

## The Development Learning Module of Gorontalo Local Content for Junior High School

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### Abstract

The purpose of this study is to develop Gorontalo local content learning module that is used in local content subjects such as language, craft, cultural arts, physics education and health as well as technology. The module was developed using a 4-D model which included define, design, develop and disseminate phases. The data were collected from the observation and questionnaire, which were further analyzed by the validity results of experts towards the developed module as well as by teachers' and students' responses. Based on the results of the study, the questionnaire response to the use of modules receives 88% positive response from students and 92% from teachers. Therefore, the student's perception of this module is very good. Further, this module is able to be employed as a reference for teachers who teach wholesome lessons in junior high school. The contribution of this research in the development of science and technology in the field of education is to create modules for local content subjects that are important in junior high schools so that it can address regional needs in meeting Gorontalo local content learning.

**Keywords:** development, local content, cultural arts

### Introduction

Local content is an education program, whose content and medium of delivery are related to the natural environment, social environment, cultural environment, and local needs. Students in that particular region are obliged to learn this subject. Therefore, environmental characteristics and the local needs should be taken into consideration during the curriculum design. The environment here is the surrounding natural environment, both living things and non-living things where the living things live and create an ecosystem. Non-living things are beach, low land including watershed, high land, and mountains. Meanwhile, social environment is an environment where interpersonal interaction with social groups take place and interaction among social groups.

The learning of Gorontalo local content in Junior High Schools is currently integrated with language, sports and health, and arts subjects. Based on the agreement supported by the local regulation (hereinafter will be referred as PERDA) No. 15 of 2015, in addition to local language, the local content being taught in schools in Gorontalo province is karawo for handicraft, langga for sports and health subject, and tidi for arts and culture lesson. The local content curriculum of Gorontalo has been implemented in schools. However, there are many loopholes in this curriculum that need to be fixed such as, most of the teachers have not yet utilized the local potentials around the school as a learning source or a representative medium of school learning, unavailability of sufficient learning media to carry out learning as expected. Lack of learning resources, such as learning module on Gorontalo local wisdom-based local content in language subject, sports and education subject, handicraft and arts and culture subject. Therefore, this study is aimed at developing a learning

module for Gorontalo local content subject which utilizes the local wisdom, both the content of the materials or the pedagogy, so that the problem statement of this study is the process of developing a learning module of Gorontalo local content for Junior High Schools. The local uniqueness can be utilized as the local potential of the region. Local knowledge that has been embedded with the belief system, norms, and culture, and expressed within traditions and myths believed and practiced for a long time is what has been referred as local wisdom (Noor, 2007). According to Marfai (2012) local wisdom is able to preserve the environment through a sacred practice and in the form of norms that should be obeyed by the community for generations. Local wisdom is a cultural identity that needs to be introduced and passed down to the younger generation through education as they will inherit those identities and preserve it themselves. Gorontalo is one of the custom regions in Indonesia. Therefore, Gorontalo has local wisdom just like other civilizations.

Based on the content and the coverage of the local content subject, the government of Gorontalo province has determined the content and the materials of Gorontalo local content subject are topics on karawo, langga game, and tidi dance (Baruadi, 2015). Karawo is a traditional handmade embroidery of Gorontalo. The word "Karawo" in Gorontalo language, means handcrafted embroidery, which uses the various color of threads to form ornaments in a fabric. It needs precision and accuracy (Baruadi, 2014). Meanwhile, langga self-defense is one of the martial arts within Gorontalo community which has been inherited for generations and has been having its golden era post Gorontalo independence in 1942 (Baruadi, 2012). In its development langga martial arts is the manifestation of the Gorontalo heroes strength to fight against the Dutch and Japanese colonization. In addition, the tidi dance is a classical dance from Gorontalo, which was developed during the 17 and 18<sup>th</sup> century among aristocrats of Gorontalo. It is a highly artistic dance and has been going on for a long time and have many traditional values.

