

Quality Mapping Analysis of Methods, Media and Learning Resources Usage at Junior High School

Muzanip Alperi^{1,2}

¹ LPMP Bengkulu, ² Education Doctor Program
University of Bengkulu²
Bengkulu, Indonesia
muzanip.alperi@kemdikbud.go.id

Dewi Handayani^{1,2}

¹ Chemistry Education Study Program, ² Education Doctor
Program
University of Bengkulu
Bengkulu, Indonesia

Abstract—This research is to find out the description of the use of learning methods, learning media, learning resources and also look at the correlation between learning methods, learning media, and learning resources towards the achievement of junior high school graduates' competency standards in the city of Bengkulu. The target schools of this study were 42 junior high schools. Respondents for each school are: 1 headmaster, 8 subject teachers, 15 students, 2 committees, at least 2 parents, and 1 supervisor. The instruments used are existing instruments from the directorate of primary and secondary education. The results of this study are that in general the SMP in Bengkulu City is very good at using learning methods, learning media, and learning resources that vary according to the learning material. From the results of the correlation obtained the value of $r = 0.4$. This means that there is a relationship with the medium criteria between variations in learning methods, learning media, and learning resources with learning outcomes. This shows that the better and varied learning methods, learning media, and learning resources are applied, the better the achievement of graduate competency standards even though the effect is not so great.

Keywords—*quality mapping; media and learning resources; junior high school*

I. INTRODUCTION

In accordance with Permendikbud number 22 of 2016 The process standard has 3 indicators [1], namely the learning process in accordance with the provisions, the learning process is carried out appropriately, and conducting authentic supervision and discussion in learning. Especially for indicators of the learning process, one of the important things to consider is the use of methods, media, and learning resources. The use of methods, media, and learning resources will not cause lack of learning outcomes. According to Alperi and Handayani there is a significant relationship between the use of instructional media and student learning outcomes [2]. There is a significant relationship between learning media and learning facilities simultaneously on student learning outcomes [3]. The impact that occurs when using inappropriate learning methods is that students are constrained in competency, knowledge and skills, and teacher competencies do not develop. The right learning method is in accordance with the facilities and infrastructure that are not yet adequate and have not been able to choose the appropriate learning methods and sources [4]. Many learning media are created for independent

learning today; however to find an actually good choice or solution of learning aid to make the learning process effective, attractive, interactive and joyful is still a problem needing the solution [5].

According to Reisky Megawati who uses a variety of methods and media will also produce interesting learning processes that help students find meaning from the material obtained in order to increase interest, understand concepts, and learn learning in biology learning [6]. The importance of using media in learning especially IT media was also revealed by Darmawan that Information and technology (IT) media can facilitate and improve the learning process [7]. Positive and significant learning resources for learning resources on learning outcomes of social studies students at SMP Negeri 1 Turi in the 2015/2016 academic year with coefficient values facing high learning resources and if it involves sufficient and complete learning resources, students can use the value of IPS learning to be higher [8]. Related to the significant influence between the use of learning resources on the learning outcomes of social studies subjects of class VIII Pontianak 11 Public Junior High School [9]. One of the learning resources is the web-based learning environment. A Web-based learning environment is something that can be created and accessed using either the Internet or an Intranet. Such an environment is just like any other learning event in that it distributes information to learners. However, the Web can also perform other tasks related to communication, assessment and classroom management [10].

Junior High Schools (SMP) in the City of Bengkulu are schools that are advanced and can use varied methods, media and learning resources. The use of diverse and appropriate learning resources will support the quality of learning especially in junior high school. Given the importance of using learning methods, learning media and diverse and appropriate learning resources, it is necessary to conduct research related to their use. Problems that have occurred so far There is not enough data to carry out this study, there is still a lack of study of the benefits of methods, media and learning resources simultaneously on learning outcomes. The purpose of this study was to learn to use learning methods, learning media, and learning resources in Bengkulu City Junior High School. Next to look at learning methods, learning media, and learning

resources towards the achievement of Learning Competency Standards in Bengkulu City Junior High School.

