARCH METHOD

General Background

This research is part of developing RODE learning models to improve student communication skills. Practicality is carried out utilizing limited trials of the RODE learning model in the Basic Science 2nd course with kinematics material. Model lecturers and observers carry out the implementation of lectures.

Participants

This research was conducted in the Basic Science 2nd course with kinematics material involving 50 students majoring in elementary school teacher education, faculty of teacher training and education, Lambung Mangkurat University.

Instrument and Procedures

The research data was collected using an observation sheet on implementing the RODE learning model, an observation sheet for student activities, and a record sheet of obstacles encountered. During the lecture process, observers assess the implementation of the RODE learning model by giving a score of 1-4 on the lesson plan implementation observation sheet, which contains lecturer activities at each stage of the RODE learning model. Observers also assess student activities by giving scores of 1-4 on student activity observation sheets containing activities carried out by students at each stage of the RODE learning model. Lecture observations applying the RODE learning model were carried out for four meetings.

Data Analysis

Data on implementing the RODE learning model and student activity data were analyzed with quantitative and qualitative descriptive techniques. The assessment of the implementation of the RODE learning model and student activities is carried out by two observers who have correctly understood the instrument of the observation sheet for the implementation of the RODE model and the student activity sheet. Each observer gave an assessment (4 = Excellent, 3 = Good, 2 = Bad, and 1 = Very Bad) during the observation process of the lecture implementation. Determination of the implementation value of the RODE model using the averages of the two observers adjusted to Table 2.

Table 2. Criteria for assessing the implementation of the RODE model.

Score Interval	Assessment Criteria
$3,25 < P \leq 4,00$	Excellent
$2,50 < P \leq 3,25$	Good
$1,75 < P \leq 2,50$	Bad
$P \leq 1,75$	Very Bad

The reliability of the results of the observation of the implementation of the RODE model is determined using the percentage of agreement formula, and it is said to be reliable if the R-value $\geq 75\%$ and strengthened using the analysis of Cronbach's Alpha (Borich, 1994; Fraenkel et al., 2012; Hunaidah et al., 2019; Siswanto et al., 2017b).

The constraints found during the implementation of the RODE model were analyzed with qualitative descriptions. The constraints of implementing the RODE learning model are observed based on the implementation of each phase by the model lecturers and student activities in each phase. The obstacles found can then be used as a reference for improving the planning and implementation of learning with the RODE model (Siswanto et al., 2017a).

RESULTS AND DISCUSSION

The RODE learning model that has been declared valid is then implemented in the the Basic Science 2nd courses on the even semester for the 2020/2021 academic year for

limited trials and broad trials. The trial time is limited in the Elementary School Teacher Study Program (PGSD) at FKIP Lambung Mangkurat University in April 2021. The extensive trial was conducted from May to June 2021 at the class D of Elementary School Teacher Study Program (PGSD) of Lambung Mangkurat University. Two observers observed the implementation of the RODE Learning Model during four meetings. Preliminary, core and closing activities are all included in observations of the application of learning. In addition, the lecture plan's learning phases are followed in the application of learning (Junaidah et al., 2022; Nilasari et al., 2018). The complete implementation of the RODE learning model in Limited Trials and Broad Trials is presented in Appendix 4 and is succinctly presented in Table 3.

Table 3. Implementation of the RODE learning model.

Stages of the RODE Learning Model	Implementation at the Meeting -															
	1				2				3				4			
	IS	C	R%	r	IS	C	R%	r	IS	C	R%	r	IS	C	R%	r
Phase 1. <i>Read</i>	3,19	G	98,04	R	3,50	Sb	96,43	R	3,56	Sb	98,25	R	3,69	Sb	98,31	R
Phase 2. <i>Outline</i>	3,13	G	96,00	R	3,63	Sb	96,55	R	3,63	Sb	96,55	R	3,63	Sb	96,55	R
Phase 3. <i>Discussion</i>	3,22	G	96,55	R	3,44	Sb	96,77	R	3,56	Sb	96,88	R	3,72	Sb	98,51	R
Phase 4. <i>Evaluation</i>	3,30	E	96,97	R	3,30	Sb	96,97	R	3,50	Sb	97,14	R	3,70	Sb	97,30	R
Classroom Atmosphere	3,17	G	94,74	R	3,50	Sb	95,24	R	3,83	Sb	95,65	R	4,00	Sb	100	R
Time Allocation	3,00	G	100	R	3,00	B	100	R	4,00	Sb	100	R	4,00	Sb	100	R

