

The Application of Teaching at the Right Level (TaRL) and Culturally Responsive Teaching (CRT) Approach to Increase the Motivation and Learning Outcomes of Students on the Material of Transport through Membranes

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Received: September 17, 2023

Revised: December 6, 2023

Accepted: January 25, 2024

Published: January 31, 2024

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DOI: [10.29303/jppipa.v10i1.5355](https://doi.org/10.29303/jppipa.v10i1.5355)

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Abstract: Teaching at The Right Level (TaRL), is a learning approach by orienting learners to carry out learning. The purpose of this study is to design and implement learning by applying the Teaching at the Right Level (TaRL) approach and applying the Culturally Responsive Teaching (CBT) approach that connects the cultural background of learners with material content. The methods carried out in this study include the preparation stage of compiling assessments, designing, preparing modules, the implementation stage, the evaluation stage and follow-up. The results of this study indicate that the application of Teaching at the right Level (TaRL) and Culturally Responsive Teaching (CRT) approaches is very appropriate to be used in the learning process to meet the diverse ability levels of learners, material content that is associated with the culture of learners raises learners' awareness of their own cultural identity. The use of digital learning media motivates learners in learning because there is an element of novelty and in accordance with technological developments.

Keywords: Culturally Responsive Teaching; Motivation; Teaching at the Right Level.

Introduction

The independent curriculum with its main essence is freedom to learn, giving teachers the freedom to carry out learning that is tailored to the abilities of their students (Aditiya & Fatonah, 2023; Nasuiton & Desyandri, 2023; Ningrum & Suryani, 2022). Learning in accordance with the achievements or levels of ability of learners is one of them known as the Teaching at the Right Level (TaRL) approach, which is a learning approach by orienting students to carry out learning according to the level of ability of students consisting of low, medium and high levels of ability not based on grade level or age (Banerji & Chavan, 2020). Learning according to the achievements or levels of ability of students is in line with the basis of education according

to Ki Hajar Dewantara, that education guides all the natures that exist in students, both the nature of nature and the nature of the times (Ahyar et al., 2022).

The basis of education according to Ki Hajar Dewantara is also related to the development of character, character and character, meaning that education not only increases the competence of students in the concept of science but also leads them to become individuals with character and culture in accordance with the culture of their nation. Integration of students' cultural background is an effort to bring students closer to the learning context and students' awareness of their cultural identity. So far, the learning that is often applied at school, especially at SMA Negeri 1 Krueng Barona Jaya is uniform learning for all students, both from learning resources and the learning process. In fact, the

How to Cite:

Amalia, S., Safrida S, & Ulva, S. M. (2024). The Application of Teaching at the Right Level (TaRL) and Culturally Responsive Teaching (CRT) Approach to Increase the Motivation and Learning Outcomes of Students on the Material of Transport through Membranes. *Jurnal Penelitian Pendidikan IPA*, 10(1), 270–274. <https://doi.org/10.29303/jppipa.v10i1.5355>

ability of students is different. There are students who are able to understand the material quickly, but there are also students who are only able to understand the subject matter after being repeated many times. For learners who are only able to understand the subject matter after repeating it many times will feel unfacilitated by the teacher when the teacher teaches advanced material while they still do not understand the previous material. Meanwhile, learners who are able to understand the material quickly will feel that learning becomes boring when they still hear the same material repeated by the teacher.

The development of technology with a wide open flow of information, provides an opportunity for students to get to know a variety of outside cultures, so that they know and like foreign cultures more than the culture of their nation (Ceipek et al., 2021; Mehrvarz et al., 2021). Education should be able to accommodate the formation and strengthening of the character of students to be more familiar with the culture of their nation and have character in accordance with the culture of their community by linking material content with the cultural background of students, but in reality this has not been done in learning so far in class (Wang et al., 2020). The presentation of material content has not been linked to the cultural background of students that they encounter in their daily lives, so the learning they feel is still lacking meaning (Arpaci et al., 2020; Gaias et al., 2019; Rizvi et al., 2022). The habit of students in utilizing gadgets that tend to be for entertainment rather than education is a problem in itself. Learning that presents technological media is expected to be able to familiarize students to utilize technology for education not just for entertainment (Hooshyar et al., 2021; Klapproth et al., 2020; Moreno-Marcos et al., 2020).

Based on this research problem, it is necessary to be able to carry out diverse learning by designing learning by applying the Teaching at the right Level (TaRL) approach that adjusts the ability levels of diverse learners, and applying the Culturally Responsive Teaching (CBT) approach that connects the cultural background of students with the content of the material they learn by utilizing digital learning media so that students become motivated to learn because learning can be felt meaningful to them.

Method

This research uses the development of the ADDIE model. Preparation Stage Activities at this stage include preparing assessments, designing modules, preparing learning media and preparing instruments. In the implementation stage, steps are taken such as providing material explanations, dividing groups of students,

students working on discussion sheets through digital learning and presenting group work results. Furthermore, in the evaluation and follow-up stages. In the evaluation stage, it is done by analyzing the results of summative assessment and learner response questionnaire.

Result and Discussion

The results felt by students are that they feel happy with the learning they have done, this can be seen from the results of the analysis of students' reflections using jamboard. Analysis of the questionnaire of learners' responses to learning also shows very encouraging results, it can be seen that most learners' responses with a percentage of 81.06% are in the good category (Appendix 6). The recapitulation results can be seen in Table 1.