The objective of this study is to develop a module of local wisdom-based content for local content subjects in Gorontalo in language, handicraft, arts and culture, and sports and health, and technology subjects. This study is important to be carried out to improve the local content subject in Gorontalo. The local content learning should be used as means to draw students' interest to be able to learn their own culture and local wisdom. Therefore, local content learning in schools should be made interesting and meaningful. Cultural, customary, and traditions aspects in a region can be applied in local wisdom-based learning that includes learning of traditions, technology, culture, and values of that local community which has been passed down for generations. Teacher, in teaching local content subject should use various resources and tools, including utilization of environment based on the local wisdom with various innovation that is currently available in this digital era. This fits the theme of the Indonesia Educational Conference and to preserve the local culture as part of the nation's culture, especially in its capacity to support the national culture.

Development research relevant to the previous study was conducted by Anwar (2017), summing up that Sumenap Regency local content-based learning module with the sub-theme of neighborhood is valid, effective, and feasible to use. Moreover, Otaviana et al., (2017) conducted a study on the development of a physics module integrated with the local wisdom of making *Lala* oil to train *Sanggam* character. It concludes that the content and are quite valid; the module is practical and effective; *Sanggam* character is well-shaped. Therefore, the physics module integrated with the local wisdom of making *Lala* oil is proper to employ.

## Method

This study uses 4D model. This model is proposed by S. Thiagarajan, Dorothy S. Semmel, and Melvyn I. Semmel (1974). The stages of this research consisted of four stages namely: 1) *define*; 2) *design*, 3) *develop*; and 4) *disseminate*.

The stages of module development were elaborated in detail below:

### 1. Defining

The defining stage was carried out by observing and interviewing the local content teachers in SMPN 1 Tapa, Bone Bolango Regency. This stage consisted of several analyses, including:

a. Curriculum Analysis

This analysis was done to assign students' developed competencies. Based on the results of the observation and interview, SMPN 1 Tapa has used the 2013 Curriculum.

b. Students' Characters Analysis

This phase needs to be the basis for the development of Gorontalo local wisdom-based local content module. The purpose of analyzing students' characters was to find out their experiences in learning Local Content subject, encompassing socio-cultural background and local content knowledge of Gorontalo.

c. Material and Gorontalo Local Wisdom Analyses

This study identified the material to be taught for the development of Gorontalo local wisdom-based local content module. The teachers of Local Content subject then analyzed it, thus, the module can be effectively used as the learning medium in the classroom. The local wisdom was analyzed by literature and direct studies.

d. Learning Objectives Formulation Analysis

Prior to arranging the module, learning objectives and competencies were formulated by looking at the curriculum and material analyses.

2. Designing

The designing stage was undertaken to create a model as in compliance with the curriculum framework and material analysis with Gorontalo local content. In designing the module, this research paid attention to the school module and the developed module.

3. Developing

Here was the process of developing the module:

- a. The module generated in the designing stage was validated by the validity experts.
- b. The revised model was further validated by the module validators, including material experts (lecturers), Local Content teachers, Gorontalo language and culture, and module experts in order to discover the relation between the material and Gorontalo local content.
- c. After the module was revised, the material, Gorontalo language and culture, and the medium in the module were assessed.
- d. The module trials were conducted, consisting of limited and general trials in grade VII.
- e. The produced module was re-revised to produce a module needed by the students.

The technique employed to get information about the module validity was the medium validity technique; this technique intended to define the feasibility of the learning module. The medium validity used competent validators by focusing on some aspects, such as content/material, language use, module presentation, and design/graphics. The validity result of the module can be utilized as the input to revise the module for it to be properly used in the learning process.

The observation and questionnaire served as the techniques to get information about the module practicality in which the observation aimed to examine students' activities and the learning process at the time the local content-based module was applied. The questionnaire, in contrast, was employed to find out teachers' and students' interests and responses to the use of the module. This questionnaire consisted of positive and negative statements provided after the learning process.

The data analysis was intended to determine the quality of the local content-based module, i.e., valid, practical, and effective. The data analysis technique of the learning module validity was performed by analyzing the results of module validity viewed from four aspects, namely language, content/material, consistency of module presentation, and module graphics. Thus, the validators' assessment of the learning module was obtained. Moreover, teachers' and students' responses in the questionnaire were analyzed using the *Likert* scale to gain their opinion about the development of the local content-based module.

