Development of Student Worksheets and Assessments in the 21st Century Lecture Model in the Course of Play for Early Childhood

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Abstract. The skills that students must have to be able to prepare for their future are mastering learning skills or often also called the 4Cs (Critical Thinking, Creativity, Collaboration and Communication), literacy skills from information literacy, media literacy and technology literacy, as well as life skills consisting of; Flexibility, Leadership, Initiative, Productivity, Social Skills. This research aims to develop prototypes in the form of worksheets and student assessments used in the 21st century lecture model, the development of worksheets and assessments is carried out by considering the KKNI curriculum which is identical to six types of tasks, namely; routine tasks, critical book reports, critical journal reviews, mini research, projects and idea engineering. The research was conducted through the 4D development stages namely; Defining, Designing, Developing and Dissemination. The results of the study found that the product of developing student worksheets and assessments in play courses for early childhood was considered feasible to use with a good category, in terms of language aspects, appearance aspects and content aspects, with an average score of 4.27 the product developed was also feasible based on expert assessment.

Keywords: Worksheet, Assessment sheet, 21st Century Skills.

1. Introduction

Education is a means of helping students reach their full potential by providing them with the knowledge and skills that they need to support themselves, their families, their communities, their country, and their state. Students who possess these qualities also stand to gain personality, intelligence, and moral strength.[1] Education can be said to be an effort made by educators. and students in order to prepare themselves to live a ready life in the future, at this time education is faced with challenges where technological developments and globalization demand changes in demands for human resource skills that are increasingly complex and of increasing quality, and innovation in education is the answer to these challenges. Globalization not only has an impact on education but also on aspects of economics, communication, technology and so on, where there is a process of interdependence and interconnectedness between individuals around the world.[2] The existence of higher education as a center of educational innovation is expected to be able to answer the challenges of current globalization, in line with this, several experts have formulated that the skills that students must have to be able to prepare for their future are by mastering learning skills or often also called 4C (Critical Thinking, Creative, Collaboration, and Communication),[3] In addition, every learner is also expected to have literacy skills ranging from information literacy, media literacy and technology literacy, literacy is an

effort to obtain the latest information, so as to be able to find real facts, find and use trusted media as a source of information and skillfully use technology to obtain the truth from the large amount of information that is still doubtful.[4] Students also need to possess life skills, which include adaptability, initiative, leadership, productivity, and social skills. 21st century skills are very important skills for every student to acquire, in previous researchers a lecture model has been developed that focuses on mastering these skills, the lecture model has also been supported by supporting lecture materials, mastery of 21st century skills will certainly be better if students are given assignments that also support mastery of these skills, so the development of worksheets and 21st century skills-based assessments needs to be developed so that innovation in lectures becomes a complete unit.

2 Method

Research and development using the 4D development stage is the research method used in this study. The stages are: Define, Design, Develop, and Disseminate. At the define stage, front-end analysis, learner analysis, task analysis, concept analysis, and the specification of instructional objectives are carried out. This research is then continued at the second stage, which is called Design and includes the preparation of worksheets and assessments, media selection, format selection, and initial design. The third stage of this procedure is called Develop and includes expert appraisal, development testing, and validation testing. Finally, research is continued at the fourth stage, which is disseminate.[5] This study involved PG PAUD Unimed students in the year of batch 2022 who had taken the course of play for early childhood in 2023.

3 Result

The define, plan, develop, and disseminate phases of the development model are used to describe the study's findings in the following manner:

3.1 Define

The first stage in this research is the define stage which serves as an initial analysis that describes the form of gaps between reality and expectations as well as analysis on students, tasks, and concepts so that a specific form is obtained as a basis in the next stage, namely design. The define stage begins with front-end analysis; This stage aims to analyze current conditions that still require quality improvement and expectations or needs, this becomes the basis for determining the form of worksheets and assessments developed, this analysis was carried out by collecting information from students through interviews and analyzing lesson plan documents, it was found that so far there were no worksheets and student assessments in the course of playing for early childhood, in working on assignments students get information about the form of tasks from lesson plan documents and instructions explained directly by lecturers, with this situation students often ask again about the task information to be done and students do not know the form of assessment to be used, the development of worksheets and student assessments is needed to overcome these circumstances. The second stage is to conduct a learner analysis; at this time students who take the play course for early childhood are students of class year 2022 in semester 3, at this time students already understand the concepts and main characteristics of the types of tasks that are done in each course based on experience in previous courses, although students already understand the concepts and characteristics of each type of task given students have not been given detailed instructions based on documents that can explain these instructions in detail, so there is often a misunderstanding of the tasks given. The third stage is task analysis; this analysis is carried out

on the curriculum used by students, it is found that students are required to work on routine tasks, critical book reports, critical journal reviews, mini research, projects and idea engineering, these six tasks are carried out in the play course for early childhood and are contained in the learning plan, these six tasks need to be arranged in subtasks through the process of working on them which are adjusted to the meeting material each week. The fourth stage is concept analysis; where the worksheets and student assessments developed are based on the concept of achieving 21st century skills implemented in the six types of tasks above, the three categories of skills include literacy (information, media, and technological literacy), life skills (adaptability, initiative, productivity, and social skills), and learning skills (critical thinking, creativity, cooperation, and communication). The fifth stage is Specifying Instructional Objectives; by carrying out these tasks it is targeted that students can acquire 21st century skills.

