

Design of Contextual Teaching and Learning (CTL) Model to Improve Student's Life Skills: The Development Phase in Research and Development

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ABSTRACT--- *One of the teacher's abilities in supporting learning objectives is to design learning products according to the needs in the field. To determine the quality of the developed product, the teacher must conduct several tests involving experts, students, and teachers. This study aims to assess the quality of the learning model that has been developed by researchers, namely the Contextual Teaching & Learning (CTL) learning model to improve students' life skills through Islamic Religious Education (IRE) subjects. This research is a development phase in research & development methods focusing on testing the validity, practicality, and effectiveness of the learning model. There were three groups of participants included in this study, namely experts, teachers, and students, who were selected using a purposive sampling technique. Data were collected using several instruments, namely: (1) validation sheets, (2) teacher response questionnaires, and (3) life skills observation sheets. The collected data is then analyzed quantitatively to determine the categories of validity, practicality, and effectiveness. The study results show that the CTL learning model is proven to be valid, practical, and effective in improving the life skills of high school students.*

Keywords--- Life Skills, Contextual Teaching & Learning, Islamic Religious Education

1. INTRODUCTION

The factors of the development of science and technology, globalization, industrialization in various aspects, privatization, urbanization, and others have a global influence in education [1]. This is considered reasonable because, in essence, education must be flexible to adapt to the times [2]. Although it continues to change, education still has one main goal: to prepare students to become independent and responsible members of society [3].

This shift in the education system, of course, will affect the specific goals of education. Nowadays, education no longer aims to equip students with knowledge alone but also other skills needed in this 21st century. One of the skills that students must master during the learning process is life skills. Life skills are widely discussed in the public sphere and became popular starting from increasing health problems for the younger generation as part of the world community. UNICEF describes life skills as an alternative behaviour by taking a development approach in three aspects: knowledge, attitudes, and skills [4].

Life skills are a set of psychosocial abilities that enable students to act competently and appropriately, and appropriately in various everyday situations and scenarios [5]. These skills are considered essential for students because they face problems or deficits in personal, cognitive, and social dependence, which are very vulnerable to bullying behaviour, harassment, bullying, drug use and others [6]. [7] state that life skills are the main contributor to negotiating and handling challenges the younger generation faces.

Although the importance of life skills for students' future is an important concept, it is still neglected in the world of

education now. This fact was found in the United States, as evidenced through a study conducted [8]. This study states that adolescents/adults who have graduated from school/university have only limited knowledge of organising or navigating their lives through real-world expectations. Although several teachers/educational institutions have internalised life skills into the learning process in Indonesia, the results have not been optimal. [9] claims that the role of parents and the school curriculum has not been able to equip the younger generation to face real life.

One of the efforts that can be used to improve students' life skills is to apply appropriate learning strategies. Contextual Teaching & Learning (CTL) is one of the learning strategies considered capable of improving learning outcomes and other aspects. CTL has improved student achievement and promoted their critical thinking skills and higher-order thinking skills [10]. In addition, CTL is also considered the right approach because it aims to support students in understanding the material by relating it to personal, social, and cultural situations [11].

There are several previous studies related to education and learning to improve students' life skills. A study states that there is a relationship between life skills and students' academic performance [5]. [12] found that strengthening character education through life skills education can be done through a process of self-development and culture in the pesantren environment. Many studies have found that life skills intervention programs into learning can effectively deal with adolescent problems such as self-esteem, decision making, problem-solving, stress, and the influence of drugs [13].

From these several studies, there are still few teachers and researchers interested in developing a CTL learning model focusing on improving students' life skills. Researchers feel it is very important to develop this learning model by integrating it into Islamic Religious Education (IRE) learning for students at the high school level. The formulation of the problem in this study is how the level of validity, practicality, and effectiveness of the CTL learning model in improving students' life skills through Islamic religious education subjects?

2. LITERATURE REVIEW

2.1 Life skills

Life Skills summarises all the skills and knowledge experienced by a person needed for a useful life. [14] state that life skills are the ability of each individual to adapt and behave positively and appropriately in facing the challenges of everyday life. These skills are learned and acquired to create the conditions for the growth of the individual's behaviour. Furthermore, this definition is strengthened by the [15] statement, which states that life skills are adaptive abilities that enable individuals to face the demands and challenges of the times.