II. METHOD

The descriptive method carried out in this study was describing the use of methods, media and learning resources in Bengkulu City Middle School. The target schools of this study were 42 junior high schools. Respondents for each school are: 1 headmaster, 8 subject teachers, 15 students, 2 committees, at least 2 parents, and 1 supervisor. The instruments used are existing instruments from the directorate of primary and secondary education. The results of this study were that SMP in Bengkulu City was generally very good in using learning methods, learning media, and learning resources that varied according to the learning material. Descriptive method is finding facts with the right interpretation. Descriptive research studies problems in society and procedures that apply in society and certain situations, including about relationships, activities, attitudes, views, and ongoing processes and the effects of a phenomenon [11].

In this study, an in-depth study was conducted to look at the relationship between methods, media, and learning resources

on the results of learning at Bengkulu City Middle School Data on these matters were investigated, then analyzed, interpreted, and generalized to determine the characteristics and characteristics of good work, in this is the field of education. To see the relationship, multiple correlation is used by using the formula in Microsoft Excel application. Double Correlation Value is a number that indicates the direction and strength of the relationship between two or more variables together with other variables.

The instrument used in this study is an instrument that has been made by the Ministry of Education and Culture through the implementation of a central government quality assurance system (<http://pmp.dikdasmen.kemdikbud.go.id/perangkat/instrument>) [12]. Data were analyzed by giving scores for each sub-indicator, indicator and standard which was a combination of scores from each respondent who filled out the instrument.

III. RESULT AND DISCUSSION

From the results of data entry and scoring, the data in table 1 below is obtained.

TABLE I. ACHIEVEMENTS SCORE OF VARIATION METHODS, MEDIA, AND RESOURCES OF STUDY AND SKL SMP KOTA BENGKULU

| NO | | SCORE ACHIEVEMENT | | | |
|----|---------------------|-------------------------|----------|--------------|------|
| | | METHOD | MEDIA | STUDY SOURCE | SKL |
| | Average | 6.08 | 5.69 | 6.33 | 6.41 |
| | | R1 | R2 | R3 | |
| | Corelation with SKL | 0.455062 | 0.309841 | 0.481579203 | |
| | | | | | |
| | | R4 = Double Correlation | | | 0.4 |

TABLE II. SCORE ACHIEVEMENT CATEGORY

| Hose Score | Number | Category |
|------------------|--------|-----------|
| $1 \leq x < 2.5$ | K | Less |
| $2.5 \leq x < 4$ | C | Enough |
| $4 \leq x < 5.5$ | B | Well |
| $5.5 \leq x < 7$ | A | Very good |

In general, variations in the use of methods, media and learning resources in Bengkulu City Middle School are classified as Very Good, as evidenced by the average achievement above 5.5.

The data in this table are used as a basis for analyzing the quality map of the learning process standards related to the use of learning methods, learning media, and learning resources for junior high schools in the city of Bengkulu. The following is an explanation per sub indicator related to the description and correlation.

A. Map of the Use of Learning Methods in Bengkulu City Junior High School in 2017

Variations in the learning method referred to here are those that are in accordance with the instrument entries by the respondents, variations of Methods used in Learning that is :

lecture method, demonstration, discussion, learn independent, simulation, brainstorming (debate), studies case, seminar or workshop, tutorial, deductive, inductive, practice in the laboratory, research simple, studies travel, visit to library, demonstration or exhibition, staging creation art, assignment individual, assignment group, reporting assignment / group, presentation results assignment, committee, race.

The map of the use of various learning methods in Bengkulu City Middle School in 2017 can be seen in the following figure 1.

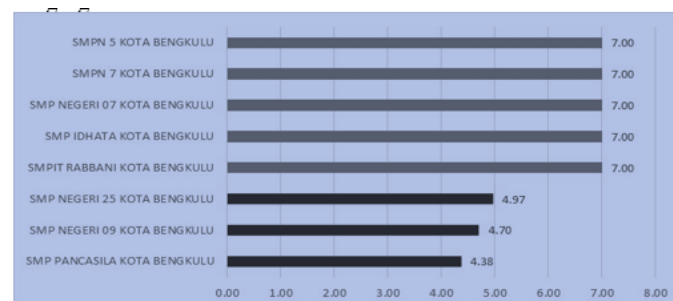


Fig. 1. Achievement score of learning method variation in junior high school.

