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Research Article

Practical Model Intelligence Computer Assisted Instruction project-based learning-oriented High Order Thinking Skill

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Abstract: In order to adapt to the challenges of the 21st century, efforts to improve the quality of education must be made through the provision of communication skills, teamwork skills, critical thinking, and problem-solving skills as well as innovative orientation and creativity for students. In this connection, of course, learning in the 21st century has made ICT an important part of the learning process through the growth of constructivism and constructivism. For this reason, this study was conducted to measure the practicality of the Intelligence Computer Assisted Instruction model of project-based learning-oriented at Higher Level Thinking Skills for lecturers and students, so that practical models can be used in learning. This study uses the Borg and Gall model steps by assessing the practicality of a model that has previously been declared valid. The subject of practicality testing is a lecturer who teaches an expert system course, a trial for students who take an expert system course. The instrument used was a practicality questionnaire. The data analysis technique used the Akien test to see the practicality of the model being developed. The results of the project-based learning model of Intelligence Computer Assisted Instruction practicum oriented at Higher Level Thinking Skills for lecturers and students which contain model books, lecturer manuals, and teaching modules are classified as very practical. From these results, it is stated that the project-based Intelligence Computer Assisted Instruction learning model that is oriented towards High-Level Thinking Skills is stated to have a practicality that is feasible to use

Keywords: Praktikalitas, Model learning, Intelligence, CAI. HOTS

1. Introduction

21st-century education is driven by the progress of ICT (Information and Communication Technology) very rapidly [1][2][3][4]. This progress is in line with the progress of the digital world which is motivated by an important element called the Internet. In responding to the challenges of the 21st century, efforts to improve the quality of education must be carried out to provide skills to students, the skills referred to in 4C are "(1) Communication Skills (2) Collaboration Skills (3) Critical Thinking Skills and Orientation Problem Solving (Critical Thinking and Problem) and (4) Creative and Innovating (Creative and Innovative) "[5].

The progress of applications in the field of data and information exchange also encourages the infinity of students to find and choose a learning model that suits their abilities, the use of ICT in learning models is a major issue in 21st-century learning which has given birth to the Industrial Revolution 4.0. 21st-century learning emphasizes the adaptation of the use of ICT in every learning activity, various multi-platform applications were born as a form of ICT application in the field of learning such as Google Suite; Microsoft Office 365; Quipper School, Teacher's Room, etc. These developments will continue to grow by technological advances, this is the driving factor for the development of project-based learning simulation models that combine intelligent computer-assisted instruction oriented HOTs in it.

Learning with a simulation orientation produces an attractive learning atmosphere, this is because simulation models can replace and strengthen real experiences with guided experiences that encourage motivation to replicate substantial things in reality [6][7][8][9][10][11][12]. In connection with this, of course, 21st-century learning with the development of constructivism and constructivism learning theory has made ICT an important part of the learning process. ICT in the form of Intelligence-Computer Assisted Instruction with the Project-Based Learning model requires interrelated elements to get a good learning development model, these elements are data connections, computers, printing devices, pencils, paper, gadgets, learners good, loving parents, learning support sources and tuition fees [13]. Some of these elements will be involved in the simulation model in research which is translated into software called Intelligence Simulator.

It is said that Intelligence Simulator or Smart Simulator because in the process of presenting information and lecture material, especially the Expert System, it can display and simulate step by step expert system lecture material in the form of text, video, and even games. Intelligence Simulator in this case is software to simulate the concepts or learning approaches used in expert system techniques. An expert system is an effort to translate knowledge, rules, ideas, rules, or roles in the form of computer applications with problem-solving abilities like experts or experts. Various applications with the CAI concept using the internet have given birth to online universities, online courses, and virtual classes, technology has distorted the concept of distance learning actors to access learning resources anytime and anywhere [14].

In addition to the concept of Intelligence Computer-Assisted in this research, it will also explain Project Based Learning. Project-Based Learning Model is a learning model that was born from a constructivist model where the understanding received by learners comes from active activities using ideas and ideas. Thomas, through contemporary Innovation Learning Strategies, explained that PjBL is a learning model by emphasizing the opportunities that teachers have in carrying out the learning process in class, especially in project work classrooms that create an interactive, interesting and useful learning atmosphere[15]. Departing from the progress of ICT development and the development of various applications in various fields, especially in the field of education, encourages the need for creative and innovative learning to easily master learning material and apply it to other forms such as products.

certain activities or jobs that adopt expert or expert behavior in solving problems in that field of expertise, while if it is related to the role of these courses in the science of information systems, expert systems courses are important subjects that must be mastered by students in that department due to developments Information technology is currently based on expert systems.