The scheme of this local wisdom-based development of local content subject, which has been modified to suit the purpose of this study is presented in the following figure:

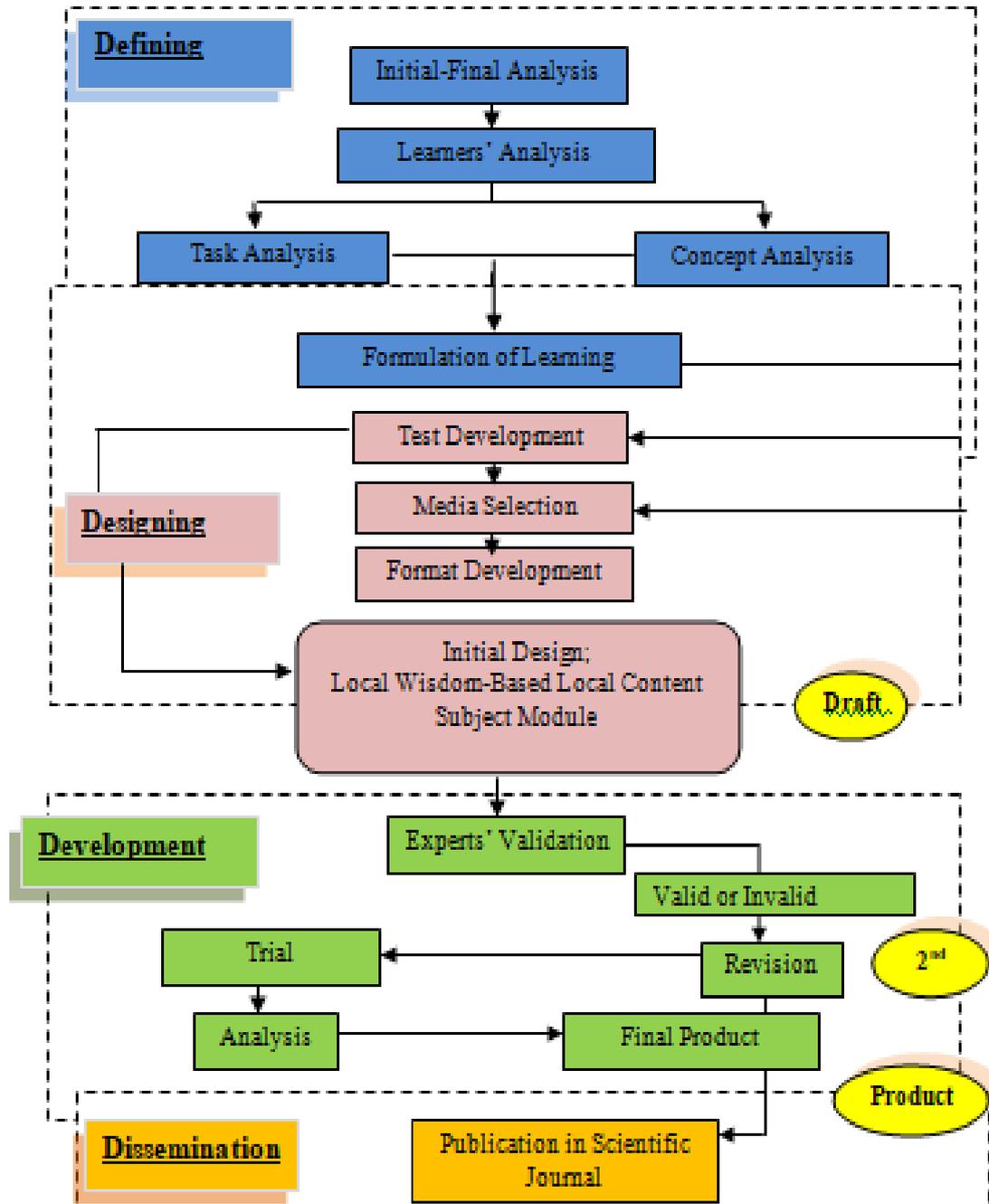


Figure 1. Design of Module Development with 4-D Model

## Results and Discussion

This study is a study on the development of a local content module for SMP/MTs based on the local wisdom; its implementation is integrated with language subject, sports and health subject, handicrafts and arts and culture. This study is carried out in the second semester of 2017/2018 academic year in SMP Negeri I Tapa of Bone Bolango regency.

