In-House Training Modules on Learning Media to Improve Information and Communication Technology Competence in Elementary School Teachers

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Article History:
Received: Aug 10, 2024
Revised: Oct 05, 2024
Accepted: Oct 24, 2024
Online First: Nov 13, 2024

Keywords:
In House Training, Information and Communication Technology, Module.

Kata kunci:
Modul, Pelatihan In House, Teknologi Informasi dan Komunikasi.

How to cite:
Panjaitan, M. S., Harapan, E., & Eddy, S. (2024). In-House Training Modules on Learning Media to Improve Information and Communication Technology Competence in Elementary School Teachers. *Edunesia : Jurnal Ilmiah Pendidikan, 5*(3), 1557-1574.

Abstract: In-house training (IHT) programs effectively address educational challenges in schools through a thorough needs analysis. While IHT programs are frequently conducted, the primary focus should be on enhancing the quality of training to meet the specific needs of institutions, roles, and individuals involved. At SDN 98, a notable issue is the low utilization of technology in the learning process despite adequate multimedia facilities. Among 17 classroom teachers, fewer than 25% are proficient in using computers for instruction, and only one or two teachers regularly use laptops. The use of LCD projectors is also rare. This situation highlights the urgent need to improve teachers' information and communication technology (ICT) skills. Consequently, this Study aims to enhance the ICT competencies of SDN 98 teachers through targeted training and the development of IHT modules. The research employs a research and development (R&D) method that includes eight stages: initial research, planning, product design, validation, revision, limited trials, and field trials. The developed IHT module received excellent evaluations, with an average score of 4.49 from respondents and 4.56 from instructors, indicating its practicality and effectiveness in enhancing teachers' ICT competencies.

Abstrak: Program In-House Training (IHT) merupakan salah satu metode yang efektif untuk mengatasi tantangan pendidikan di sekolah dengan melakukan analisis kebutuhan yang komprehensif. Meskipun program IHT sering diadakan, namun fokus utama haruslah pada peningkatan kualitas pelatihan yang sesuai dengan kebutuhan lembaga, jabatan, dan individu yang terlibat. Di SDN 98, perlu ada pemanfaatan teknologi yang lebih banyak dalam proses pembelajaran, meskipun sekolah memiliki fasilitas multimedia yang memadai. Dari 17 guru kelas, kurang dari 25% yang mahir menggunakan komputer untuk mengajar, dan hanya satu atau dua guru yang secara rutin menggunakan laptop. Penggunaan LCD proyektor juga sangat jarang. Kondisi ini mengindikasikan adanya kebutuhan untuk meningkatkan kemampuan teknologi informasi dan komunikasi (TIK) di kalangan guru. Oleh karena itu, penelitian ini bertujuan untuk meningkatkan kompetensi TIK guru-guru SDN 98 melalui pelatihan dan pengembangan modul IHT. Metode yang digunakan dalam penelitian ini adalah penelitian dan pengembangan (R&D), yang terdiri dari delapan tahap, mulai dari penelitian awal, perencanaan, desain produk, validasi, dan revisi, hingga uji coba terbatas dan uji coba lapangan. Hasilnya, modul IHT yang dikembangkan mendapat penilaian sangat baik dengan skor rata-rata 4,49 dari responden dan 4,56 dari instruktur, yang menunjukkan bahwa modul ini praktis dan efektif dalam meningkatkan kompetensi TIK guru.

https://doi.org/10.51276/edu.v5i3.1033

A. Introduction

In the 21st century, every individual is faced with demands to keep going and develop skills and competencies to be able to compete at the global level (Sugandi & Faizah, 2023). Changes significantly brought about by the Revolution Industry 4.0 also have an impact on various aspects of life, including sector education. In the world of education, change This known as Education Revolution 4.0, which marks the transition from traditional method learning to learning digital-based (Gogahu & Prasetyo, 2020). In Indonesia, technology has been integrated into the learning process taught through various media (R. Herlinda et al., 2024). Education in this digital era demands the use of digital technology as a tool to support learning; one of them is the utilization of digital books. Digital technology has proven effective in developing the ability to think of students (Suyasa et al., 2021).