Description: IS: Implementation Score; K: Criteria; R%: *Percentage of agreement*; r: Reliability; E: Excellent; G: Good; R: Reliable

Table 3. shows that, in general, the RODE learning model during the study can be carried out correctly in terms of the improved implementation score. This is because the RODE learning model developed has five main components in the model, namely: 1) syntax, 2) social system, 3) reaction principle, 4) support system, and 5) instructional impact and accompaniment impact that can be fulfilled and carried out properly during the implementation of the RODE learning model in lectures (Joyce et al., 2015).

The practicality of the RODE learning model is inseparable from the rationality of model designing, which has theoretical and empirical support for each stage. In the Read stage, the lecturer conveys the objectives of the lecture and motivation and gives directions related to the learning process with the RODE model, which aims to arouse students' curiosity and interest in learning. This follows the ARCS Theory of Attention, Relevance, Confidence, and Satisfaction (ARCS). The motivation that awakens lecturers at the beginning of lectures affects success in the individual and communication (Keller, 2010; Nielsen, 2013). The motivation to perform well must be followed by the motivation to comprehend the content, which comes from a developing appreciation of its advantages. Therefore, to motivate students to study, the lecturer should explain the learning materials' advantages at the lesson's beginning (Mazaya, 2019). Students can be arranged into active and enjoyable learning by lecturers. Students are given a chance to investigate their prior learning in order to identify solutions to the issues they are facing (Pulu & Widia, 2022). Students are motivated to digest knowledge that is clear and understandable, in addition to being obliged to learn independently by memorizing all accessible material. Students need to be encouraged to strengthen their thinking skills to process the material they have learned (Hidayati et al., 2021). The formation of working groups (3-4 people) heterogeneously is also carried out by referring to the social

constructivist theory of Vygotsky to provide opportunities for students to share alternative views or ideas, helping students see ideas from different points of view. As a result, students will share individual perspectives with others to build a common understanding that is impossible to build individually (Moreno, 2010). A lecturer must first give training instructions and convey knowledge step by step (Kastur et al., 2020). At this reading stage, lecturers also distribute student worksheets which contain assignments that students must complete during learning. Student worksheets should be utilized as reference materials to help students comprehend ideas in more detail and provide questions or challenges for them to complete as they study to increase student engagement (Hidayati et al., 2021). Student worksheets are designed to improve communication skills based on the process of students starting learning by finding (with the help of lecturers) and solving problems with the necessary basic skills through collaboration and interaction by sharing information and ideas (Slavin, 2018). The Read stage was able to be carried out well with an increased implementation score from 3.19 – 3.69 with a percentage of agreement between the two observers of 98.04% – 98.31%.

The second stage is Outline; at this stage, students are given complex, challenging, and practical tasks and sufficient assistance to complete these tasks. This refers to the cognitive constructivist theory, which states that students must be actively involved in obtaining information and constructing their knowledge (Arends., 2012). In experimenting, students exchange information with friends in the working group; this condition encourages students to practice communication skills by paying attention to each other's ideas and ideas in group discussions. To accomplish a common objective, students cooperate. Students are assigned two duties: optimizing their learning and enhancing the learning of the entire group. Therefore, students aim to achieve results that are advantageous to everyone to whom they are collaboratively related (Husaini et al., 2019). Finally, the lecturer gives directions so that students can complete the assigned tasks, which refers to the learner's need to attend to relevant information from the model to be able to learn from the model (Moreno, 2010). This stage can be carried out well with an increase in the implementation score of 3.13 – 3.63 with a percentage of agreement between the two observers of 96.00% – 96.55%.