Another problem is the high need for the world of work for IT workers who have competence in the field of expert system application development, one example of how currently the Indonesian industry has begun to switch to automation by utilizing robots, although in relatively small numbers but starting from 2005 Until 2015 there was a 20-fold increase in robot orders from developed countries, namely 314 robots to 6,265, which are mostly used in the production process, as well as the Indonesian e-commerce industry which also adopts expert systems in applications that are owned. growth of up to 9.3 billion USD, an increase of 8% of total sales in 2017, even though the government has mostly utilized portal technology such as smart cities which can overcome accessibility problems in public services, providing new service spaces for the community that leads to efficiency and effectiveness. So we need a relevant learning model to be developed that has practicality so that it is easy to apply.

Fun Expert System Learning with the PjBL Learning Model becomes a solution through designing an LMS application in the form of Intelligence-Computer Assisted Instruction which will help students have the knowledge and mastery of Expert System material to apply and analyze it which in the end will be able to evaluate and create it in various forms of cutting-edge applications based on expert systems that are useful for the community. The purpose of this study was to see the level of practicality of a model developed by the Project-Based Learning Model, and HOTS-oriented Intelligent Computer-Assisted Instruction.

2. Method

Research and development is the process of researching and developing a product so that it can be used in educational institutions. (Gay, Mills, and Airasian, 2011). Thus Research and Development identic by carrying out research related to product development with various processes or steps that must be carried out. The development research design in this study, based on the picture above, adopts a 10-step development algorithm (Tegeh and Jampel, 2017), however, the development research procedure above can be simplified by as many as 5 main steps, namely:

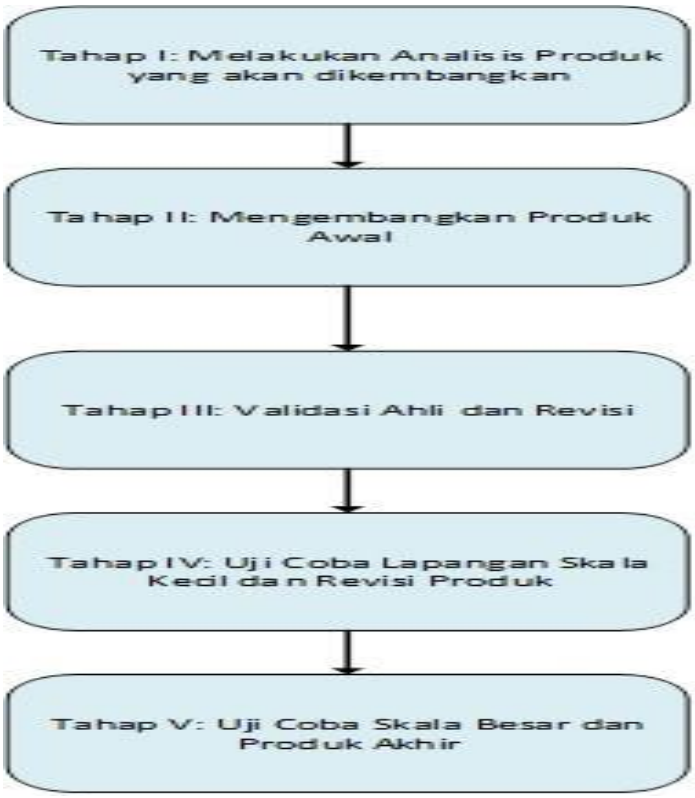

Figure 1. Model Development Procedure

This research enters into Stage V (System Deployment and System Maintenance). This stage is the final process of the learning software development procedure. This stage is intended to maintain the learning software to improve the quality of learning, of course. This study, assessing the practicality of the Intelligence Computer Assisted Instruction model of project-based learning-oriented High Order Thinking Skills that had previously been declared valid. The practicality test subjects were 4 lecturers teaching Expert System courses and 64 students. The data analysis technique used the Akien test to see the practicality of the developed model. The instrument used was a practicality questionnaire. The products assessed for practicality by the lecturers were model books, teaching modules, and lecturer manuals. Meanwhile, to assess the practicality of students, there are model books, teaching modules, and student manuals.