Education is an important process in the formation of aligned values with natural human beings who have mind, soul, and body, so that capable make man a civilized being (Ujud et al., 2023; Gardner, 2021). In the dynamics of ongoing education throughout life, whether in the formal, non-formal, or informal realms, strategic concepts and planning face the challenges 21st century, especially in mastery of knowledge, technology, and ethics (Friticarani et al., 2023). Along with the development knowledge knowledge and technology, which brings changes in various aspects of life, mastery of science and technology has become an inevitability (Ulfah et al., 2022). In context in this era, the role of teachers becomes very crucial, especially in the era of technology. Advanced and changing values (Nasem et al., 2018)

Teachers are the end spear in the learning process Because interact direct with students To convey knowledge and skills important (Musyadad et al., 2019). Professional teachers are responsible for answering answers to participants, parents, society, and the nation (Solekhat, 2023). Quality of education increases with improvement in teacher quality, which must control four competence and skills teaching, such as asking, explaining, making variations, strengthening, as well as managing class (Apiyani et al., 2022)

Information and Communication Technology (ICT) Competence is one of the important aspects that must be mastered by teachers, including the ability to utilize ICT in planning, implementing, and evaluating learning. This competence not only supports the pedagogical, professional, and social tasks of teachers but also plays a role in their self-development. As technology advances, the learning paradigm must change, and teachers are required to be able to use various methods and media to deal with different student characteristics. The application of technology is crucial in facing the era of globalization and improving teacher competence (Niarsa, 2013; Herlinda et al., 2020; Effendi & Wahidy, 2019). Competence, as a combination of knowledge, skills, and attitudes, is formed through the interaction between individual potential and the environment, which is also relevant in the context of ICT competence for teachers (Rivalina, 2015).

Although information and communication technology (ICT) has developed rapidly, the ICT competence of elementary school teachers still needs to overcome a number of obstacles. Teachers often do not use projectors in class due to practical reasons, technical

https://doi.org/10.51276/edu.v5i3.1033

concerns, or lack of digital teaching materials. The use of computer laboratories in elementary schools is also less than optimal because teachers are more comfortable with verbal learning methods and are less accustomed to using ICT devices. Several trainings, such as the Teacher Working Group (KKG) and Subject Teacher Deliberation (MGMP), have been held to improve teacher competence. However, they still face challenges in designing interesting and innovative strategies. Another effective solution is the *In-House Training* (IHT) program, which can be tailored to the specific needs of teachers and schools. Research shows that IHT is able to improve teacher competence in using information technology in teaching (Hariany et al., 2021; Musfah, 2011; Ashari et al., 2022; Yulistia et al., 2024 Ayuningtyas et al., 2017)

SDN 98 in Seberang Ulu II District, Palembang City, is known for its impressive academic achievements, such as third place in the National Student Sports Olympiad (O2SN) in the science field in 2018 and second place in Mathematics in 2019. In addition, the school also has accreditation very good (A) and became a school pilot with 17 groups of Study, the most in the sub-district. However, behind the performance, the main challenge issues faced is method teaching that is still conventional, where less the 25% of teachers are able to utilize technology even though facilities are already available. SDN 98 has applied The 2013 curriculum prioritizing learning thematic, so that required effort To increase the utilization of technology in the teaching and learning process.

Focus mMainStudy This is to increase competence in technology Information and Communication (ICT) for school teachers, which is very relevant in conditions in which the number of teachers could be more optimal in technology. Different from other research highlights aspects of pedagogical research, this special aims to strengthen teachers' ability to use technology as a learning medium, which is expected to be capable answer challenges faced by SDN 98. The IIn-HouseTraining approach applied in Study This gives more flexibility in adapting training with the need for local teachers in schools, such as SDN 98. Approach This is different from training external or workshop-based- which is often not fully customized with conditions real in the field. Through training provided in school, research offers more solutions appropriate target for SDN 98 teachers who need guidance practical in implementation technology in the classroom.

More further research targets namely school teachers based with Diverse ICT skills, which are highly relevant for conditions of SDN 98, where the use of technology is still limited. A more simple and practical application of ICT will be more easily accepted by elementary school teachers who may have no background in powerful technology. This is different from other research targeting teachers at the tertiary level of education, who are usually Already more familiar with the technology.

In addition, the purpose of research that focuses on improving ICT competency also supports SDN 98's efforts in facing the digital era. Increasing ICT mastery for teachers at SDN 98 will help create more learning interactive and effective, in line with demands. The 2013 curriculum requires the integration of various source learning, including digital media.