Table 1. Analysis of Learner Response

Statement (10 items)	Assesment				
	1	2	3	4	5
Number of Frequencies	10	6	16	52	66
Total Score	10	12	48	208	330
Total Number of Scores					608
Average Percentage					4.05 81.06%
Criteria					Good

The results of the summative assessment analysis given at the end of learning also showed good results, where classical completeness also showed encouraging results. the average class score increased from the results of the cognitive diagnostic assessment and the scores of individual students also increased (Appendix 6). The results can be seen in Figure 1.

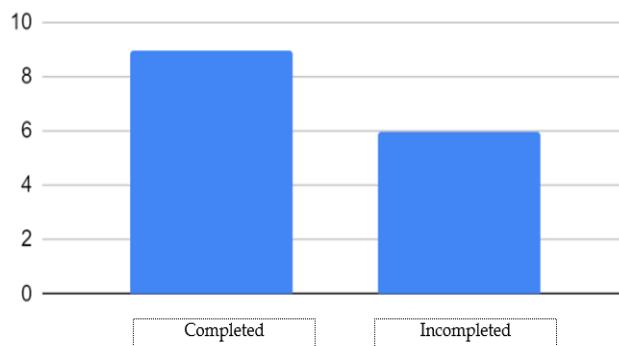


Figure 1. Learner Learning Outcomes

The learning process was also very active and collaborative, the learners' digital literacy skills improved by accessing digital learning media and working collaboratively using the online LKPD in the

classroom. Based on a study conducted by Panduwinata et al. (2022), Marlina et al. (2021), Permata Sari et al. (2022), stated that the use of LKPD can improve student collaborative and literacy skills in learning. Something they have never done before. Learners become more familiar with their culture through the relevance of the content of the material they learn and they become accustomed to using online assessment media such as jamboard, quizizz and google form.

Supporting and inhibiting factors

The supporting factors of the implementation of learning with the Teaching at the right Level (TaRL) and Culturally Responsive Teaching (CRT) Approach are that it has advantages in facilitating the diverse abilities of students, it is felt meaningful by students because it is related to their cultural background, digital learning media is in accordance with the times so that it motivates them to learn. This is in accordance with research from Ahmad and Setiadi (2023), which states that the use of TaRL can improve student learning outcomes. Furthermore, according to the study from (Maryono et al., 2021; Taher, 2023) stated that CRT learning makes students have motivation, courage, and confidence to express opinions both to friends and teachers.

In addition to the many supporting factors, the author also finds obstacles in the implementation of learning with the Teaching at the right Level (TaRL) and Culturally Responsive Teaching (CRT) Approach, namely the lack of confidence of students in accessing digital learning media and in expressing opinions related to their understanding. To overcome this, the author resolves by taking a direct approach to students who are considered not confident in accessing digital learning media and in expressing opinions to provide motivation and guidance. Based on study conducted by Ningsih et al. (2023) and Adha et al. (2023), stated that there is an increase in the intelligence of students after the application of TaRL. Furthermore, it is supported by Adawiyah et al. (2022) and Handayani et al. (2022), which states that the Culturally Responsive Transformative Teaching (CRT) integrated LKPD that has been developed meets the criteria of feasible, practical and easy to use in learning.

Both in class and outside the classroom. as well as encouraging through groupmates and one class to provide assistance related to learning difficulties and more actively involve and provide opportunities for opinion and questions to them. Based on the study from Amri et al. (2021) and Hemamalini et al. (2022), it is stated that the use of technology-based learning with the use of LKPD combined with TaRL and CRT provides good results in the student literacy process and the learning outcomes obtained achieve the objectives.

Important Value and Novelty

Based on the results that have been achieved from learning activities with the Application of Teaching at the Right Level (TaRL) and Culturally Responsive Teaching (CRT) Approach. There are important values and novelty, namely the Application of Teaching at the Right Level (TaRL) and Culturally Responsive Teaching (CRT) Approach is very appropriate to be used in the learning process to meet the diverse ability levels of students, material content that is associated with the culture of students raises students' awareness of their own cultural identity. Based on study by Khair et al. (2022) and Yani et al. (2019), stated that the use of various digital learning media motivates learners in learning because there is an element of novelty and in accordance with technological developments and the times where learners are currently located.

Conclusion

The application of Teaching at the Right Level (TaRL) and Culturally Responsive Teaching (CRT) approaches is very appropriate to be used in the learning process to meet the diverse ability levels of learners and the material content associated with culture. The application of TaRL and CRT can raise learners' awareness of their own cultural identity. The use of various digital learning media motivates learners in learning.

Acknowledgments

Thanks to the principal of SMA N Krueng Barona Jaya and the Head of the Aceh Education Office as well as the Biology MGMP teacher

Author Contributions

Conceptualization, S. A and S.; methodology, S. A.; software, S. M. U.; validation, S and S. A.; formal analysis, S. A.; investigation, S. A.; resources, S. M. U.; data curation, S. A.; writing—original draft preparation, S. A.; writing—review and editing, S.; visualization, S. M. U.; supervision, S. A.; project administration, S. A. funding acquisition, S. A.

Funding

This article was independently funded by Seri Amalia, Safrida, Susi Mulia Ulva.

Conflicts of Interest

The authors declare no conflict of interest.

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