The practical instruments can be seen in Table 1 as follows:

Table 1. Practicality Instruments

No.	Instrument Name	**Indikator Penilaian**
1	The Practicality Based on Lecturer Assessment	The Practical Learning Model Book The practicality of the Teaching Module The practicality of Lecturer Guide
2	The Practicality Based on Student Assessments	Practical Learning Model Book The practicality of the Teaching Module The practicality of Lecturer Guide

3. Result and Discussion

Practicality is carried out to assess the applicability of the Intelligence Computer Assisted Instruction model of project-based learning-oriented High Order Thinking Skill through the perceptions of the lecturer who uses it, and students who learn with the developed model, the aim is to find out whether the learning model developed is practical. Practicality testing is used to measure the practicality of each product.

The products produced in this study are as follows:

The Intelligence Computer Assisted Instruction model book project-based learning-oriented High Order Thinking Skill, can be seen in Figure 2.

Figure 2. Model Book

The guidebook for lecturers and students can be seen in Figure 3.

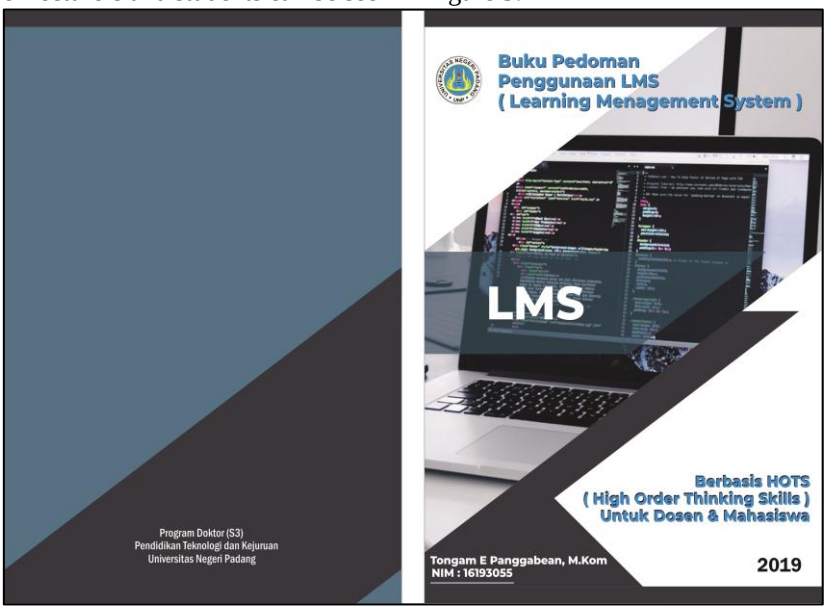

Figure 3. Guidebook for lecturers and students

The teaching module can be seen in Figure 4.

Figure 4. Teaching Module

The following is an explanation regarding the process and practicality testing of each product, namely as follows:

1. Practicality Test of PjBL Intelligence Computer Assisted Instruction Model Book with High Order Thinking Skill oriented

To measure the practicality of the PjBL Intelligence Computer Assisted Instruction Model Book, the High Order Thinking Skill oriented in terms of various aspects. The practical assessment aspects are as follows: (a) attractiveness, (b) development process, (c) ease of use, and (d) function and meaning of the model. The following is a summary of the practical test of the PjBL Intelligence Computer Assisted Instruction Model Book with High Order Thinking Skill-oriented, namely:

Table 2. Summary of Practical Test Book Model Intelligence Computer Assisted Instruction PjBL oriented High Order Thinking Skill Aspect I Attraction

No	**Respondents**	**Indicator**			
		Indicator 1	Indicator 2	Indicator 3	Indicator 4
1	Lecturer 1	4	4	5	5
2	Lecturer 2	5	5	4	5
3	Lecturer 3	4	4	5	4
4	Lecturer 4	5	5	5	5
Overall Score (NK)		18	18	18	19
Average value		4,5	4,5	4,5	4,75
Percentage Value		90	90	90	95
Information		SP	SP	SP	SP

Then for the PjBL Intelligence Computer Assisted Instruction Model Book oriented High Order Thinking Skill from Aspect II, namely as follows:

Table 3. Summary of Practical Test Book Model Intelligence Computer Assisted Instruction PjBL oriented High Order Thinking Skill Aspect II Development process