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Notice that context research that emphasizes development modules in basic school research gives more realistic and applicable solutions. Limitations source power and lack of utilization of technology at SDN 98 are challenges that can be overcome through module-developed training so that capable teachers can increase their ICT skills and enrich the experience for Study students.

B. Method

Types of research used in the Study This is research and development *(R&D)*. Research and development methods, or in English, *Research and Development*, are the methods used to produce product-specific and test-effectiveness products (Sugiyono, 2015). The development model used in this Study to develop learning media is the *Borg and Gall model. The development of the Borg and Gall* model can be seen in the image below.

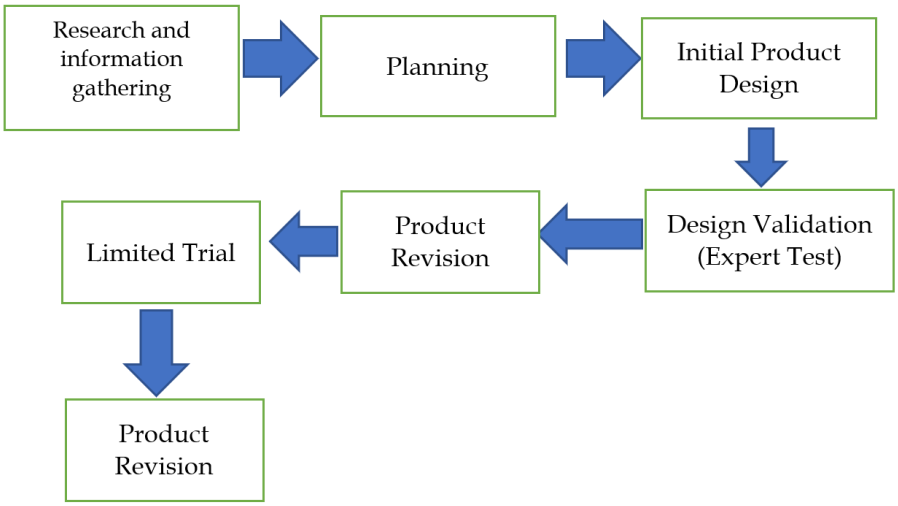

Figure 1. Borg and Gall Model

In this development research, the researcher only carried out up to the seventh stage, which includes research and information collection, planning, initial product design, design validation (expert test), product revision, limited trial, and product revision. After the limited trial stage, the IHT module is ready to be used in schools both as IHT media and as independent learning materials.

C. Result and Discussion

Result

Based on research that has been implemented, the results development module *In House Training* (IHT) for learning media use increase competence in technology information and communication (ICT) in school teachers base discussed. The results of the form training show that the Implementation Independent Curriculum at the moment facilitates teachers in a community or groups to collaborate and exchange inspiration and ideas in learning.

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Training held in the unit each education provides a chance for teachers to discuss in solve problems related to Independent Curriculum and share practices—good its Implementation. Community Learning what is there can facilitate the development of teaching tools such as channel objective learning, teaching modules, module projects, teaching materials, and materials assessment, all of which can be customized interest learning.

Research by Yulistia et al (2024) shows that besides increasing teacher competence, the development module also produces products in the form of modules that can used by teachers and heads of schools For coaching and mentoring in increasing the ICT competency of school teachers. *An in-house Training* (IHT) program was found as a solution for schools that want their teachers to train collectively. Training This Not only increases the number of credits for increasing positions but also improves the insight and skills of teacher teaching so that they are capable of giving more teaching. Hopefully, it will assist the accreditation process. Good For increases mark accreditation and also guards quality schools.

Researchers find that training the No Use module is a special guide for teachers, but only using laptops as training media with guide oral. As a result, after the training is finished, the teachers still feel difficulty in using the applications studied. The importance of activity Directed *In-House* Training To ensure the implementation activity strengthening learning approach scientific, thematically integrated, and learning based on disclosure/research (*discovery/inquiry learning*). With approach productive learning work, this IHT training can increase teacher competence in preparing lesson plans at school intermediate First.

At this stage, the researcher develops the Module based on the prepared design. The Module is then given to the validator to be validated and tested in a limited learning community at school.

a. Module Development

The development module is followed by a compilation Content module consisting of a number of activities that participants must complete to learn, including activity analysis, reflective thinking, guidance, outpouring of opinion, discussion, discussion groups, practice, and presentation.