This development study is aimed at producing local content learning module, which is valid, effective and practical. The validity criteria are based on the assessment result of module validity,

such as experts' validation. Meanwhile, the practicality of the module is based on teachers and students' responses toward the utilization of the module during the teaching and learning process. The development procedure for this model adopts the 4D model, which consists of four main stages. Rohman and Amri (2013) describe the 4D development model as: (1) define, (2) design, (3) develop, and (4) disseminate. The description of each stage is described below.

Defining stage:

In this stage, some analysis is carried out, such as initial-final analysis, learners' analysis, material analysis, task analysis and formulation of learning objectives. These activities are carried out in the defining stage and described as follow:

1. Initial-Final Analysis

The initial-final analysis aims at gaining information on basic problems that teachers and learners faced during the learning process of the local content subject in the class. This becomes the basis for the development of the product, the module. During the initial analysis, the activities are a literature review, field study, and interview both with teachers and learners at SMPN 1 Tapa, Bone Bolango. In this literature review, it is obtained that the school has been using the 2013 curriculum; both for teacher's book and students' book, however, the books available are insufficient for the current number of students. Meanwhile, during the field study, it is revealed that the problem during the teaching and learning process is the resources used by the teacher is a textbook from publisher that cannot be well understood by the teacher. It is also revealed that many teachers teach the local content subject without any correlation to the local wisdom of Gorontalo.

2. Learners' Analysis

In this analysis, the characteristics of the grade 8 students of SMPN 1 Tapa, Bone Bolango as the user's candidate of the will be developed module are identified. Their characteristics consist of sex, background, academic ability (knowledge), and level of learners' cognitive development. It is revealed that during learning process, students rarely uses other source of learning than the textbook. In addition, during interview with local content teacher, it is revealed that students are of various backgrounds, their parent works as teacher, government employees, farmers, tradesmen, businesspersons, etc. They live in the city and in surrounding areas. The ethnicity background are indigenous Gorontalo and from other ethnics. Their knowledge on Gorontalo local-wisdom is also very low.

Grounded on the problems found during this initial-final analysis, the solution is by developing a local wisdom-based module for local content subject. Thus, students can have knowledge on Gorontalo local wisdom through local content subject of Gorontalo. In addition, as source of learning, this module is also equipped with pictures; hence, learners will find it easy to use the local content module.

Designing Stage:

In this stage, the module draft is developed based on the curriculum needs analysis and materials analysis, which refers to the structure of module development from the Ministry of Education and Culture (Kemendikbud, 2016). In detail, this module framework is described as follow:

1. Outer cover is made to draw readers' attention, especially learners, where there are the title of the module that will be discussed.
2. Inside Cover, is made to find out the identity of the module, module's authors, name of the advisors and authors' institution.
3. Preface, is made to show gratitude to God, Allah SWT and the Prophet, Muhammad PBUH, the gratitude for the contribution of those in the development of this module, and authors' expectation on this developed local wisdom-based local content.
4. The list of content is made to illustrate the framework of the module that consists of topics and sub topics and page numbers to ease learners in using the module.
5. List of module title consists of module code and topics that will be learned in each semester.

6. Introduction consists of; 1) background that describes the correlation of materials with daily life; 2) description of core competencies and basic competencies in 2013 curriculum; 3) concept mapping as description of all materials that will be learned within the module; 4) module guideline on how to use the module.
7. Learning activities consists of several learning activities divided into several sub-topics, where all learning activities include; 1) learning objectives in each sub-topic that should be achieved by learners following the learning in the module; 2) topic introduction that consists of general description on the sub-topic; 3) learners' activities; 4) topic description; 5) sample questions and exercises; 6) formative test that contains questions to test the students' knowledge of the learning process that have been carried out; the test can be found at the end of each sub-topic and consists of essay questions; 7) feedback and follow up that contains learners' grade for them to know the degree on their mastery on the current topic;
8. Summary, consists of topic summary.
9. Summative test, consists of tests on all learning activities in each topic. This summative test consists of multiple choice questions based on the revised Bloom taxonomy.
10. Answer key consists of answer from exercises, formative, and summative tests and scoring.
11. *Glossary* consists of description of terms, difficult words and foreign words within the module.
12. References consists of list and sources used in the development of this learning module.