No	**Respondents**	**Respondent's Assessment of Indicators**			
		Indicator 1	Indicator 2	Indicator 3	Indicator 4
1	Lecturer 1	4	5	5	5
2	Lecturer 2	5	5	4	5
3	Lecturer 3	4	4	4	5
4	Lecturer 4	4	4	5	4
Overall Score (NK)		17	18	18	19
Average value		4.25	4.5	4.5	4.57
Percentage Value		85%	90%	90%	95%

Information	SP	SP	SP	SP

Then for the PjBL Intelligence Computer Assisted Instruction Model Book oriented High Order Thinking Skill from Aspect III, namely as follows:

Table 4. Summary of Practical Test Book Model Intelligence Computer Assisted Instruction PjBL oriented High Order Thinking Skill Aspect III Ease of Use

No	**Respondents**	**Respondent's Assessment of Indicators**		
		Indicator 1	Indicator 2	Indicator 3
1	Lecturer 1	4	4	4
2	Lecturer 2	4	5	5
3	Lecturer 3	5	5	4
4	Lecturer 4	4	4	4
Overall Score (NK)		24	17	18
Average value		4.8	4,25	4,5
Percentage Value		85	85	90
Information		SP	SP	SP

Then for the PjBL Intelligence Computer Assisted Instruction Model Book oriented High Order Thinking Skill from Aspect III, namely as follows:

Table 5. Summary of Practical Test Book Model Intelligence Computer Assisted Instruction PjBL oriented High Order Thinking Skill Aspect IV Functionality and meaningfulness of the model.

No	**Respondents**	**Respondent's Assessment of Indicators**					
		Indicator 1	Indicator 2	Indicator 3	Indicator 4	Indicator 5	Indicator 6
1	Lecturer 1	5	5	5	5	5	5
2	Lecturer 2	5	5	5	5	4	5
3	Lecturer 3	5	4	4	4	4	4
4	Lecturer 4	5	5	5	4	5	5
Overall Score (NK)		20	19	19	18	18	19
Average value		5	4,75	4,75	4,5	4,5	4,75
Percentage Value		100	95	95	90	90	95
Information		SP	SP	SP	SP	SP	SP

Based on the results of practicality tests by lecturers related to the PjBL Intelligence Computer Assisted Instruction Model Book with High Order, Thinking Skill oriented, it is stated "Very Practical".

2. Practical Test of PjBL Intelligence Computer Assisted Instruction Model Handbook with High Order Thinking Skill oriented

In measuring the practicality of the PjBL Intelligence Computer Assisted Instruction Model Manual, it is High Order Thinking Skill oriented in terms of various indicators both from the aspects of the Syllabus Components, RPS Components, and Language. In this study, there are 18 assessment indicators. The following are the results of the practicality test of the PjBL Model Intelligence Computer Assisted Instruction manual with the orientation of High Order Thinking Skills, namely:

Table 6. Summary of Practical Test of the Manual for Using the Intelligence Model Computer Assisted Instruction PjBL oriented High Order Thinking Skills

No	**Ind-01**	**Ind-02**	**Ind-03**	**Ind-04**	**Ind-05**	**Ind-06**	**Ind-07**	**Ind-08**	**Ind-09**
Lecturer 1	5	5	5	5	5	5	4	4	5
Lecturer 2	4	5	5	5	5	5	5	4	5
Lecturer 3	5	4	4	4	5	5	5	4	5
Lecturer 4	4	4	4	5	5	5	5	5	5
Mean Value	4,5	4,5	4,5	4,75	5	5	4,75	4,25	5
Percentage	90	90	90	95	100	100	95	85	100

Information	SP	SP	SP	SP	SP	SP	SP	SP	SP

No	**Ind-10**	**Ind-11**	**Ind-12**	**Ind-13**	**Ind-14**	**Ind-15**	**Ind-16**	**Ind-17**	**Ind-18**
Lecturer 1	5	4	5	4	4	5	4	5	4
Lecturer 2	4	5	5	5	4	5	5	4	5
Lecturer 3	4	4	4	4	5	5	4	4	4
Lecturer 3	4	5	5	5	5	4	4	5	5
Mean Value	4,25	4,5	4,75	4,5	4,5	4,75	4,25	4,5	4,5
Percentage	85	90	95	90	90	95	85	90	90
Information	SP	SP	SP	SP	SP	SP	SP	SP	SP

Based on practicality tests by lecturers related to the Guidebook for Using the Intelligence Model Computer Assisted Instruction PjBL oriented High Order Thinking Skill, it is stated "Very Practical".