This Module was developed in accordance with principle drafted plans. Module developed with competency 1) Can know educational institution level school base further; 2) Able to understand every character participant educate so that makes it easier for teachers to interact to educate participant; 3) Able to create conducive conditions that can help development participant educate optimally; 4) Can make into instruction in carrying out the learning process teaching; 5) Able to understand every giving material lesson to participant educate so that makes it easier transfer science; and 6) Able to integrate environment and materials lesson in the relationship with participant educate.

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b. Compilation key Answer

Module for handle instructor the lessons prepared are also equipped with a key Answer. The answer key is located in the section at the end of the Module after the activity learning.

c. Module Validation

At this stage, the next researcher will do the validation module through experts, namely Dr. Mahasir, M.Pd., Santa Sinaga, M.Pd., and Mutia Ratna, M.Pd., as lecturer experts. To get valid data, I developed a Module and used a sheet evaluation Module. Module consulted with lecturer supervisor and revised, then Module the validated by lecturer expert in his field. The results of validation the further analyzed by calculating the average score results sheet evaluation module, and converted, the average score becomes a qualitative mark in accordance with aspect evaluation. A module is said to be valid if fulfil classification evaluation minimal good Module. Here, This outlined results validator assessment of the Module.

Table 1. Results of Validation of Material in the Module

Respondent No.	Average		Classification
1	4.55		
2	4.64	4, 67	Very good
3	4.82		

Based on the data in Table 1, the score results validation material module is 4.67, and the classification entered is very good. So, it can be concluded that the material in the Module was declared valid. Validation data are explained in detail in Table 2.

Table 2. Assessment of Material in the Module

No	Statement	Average Score
1	Compliance with the material presented in the Contents module guide teaching at the level of Elementary school	4.67
2	Compliance material with expected competencies	5.00
3	Explanation compile module guide teaching at the level school base for teachers	4.67
4	The working principle of using modules guides teaching at the level of school base for teachers	4.33
5	Explanation relatedness between draft with module guide teaching at the level school base for teachers	4.00
6	Modules presented support understanding and facilitating teachers	4.67
7	Accuracy module guide teaching at school base for teachers who made	4.67
8	Compliance title with Contents learning and draft Work	5
9	Modules displayed support understanding teaching at the level of school-base	4.67

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No	Statement	Average Score
10	Guide module teaching at the level school base for teachers to improve teacher creativity	4.67
11	Module material supports objective learning	5.00
	Average	**4.67**

Evaluation furthermore is from the developed Module. The following results validate the assessment of the form-developed Module.

Table 3. Validation Results Developed Module Form

Respondent No.	Average		Classification
1	4.67	4, 61	Very good
2	4.33		
3	4.83		

Based on the data in Table 3. it can be concluded that the form-developed Module is declared valid with score validation from module 4.61 and entered in a very good classification. Validation data in a way Details explained in Table 4

Table 4. Assessment Developed Module Form

No	Statement	Average
1	Clarity learning objectives in the module guide teaching at the level school base for teachers	5.00
2	Clarity instruction use module	4.67
3	Compliance example learning that is displayed with material Learning	4.67
4	Usage techniques module guides teaching at the level school base for teachers	4.33
5	Clarity and appropriateness of size letter in writing and the image shown	4.33
6	Compilation order presentation and linkage between material in module guide teaching at the level school base for teachers	4.67
	Average	**4.61**

Next, the validator's assessment of motivation in the Module. This table displays the results of an evaluation expert's assessment of motivation in the Module.

Table 5. Validation Results Motivation in Module

Respondent No.	Average		Classification
1	4.43	4, 76	Very good
2	4.86		
3	5.00		

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Based on the data, motivation in the Module was declared valid with a score evaluation module 4.76 and entered in a very good classification. Validation data are explained in detail in Table 6.

Table 6. Assessment Motivation in Module

No	Statement	Average
1	The attraction module guides teaching at the level of school base for teachers	5.00
2	Modules can grow motivation for teachers in teaching at the level of school-base	4.67
3	Use Module can help more teachers gain knowledge in	4.67
4	Compliance use module with speed teacher learning	4.67
5	The Module helps teachers Study independently without limited space and time	5.00
6	Using modules can awaken new knowledge for teachers	5.00
7	Modules created in accordance with teacher needs	4.33
	Average	**4.76**

Finally, the validator's assessment of language and readability. This outlined table shows the results of the evaluation expert's assessment of language and readability.