#### Development Stage:

This stage is aimed at producing valid, practical, and effective learning module that are appropriate for local content learning. During the validity analysis, there are several aspects being assessed namely; (1) validity of the module by experts. The initial draft of the module is handed over to the validator to be assessed. The assessment is carried out by filing several module quality assessment checklists based on the expertise of the expert, then the module is given input based on the experts' assessment, (2) module revision based on the experts' input during validation process, (3) trial in classroom learning. In data analysis, the practicality consists of several aspects namely; local content teachers' responses and learners' responses toward the developed module in learning and observation of learners' activities during the implementation of the module.

#### Module Validation Result:

Module validation involves 4 experts, with the expertise on the quality of the module. This quality consists of several aspects namely content of the module, language quality of the module, quality of module presentation, and quality of the module design/graphic. Below is the assessment result on the quality of the module from four validators/experts for each aspect of the module quality. The four experts validates the module quality on the three main categories of the content aspects namely, materials/topic accuracy, attractiveness, and appropriateness with local content. These three categories consist of 11 indicators namely: material completeness, material's depth, material's coverage, concept accuracy, picture accuracy, diagram, illustration, notation and symbol accuracy, encourage curiosity, encourage willingness to pursue further information, appropriateness of facts and illustration with local wisdom, appropriateness of local wisdom content with the topic/material within the module, sample questions and exercises on the local wisdom of Gorontalo at the end of learning process. Figure 1 shows the average score on the quality of the content from each validator. The first validator gives the average score of 4.64, the second validator gives the score of 4.73, the third validator's average score is 4.55, and the fourth validator's average score is 5. Further, all the average scores from validators are processed into overall validators' score for content aspect of the module and the overall average score is 4.73, which falls within very good category (Sukarjo (2006) and the percentage of the content quality score is 94.6% and within very appropriate category to be used in learning process (Arikunto, 2010). Thus, the developed local wisdom-based local content module has met the validity requirements on its content quality aspect. This is in line with the previous study conducted by Anwar (2017), concluding that a Sumenap Regency local wisdom-based

module with the sub-theme of neighborhood is valid and feasible to use. The average percentage of the content quality score of the module for each indicators is derived from combination of scores from each validator and is presented in Figure 2.

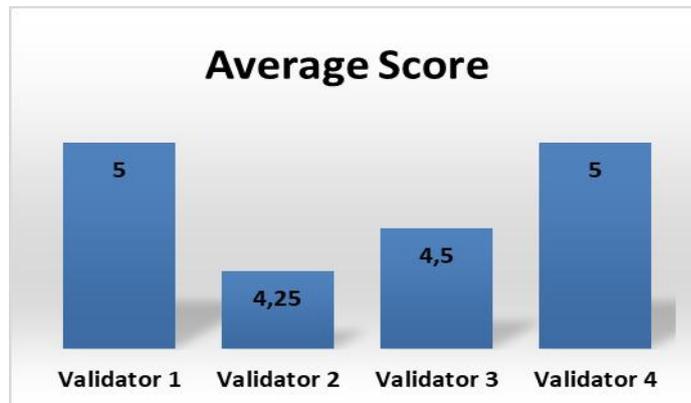


Figure 2. Average Score on the Quality of the Module Content

Four experts validate language utilization quality in the module. There are two main categories in this assessment namely appropriateness with the learners' development and suitability with the Bahasa's rule. These two categories consist of four indicators namely: appropriateness with learners' intellectual developmental appropriateness, spelling, and direction clarity. Figure 2 below shows the average score from language utilization aspect from each validator, where the first and the fourth validators give the average score of 5, whereas the second validator gives the average score of 4.25 and the third validator gives the average score of 4.5. Further, the average score from all validators on the language quality aspect is 4.68 and is within very good category (Sukarjo, 2006) and the percentage reaches 93.6% and is within very appropriate category (Arikunto, 2010). Based on this result, the developed local wisdom-based local content module is valid from the language quality aspect. The average percentage from the language quality aspect is obtained from the combination of score from each validator as presented in Figure 3 below