The third stage is the Discussion. This stage refers to Piaget's constructivist theory by putting the student in a situation to interact with peers of higher knowledge. Students will study more effectively if they are the same age and speak the same language. Therefore, discussions among students in working groups or in the classroom must be managed by the lecturer's guidance. The objective of a lecturer's guidance in the learning process is to help students comprehend the rationale behind the tasks they complete and to give instructions on how to carry out the tasks required, whether completing worksheets, questions, or other forms of learning activities. The objective of a lecturer's guidance in the learning process is to help students comprehend the rationale behind the tasks they complete and to give instructions on how to carry out the tasks required, whether completing worksheets, questions, or other forms of learning activities (Mazaya, 2019; Revita, 2019). This situation will stimulate students' mental processing in processing and storing information (Slavin, 2018). The class discussion technique of lecturers encourages students to exchange information presented visually and verbally, which impacts better information storage. More severe and earnest students will be better at processing and storing the information received than less severe students. Students converse about the subject matter, aid one another in understanding it, and support one another's efforts. (Husaini et al., 2019; Kusuma et al.,

2020). The practice of having class discussions may create a more vibrant and engaging learning environment (Kastur et al., 2020). The implementation score of this stage increased from 3.22 at the first meeting to 3.72 at the fourth meeting, with the percentage of agreement of the two observers 96.55% – 98.51%.

The fourth stage of the RODE learning model is the Evaluation. Students evaluate the process and result in the lecture experience at this stage. Students are trained to organize and assess themselves and others. It is vital to assess the students' initial grasp of the lesson at the conclusion by delivering tasks or assessments along with the supplied learning materials (Kastur et al., 2020). The situation at this stage corresponds to the view of a person's belief that he or she can succeed in performing a given task, self-evaluation, judging if the outcome of one's actions or strategies is acceptable or unacceptable, and Metacognition theory, An individual's cognition about his or her cognition or "knowing about knowing" (Moreno, 2010). For students to be more enthusiastic and motivated in every right action during lectures and the evaluation process, they must immediately be praised. Precise performance (contingent praise) refers to giving praise, namely student performance and behavior. Per the theory of motivation, learners need to be motivated to learn from the model and to reproduce what they learned and the concept of recency effects (Moreno, 2010; Slavin, 2018). The evaluation stage is essential in learning because, in this stage, feedback is obtained from the lecture process that can enrich the knowledge gained by students (Arends, 2012). With the direction and guidance of lecturers, students can quickly and practically fill out an assessment sheet evaluating the lecture process of the RODE learning model. This stage can also be carried out correctly, and the implementation score increased from 3.30 to 3.70, with an increase in the percentage of agreement of the two observers from 96.97% – 97.30%.

Another aspect assessed by observers of the practicality of the RODE learning model is the classroom atmosphere and time allocation. Both aspects relate to the social system and the reaction principle of the RODE learning model. The performance scores of the two aspects increased from a score of 3.00 to 4.00 of the two observers of 94.74%-100.00%. The increase in the implementation score shows that the RODE learning model meets two other aspects of the applicable criteria. This is inseparable from the social system and the principle of reaction of the RODE learning model, which exposes students to be proactive in lecture activities by contributing to the communication process in both group and classical discussions. The lecturer executed each step of the learning model successfully, and the student's activities were pertinent to each stage, which supported the learning model's applicability (Siswanto et al., 2018). Lecturers need to be able to create learning environments and learning models that actively include students in teamwork. In addition, the lecture method must effectively and efficiently support students' learning activities (Maulana et al., 2019). The RODE learning model places lecturers as mentors, moderators, facilitators, consultants, and mediators in the learning process to improve communication. Lecturers pay attention to and treat students, including lecturers responding to student questions, answers, responses, or activities. Lecturers motivate and implement strategies to improve student communication with mastery experiences, vicarious experiences, verbal persuasion, and students' physiological and affective state. Lecturers also provide feedback, praise, and opportunities for students to ask questions, and opinions, answer questions and give responses in the learning process so that student communication skills and motivation can improve (Kusuma et al., 2020).