3.2 Design

After the analysis at the define stage is carried out, the research continues with the design stage where this stage is divided into several stages, the sixth stage is media selection, worksheets and assessments are arranged in the form of document files (.doc) which can be accessed online via google docs where the file can be viewed and downloaded by students then can directly work on the assignment on the worksheet file, this is based on the effectiveness and efficiency of the task, students find it easier if the task can be accessed online and can save it, this also saves student expenses in printing their assignments, lecturers will also be facilitated in conducting assessments, checking the originality of the task and saving the task. The seventh stage is format selection; the student worksheet and assessment are arranged by combining several parts such as cover, table of contents, assessment sheet and worksheet (material title, achievement indicators, material summary and assignment); then this sheet is arranged with line spacing 1.15 and left and right aligned writing (Justify), Times News Roman font size 12. The student worksheet is equipped with instructions, a student identity column, and the format of the task to be done.

3.3 Develop

Following the design step, the development stage is completed by having professionals validate the work, the initial trial was carried out involving two experts, the trial was carried out on language aspects, content aspects, and feasibility aspects, the following are the results of the expert trial;

Table 1. Expert Trial Assessment

No	Aspects to be assessed	Expert Assessment Score			Average	Description
		1	2	3		
1	Language Aspect	4,69	4,54	4,77	4,67	Good
2	Content aspect	4,80	4,70	4,60	4,70	Good
3	Feasibility aspect	4,85	4,92	4,85	4,87	Good
	Total	14,34	14,16	14,22		
	Average	4,78	4,72	4,74		

The average value of the expert assessments was discovered based on the trial's outcomes, and it was found that the language aspect received the lowest score, this was due to the fact that the instructions given in the worksheets and student assessments needed to be made clearer and the illustrations used were not optimal for providing information, so that based on the suggestions for improvement from the expert, improvements were made in the form of improving the structure of the task instructions given, this improvement was made by compiling the instruction structure in the form of a table that resembled the final form of the task to be reported by students, the eighth stage was developmental testing; After the revisions were made, a small-scale trial with thirty pupils was conducted, the results is that the average assessment on the presentation aspect is 4.14; the language aspect is 4.30; and the content aspect is 4.27 where these three aspects are in the good category, the research was continued with a trial in a larger group, in the large group test conducted on all PG PAUD students in the 2022 batch of 165 people, The following table displays the trial results:

Table 2. Large Group Product Trial Results

Aspect	Desription	Score	Mean
Language	Clarity of information provided	664	4,02
	Language/sentences that are easy to understand	671	4,07
	Instruction presentation has a coherent flow of thought	699	4,24
	Appropriateness of the selection of worksheet content and assessment formats	749	4,54
	Proportional arrangement of worksheet content and assessment	660	4,00
Appearance	Worksheets and assessments are presented in clear sentences.	736	4,46
	The use of language is communicative	664	4,02
	Worksheets and assessments are presented in terms that are easy to understand	662	4,01
	There are no errors in printing or writing (typography)	679	4,12
Content	Worksheets and assessments can help improve students' creativity skills	744	4,51
	Worksheets and assessments can help improve students' critical thinking skills	740	4,48
	Worksheets and assessments can help improve students' communication skills	740	4,48
	Worksheets and assessments provide opportunities for students to collaborate	748	4,53
	Worksheets and assessments involve technology literacy activities	732	4,44
	Worksheets and assessments involve media literacy activities	743	4,50
	Worksheets and assessments involve information literacy activities	739	4,48
	Worksheets and assessments enhance student leadership	730	4,42
	Worksheets and assessments increase student flexibility in facing obstacles	675	4,09
	Worksheets and assessments increase student productivity	666	4,04
	Worksheets and assessments improve students social skills	668	4,05
	Worksheets and assessments increase student initiative	670	4,06
	Mean		4,27
	Category		Good

According to the validation test findings, every aspect has been established with a good categorization, meaning that distribution can proceed without any changes being made.

3.4 Dissemination

The final stage in this development procedure is to carry out dissemination by conducting FGDs with lecturers teaching play courses for early childhood and continued with the use of worksheets and student assessments in lectures.

4. Discussion

In the discussion of 21st century skills, the future and skills are closely related. From the standpoint of the study of 21st century skills, every student needs to have skills like problem-solving, creativity, innovation, meta-cognition, and communication in order to be prepared for the future,[6] learning today requires the application of skills like life planning, flexibility and adaptability, initiative and self-management, entrepreneurship, social and cultural interaction, productivity and accountability, leadership, critical thinking, problem solving, communication, collaboration and teamwork, lifelong learning, and digital literacy. This promotes changes in the form of learning that are increasingly innovative. [7] consequently, it is imperative to assess how well students are acquiring 21st century skills. The study found that various methods should be used to measure 21st century skills, including self-reports, global rating scales, standardized assessments (both multiple choice and performance-based), and observational measures.[8] The results of the study are in line with this study where the concept and form of evaluation of efforts to achieve 21st century skills, the form of tasks carried out through team-based projects can accommodate collaborative activities that require skills such as creativity, critical thinking, with leadership values, initiative, productivity, social skills, flexibility. The form of mini research and idea engineering tasks is also able to foster student literacy skills, creativity and critical thinking. The critical book report, critical journal review and routine assignments facilitate the improvement of literacy and communication skills.

5. Conclusion

This research was conducted through the following stages: Define (front-end analysis, learner analysis, task analysis, concept analysis, specifying instructional objectives), Design (preparation stage of worksheets and assessments, media selection, format selection, and initial design), Development (expert appraisal, development testing, and validation testing), and Disseminate. Worksheets and assessments were successfully developed in play courses for early childhood developed using the 4D development model approach. Based on the results of trials by experts and the results of product trial data in large groups, it shows that the development of worksheets and student assessments in play courses for early childhood is considered feasible to use with good categories, in terms of language aspects, presentation aspects and content aspects, with an average score of 4.27.

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