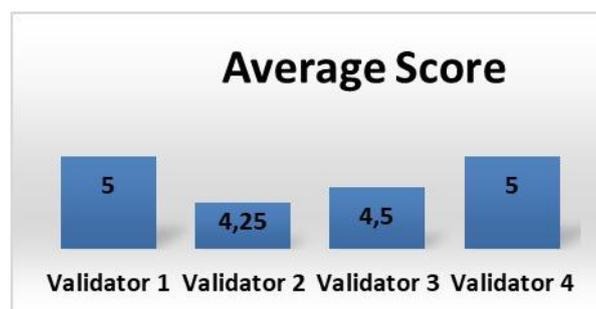


Figure 3. Average Score of the Language Quality Aspect

Four validators validate the presentation quality aspect of the module which contains of three main categories namely: terms' symbol or icon utilization, presentation technique, learning support and presentation. These three categories consist of 11 indicators namely: terms' consistency, consistency of notation and symbol, consistency of pattern and layout, concept sequence, meaning's unity in chapter/sub-chapter/paragraph, clarity of activity direction, motivating statements to learn, competency test questions at the end of each chapter, introduction, glossary, and references. Figure 3 shows the average score from the presentation quality aspect from each validator, where the first validator gives the average score of 4.73, the second validator gives the average score of 4,64, the third validator gives the average score of 5, and the fourth validator gives the average score of 4.73. further, the overall average score for this presentation quality aspect is 4.78, which is within very good

category (Sukarjo, 2006) and the percentage of 95.6% is within very appropriate category to be implemented in teaching and learning process (Arikunto, 2010). Based on this result, the developed module of local wisdom-based local content has met the presentation quality aspect. The average score on the presentation quality of the developed module is shown in Figure 4 below.

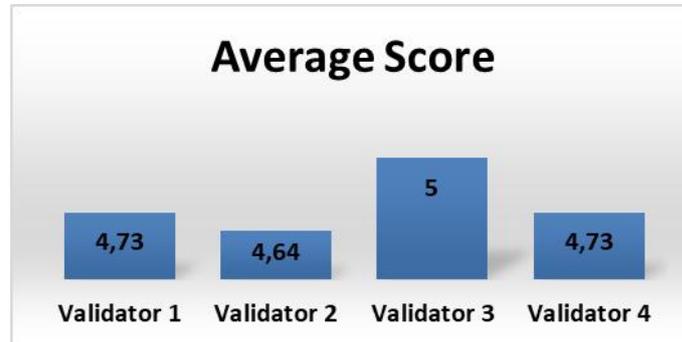


Figure 4. Average Score in The Presentation Quality Aspect

Four validators validate the design/graphic quality aspect. This aspect consists of three main categories namely: module size design, module cover design, and module content design. These three categories consists of 11 indicators namely: suitability of the module size with the ISO standard, the size of the module title is more dominant, the module title color contrasts with the background color, shape, color, size, and object proportion are appropriate, layout of the module elements are consistent, printing surface is proportional, no utilization of too varied types of letter, utilization of letter varieties (bold, italic, all capital, small), space between lines is normal, able to reveal the meaning of the object, and overall illustration is appropriate. Figure 4 shows the average score of the design/graphic quality aspect. The first validator gives the average score of 4.73, the second validator gives the average score of 4.64, the third validator gives the average score of 5, and the last validator gives the average score of 4.55. Further, the overall average score for this design/graphic quality aspect is 4.73, which is within very good category (Sukarjo, 2006) and the percentage of 94.6%, which is within very appropriate category to be used in teaching and learning process (Arikunto, 2010). Therefore, this developed local wisdom-based local content module is valid from its design/graphic quality aspect. The average score of design/graphic quality aspect of the developed module is presented in Figure 5 below.