[16] put forward a similar definition, who claims that life skills are a set of human skills acquired through experience and the teaching process used in dealing with the problems encountered. In line with this statement, [17] also argues that life skills are the abilities needed to interact and adapt to other people/communities in the environment in which they are located. Some of the skills referred to include: (1) decision-making skills, (2) problem solving, (3) critical thinking, (4) creative thinking, (5) effective communication, (6) fostering interpersonal relationships, (7) self-awareness, (8) empathy, (9) coping with emotions, and (10) coping with stress [18,19].

Life skills are skills that a person has to be willing and brave to face problems and life naturally without feeling pressured. Based on this definition, [20] identified life skills as an essential resource for developing individual psychosocial, emotional, cognitive, behavioural, and resilience skills to deal with the challenges they face every day. [21] assert that these four skills are essential in ensuring adolescents' personal and social success.

Referring to the article published by the [22] entitled *Life Skills Education for Children and Adolescents in Schools* about the core or generic life skills, life skills are grouped into three categories. The three categories of life skills are (1) social & interpersonal skills, (2) cognitive or thinking skills, and (3) emotional skills. However, some experts suggest that the specific types of life skills are: (1) decision making, (2) problem solving, (3) creative thinking, (4) critical thinking, (5) effective communication, (6) interpersonal relationships, (7) self-awareness, (8) empathy, (9) coping with emotions, and (10) coping with stress [8,9,23,24].

2.2 CTL learning model

Contextual learning was initially being developed by John Dewey, who formulated a curriculum and learning method related to the experiences and interests of students in 1918. This experiment proved that students would learn well if what they learn is related to the activities/knowledge they already know or occurred in the past. This contextual-based learning approach is the foundation of constructivism philosophy, focusing on learning activities that are not just memorizing abilities [25].

In its development, contextual-based learning has developed and influenced teaching activities in various countries [26]. Learning with this approach has become a standard approach used in almost all fields of education [27]. This is based on the fact that this approach emphasizes that students consider the social context and learning environment to process and process their knowledge [28].

Contextual Teaching & Learning (CTL) is a learning approach that helps students understand what they are learning by connecting the subject matter with the context of their lives [29]. In addition, CTL is also defined as a way to introduce content using a variety of active learning techniques designed to help students relate what they are learning to their environment [30]. Thus, contextual-based learning is an innovative method that places students in a real-life setting and leads to applying the knowledge gained [31].

Experts claim that the CTL approach has various advantages when compared to other methods. Bongancisco (2016) states that students who study with the CTL approach feel the learning process is meaningful because they experience what they learn firsthand. In the CTL approach, students do not only learn by focusing on the memorization aspect alone but more than that. Contextual learning is considered effective in supporting students' academic achievement because this approach involves seven main components of learning, namely: (1) constructivism, (2) asking, (3) investigating, (4) learning community, (5) modelling, (6) reflection, and (7) authentic assessment [32].

The researcher designed this CTL learning model by referring to the learning model proposed by [33]. This learning model consists of several components, namely: (1) syntax, (2) social system, (3) reaction principle, (4) support system, and (5) instructional impact & accompaniment. Some of the learning products developed in this study include (1) model books, (2) teacher handbooks, (3) student handbooks, (4) Semester Lesson Plan (SLP), and (5) Student Worksheets (SW).

2.3 Islamic religious education (IRE)

[34] gives an understanding of Islamic education as an effort that is more specifically emphasized to develop students' religious nature (religiosity) so that they are better able to understand, appreciate, and practice Islamic teachings. Implementing this understanding, Islamic Religious Education (IRE) is an inseparable component of the Islamic education system. It is not an exaggeration to say that Islamic education functions as a pathway for integrating Islamic religious insight with other fields of study.