3. Practicality Test of Expert System Teaching Module Books by Lecturers

In measuring the practicality of the Expert System Teaching Module Book in terms of various aspects. The practical assessment aspects are as follows: (a) Presentation, (b) Conformity, (c) Eligibility, and (d) Language with a total of 19 indicators. The following is a summary of the practical test of the Teaching Module Book of the PjBL Intelligence Computer Assisted Instruction Model with High Order Thinking Skill oriented, namely:

Table 7. Summary of Practical Test from the Textbook of the PjBL Intelligence Computer Assisted Instruction Model High Order Thinking Skill oriented

No	**Ind-01**	**Ind-02**	**Ind-03**	**Ind-04**	**Ind-05**	**Ind-06**	**Ind-07**	**Ind-08**	**Ind-09**	**Ind-10**
Lecturer 1	4	5	4	5	4	5	4	5	5	5
Lecturer 2	5	5	5	4	5	5	4	5	4	4
Lecturer 3	5	4	5	4	4	4	4	4	5	5
Lecturer 3	5	4	4	5	5	4	5	5	4	5
Mean Value	4,75	4,5	4,5	4,5	4,5	4,5	4,25	4,75	4,5	4,75
Percentage	95	90	90	90	90	90	85	95	90	95
Information	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP

No	Ind-11	Ind-12	Ind-13	Ind-14	Ind-15	Ind-16	Ind-17	Ind-18	Ind-19
Lecturer 1	5	4	4	4	4	5	4	5	5
Lecturer 2	4	5	5	5	5	4	4	5	4
Lecturer 3	5	4	5	4	4	4	5	5	5
Lecturer 3	5	5	5	4	5	5	4	5	4
Mean Value	4,75	4,5	4,75	4,25	4,5	4,5	4,25	5	4,5
Percentage	95	90	95	85	90	90	85	100	90
Information	SP	SP	SP	SP	SP	SP	SP	SP	SP

Based on practicality tests by lecturers related to the PjBL Intelligence Computer Assisted Instruction Model Book with High Order orientation, it is stated "Very Practical".

4. Practicality Test of Learning Media by Lecturers

On measuring the practicality of learning media. The practical assessment aspects are as follows: (a) Model Components, (b) Display and Multimedia, and Language with a total of 26 indicators. The following is a sum-

mary of the practicality test of the Learning Media from the High Order-oriented PjBL Intelligence Computer Assisted Instruction Model, namely:

Table 8. Summary of Practical Tests from the Toolbook Toolkit of the PjBL Intelligence Computer Assisted Instruction Model High Order Thinking Skill oriented

No	Ind-01	Ind-02	Ind-03	Ind-04	Ind-05	Ind-06	Ind-07	Ind-08	Ind-09
Lecturer 1	4	4	5	4	5	4	4	5	5
Lecturer 2	4	4	5	5	5	5	5	5	5
Lecturer 3	4	5	5	4	4	5	5	4	4
Lecturer 3	5	5	5	5	5	4	4	5	4
Mean Value	4,25	4,5	5	4,5	4,75	4,5	4,5	4,75	4,5
Percentage	85	90	100	90	95	90	90	95	90
Information	SP	SP	SP	SP	SP	SP	SP	SP	SP

No	Ind-10	Ind-11	Ind-12	Ind-13	Ind-14	Ind-15	Ind-16	Ind-17	Ind-18
Lecturer 1	5	4	4	5	4	5	5	5	4
Lecturer 2	5	4	5	5	4	4	5	4	5
Lecturer 3	4	5	4	4	4	5	5	5	4
Lecturer 3	4	4	5	4	5	5	4	4	4
Mean Value	4,5	4,25	4,5	4,5	4,25	4,75	4,75	4,5	4,25
Percentage	90	85	90	90	85	95	95	90	85
Information	SP	SP	SP	SP	SP	SP	SP	SP	SP

No	Ind-19	Ind-20	Ind-21	Ind-22	Ind-23	Ind-24	Ind-25	Ind-26
Lecturer 1	4	5	5	4	5	5	4	5
Lecturer 2	5	4	5	4	5	4	4	4
Lecturer 3	4	4	5	4	5	5	4	5
Lecturer 3	4	4	5	5	5	4	4	5
Mean Value	4,25	4,25	5	4,25	5	4,5	4	4,75
Percentage	85	85	100	85	100	90	80	95
Information	SP	SP	SP	SP	SP	SP	SP	SP

Based on the practicality test by 4 lecturers related to Learning Media which is an element of the PjBL Intelligence Computer Assisted Instruction Model High Order oriented, it is stated "Very Practical".