The lack of proper facilities and equipment will cause the learning process to become routine, which will diminish the involvement of students (Ramdhani & Harjono, 2022). The practicality of the RODE learning model when applied in lectures is inseparable from the support system that has been declared valid by experts, namely: (a) Lecture tools refer to the RODE learning model, namely: Lesson Plan (SAP), Students Worksheet (LKM), Lecturer Textbooks (BAD), Student Textbooks (BAM), and communication skills evaluation instruments. (b) Simple Physics experimental tools and materials. (c) Learning media in the form of learning videos and utilizing ICT. In applying a learning model, lecturers are required to manage the environment, the methods used, learning media, assessment system procedures, and facilities and infrastructure to facilitate student learning activities (Dumiyati et al., 2019).

Table 4. Student activities in the RODE learning model.

Stages of the RODE Learning Model	Implementation at the Meeting -															
	1				2				3				4			
	IS	C	R%	r	IS	C	R%	r	IS	C	R%	r	IS	C	R%	r
Phase 1. <i>Read</i>	3,42	VA	97,56	R	3,58	VA	97,67	R	3,75	VA	97,78	R	3,92	VA	97,87	R
Phase 2. <i>Outline</i>	3,50	VA	98,41	R	3,67	VA	100	R	3,72	VA	98,51	R	3,83	VA	98,55	R
Phase 3. <i>Discussion</i>	3,31	VA	98,11	R	3,56	VA	98,25	R	3,69	VA	98,31	R	3,81	VA	98,36	R
Phase 4. <i>Evaluation</i>	3,36	VA	97,87	R	3,64	VA	98,04	R	3,79	VA	98,11	R	3,93	VA	98,18	R

Description: IS: Implementation Score; K: Criteria; R%: *Percentage of agreement*; r: Reliability; R: Reliable; VA: Very Active; A: Active

Student activities describe the activities carried out by students during the Basic Science 2nd course taking place using the RODE learning model. In general, student activities observed in implementing the RODE Learning Model on Kinematics material generally increased at each meeting and can be said to be Very Active. Reliability in observing student activity also shows that it is classified as reliable (Borich, 1994; Fraenkel et al., 2012; Hunaidah et al., 2019; Siswanto et al., 2017b). This increase is because the RODE learning model emphasizes the importance of helping students understand the need for active student engagement (Prahani et al., 2019). The lecturer also communicate lecture stages using the RODE learning model to students so that students make it easier to participate and be involved during lectures (Budiarso et al., 2022). This finding is in line with Fadly's finding (2017); by participating in discussions, students will be skilled and active in social interaction, which can directly practice good communication skills with others. The lecturer and students must agree that the learning models are simple to use (the content can be understood) and adhere to the researcher's design plan in order for them to be considered practical (Irawan & Hakim, 2021). In addition, students will be more enthusiastic about looking for information to broaden their horizons so that the tasks given in lectures will be easier to complete.

Table 5. Constraints during the implementation of the RODE learning model.

The meeting-	Constraints	Solution
1 Position, Speed and Acceleration	1. Students are not yet familiar with the learning process with the RODE model. 2. Phase 1 <i>Read</i> . Many students	1. The lecturer needs to explain well the RODE model used in the learning process related to the 4 phases in their learning so that students can position themselves in teaching and learning activities 2. The lecturer needs to provide