The term Islamic education can be understood in several senses. First, Islamic education is education that is understood and developed from the teachings and fundamental values contained in its primary sources, namely the Qur'an and Al-Sunnah. Second, Islamic religious education is an effort to educate Islamic values to become the views and attitudes of one's life. Finally, IRE is a process and practice of providing education that has taken place and developed in the history of Muslims. Although the term IRE can be understood differently, in essence, it is a unit that cannot be separated into one complete system [35].

In addition, IRE is also interpreted as a conscious effort to prepare students to believe, understand, appreciate, and practice the teachings of the Islamic religion through reality, guidance, teaching, and training by paying attention to the demands to respect others faiths [36]. In line with this definition, [37] states that IRE is a form of education that provides knowledge and shapes the attitudes, personality, and skills of students in practising their religious teachings, which is carried out at least through subjects/lectures at all paths, levels, and type of education.

3. METHODS

3.1 Research design

In designing a product in the form of a CTL learning model in IRE subjects, researchers used the Four-D theory proposed by [38]. This theory consists of four main stages of research, namely define, design, develop, and disseminate. In this article, the main focus discussed is the development phase which contains three main activities in measuring the quality of the product created. The three tests in this development phase are validity, practicality, and effectiveness tests [39].

A validity test is conducted by researchers involving several experts in their fields to measure, assess, and provide suggestions for the products developed. Furthermore, the practicality test is a product trial by applying users in assessing the level of practicality. Finally, the product effectiveness test is a specific test involving students to see learning outcomes using the CTL learning model that has been developed.

3.2 Research site and participants

The practicality and effectiveness were conducted at the State Senior High School (SMAN) 22 Makassar, Indonesia. The selection of this research location was based on the fact that the school was more representative for research purposes when compared to other schools. There were 20 students involved in this study which came from class X. The selection of this research subject used the purposive sampling technique, which is a sampling technique based on specific needs and considerations.

3.3 Data collection

3.3.1 Product validation sheet

To test product validity used was a product validation sheet was developed by the researcher. There are four types of validation sheets used, namely: (1) model book validation sheets, (2) teacher handbook validation sheets, (3) student book validation sheets, (4) student worksheets (SW), and (5) Semester Learning Plan (SLP). The validation sheet is designed by providing four score options, namely a score of 4 = very valid, 3 = valid, 2 = less valid, and 1 = invalid. Several aspects assessed in the product validation sheet are presented in table 1.

Table 1. Aspects assessed in the validity test

No.	Validated product	Validated Aspects
1.	Model book	Model rationality Supporting theory Model description Implementation of learning Learning environment and learning tasks
2.	Teacher’s handbook	Format Illustration Aspects of language Content aspects
3.	Student Books	Format Illustration Aspects of language Content aspects
4.	Semester Learning Plan (SLP)	Aspects of format Aspects of language Content aspects
5.	Student Worksheets (SW)	Aspects of format Aspects of language Content aspects

3.3.2 Product practicality questionnaire for teachers

To measure the product’s practicality, the researcher distributed a questionnaire to the teachers to assess the research product that had been developed. The developed questionnaire consists of several questions by providing four answer options, namely: (a) very helpful, (b) helpful, (c) less helpful, and (d) not helpful.

3.3.3 Student life skills observation sheet

To measure the effectiveness of this learning model, the researcher used a life skills observation sheet filled out by the teacher as an observer. The life skills observation sheet uses an attitude scale instrument adapted from a questionnaire developed by [40]. This observation sheet is designed by incorporating two elements of life skills, namely personal skills and social skills. There are two forms of statements (favourable & unfavourable) in the instrument using a Likert scale, as shown in Table 2.

Table 2. Scores of respondents’ alternative answers

No.	Category	Score	
		Favourable	Unfavourable
1.	Strongly Agree	5	1
2.	Agree	4	2
3.	Less Disagree	3	3
4.	Disagree	2	4
5.	Strongly Disagree	1	5

3.4 Data analysis

Data from two experts, and three teachers were analyzed quantitatively to determine the average score. After obtaining the average score, the results of the validation/practicality are compared with the criteria listed in table 3.

Table 3. Criteria for validity and student responses [41].