5. Practicality Test of the Media Intelligence Model Computer Assisted Instruction PjBL oriented High Order Thinking Skill by Students

In measuring the practicality of the media, the PjBL Intelligence Computer Assisted Instruction Model is oriented towards High Order Thinking Skills by students in terms of various aspects. The practical assessment aspects are as follows: (a) Model Components, (b) Display and Multimedia, and Language with a total of 26 indicators. The following is a summary of the practicality test of the High Order-oriented PjBL Intelligence Computer Assisted Instruction Model Learning Media, namely:

Table 9. Summary of Practicality Test of Learning Media from PjBL Intelligence Computer Assisted Instruction Model High Order Thinking Skill oriented

No	Mahasiswa Ke	Mean	No	Mahasiswa Ke	Mean	No	Mahasiswa Ke	Mean
1	Mhs-01	4,462	23	Mhs-23	4,308	45	Mhs-45	4,462
2	Mhs-02	4,423	24	Mhs-24	4,462	46	Mhs-46	4,500
3	Mhs-03	4,500	25	Mhs-25	4,423	47	Mhs-47	4,423
4	Mhs-04	4,538	26	Mhs-26	4,577	48	Mhs-44	4,385
5	Mhs-05	4,500	27	Mhs-27	4,423	49	Mhs-45	4,385
6	Mhs-06	4,500	28	Mhs-28	4,577	50	Mhs-46	4,500
7	Mhs-07	4,462	29	Mhs-29	4,654	51	Mhs-45	4,538
8	Mhs-08	4,385	30	Mhs-30	4,615	52	Mhs-46	4,423
9	Mhs-09	4,462	31	Mhs-31	4,500	53	Mhs-47	4,577
10	Mhs-10	4,538	32	Mhs-32	4,423	54	Mhs-44	4,462
11	Mhs-11	4,385	33	Mhs-33	4,577	55	Mhs-45	4,577
12	Mhs-12	4,538	34	Mhs-34	4,654	56	Mhs-46	4,462
13	Mhs-13	4,423	35	Mhs-35	4,423	57	Mhs-45	4,462
14	Mhs-14	4,346	36	Mhs-36	4,654	58	Mhs-46	4,654
15	Mhs-15	4,385	37	Mhs-37	4,423	59	Mhs-47	4,385
16	Mhs-16	4,500	38	Mhs-38	4,462	60	Mhs-44	4,538
17	Mhs-17	4,500	39	Mhs-39	4,615	61	Mhs-45	4,500
18	Mhs-18	4,308	40	Mhs-40	4,462	62	Mhs-46	4,538
19	Mhs-19	4,615	41	Mhs-41	4,423	63	Mhs-45	4,308
20	Mhs-20	4,538	42	Mhs-42	4,462	64	Mhs-46	4,462
21	Mhs-21	4,538	43	Mhs-43	4,615			
22	Mhs-22	4,423	44	Mhs-44	4,500			

Based on the practicality test by 64 students related to Learning Media which is an element of the PjBL Intelligence Computer Assisted Instruction Model with High Order, Thinking Skill oriented, it is stated "Very Practical".

6. Practicality Test of the Expert System Subject Teaching Module Book by Students

In measuring the practicality of the Expert System Teaching Module Book by Students in terms of various aspects. The practical assessment aspects are as follows: (a) Model Components, (b) Display and Multimedia, and Language with a total of 16 indicators. The following is a summary of the practicality test of the Learning Media from the High Order-oriented PjBL Intelligence Computer Assisted Instruction Model, namely:

Table 10. Summary of Practical Tests from the Teaching Module Book of the PjBL Intelligence Computer Assisted Instruction Model High Order Thinking Skill oriented by students