The meeting-	Constraints	Solution
	<p>still have forgotten the kinematics material obtained in high school, so it takes time at the time of apperception by the model lecturer in phase 1 related to the introductory material on kinematics. Students are still slow in listening to the phenomena in students worksheet 1 related to written communication skills with indicators of exploring and reading learning resources and materials</p>	<p>kinematics material orientation. At the same time, in high school, they motivate students to be able to return to physics so that they are enthusiastic about returning to learning physics material delivered by model lecturers. Lecturers need to give more attention and direction so that students can follow and understand well the kinematics material that will be studied later</p>
<p>3. Phase 2 <i>Outline</i>. Students are still slow in listening to and working on students worksheet 1 tool and material to be used, experimental variables, conducting experiments, making observational data, analyzing the data, concluding, and making videos and group presentations.</p>	<p>3. The lecturer advised students to learn early related to student textbooks and students worksheet 2 material for the next meeting so that they can be faster in participating in learning</p>	
<p>4. Phase 3 <i>Discussion</i>. The Lecturer allows students to become a presenting group, but most students are still hesitant and afraid to convey the results of their group work. There was still low participation from the student audience group in response to the results of the group's presentations that came forward. Much time is seized when the presentation is done in turn for all groups.</p>	<p>4. The Lecturer gives confidence and rewards to the students of the presenting group and asks for alternating students who present it so that all students are trained to communicate well with others. Lecturers need to motivate students to actively participate in responding to the results of other group presentations if there are differences in results and opinions. Lecturers need to pay attention to time and get around it by providing time limits for each group's presentation</p>	
<p>5. Phase 4 <i>Evaluation</i>. Students are not yet accustomed to creating and conveying ideas to conclude lecture materials and evaluate lecture processes and results. Lecturers still seem to have not given meaningful feedback and awards to the group that is active during lectures</p>	<p>5. The Lecturer clarifies whether there are differences in the results and opinions of the audience group with the presenting group. Lecturers invite groups whose work results are different only to present the results and be responded to by other groups. The Lecturer needs to guide students to get used to making and delivering</p>	

The meeting-	Constraints	Solution
2 Straight motion changes uniformly	1. Phase 2 <i>Outline</i> . Students need much time in activities in this second phase. Students need much time listening to and working on students worksheet 2 related to the tools and materials used, experimental variables, conducting experiments, making observational data, analyzing the data, concluding, designing, and making videos and group presentations. Students must be creative to carry out experimental activities correctly and efficiently. 2. Phase 3 <i>Discussion</i> . Time is lacking because many students worksheet results have to be presented by each group.	conclusions from lecture materials and evaluating lecture processes and results. The Lecturer needs to provide feedback and appreciation to active student groups to spur other groups to improve. 1. The Lecturer must guide student groups to create workflows in groups that are needed in experimental activities in students worksheet. 2. The Lecturer needs to encourage students to collaborate in their groups to save time in carrying out the activities of each assigned students worksheet.
3 Two- Dimensional Motion	Phase 2 <i>outline</i> . The students worksheet at the third meeting demands the student group's ability to determine the tools and materials used in the experimental activity to answer the problems; therefore, it requires the knowledge and skills of students to find information related to the knowledge to be done. In this case, students need a plan and sufficient time to complete the activities in phase 2.	The Lecturer must guide each group so that the student group can find and determine the correct tools, materials, and workflow in carrying out experimental work activities to solve the given problems.
4 Relative Motion	There are no obstacles because the lecturer is used to the learning activities from the first to the third meeting and lecture materials that are easier than the previous three materials. Furthermore, model researchers and lecturers have studied the weaknesses that occurred in previous activities and can prepare as well as possible to teach at the fourth meeting.	

In general, there are no significant obstacles that interfere during the implementation of the RODE learning model. The obstacles encountered can be overcome by communication between model lecturers, researchers, and observers in planning lectures for the next meeting. Learning planning must be designed in detail and

understood by model lecturers to improve the quality of lectures and facilitate students' communication skills (Siswanto et al., 2017a). In addition, model lecturers must be confident and motivate students to be more enthusiastic about attending lectures and dare to speak in class discussions as presenters and audiences who provide responses and questions (Antika et al., 2022). Thus, all aspects of the RODE learning model's practicality can be fulfilled and applied in lectures.