Table 7. Results of Language Validation and Module Readability

Respondent No.	Average		Classification
1	4.25		
2	4.25	4.42	Very good
3	4.75		

Based on the evaluation, experts can conclude that the language and readability in the Module were declared valid with a score evaluation module 4.42 and entered in the Very Good classification. Validation data in a way Details explained in Table 8.

Table 8. Language and Readability Assessment of the Module

No	Statement	Average
1	The language used in the Module in accordance with level teacher ability	4.33
2	The language used in the Module is simple and communicative	4.33
3	Terms used in accordance with material Learning	4.67
4	Writing in module guide teaching at the level school base for teachers	4.67
	Average	**4.42**

d. Module Revision

Module revision is done based on suggestions and input from the validator at the time of Module validation. There are some suggestions given for improvements to the

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product beginning before revised. First, according to Dr. Mahasir, M.Pd., improve the procedures writing. Second, according to Santa Sinaga, M.Pd., improve writing, especially the term foreign italics and consistency letters. Third, according to Mutia Ratna, M.Pd., to be added the basics literature that becomes the base compilation module. Following is an example of appearance modules that have been tested limited.

Figure 2. Module Cover

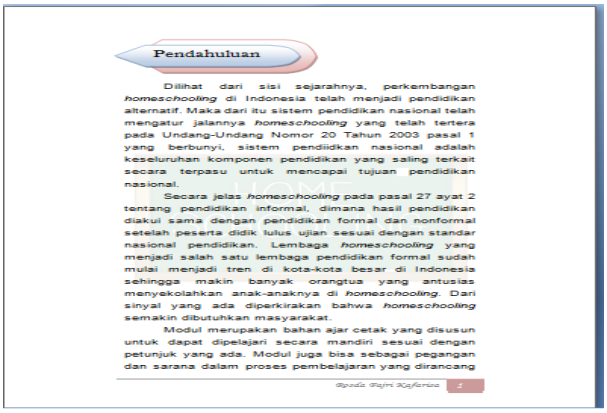

Figure 3. Introduction

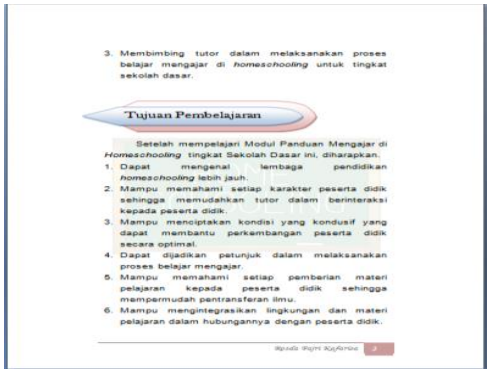

Figure 4. Learning Objectives

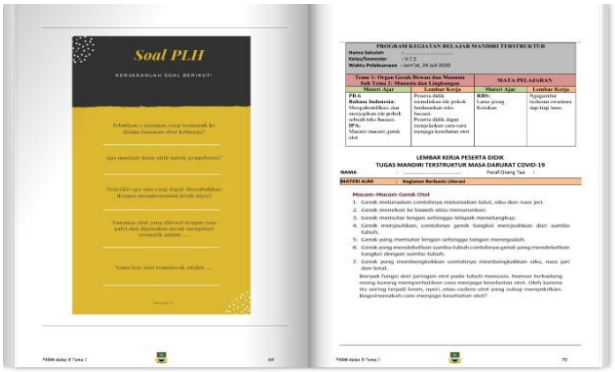

Figure 5. Activities Learning

Implementation Stage

At this stage, the researcher, together with educational units at State Elementary School 98 Palembang (subject research), prepares participants' education and organizes a room to learn. Next researcher tests the practicality and effectiveness module. The Module that was validated by experts and then tested in community learning teachers was later implemented in a way experiment on 15 respondents in learning use module guide teaching at the level school the base consisting of 20 participants educated from Class VA. At the stage of Implementation, the researcher tests the practicality and effectiveness of module guide teaching at the level of school based onon subject research. Based on the results, Implementation obtained a number of findings as follows.

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a. Testing Module Practicality

In this research, questionnaire responses were used to obtain practical data using a module. Data were obtained from questionnaire responses from participant instructor learners. The analysis results for questionnaire responses from one participant instructor learner can be seen in Table 9.