The achievement of the average score using a variety of learning methods in SMP Bengkulu is 6.08. This means that in general, junior high schools in the city of Bengkulu are very good at using varied learning methods according to the learning material. From Figure 1 it can be interpreted that the school that achieves the highest score in the use of various methods is SMPIT Rabbani, Junior High School 7 in Bengkulu City, Junior High School 5 in Bengkulu City, Junior High School 1 in Bengkulu City, and Idhata Junior High School in Bengkulu City. This means that the five schools that achieved the highest score have applied various learning methods and can be used as examples.

The three schools that got the lowest score were Junior High School Pancasila, Junior High School 9 Bengkulu City, and Junior High School 25 Bengkulu City. This means that these 3 schools have not been maximized in the category of Good in using various learning methods in learning. Furthermore, for better learning, the use of methods needs to be varied according to the corresponding teaching material.

B. Map of the Use of Learning Media at Junior High School in Bengkulu City in 2017

Variations in the learning media referred to here are those that are in accordance with the instrument entries by the respondents, namely: Audio, Print, Slide, audio visual, real objects, Humans and the environment.

TABLE III. VARIATIONS OF MEDIA USED IN LEARNING

| No | Media |
|----|--|
| 1 | Audio: Audio tapes , radio broadcasts , CDs, telephones |
| 2 | Print : Book lessons , modules , brochures , leaflets, pictures |
| 3 | Audio- printing : Audio cassette equipped ingredients written |
| 4 | Silent visual projection : Overhead transparency (OHT), film frame (slide) |
| 5 | Silent audio visual projection : A sound (slide) frame film |
| 6 | Visual motion : silent film |
| 7 | Audio visual motion : Audio Visual motion , motion film voiced , video / VCD, television |
| 8 | Object physical : real objects, models, specimens |
| 9 | Humans and the environment : Teachers, Librarians , Laboran |
| 10 | Computer : CAI (with computer assistance) and CBI (use computer) |

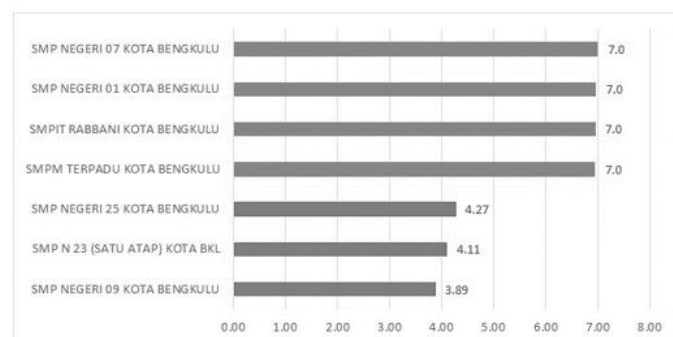


Fig. 2. Achievement of score using various learning media in junior high school.

The achievement of the average score of the use of various learning media in Junior High School Bengkulu City was 5.69. This means that in general, junior high schools in the city of Bengkulu are very good at using learning media that vary according to the learning material. From Figure 2 it can be interpreted that the school that achieved the highest score in the use of various instructional media was Junior High School 7 in Bengkulu City, Junior High School 1 in Bengkulu City, SMPIT Rabbani, and Integrated Junior High School Muhammadiyah Bengkulu City. This means that the four schools that achieved the highest score have applied a variety of learning media and can be used as examples.

The three schools that got the lowest score in the use of various instructional media were Junior High School 25 in Bengkulu City, Junior High School 9 Bengkulu City, and Junior High School 23 Bengkulu City. This means that these 3 schools have not been maximized in the category of Good in using a variety of learning media varied in learning. Furthermore, for better learning, the use of media needs to be varied according to the corresponding teaching material.