CONCLUSION

The RODE learning model with the Read, Outline, Discussion, and Evaluation stages has excellent practicality in implementing the RODE learning model and student activities. The learning atmosphere also has excellent criteria for the suitability of learning objectives, students as a learning center, learning tools available and supportive, and interaction between lecturers and students, as well as students with students. Through this paper, it is recommended to conduct further research related to the application of the RODE learning model to improve student communication skills. The research's limitations have only been examined with kinematics content on the Elementary School Teacher Study Program students. Therefore, the researcher advises conducting another study to examine the efficacy of the RODE learning model using various physics materials with high school and junior high school students.

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REFERENCES

- Akker, J. Van D., Bannan, B., Kelly, A. E., Nieveen, N., & Plomp, T. (2007). *Curriculum design research: An introduction to educational design research*. Netherlands: SLO.
- Anggraeni, R. E., Suratno, & Narulita, E. (2019). The validity and practicality of the SEDC learning model to improve students' HOTS in science learning. *Biosfer: Jurnal Pendidikan Biologi*, 12(1), 94–108. <https://doi.org/10.21009/biosferjpb.21616>
- Antika, R., Zulfa, Z., & Jaenam, J. (2022). Kendala-kendala dalam pelaksanaan model pembelajaran aktif tipe. *Puteri Hijau: Jurnal Pendidikan Sejarah*, 7(2), 292–300. <https://doi.org/10.24114/ph.v7i2.37761>
- Arends, R. I. (2012). *Learning to teach, ninth edition* (9th ed.). New York: McGraw-Hill.
- Arikunto, S. (2016). *Dasar-dasar evaluasi pendidikan (edisi revisi)*. Jakarta: Rineka Cipta.
- Astutik, S., & Prahani, B. K. (2018). The practicality and effectiveness of Collaborative Creativity Learning (CCL) model by using PhET simulation to increase students' scientific creativity. *International Journal of Instruction*, 11(4), 409–424. <https://doi.org/10.12973/iji.2018.11426a>
- Borich, G. (1994). *Observation Skill For Effective Teaching*. New York: Mac Millan Publishing Company.
- Budiarso, A. S., Sutarto, S., Mahardika, I. K., Putra, P. D. A., Sari, D. N. I., & Laela, F. N. (2022). Validitas dan kepraktisan model pembelajaran contextual analysis of science and laboratory problems (CANLABS) pada pembelajaran IPA. *Jurnal Penelitian Pendidikan IPA*, 8(1), 94–102. <https://doi.org/10.29303/jppipa.v8i1.1069>
- Dumiyati, D., Wardhono, A., & Nurfalah, E. (2019). Kepraktisan dan keefektifan penerapan model pembelajaran berbasis ICT. *JPEKA: Jurnal Pendidikan Ekonomi, Manajemen Dan Keuangan*, 3(1), 1-10. <https://doi.org/10.26740/jpeka.v3n1.p1-14>
- Fadly, W. (2017). Tinjauan kepraktisan model pembelajaran fisika "PRODUKSI" terhadap keterlaksanaan pembelajaran dan aktivitas belajar siswa. *Scientiae Educatia*, 6(2), 111-120.