Table 9. Average Score of Questionnaire Response

No	Rated aspect	Evalation	
		Participant Learner	**Learning Teacher**
1	Guide module teaching at the level school base makes it easier for participant Dika to carry out the learning process.	4.40	4.5
2	Using module guide teaching at the level school base can awaken teacher motivation to give direction/instruction and knowledge use module.	4.60	4.60
3	Using module guides to teach at the school level can clarify the teaching stages that researchers conduct.	4.53	4.50
4	Using module guides to teach at the school level can make the teaching stages that researchers perform more regular.	4.67	4.50
5	Guide module teaching at the level of school base can reduce constraints or teacher barriers to carrying out the teaching process at school	4.6	4.45
6	Guide materials taught at the school offered in Module in accordance with problem or teacher needs.	4.27	4.60
7	The techniques offered in the module guide teaching at school. This makes Implementation in the learning process easier to understand the tutor.	4.53	4.60
8	Teaching guide in schools interesting For followed by teacher	4.47	4.50
9	With the use module guide, teachers at school obtained information about the procedure to carry out an appropriate learning process with systematics to teach well and correctly.	4.3	4.80
	Overall Average	**4.49**	**4.56**
	Classification	**Practical**	

The results of data analysis from the questionnaire response participant obtained a score of 4.49. They entered the classification as very good, while the questionnaire response from the instructor learner obtained a score of 4.56 and entered the classification as very good. This shows that the Module is developed practically. Because of the average scores of 4.49 and 4.56 and the very good rating, it is worth using in the learning use module teaching learning media through Canva at the level school base.

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b. Testing Module Effectiveness

To get a mark effectiveness module, use test results Study before and after learning. Test data results The Study was obtained by documenting test results and learning carried out by participants (tutor) with criteria. The minimum passing grade (KKM) is 75. The test results of tutor learning can be seen in Table 10.

Table 10. Learning *Pretest* Results

No	Question	*Pretest*			
		Completed		Not finished yet	
		f	%	f	%
1	Learning in Elementary School Educational Institutions	4	26.67	11	73.33
2	Learning for Children with Special Needs	3	20	12	80
3	Language Learning	5	33.33	10	66.67
4	Mathematics Learning	6	40	9	60
5	Natural Science Learning	4	26.67	11	73.33
6	Social Science Learning	7	46.67	8	53.33
7	Citizenship Education Learning	3	20	12	80
	Average	**4.57**	**30.48**	**10.43**	**69.52**

Based on Table 10, the *pretest results of* 15 participants learning the Indonesian language from students in Classes V and 6 obtained an average result of 69.52% of participants learning not yet completed (did not pass) and only 30.48% of participants completed. Thus, before learning, the average Respondent does not pass.

Table 11. Learning *Posttest* Results

No	Question	*Posttest*			
		Completed		Not finished yet	
		f	%	f	%
1	Learning in Elementary School Educational Institutions	13	86.67	2	13.33
2	Learning for Children with Needs Special	14	93.33	1	6.67
3	Language Learning	14	93.33	1	6.67
4	Learning Mathematics	15	100	0	0
5	Learning Knowledge Knowledge Natural	12	80	3	20
6	Learning Knowledge Knowledge Social	14	93.33	1	6.67
7	Citizenship Education Learning	13	86.67	2	13.33
	Average	**13.57**	**90.48**	**1.43**	**9.52**

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Table II shows the results *post-test of* 15 participants learning Indonesian from grade 5 and grade 6 with an average ≈result of 13.57 14 learner participants, or 90.48% of respondents, completed (passed), and only 1.43 ≈1 participant, or 9.52% of respondents were not complete (did not pass). Based on the results analysis test results Study said then the Module is composed effectively so that worth using in learning the module teaching at the level school base.

c. Evaluation Stage

The evaluation stage is done by analyzing conformity between analysis needs with the design module, design module with development, and development with Implementation. The improvement module at stage evaluation is based on the tutor's suggestions and comments as participants and from the instructor learner, both written in questionnaire responses or delivered at the end of the learning process. In addition, improvements in the Module are also based on results observation and evaluation after learning, which is done through test pretest and test end (*posttest)* of use module teaching at *homeschooling* level school base.

Evaluation of the learning process done by the researcher. See the conformity implementation module with a design made. Evaluation results were done by the researcher using a *posttest* to see the level of achievement. Respondents from the *pretest* and after given learning use module This.