The use of media in learning gives good results, with the game-based learning group significantly created more flow experiences than the non-game-based learning group. incorporating mobile and gamification technologies into learning process could achieve a better learning performance and a higher degree of motivation than either non-gamified mobile learning or traditional instruction. Social media could be developed as an innovative and effective tool for teaching and learning [13,14,15]

C. Map of the use of Learning Resources in Junior High School Bengkulu in 2017

Variations in the learning resources referred to here are those that are in accordance with the instrument entries by the respondents, namely:

TABLE IV. VARIATION OF LEARNING RESOURCES USED IN LEARNING

| No | Learning Resources |
|----|---|
| 1 | Source learn print: books, magazines, encyclopedias, brochures, newspapers, posters, and plans |
| 2 | Source non- print learning: movies, slides, videos, models, dolls , and audio cassettes. |
| 3 | Source learning in the form facilities: auditorium, library, studio and field Sports |
| 4 | Source learning in the form activity: interview, work groups, observation, simulation, and games. |
| 5 | Source learning in the form environment : parks and terminals. |

The map of the use of variations in learning resources in Bengkulu City Middle School in 2017 can be seen in the following figure 3:

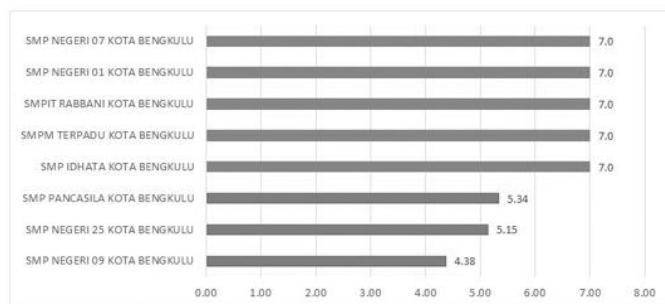


Fig. 3. Achievement of score of the use of learning resources at junior high school.

The achievement of the average score of using a variety of learning resources in Junior High School Bengkulu City is 6.33. This means that in general, junior high schools in the city of Bengkulu are very good at using learning resources that vary according to the learning material. From Figure 3, it can be interpreted that the school that achieved the highest score in the use of variations in learning resources was Junior High School 7 Bengkulu City, Junior High School 1 Bengkulu City, SMPIT Rabbani, and Integrated Junior High School Bengkulu City. This means that the four schools that achieved the highest score have applied various learning resources and can be used as examples.

The three schools that got the lowest score in the use of various learning resources were Junior High School 25 Bengkulu City 25, Junior High School 9 Bengkulu City, and Junior High School Pancasila Bengkulu City. This means that these 3 schools have not been maximized in the category of Good in using learning resources varied in learning. Furthermore, for better learning, the use of learning resources needs to be varied according to the corresponding teaching material.

D. Standard Competency Map for Graduates Competency Standards in SMP Bengkulu City in 2017

Graduates Competency Standards (SKL) contains 3 indicators as follows: Having competency in the attitude dimension, having competence in the knowledge dimension, and having competence in the skill dimension. Achievement of Standard Competency of graduates based on the opinions of respondents during the research is as follows:

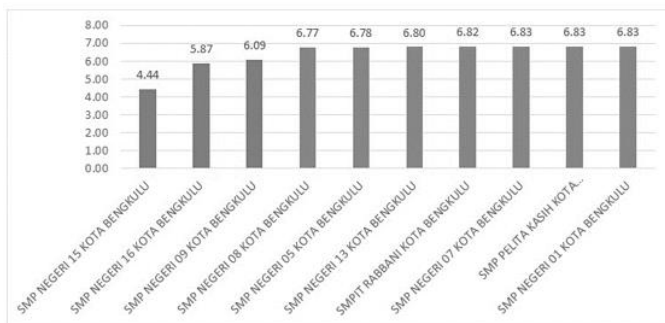


Fig. 4. Achievement of the score of the use of learning resources.

The achievement of the average competency standard score of Bengkulu City Junior High School graduates is 6.41. This means that in general, junior high schools in the city of Bengkulu are **very good** achieving the competency standards of graduates. From the picture above, it can be seen that the 3 schools that achieved the lowest graduate competency standard score were Bengkulu City 15 Junior High School, Bengkulu City 16 Junior High School, and Bengkulu City 9 Junior High School.

The achievement of the graduate competency standard score including the high exceeding 6.7 is the City of Bengkulu 1 Junior High School, Junior High School Pelita Kasih, Bengkulu City 7 Junior High School, SMPIT Rabbani, Bengkulu City 13 Junior High School, Bengkulu City 5 Junior High School, and Bengkulu City 8 Junior High School.

