

# Development of Microlearning Model at High Class SDN 106813 Amplas

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**Abstract.** This research is motivated by the needs of students during the current Covid-19 pandemic. Conditions that force students and teachers to be far apart in carrying out learning. Offline and online learning are very different and their needs are also different. The needs of students are focused on interesting learning. One of the things that teachers can do is develop teaching materials in a more recent form, such as using the microlearning model. The aims of this research are (1) to describe the process of developing a microlearning model in high grade SDN 106813 Amplas; (2) to describe the feasibility of the microlearning model in high grade SDN 106813 Sandpaper; (3) to describe the effectiveness of developing a microlearning model in high grade SDN 106813 Amplas. This research is Research and Development (R&D). There are 7 inspection methods, there are 7 research procedures, namely 1. Needs analysis process, 2. Resource identification process, 3. Product specifications identification process, 4. Product development process, 5. Validation process, 6. Product trial process, and 7. product. The outputs of this research are scientific publication articles, intellectual property rights, copyrights, and teaching materials. In the design phase, expert validation was carried out.

**Keywords:** Model, Microlearning, Teaching Materials.

## 1. Introduction

Effective learning cannot be separated from interesting teaching strategies. Interesting teaching cannot be separated from the creative and innovative role of teachers in adapting teaching. Teachers do things that are useful to foster student learning enthusiasm and achieve learning goals. Lecturer teaching influences how students understand the material presented. An engaging lesson is reflected not only in the teacher's teaching tactics, but also in the complementary tools in the teacher's lesson, such as teaching materials and teaching environment. Both of these greatly affect the continuity of learning for teachers and students. Learning resources are everything including messages, people, teaching materials, learning tools, learning technology, and learning environments that are designed in a planned manner to realize quality learning (Wedi in Surahman et al, 2020: 2). Learning material is an important part of the continuity of a good learning process. At present the teaching materials

for SDN 106813 which are still printed and monotonous require the latest innovations in the use of teaching materials. The innovation needed can be in the form of interesting and modern teaching materials.

The current COVID-19 pandemic situation has brought all activities to a halt. It cannot be separated from teaching and learning activities. As a result of this pandemic, all activities must be carried out from home. Learning is turning online. The teacher's teaching system has changed drastically. Based on observations, SDN 106813 Amplas does not yet have digital teaching materials. Therefore, the researcher proposes a discovery so that the teaching and learning process is interesting and not monotonous. The thing that can be done is the development of teaching materials, not that the existing teaching materials are not interesting, but adjustments to the situation and circumstances that are the main basis for this development. The development goal is to form a new innovation that can foster positive energy in learning in elementary schools.

The appropriate development in this situation is teaching materials with a microlearning model. Microlearning is a product of the paradigm shift in the epistemology of science and human knowledge (Stephansen & Coudry in Surahman et al, 2020: 4). Microlearning wants the process of constructing knowledge and experience in students to be short, dense, clear, simple, and easy. The material in e-learning is presented in the form of parts. As the results of research (Giurgiu in Surahman et al., 2020: 4) show that learning content in the form of material slices is proven to help students remember the material better. Microlearning was born from the emergence of the term microcontent. Microcontent is little digital information (Job & Ogalo in Surahman et al, 2020:4). Microlearning supports the knowledge documentation process. Microlearning has massively influenced the learning patterns of the digital era.

The role of parents is also very important in assisting the child's learning process at home so that learning activities can be carried out optimally. This microlearning model makes it easy for parents to help their child's learning process because in microlearning there are learning resources, such as digital modules, interactive powerpoints, infographics, graphic animations, podcasts, and explainer videos.

On the background of the problem described above, the following research problems can be identified: SDN 106813 High grade sandpaper requires the latest innovation teaching materials, the teaching materials used have not adapted to the online learning situation. There are no teaching materials used that use modules digital.

## **2 Methods**

The research design is a Research and Development (RnD) method. According to Sugiyono Research and Development (RnD). Research and development (RnD) are research methods used to test effectiveness and create products. RnD is a research and development method.

The research referenced here tested microlearning models. How to develop microlearning at SDN 106813 Amplas after testing. This research method uses the ADDIE development model which stands for Analysis, Design, Development, Implementation and Evaluation.

. The ADDIE Development Model according to Cahyadi (2019: 36) in his journal article entitled Development of ADDIE Model-Based Teaching Materials has several stage, namely analisis, design, development, implemention, and evaluation.

### 3. Result and Discussion

This development uses the RnD (Research and Development) research method with the stage of the ADDIE model in Cahyadi (2019: 36). The stages in the ADDIE model have several stages, namely: analysis, design, development, implementation, and evaluation. a. Analysis Stage, at this stage the main activity is analyzing needs as evidence of the need for developing a microlearning model in the learning process. b. Design stage, at this stage includes several interrelated activities. Making teaching materials in contextual learning, taking into account core competencies and basic competencies to determine teaching materials based on facts, concepts, principles, procedures, learning time allocation, indicators and student assessment tools, c. Development Stage, at this stage contains product realization activities that have been compiled and designed previously. Realization activities include building, creating and modifying activities. In the implementation of this development stage d, Implementation Phase, at this stage it contains activities for implementing products that have been developed in real situations by going through expert tests and field tests to determine the feasibility and effectiveness of the microlearning model being developed. Implementation of this product is conditioned on the learning conditions and situations in the classroom.