- <https://doi.org/10.24235/sc.educatia.v6i2.1510>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). New York: McGraw-Hill.
- Greenhill, V., & Petroff, S. (2010). *The 21st century knowledge and skills in educator preparation*. New York: American Association of Colleges of Teacher Education and the Partnership for 21st Century Skills (P21).
- Hairunnisa, H., Zaini, M., Badruzsaufari, B., Aufa, M. N., Warnida, Y., & Hasbie, M. (2022). Development of student worksheets on biology topics based on critical thinking skills. *Jurnal Penelitian Pendidikan IPA*, 8(3), 1280–1285. <https://doi.org/10.29303/jppipa.v8i3.1631>
- Hidayati, S., Susilawati, S., & Harjono, A. (2021). Validity and practicality of problem based learning (PBL) model learning tools to improve students' conceptual understanding. *Prisma Sains: Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, 9(1), 82-87. <https://doi.org/10.33394/j-ps.v9i1.3966>
- Hunaidah, M., Susantini, E., & Wasis, W. (2019). Validitas model pembelajaran CinQASE untuk meningkatkan keterampilan individual critical thinking (INCT) dan collaborative critical thinking (CCT). *Prosiding Seminar Nasional*, 1–4.
- Husaini, A., Syarifuddin, H., & Usmedi, U. (2019). The practicality of learning devices cooperative models based on blended learning to improve learning outcomes of 10th-grade MA students. *International Journal of Trends in Mathematics Education Research*, 2(3), 157–160. <https://doi.org/10.33122/ijtmer.v2i3.121>
- Irawan, A., & Hakim, M. A. R. (2021). Kepraktisan media pembelajaran komik matematika pada materi himpunan kelas VII SMP/MTs. *Pythagoras: Jurnal Program Studi Pendidikan Matematika*, 10(1), 91–100. <https://doi.org/10.33373/pythagoras.v10i1.2934>
- Joyce, B., Weil, M., & Calhoun, E. (2015). *Models of teaching* (9th ed.). London: Pearson Education, Inc.
- Junaidah, A. E., Erman, E., & Rahardjo, R. (2022). Teaching materials of cluster blended-based learning on reduction-oxidation reactions to improve students' scientific literacy. *IJORER: International Journal of Recent Educational Research*, 3(4), 425–440. <https://doi.org/10.46245/ijorer.v3i4.225>
- Kastur, A., Mustaji, M., & Riyanto, Y. (2020). The practicality and effectiveness of direct learning model by using life-based learning approach. *Studies in Learning and Teaching*, 1(3), 165–174. <https://doi.org/10.46627/silet.v1i3.50>
- Keller, J. M. (2010). *Motivational design for learning and performance*. Netherlands: Springer.
- Kusuma, A. E. (2022). *Pengembangan Model Pembelajaran Read Outline Discussion Evaluation (RODE) untuk melatih keterampilan komunikasi mahasiswa*. Dissertation. Surabaya: Universitas Negeri Surabaya.
- Kusuma, A. E., Wasis, Susantini, E., & Rusmansyah. (2020). Physics innovative learning: RODE learning model to train student communication skills. *Journal of Physics: Conference Series*, 1422(1), 1-7. <https://doi.org/10.1088/1742-6596/1422/1/012016>
- Maulana, I. T., Hary, R. D., Purwasih, R., Firdian, F., Sundara, T. A., & Na'am, J. (2019). Project-based learning model practicality on local network devices installation subject. *International Journal of Emerging Technologies in Learning*, 14(15), 94–106. <https://doi.org/10.3991/ijet.v14i15.10305>
- Mazaya, M. S. (2019). Effective practical learning model for the subject of basic information technology. *Journal of Physics: Conference Series*, 1157(4), 1-6. <https://doi.org/10.1088/1742-6596/1157/4/042003>
- Miranti, K., Syahmani, & Santoso, U. T. (2021). Kepraktisan perangkat pembelajaran dengan model pembelajaran inkuiri terbimbing pada materi materi zat aditif dan zat adiktif. *Journal of Banua Science Education*, 1(2), 69–72.
- Moreno, R. (2010). *Educational psychology*. New Jersey: John Wiley & Sons, Inc.
- Nielsen, K. H. (2013). Scientific communication and the nature of science. *Science and Education*,