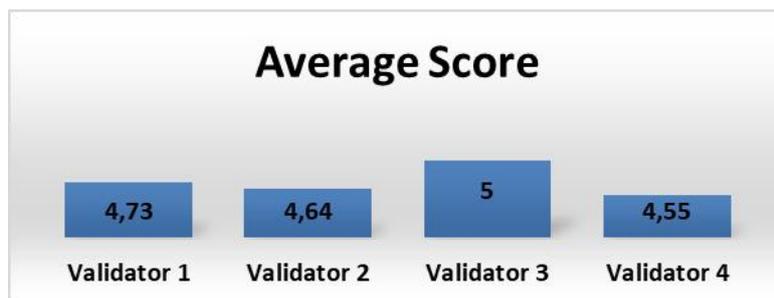


Figure 5. Average Score based on the Design/Aspect Quality Aspect

As seen in Table 1 below, the developed module is very appropriate to be used in local content teaching and learning process based on the four validated aspects. The highest validation result is on the presentation quality with the average score of 4.78 and the percentage is 95.6%, followed by the language quality aspect score by 4.68 and the percentage of 93.6%, the content/material aspect with the score of 4.73 and the percentage of 94.6%, and graphic/design quality aspect by the average score of 4.73 and the percentage of 94.6%.

Table 1. Data Recap for Module Validation

No.	Aspect	Score	Percentage	Category
1.	Content/Material Quality	4.73	94.6	Very Good/Very Appropriate
2.	Language Quality	4.68	93.6	
3.	Presentation Quality	4.78	95.6	
4.	Design/Graphic Quality	4.73	94.6	

Comparison assessment percentage on the validity aspects quantitatively from 4 validators is presented in Figure 6 below.

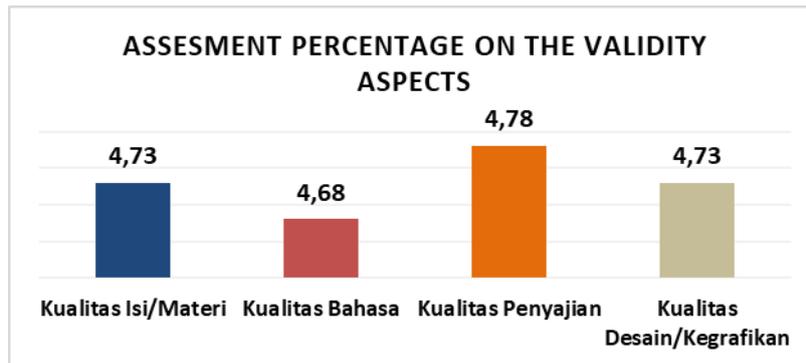


Figure 6. Assessment Percentage on the validity aspects by validators

Figure 6 shows that the validity of the module is within very good category (Sukarjo, 2006) and assessment result from four validators shows that content quality aspect score is 4.73, language quality score is 4.68, presentation quality aspect score is 4.78, and the design/graphic quality aspect score is 4.73.

b. The Result of Questionnaire Distributed to Learners and Teachers

The distributed questionnaire is aimed at gathering information from learners on the utilization of the developed module on local wisdom-based local content subject and the result is presented in Table 2.

Table 2. Learners' Perception on Module Utilization

No.	Indicator	Average Score	Agree (%)
1.	Happy Feeling	4.67	93,5
2.	Learners' Interest	4.56	91.2
3.	Learners' Attention	4.34	86.8
4.	Learners' Involvement	4.25	85

Table 1 above shows that the responses of the learners toward the utilization of the developed model are within very good category in each aspect with the percentage for happy feeling reaches 93.5%, learners' interest aspect is 91.2%, learners' attention by 86.8%, and learners' involvement aspect by 85%. Therefore, learners' interest response on the developed module of local wisdom-based local content is very Positive as the percentage is  $\geq 50\%$ . The learners' interest responses during the trial is presented in Figure 7 below.