#### 2.1 Expert Test Data

Expert test validation was carried out by 2 content/learning materials experts and 2 design experts. The product is tested for feasibility to the validator so that it gets improvements according to the expectations of the validator. The validation of expert tests carried out at this stage include the following:

#### 2.2 Content Expert Validation

**Material Validation of microlearning devices.** The material validators in this study were Mahrani Fitri Siregar, M.Pd., and Syahrizal Akbar, M.Pd. The assessment was carried out to obtain information about the quality of the micro learning tools developed to improve the quality of learning at SDN 106813 Amplas.

Based on the results of the evaluation of the feasibility aspect of the content, the use of microlearning devices in the high class is considered "very good" with an average total share of 85.4%.

**Table 1** Expert assessment of microlearning device materials content feasibility

Sub Components	Indicatoor	Average (%)	Criteria
A. Suibility of the Material with Achievement Learning	1. completeness of materials	86	Very Good
	2. The breadth of material	84	Very good
	3. material depth	85	Very Good
B. Matetial Accuary	4. Concept accuracy and definition	85	Very good
	5. Data accuracy	86	Very good
	6. Sample accuracy	85	Very good
	7. Image accuracy	85	Very good
	8. Accuracy of terms	85,5	Very Good
	9. Accuracy of symbols and icons	84	Very good
C. Up-to-date materials	10. The suibility of the materials with	86	Very Good

	11. Language development use microlearning	88	Very Good
	12. Examples and cases in life Daily	84	Very Good
	13. Images and illustrations in everyday life	85	Very Good
	14. using the example case that exist in everyday life	83	Very Good
D. Encourage uriosity	15. Encourage curiosity	85	Very Good
	16. Creating the ability to ask questions	86	Very Good

The results of the content feasibility validation from the validator mentioned above show that the content feasibility of the microlearning tools developed has very good criteria. This is indicated by the feasibility of presenting material experts "very well" with an average total presentation of 85.6%.

**Table 2** Microlearning Toolkit Materials Expert Assessment for Presentation

Sub Components	Indicator	Average (%)	Criteria
A. Technique Presentation	1. Consistent systematic presentation	84	Very good
	2. Sequence of concepts	85	Very good
B. Presentation Support	3. Example questions for each Learning Activities	85	Very good
	4. Introduction	84,5	Very good
C. Presentation Learning	5. Student Engagement	86	Very good
D. Coherence and coherence of the plot think	6. Linkages between learning activities/sub learning activities	85	Very good
	7. Wholeness of meaning	86	Very good

**Table 3** Microlearning Toolkit Materials Expert Assessment of Language Aspects

Sub components	Indicator	Average (%)	Criteria
A. Straightforward	1. The accuracy of sentence structure	84,5	Very good
	2. Sentence effectiveness	85	Very good
	3. Term Standards	86	Very good
B. Communicative	4. Understanding of the message or Information	84,5	Very good
C. Dialogue and interactive	5. Ability to motivate students	86	Very good
	6. Ability to encourage critical thinking	85	Very good

D. Conformity to the level of development student	7. compatibility with development student intellectual	86	Very good
	8. conformity to level student emotional development	85	Very good
E. Suitability	9. Grammatical accuracy	84	Very good
F. Usage term	10. Consistency in the use of terms	85	Very good

The assessment of language aspects according to material experts is "very good" with a total average of 85.4%. Information on the results of expert validation in terms of language is presented in the table.

Material validation was carried out twice with the first stage still needing improvement. Some suggestions from the material validator that should be improved are that the content of the material should be wider, and provide more concrete examples that can be found in everyday life as well as improvements in writing grammar. After making repairs the material is declared feasible. The assessment of language aspects according to the aspects experts is 'very good' with an overall average of 85.4%.

**Design Validation.** The design validators in this study were Afin Arfian, S.T., and Ferdinano Tahrorigo Wan, S.Pd., M.S. The assessment evaluation of microlearning device aspects is carried out to improve the quality of the microlearning display that will be developed. From the results of microlearning validation conducted by learning design experts, it can be concluded that the microlearning model developed is "very good" with an overall average percentage of 86.3%. Information on the validation results of learning design experts is presented in Table 4 below.

**Table 4** Microlearning Device Design Expert Assessment Score

Indicator	Avarege (%)	Criteria
1. Effective and efficient media	85	Very good
2. Realible (part or all the learning media can be reused)	84	Very good
3. Maintable (can be maintained/mananged casily)	85, 5	Very good
4. Usability (aesy to use and simple tu use operation)	86	Very good
5. Accuracy in selecting the type of application/software/tool/for Delopment	85	Very good
6. Compatibility	84	Very good
7. Easy program packing	85	Very good
8. completenss of learning media	86	Very good
9. Reusable	85, 5	Very good

The validation of the design of teaching materials was carried out twice, the first validation still needs improvement. The suggestions for improvement are given by the validator of learning design experts are that the layout of the text on the teaching materials must be more attractive and look neat and it is necessary to add animations that support the delivery of the material to make it easier to understand . After the improvements were made, the design expert assessed that the CapCut-based teaching materials in their use in high-class learning at SD N 106813 Amplas were developed to have a feasibility with an average score percentage of 85.5%.

#### **4. Conclusion**

This research produces microlearning-based teaching materials which in its features there are various types of teaching materials such as digital modules, interactive powerpoints, infographics, graphic animations, podcasts, and explainer videos. the development of microlearning devices obtained a very good category, both in terms of content, presentation and language as well as design aspects. So that this microlearning can be used at SD 106813 Amplas in learning activities at the school.

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