From several studies stated that learning methods, learning media and learning resources influence the achievement of graduate competencies in an education unit. The following will see the correlation between learning methods, learning media, and learning resources with the achievement of SKL SMP in the City of Bengkulu.

E. Correlation of Learning Media, Learning Media, and Learning Resources with the Achievement of SKL SMP in the City of Bengkulu

Alper stated that the correlation value shows the strong value of the relationship between two or more variables [16]. To conclude the relationship between the two variables above, it is necessary to meet the following criteria, if:

- 0,00 - 0,199: The correlation is very weak
- 0,20 - 0,399: The correlation is weak
- 0.40 - 0.599: The correlation is moderate
- 0.60 - 0.799: Strong correlation relationship
- 0.80 - 1.0 : The correlation is very strong

To correlate the data used the formula in *Microsoft excel*. For the correlation between the two variables with the following formula:

- $R_1 = \text{correl}(\text{blog cell data learning method; SKL blog cell data})$
- $R_2 = \text{correl}(\text{blog cell learning media data; SKL blog cell data})$
- $R_3 = \text{correl}(\text{blog cell data learning resources; SKL blog cell data})$

For multiple correlations, the formula is used:

- $R_4 = \text{correl}(\text{cell data method * cell data media * cell learning source; SKL data blog cell})$
- Description R_1 = Correlation between variations of learning methods and learning outcomes
- Description R_2 = Correlation between variations of learning media and learning outcomes

- Description R3 = Correlation between variations of learning resources and learning outcomes
- Description R4 = Simultaneous double correlation between variations of methods, media and learning resources with learning outcomes.

Data results using Microsoft Excel program are as follows

TABLE V. CORRELATION VALUES BETWEEN VARIABLES

| R1 | R2 | R3 | |
|-------------------------|----------|----------|-----|
| 0.455062 | 0.309841 | 0.481579 | |
| R4 = Double Correlation | | | 0.4 |

From these results obtained $R1 = 0.4551$, there is a positive relationship with the criteria being. This means that there is a relationship with the medium criteria between variations of learning methods and learning outcomes. This shows that the better and varied learning methods are applied, the learning outcomes will be better. From these results obtained $R2 = 0.3098$, there is a positive relationship with weak criteria. This means that there is a moderate weak relationship between variations in learning media and learning outcomes. This shows that the better and more varied learning media are applied, the learning outcomes will be better even though the effect is not so great. From the results obtained $R3 = 0.4816$, there is a positive relationship with the criteria being. This means that there is a relationship with the medium criteria between variations in learning media and learning outcomes. This shows that the better and more varied learning media are applied, the better learning outcomes.

From these results obtained $R4 = 0.4$ there is a positive relationship with the criteria being. This means that there is a relationship with the medium criteria between variations in learning methods, learning media, and learning resources simultaneously to the achievement of the competency standards of junior high school graduates in the City of Bengkulu. This shows that the better and more varied learning methods, learning media and learning resources simultaneously, the better the achievement of graduates' competency standard.

Despite technological advances, the role of printed books remains the main thing. The findings reveal that a large part of student-teachers do not read e-books, have indicated that the main reason they do not read e-books is that printed books cost less than e-books. Also, having the hardware and software required to read e-books warrants additional expenditure. [17]. Also reports that even though students have the opportunity to access technology anytime and anywhere they want, there is still a preference for reading printed books [18].

IV. CONCLUSION

From the discussion above, it can be concluded that in general the variations in the use of learning methods, learning media, and learning resources as well as the achievement of the competency standards of Bengkulu City Junior High School graduates are classified as Very Good, as evidenced by the

average achievement above 5.5. There is a relationship with the medium criteria between the variation of learning methods, learning media, and learning resources simultaneously to the achievement of the competency standards of junior high school graduates in the City of Bengkulu. This shows that the better and more varied learning methods, learning media and learning resources simultaneously, the better the achievement of graduates' competency standards.