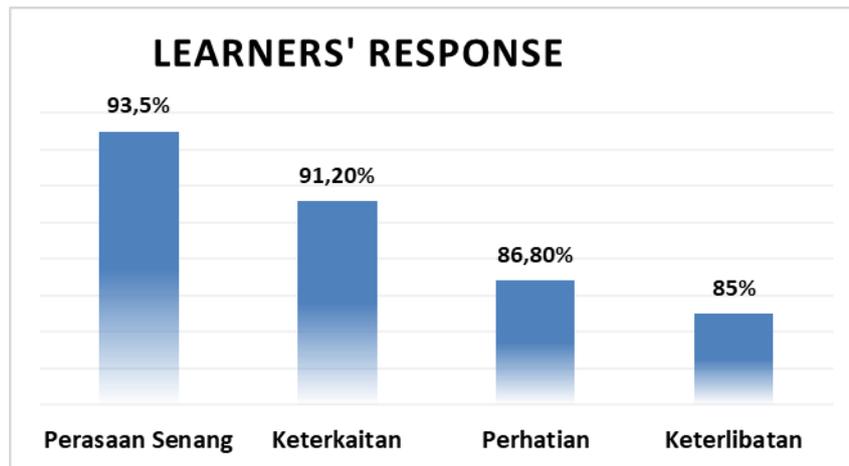


Figure 7. Diagram on the Percentage of Learners' Response

The distributed questionnaire is also aimed at gathering the data on the teachers' responses toward the implementation of the developed module on local wisdom-based local content. The teachers' responses is presented in Table 2 below.

Table 3. Teachers' perception of the utilization of the module

No.	Indicator	Average score	Agree(%)
1.	Happy Feeling	4.75	95
2.	Interest	4.60	92
3.	Attention	4.50	90
4.	Involvement	4.55	91

Table 2 shows that teachers' responses toward the utilization of the developed model is within very good category for each aspect with the happy feeling percentage of 95%, interest aspect by 92%, attention aspect by 90%, and involvement aspect by 91%. Trianto as cited in Setyandaru et al., (2017) states that calculation of assessment that a local wisdom-based local content gains a positive response from teachers if the percentage is  $\geq 50\%$ .

Dissemination Stage:

Dissemination stage of the module is carried out by visiting several schools, especially to local content teachers by explaining the description on the developed module, where it is expected that these teachers can utilize the distributed module in the form of softcopy and hardcopy. Hence, the module can be widely used. The module is distributed in several schools in Gorontalo city such as in SMPN 1 Gorontalo, SMPN 2 Gorontalo, and SMPN 6 Gorontalo.

## Conclusions

Based on the result of this study, it can be concluded that the developed local wisdom-based local content module can be categorized as very appropriate to be used in the learning process. The developed module has met the validity aspects, as during the validation process all four aspects of validity, presentation quality aspect is valid by the score of 4.78 and the percentage of 95.6%, the language quality aspect is valid with the score of 4.68 and the percentage of 93.6%, the content/material quality aspect is valid by the score of 4.73 and the percentage of 94.6%, and the design/graphic quality aspect is valid by the score of 4.73 and the percentage of 94.6%. The questionnaire on the module utilization also gains positive response from the learners by 88% and the teachers' response is positive by 92%. Students' and teachers' perception on this developed module is very good.

## Acknowledgments

We would like to acknowledge contribution of the Directorate General of Research Empowerment and Development of the Ministry of Research and Higher Education of the Republic of Indonesia for funding this research through and we would like to acknowledge the contribution of Lembaga Penelitian dan Pengabdian Masyarakat (LPPM) UNG and the steering committee of Konferensi Pendidikan Indonesia (KONASPI) XI in Universitas Negeri Padang for accepting this paper. We would like to specifically acknowledge the contribution of Dinas Pendidikan dan Kebudayaan Kabupaten Bone Bolango Regency dan Gorontalo City especially to the principals and teachers of local content subject at SMPN 1 Tapa, SMPN 1 Gorontalo, SMPN 2 Gorontalo and SMPN 6 Gorontalo, and all parties who have contributed to this study.

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