Score interval	Rating Category
$3.6 \leq M \leq 4$	Very Valid/Very Practical
$2.6 \leq M \leq 3.5$	Valid/Practical
$1.6 \leq M \leq 2.5$	Less Valid/Less Practical
$1.0 \leq M \leq 1.5$	Invalid/Impractical

Furthermore, the observation data from the teachers to determine the level of effectiveness were also analyzed quantitatively to determine the overall percentage of student activity. After the percentage score is obtained, it is then compared with the effectiveness category to choose whether the level of student life skills is very high, high, medium, less, or inferior.

4. RESEARCH RESULTS

4.1 Validity of *ctl learning model*

To determine the level of product validity, researchers provide validation sheets to experts to assess the product. There are two types of validated products, namely model books and learning tools. Validated learning tools are teacher handbooks, student books, Semester Learning Plan (SLP), and Student Worksheets (SW). The validation results can be seen in table 4.

Table 4. Results of the validation of the CTL learning model

No	Validation instrument	Average score	Category
1.	Learning model book	3.53	Very Valid
2.	Teacher's handbook	3.37	Valid
3.	Student book	3.38	Valid
4.	Semester Lesson Plan (SLP)	3.56	Very Valid
5.	Student Worksheet (SW)	3.24	Valid

Based on table 4, the validation results of the model book and learning tools are declared “valid” and “very valid”. Learning products categorized as very valid are model books with an average score of 3.53 and lesson plans with an average score of 3.56. In addition, the three learning products that were declared “valid” based on the experts’ assessments were the teacher's handbook, student’s book, and worksheets. The validation results of the teacher's handbook reached an average score of 3.37, the student book was 3.38, and the Student Worksheet (LKS) was 3.24. Thus, model books and other learning tools are usable with slight improvements based on expert judgment.

4.2 Practicality of *ctl learning model*

The level of practicality of this CTL model is determined based on the responses given to teachers who assess the overall model book and learning tools developed. In general, the results of the average practicality level of the CTL learning model are presented in table 5.

Table 5. The results of the analysis of the practicality of the CTL learning model

No.	Assessment Aspects	Average	Category
Do these learning tools help improve students' life skills?			
1.	Material Analysis	4.0	Very Practical
2.	Competency Map	3.0	Practical
3.	Lesson plan	3.0	Practical
4.	Textbooks	4.0	Very Practical
5.	Student Book	3.0	Practical
6.	Student Worksheet	4.0	Very Practical
7.	Learning Activities	3.0	Practical
Is this learning tool categorized as good?			
8.	Material Analysis	4.0	Very Practical
9.	Competency Map	3.0	Practical
10.	Lesson plan	3.5	Very Practical
11.	Textbooks	4.0	Very Practical
12.	Student Book	3.0	Practical
13.	Student Worksheet	4.0	Very Practical
14.	Learning Activities	4.0	Very Practical
Additional Description			
15.	Is this learning tool necessary and feasible to be developed on other subjects?	4.0	Very Practical
16.	Is this learning model by the pattern of education and training (training)	3.0	Practical
17.	Is this learning model by the procedures in the device development workshop?	3.0	Practical
18.	Can this learning model be used as a learning model in IRE learning activities in the future?	3.0	Practical
19.	What obstacles were encountered during the learning process?	3.5	Very Practical
20.	In your opinion, what are the advantages of implementing this learning model?	3.0	Practical
Total Average		3.5	Very Practical

From table 5 above, information is obtained that this learning model is classified as very practical overall. This is obtained from the teacher's response analysis in assessing the learning products that have been developed. Overall, the average score of the teacher's response questionnaire is 3.5 and is categorized as very practical. The very practical category was concluded from the average score, which was in the score range of $3.5 \leq M \leq 4.0$. Thus, the CTL learning model in IRE subjects is proven to be practical in terms of its use based on the teachers' assessment.

4.3 Results of model effectiveness analysis

During the learning process, three observers made observations to assess students' life skills. Overall, the results of the student's life skills are presented in Table 6 and Table 7.