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REFERENCES

- [1] Permendikbud, Standar Proses Pendidikan Dasar dan Menengah. Salinan Lampiran Peraturan Menteri Pendidikan Dan Kebudayaan Nomor 22 Tahun 2016.
- [2] M. Alperi and D. Handayani, "Pembuatan Alat Peraga Secara Sederhana dan Pengeditan Film sebagai Media untuk Meningkatkan Pembelajaran Matematika SMP di Kabupaten Kepahiang," In Prosiding Seminar Nasional Teknologi Pendidikan, 2015.
- [3] M. Alperi, "Hubungan Antara Penggunaan Media dan Fasilitas Pembelajaran dengan Hasil Belajar Siswa SMP Model di Provinsi Bengkulu Tahun 2017," Jurnal Pendidikan Bumi Rafflesia, 2017.
- [4] Tim Penyusun Indikator Mutu dalam Penjaminan Mutu Pendidikan Dasar dan Menengah. Direktorat Jenderal Dikdasmen Kemdikbud: Jakarta, 2017.
- [5] A. Dirgata, C. Huda, S. Siswandari, and C.D.S. Indrawati, "The Effectiveness of Archived E-Book Based Curriculum 2013 as an Effort to Improving Learning Outcomes in Vocational School," Journal of Education and Learning, vol. 11, no. 3, pp. 251-256.
- [6] M.T. Reisky, "Keterkaitan Metode dan Media Bervariasi dengan Minat Siswa dalam Pembelajaran Biologi Tingkat SMP," Jurnal Pendidikan (Teori dan Praktik), vol. 2, no. 2, pp. 134-142, 2017.
- [7] D. Darmawan, Pendidikan Teknologi Informasi dan Komunikasi. Bandung: PT Remaja Rosdakarya, 2013.
- [8] A.N. Pujawati, Pengaruh Ketersediaan Sumber Belajar dan Gaya Belajar Siswa terhadap Hasil Belajar IPS Siswa Di Smp Negeri 1 Turi Tahun Ajaran 2015/2016. Laporan Penelitian. Pendidikan Ilmu Pengetahuan Sosial: Universitas Negeri Yogyakarta, 2016.
- [9] F. Ida, Herkulana, S. Izhar, Pengaruh Motivasi Belajar dan Pemanfaatan Sumber Belajar terhadap Hasil Belajar Siswa SMP Negeri 11 Pontianak. Program Studi Magister Pendidikan Ekonomi FKIP UNTAN, Pontianak, 2017.
- [10] J. Alan, R. Jonathan and S. David, The Online Learning Hand Book. Developing and Using Web-Based Learning. London & New York L Routledge Taylor & Francis Young, 2012.
- [11] F.L. Whitney, The Elements of Resert. Asian Eds. Osaka: Overseas Book Co, 1960.
- [12] Tim Penyusun, Instrumen Penjaminan Mutu Pendidikan Satuan Pendidikan. Jakarta: Direktorat Pendidikan Dasar dan Menengah, 2017.
- [13] C.C. Chi, Chaoyun Liang, Pao-Nan Chou, Guan-You Lin. Is game-based learning better in flow experience and various types of cognitive load than non-game-based learning? Perspective from multimedia and media richness. Elsevier. Computers in Human Behavior. Volume 71, June 2017, Pages 218-227. <https://doi.org/10.1016/j.chb.2017.01.031>
- [14] C-H. Su, "A mobile gamification learning system for improving the learning motivation and achievements," Journal of Computer Assisted Learning, 2014.
- [15] A.E.E. Sobaih, M.A. Moustafa, P. Ghandforoush, and M. Khan, "To use or not to use? Social media in higher education in developing countries," Computers in Human Behavior, vol. 58, pp. 296-305, 2016.

- [16] M. Alperi, Statistika pendidikan lanjutan dilengkapi dengan prosedur penggunaan SPSS 16 dan Lisrel 8.8. Bengkulu: Vanda, 2017.
- [17] N. Tosun, "A Study On Reading Printed Books Or E-Books: Reasons For Student-Teachers Preferences," Journal TOJET: Educational Technology, vol 13, no. 1, pp. 21-28, 2014.
- [18] W.D. Woody, D.B. Danie, C.A. ve Baker, "E-books or textbooks: Students prefer textbooks," Computers & Education, vol. 55, pp. 945–948, 2010.