- 22(9), 2067–2086. <https://doi.org/10.1007/s11191-012-9475-3>
- Nilasari, K. E., Atmazaki, A., Effendi T. H., & Ananda, A. (2018). Practicality the development of whole language based bahasa indonesia learning. *International Conferences on Education, Social Sciences and Technology*, 30–42. <https://doi.org/10.29210/201815>
- Prahani, B. K., Jatmiko, B., Supardi, Z. A. I., Deta, U. A., Althaf, R., & Mahtari, S. (2019). The practicality of OR-IPA learning model to improve critical thinking skill of prospective physics teachers. *Berkala Ilmiah Pendidikan Fisika*, 7(3), 148–157. <https://doi.org/10.20527/bipf.v7i3.6923>
- Pulu, S. R., & Widia. (2022). Pengembangan perangkat pembelajaran fisika strategi konflik kognitif berbasis eksperimen untuk mereduksi miskonsepsi peserta didik SMA konsep fluida statis. *Jurnal Pendidikan MIPA*, 12(1), 23–29. <https://doi.org/10.37630/jpm.v12i1.533>
- Putra, Z., Kaharudin, A., Rahim, B., & Nabawi, R. (2018). The practicality of learning module based on jigsaw-cooperative learning model in media education course. *The Practicality Of Learning Module Based On Jigsaw-Cooperative Learning Model In Media Education Course*, 48–52. <https://doi.org/10.2991/aptekindo-18.2018.11>
- Rahayu, C., Eliyarti, E., & Festiyed, F. (2019). Kepraktisan perangkat pembelajaran berbasis model generative learning dengan pendekatan open-ended problem. *Berkala Ilmiah Pendidikan Fisika*, 7(3), 164–177. <https://doi.org/10.20527/bipf.v7i3.6139>
- Ramdhani, R., & Harjono, A. (2022). Validitas Perangkat pembelajaran fisika model kooperatif tipe think-pair-share untuk meningkatkan kemampuan pemecahan masalah fisika peserta didik. *Jurnal Ilmiah Pendidikan Fisika*, 6(2), 256–263. <https://doi.org/10.20527/jipf.v6i2.4966>
- Revita, R. (2019). Uji kepraktisan perangkat pembelajaran matematika berbasis penemuan terbimbing untuk SMP. *JURING (Journal for Research in Mathematics Learning)*, 2(2), 148–154. <https://doi.org/10.24014/juring.v2i2.7486>
- Ridha, M. R., Zuhdi, M., & Ayub, S. (2022). Pengembangan perangkat pembelajaran pjbl berbasis STEM dalam meningkatkan kreativitas fisika peserta didik. *Jurnal Ilmiah Profesi Pendidikan*, 7(1), 223–228. <https://doi.org/10.29303/jipp.v7i1.447>
- Rusdi, Arnawa, I. M., Fauzan, A., & Lufri. (2020). The practicality of mathematics learning model based on rme and literacy in junior high school. *Proceedings of the 2nd International Conference Innovation in Education (ICoIE 2020)*, 300–304. <https://doi.org/10.2991/assehr.k.201209.238>
- Siswanto, J., Susantini, E., & Jatmiko, B. (2017a). Kendala-kendala pembelajaran multi representasi berbasis investigation dalam pembelajaran fisika. *Jurnal Penelitian Pembelajaran Fisika*, 8(1), 39–43. <https://doi.org/10.26877/jp2f.v8i1.1335>
- Siswanto, J., Susantini, E., & Jatmiko, B. (2017b). Kepraktisan model pembelajaran investigation based multiple representation (IBMR) dalam pembelajaran fisika. *Jurnal Penelitian Pembelajaran Fisika*, 7(2), 127–131. <https://doi.org/10.26877/jp2f.v7i2.1307>
- Siswanto, J., Susantini, E., & Jatmiko, B. (2018). Practicality and effectiveness of the IBMR teaching model to improve physics problem solving skills. *Journal of Baltic Science Education*, 17(3), 381–394. <https://doi.org/10.33225/jbse/18.17.381>
- Slavin, R. E. (2018). *Educational psychology*. London: Pearson Education, Inc.
- Wangsa, P. G., Suyana, I., Amalia, L., & Setiawan, A. (2017). TSTS (pada materi gerak lurus di SMAN 6 bandung). *Jurnal Wahana Pendidikan Fisika*, 2(2), 27–31. <https://doi.org/10.17509/wapfi.v2i2.8274>
- Yusmarni, Y., Fauzan, A., Amanda, A., & Musdi, E. (2019). The practicality of the mathematics learning model constructivism-based think create apply. *Advances in Social Science, Education and Humanities Research*, 253(Aes 2018), 59–63. <https://doi.org/10.2991/aes-18.2019.14>

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