No	Mahasiswa Ke	Mean	No	Mahasiswa Ke	Mean	No	Mahasiswa Ke	Mean
1	Mhs-01	4,423	23	Mhs-23	4,308	45	Mhs-45	4,577
2	Mhs-02	4,538	24	Mhs-24	4,500	46	Mhs-46	4,462
3	Mhs-03	4,538	25	Mhs-25	4,385	47	Mhs-47	4,500
4	Mhs-04	4,500	26	Mhs-26	4,308	48	Mhs-44	4,462
5	Mhs-05	4,462	27	Mhs-27	4,538	49	Mhs-45	4,462
6	Mhs-06	4,615	28	Mhs-28	4,577	50	Mhs-46	4,385
7	Mhs-07	4,500	29	Mhs-29	4,577	51	Mhs-45	4,538
8	Mhs-08	4,462	30	Mhs-30	4,462	52	Mhs-46	4,423
9	Mhs-09	4,385	31	Mhs-31	4,731	53	Mhs-47	4,385
10	Mhs-10	4,538	32	Mhs-32	4,538	54	Mhs-44	4,577
11	Mhs-11	4,538	33	Mhs-33	4,462	55	Mhs-45	4,538
12	Mhs-12	4,654	34	Mhs-34	4,500	56	Mhs-46	4,500
13	Mhs-13	4,500	35	Mhs-35	4,423	57	Mhs-45	4,462
14	Mhs-14	4,462	36	Mhs-36	4,615	58	Mhs-46	4,462
15	Mhs-15	4,538	37	Mhs-37	4,615	59	Mhs-47	4,577
16	Mhs-16	4,577	38	Mhs-38	4,538	60	Mhs-44	4,500
17	Mhs-17	4,500	39	Mhs-39	4,692	61	Mhs-45	4,538
18	Mhs-18	4,500	40	Mhs-40	4,308	62	Mhs-46	4,423
19	Mhs-19	4,577	41	Mhs-41	4,385	63	Mhs-45	4,500
20	Mhs-20	4,385	42	Mhs-42	4,462	64	Mhs-46	4,346
21	Mhs-21	4,500	43	Mhs-43	4,462			
22	Mhs-22	4,538	44	Mhs-44	4,615			

Berdasarkan uji praktikalitas oleh 64 orang mahasiswa terkait Modul Ajar dari yang merupakan elemen dari Model *Intelligence Computer Assisted Instruction* PjBL berorientasi *High Order* maka dinyatakan "Sangat Praktis". Sehingga, berdasarkan seluruh nilai distribusi penilaian baik dosen dan mahasiswa menunjukkan hasil uji praktikalitas terhadap Model *Intelligence Computer Assisted Instruction* PjBL berorientasi *High Order Thinking Skill* "sangat praktis"**.** Berdasarkan dari nilai rata-rata tersebut dapat maka dapat dinyatakan dosen

sangat mendukung sekali terhadap model Model *Intelligence Computer Assisted Instruction* PjBL berorientasi *High Order* dalam pembelajaran matakuliah Sistem Pakar di Program Studi S1-Sistem Informasi.

Based on the practicality test by 64 students related to the Teaching Module, which is an element of the PjBL Intelligence Computer Assisted Instruction Model, High Order oriented, it is stated "Very Practical". Thus, based on the entire value distribution of the assessment, both lecturers and students show practicality test results on the PjBL Intelligence Computer Assisted Instruction Model with a High Order Thinking Skill oriented "very practical". Based on the average value, it can be stated that the lecturer is very supportive of the PjBL Intelligence Computer Assisted Instruction Model model of High Order orientation in learning Expert Systems courses in the S1-Information Systems Study Program.

Based on the results of the study, a PjBL Intelligence Computer Assisted Instruction Model of learning was produced with a practical High Order Thinking Skill oriented. The model developed can not only be used in one course, namely expert systems but can also be applied to other courses, especially in courses in the software development family.

4. Conclusion

To implement a learning model, of course, it must have practicality in use for lecturers and students, so that the model used is appropriate and can be easily applied and followed by the steps in learning. It was concluded that the practicality results of the lecturers containing model books, lecturer manuals, and teaching modules were classified as very practical. Meanwhile, the results of student practicality that contain model books, student manuals, and teaching modules are classified as very practical. From these results, it was stated that the PjBL Intelligence Computer Assisted Instruction Model model with the orientation of High Order Thinking Skill was stated to have feasible practicality to use.

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