Based on the evaluation of the results of the test given before and after learning, the Module can be concluded to be influential overall because There is an improvement mark Respondent from before and after done learning module. Here is this delivered table evaluation results in learning.

Table 12. Evaluation of Learning Test Results

Completeness	Pretest		Posttest		Criteria
	f	%	f	%	
Completed learner participants	5	30.48	14	90.48	**Effective**
Unfinished learners	10	69.52	1	9.52	

Evaluation results on the process, researchers do together head Elementary School 98 Palembang Mrs. Suzana Desty, S.Pd., M.Si. based on results from a process evaluation of training can conclude that all the observed aspects are " existing " and the average is "very good. " The results of the evaluation in the research process are presented in the following table.

Based on the results study development that has been described, development modules are done with steps development using the Dick and Carey model, which has stages of Study in a systematic way that is analyzed, designed, developed, implemented, and evaluated. Then, produce a module guide teaching in *homeschooling* level schools on the stated basis to fulfill valid, practical, and effective quality.

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The results of the assessment carried out by expert lecturers, the modules developed declared valid because they fulfil minimum good classification. The average score given for the assessment of the material module is 4.67, with a very good classification. The average score given for the evaluation form module is 4.61, with very good classification. The average score given for the evaluation motivation module is 4.76, with a very good classification. The average score given for the evaluation language and readability module is 4.42, with very good classification.

The questionnaire results in the response given to participant learners and instructors learners; the Module stated practical Because it fulfils minimum good classification. The average score given through the results questionnaire response instructor learner is 4.56, so the Module is classified as very good. While the average score given through the results questionnaire response participant learner is 4.49 th, the Module is in very good classification.

These results are also supported through results questionnaire responses from the participant tutors learner, who finds that 6 participants stated that they strongly agree, and 9 participants from other states agree that module guide teaching at *homeschooling* level school base makes it easier for tutors to carry out the learning process. Furthermore, 9 participants stated that they strongly agreed, and 6 participants other state agreed that module guide teaching at *the homeschooling* level school base can awaken tutor motivation for giving direction instruction, and knowledge use module the.

Next, 8 participants stated that they strongly agreed, and 7 participants from other states agreed that module-guided teaching at the school base could make the teaching stages carried out by researchers clearer. Next, 10 participants stated that they strongly agreed, and 5 participants from other states agreed that module-guided teaching at the school base could make the stages of teaching that are done by researchers more regular.

Next, 9 participants stated that they strongly agreed, and 6 participants from other states agreed that module guide teaching at *the homeschooling* level school base can reduce constraints or obstacles participants encounter In carrying out the teaching process at State Elementary School 98 Palembang. Next, 6 participants stated strongly agree, 7 participants stated agree, and 2 participants stated Enough agree that the material in the module guide teach*es at* level school base offered in accordance with problem or tutor needs.

Next, 8 participants stated that they strongly agreed, and 7 participants other state agreed that techniques offered in the module guide teaching at the level of school base. This makes Implementation in the learning process easier For participants. Next, 8 participants stated strongly agree, 6 participants stated agree, and 1 participant stated Enough agree that the Module guides teaching at the level school base interesting fol, lowed by participants educate. Next, 5 participants stated that they strongly agreed, and 10 participants from other states agreed that with the existing module guide teaching at the level, the school base obtained information about the procedure to carry out an appropriate learning process with systematics teach well and correctly.

https://doi.org/10.51276/edu.v5i3.1033

Test results result in learning that is done at the end of research; developed modules are categorized as effective. This is shown by the percentage completeness of Study participant learners of 90.48%, so the completeness of Study participant learners is in the very good classification. Evidence of effectiveness is also known through direct observation during the learning process. The average Respondent previously Not yet know in a way good institution education *homeschooling* specifically in know character participant educate and when carrying out the learning process after done learning Respondent capable improve ICT in particular in know character participant educate and when carrying out the learning process.

Research result This shows that the developed Module can used in an way appropriate and also varies, such as increasing motivation and spirit in learning, developing the ability To interact in a way direct with the environment and resources, Studying others that allows tutors or participants learner Study in a way independent in accordance with his abilities and interests, as well as allows tutors or participant learner can measure or evaluate Alone learning (Ministry of Education and Culture, 2017). Thus, there is a Module developed by researchers as well as intensity tutor learning by the head schools and related parties, which can help new tutors or long-known institutions *homeschooling* specifically in understanding character participants' education and when to carry out the learning process.