Table 6. Distribution of students' life skills observations

No	Score	Frequency (f)	f.x	Percentage (%)
1.	66	1	66	6.66
2.	69	3	207	20
3.	70	1	70	6.66
4.	72	2	144	13.3
5.	75	3	225	20
6.	76	2	152	13.3
7.	77	1	77	6.66
8.	79	1	79	6.66
9.	80	1	80	6.66
Σ		15	1100	100 %

Table 7. Student life skills achievement categories

No.	Score interval	Category	Frequency	Percentage (%)
1.	79-83	Very high	2	13 %
2.	74-78	high	6	40 %
3.	70-73	Moderate	3	20 %
4.	66-69	Low	4	27%
			15	100%

From the results of the student's life skills scores, they can be grouped into several categories. Two students achieved scores between 79 to 83 and were categorized as very high. Furthermore, six students are in the high category, with 40% of the total number of students. For the medium category, three students fall into this category (20%), while the other four students are in the low category with 27%.

5. DISCUSSION

This study indicates that the CTL learning model in Islamic Religious Education learning is proven to be valid, practical, and effective in improving the life skills of high school students. The three tests are tests carried out to see the level of validity, practicality, and effectiveness of the learning products that have been developed [42]. Product validity is determined by the expert's assessment of the developed product, which usually validates two aspects, namely construct validity and content [43]. In this study, several aspects are assessed in the validation process, namely: (1) content aspects, (2) language, (3) format, and others. However, [44] stated that the aspects assessed in product validity were adequacy, suitability, coherence, and usability.

In addition to the validity test, practicality tests also need to be carried out in measuring the quality of learning products. This practicality test is a test that involves users providing responses related to products that have been developed. A product is declared practical if it meets several criteria. It namely (a) the teacher's assessment states that the product can be applied due to slight revisions; (b) the product can be applied in the classroom by the applicable curriculum, time allocation, and others [45].

The final test in determining the quality of product development is the effectiveness test. This test involves students as users by looking at the effect produced by the product on the specified target, cognitive aspects (learning outcomes), attitudes (affective), and skills. [46] stated that the effectiveness of the product is determined by several criteria, namely: (a) the achievement of predetermined goals, (b) according to the needs of users, and (c) having a positive impact on improving learning outcomes, both in terms of aspects knowledge, attitudes, and behaviour.

Life skills as one of the skills to be achieved through education have become the reference and goal of education from preschool, elementary school, high school to college level. Life skills training and education puts students on the highway to development and enables them to live life efficiently and successfully [18]. But basically, life skills play a significant

role in increasing a person's psychological and physical well-being, influenced by various social and environmental factors [47,48].

In the learning process in the classroom, of course, the right strategy or method is needed so that students' life skills can be grown and developed correctly. Life skills education involves a dynamic learning process built with social learning theory [49]. This study uses a Contextual Teaching & Learning (CTL) approach, which is a fundamental approach in promoting student life skills. This method is considered the best method because it includes several activities that include cooperative learning, problem-based learning, work-based learning, project-based learning, and service-learning [10].

In addition, life skills also play a role in influencing certain aspects of human life. A study shows that life skills in deaf students can increase their self-esteem in the classroom [50]. On the other hand, life skills can also be associated with positive determinants of improving student learning skills [51]. Life skills connect factors that drive knowledge, attitudes, values and positive behaviour on health aspects. The two researchers claim that life skills contribute to the process of primary education, democracy, character building, continuous learning, and quality of life [52].

By seeing the many advantages of these life skills, teachers should design learning models that can improve these skills. This study is expected to be used as a basis and consideration for policymakers in Indonesia to focus on improving students' life skills. This means that teachers/researchers and the government must synergize in designing educational curricula that highlight life skills rather than just focusing on learning test results that are more inclined to the cognitive aspect alone.

6. CONCLUSION

This research is the “develop” phase of the research and development method of 4D theory from Thiagarajan et al. (1974), which aims to determine the level of validity, practicality, and effectiveness of the CTL learning model in PAI learning to improve students' life skills. The results showed that the products produced were proven to be valid, practical, and effective. Product development in a learning model is deliberately focused on aspects of life skills as 21st-century skills that students must master. Life skills must be a priority in the educational curriculum design because, with these skills, students can learn through their environment and overcome the problems of everyday life.

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