Discussion

Research and development This aims to create a module *In House Training* (IHT) is used as a learning medium use increase competence in technology information and communication (ICT) for teachers at SD Negeri 98 Palembang. This Module can help the teachers control the use of technology in teaching them. The results of interviews with 17 class teachers and one principal school at SDN 98 Palembang found that the ICT competency of teachers is still classified as low. Many of them still use methods of teaching and are not yet capable of utilizing multimedia and learning media optimally.

Most of the teachers in the school only depend on textbooks provided by the government, and they feel reluctant to use multimedia. They consider learning technology new Enough difficult and requires time that is not a little bit. Although education such as LCD projectors, computers, and laptops are already available at school, devices are not yet utilized in a way effective. This is due to a lack of teacher skills in operation devices as well as a lack of training and modules For Independent Study.

Irwantoro & Suryana (2016) notes that one of the reasons for the low use of multimedia is the lack of adequate training and modules. In line with this, Nawawi (1983) recommends that training is an effective strategy For increasing Teacher knowledge and skills. IHT training in schools is viewed as an effective solution for overcoming problems. Training This is considered more efficient and economical time as well as cost compared to training conducted outside school. In addition, training at school allows teachers to direct apply what they learn in the environment Work they.

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Developed modules in IHT training will facilitate learning independently for teachers at SDN 98 Palembang. According to Daryanto (2013), Module This is designed to fit the needs and abilities of teachers so that they can increase their ICT competencies in a way independent. Observations show that teachers still rely heavily on textbooks as a learning medium main and feel that multimedia is too complicated to use. Therefore, IHT training will help them know and use application programs such as Microsoft PowerPoint via Canva to make material more learning interesting and interactive.

Questionnaires were distributed to the teachers to show the ability they use learning methods and media is Still low, although means like computers and LCD projectors are Already available. Documentation from training previously also showed that without Module Special, using applications after training becomes difficult for teachers. Training modules specially designed to facilitate learning independently and improve teacher ICT competency. This Module is expected can give a clear and easy guide understood teachers so they can control the use of technology in teaching them.

Analysis problem using the Fish Bone diagram shows that lack of teacher ICT competencies and lack of training and modules become reason main No optimal utilization multimedia facilities in schools. With the existence of IHT training equipped with Module Special, the expected ICT skills of teachers at SDN 98 Palembang will increase in a significant way. Research This uses the R&D method with a procedural model that follows stages from Borg and Gall Stages covering research and collection information, planning, design product initial, validation design, revision product, trial limited, and trial field. All stages This is done to develop relevant IHT modules with teacher needs at SDN 98 Palembang.

In general, overall, research This expected to give benefits in various sectors, good in a way direct and also No directly. In the theoretical results, this is expected can increase teacher competency, which can achieved through House Training activities. In addition, research also provides benefits in the form of modules that can develop ability participant training. In terms of practical research, this is beneficial for teachers with increased competence in Technology Information and Communication (ICT) and encourages teachers to share experience and knowledge with colleagues. Work through training in the environment of the school. For the Head School, research can function as a medium for coaching and mentoring to develop source Power humans in the environment school, particularly in the improvement of ICT competency. For Supervisors of Development, research This can used as a medium for coaching and mentoring for the teachers he mentors in creating interesting learning media for students in class.

D. Conclusion

Based on the research results, the teaching guide module in elementary school homeschooling developed with the Dick and Carey model was declared valid, practical, and effective, meeting the classification of very good in terms of material, form, motivation, language, and readability. This Module facilitates the learning process, increases tutor

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motivation, and helps tutors understand the learning stages more clearly and regularly, with the percentage of participant learning completion reaching 90.48%.

Results This Study shows that this Module is effective in improving learning outcomes and can be used as a tool to support learning in homeschooling, raise students' learning motivation, and make it easier for tutors to design systematic learning and understand students' characters. This Module also allows students to learn independently according to their interests and abilities, making the learning process more flexible and interactive.

For further research, it is expected that this Module can be explored further in various educational contexts, including homeschooling at higher education levels or for students with special needs, and examine its influence on critical and collaborative thinking skills. The development of modules with an emphasis on the use of technology in homeschooling learning also needs to be studied further.

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