



Developing Submotive Media to Improve Students' Learning Motivation During the Covid-19 Pandemic

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ABSTRACT:

The pandemic has impacted all sectors of life, one of the impacts is distance learning. Distance learning makes students bored and unmotivated. The purpose of this research is to generate motivation in students in carrying out learning. This research is ADDIE model development research. The instruments used are media validation sheets, student motivation questionnaires, and student response questionnaire sheets. The SUBMOTIVA (Subconscious Motivation Audio) media was tested on class VIIA MTSN 3 Mojokerto. The results of the SUBMOTIVA media validation test by validators of psychology experts are 86%, while 90% of subconscious mind practitioners are validators. The results of the field test of 31 students, the effectiveness meets the good category with a gain score of 0.709 ($G_s > 0.3$). The results of the practicality trial meet the very good category with an average score of 3.38 ($S_m > 2.51$). The results of this study indicate that the SUBMOTIVA media is proven to be valid, effective and practical to increase students' motivation to learn mathematics.

Keywords: Development, SUBMOTIVA Media, Learning Motivation.

INTRODUCTION

The COVID-19 pandemic, apart from having an impact on public health, also affected the educational, economic and social conditions of the community. The government has implemented a social restriction policy as needed to minimize the impact. This condition has implications for limiting community activities, including educational activities, economic activities, and other social activities.

The education sector places restrictions on learning by implementing distance learning. At the beginning of the implementation of distance learning, the enthusiasm of the students was very good. However, after running for several months, student motivation decreased significantly.

Low student achievement is influenced by low motivation in learning (Gunawan and Gunadi). Students with high learning motivation must try their best to develop their various potentials. But on the other hand, students who have low motivation always give various reasons when asked to develop their potential; As a result, their learning achievement is also low.

Rivera & Ganaden (2001) explained about the need to improve students' attitudes toward subjects. This is because students' attitudes towards subjects are closely related to their achievements. In addition, students who have a positive attitude tend to have enthusiasm or motivation to deepen their learning and knowledge. Based on this, it can be concluded that attitudes play an important role in student learning.

There are various studies that examine the factors that influence student enthusiasm for learning, such as the environment and the individual (Ramirez, 2005). One of the factors that can influence the spirit of learning is by giving motivation. Motivation can encourage students to pay attention, think, plan and carry out learning activities (Slameto, 2013). In this case the role of the teacher and the media is very important in fostering motivation to learn in their students. One of the benefits of media in learning is expressed by Sudjana (2010). He explained that learning motivation will grow because learning is more interesting.

The tough task of a teacher is to make students more interested in the lesson. Therefore the teacher must try hard to find out the problems of students and be able to provide motivation to students. This activity is extrinsic motivation that comes from outside the students and aims to change their attitudes and interests. However, experts state that the strongest motivation is intrinsic motivation, namely motivation that comes from the students themselves, commonly known as self-awareness. In this regard, educators are expected to be able to and know how to explore and raise awareness from students. One of them is by activating the brain on alpha theta waves.

As perfect creatures, humans are equipped with extraordinary brain abilities. Brain waves have an important role in carrying out activities in life. Human brain waves are electrical waves that are generated and can be measured by frequency and amplitude and have their respective functions that will influence human lifestyle and behavior. Brain waves are classified into five categories based on the frequency range: 1) Delta activity (δ wave): The frequency is below 3 Hz, and its amplitude is about 20-200 μV . 2) Theta activity (θ wave): The frequency is between 4 Hz and 7 Hz. 3) Alpha activity (α wave): The

frequency is 8-13 Hz, and the amplitude is about 20-200 μ V. 4) Beta activity (β wave): The frequency is 13 Hz or more, but rarely higher than 30 Hz. 5) Gamma activity (γ wave): The frequency is between 31 and 50 Hz. (Fell, 2003)

According to Gunawan (2005: 54), the human brain has five waves with different frequencies, namely delta, theta, alpha, beta, and gamma. Each type of wave has a different role and purpose. Brain waves are the center of human intelligence and artificial intelligence. The most suggestive and frequently used brain wave zone is the alpha-theta boundary. Alpha waves (8-13hz) are located between the subconscious mind and the dominant conscious mind when the human mind flows quietly, daydreams, during relaxation, or in a high meditative state. This wave appears when a person is relaxed or begins to rest. One of the signs that can be seen is when a person starts to close his eyes and is sleepy. At this time, the suggestions given correctly will be easy for humans to accept.

Theta waves (4-7hz) occur when a person is experiencing light sleep or is very sleepy. In this condition, breathing begins to slow down and deepen. Apart from occurring in people on the verge of sleep, theta waves also occur during trance, prayer, deep meditation, or solemn conditions. In the theta waves, humans are connected to the subconscious brain/long-term memory, which is the human creative center, so when we are dreaming, it is truly creative and full of complex emotions. Theta waves are the gateway to learning, memory, and intuition. In the theta wave condition, humans dream, experience vivid visualization, extraordinary creativity, and deep inspiration, and get ideas beyond our normal awareness.

Dedi (2018) states that alpha-theta brain waves are good for receiving information/suggestions, visualizing, or doing mind programming. Humans are aware of the environment at the alpha-theta frequency, but the human body is in deep relaxation. Furthermore, programming/activation can be carried out on personality, awareness, emotions, and various other things, including attitude, interest, and motivation in learning in academic units.

Researchers have observed the decline in student motivation through end-of-semester grade recap data and interviews with teachers at MTsN 3 Mojokerto. Researchers have conducted a preliminary study on the conditions and situations of learning activities at MTSN 3 Mojokerto through interviews and observations. Interviews were conducted with madrasah heads, teachers, and class VII students. Based on the interview results, It was known that students were getting bored and less motivated to learn because the learning process was monotonous. Furthermore, the conditions of Covid 19 also limited their movements, so they were even more bored when students were required to stay home more. While the results of interviews with Mojokerto MTSN 3 madrasah heads found that the pandemic condition made the psychological conditions of students bored and bored in participating in learning at school, and parents who had economic difficulties also sidelined attention to children's learning. The teachers of class VII expressed that the pandemic caused restrictions on movement and the difficulty of giving a warning because there was no face-to-face meeting.

Based on the results of observations and the administration of a media needs analysis questionnaire, It was obtained that innovation was needed that was different from before, but what was even more important was to generate motivation in students. Hence, they wanted to take part in learning well. To get a comprehensive picture of the problems, this research is planned to focus on students' interests and motivation in participating in learning by utilizing human alpha-theta waves. The uniqueness of alpha-theta waves makes researchers interested in digging deeper and maximizing its benefits in learning. As with the existing problems, the researcher will develop Subconscious Motivation Audio (SUBMOTIVA) media on alpha-theta brain waves to increase students' intrinsic motivation to participate in learning. In addition, this study describes the process of developing SUBMOTIVA media and producing SUBMOTIVA media that is valid, effective, and practical for increasing student motivation at MTsN 3 Mojokerto.

Given the importance of learning motivation, much research has been conducted on increasing student interest/motivation in learning. Bisri (2017) conducted classroom action research to increase motivation to learn mathematics by implementing the local tourism learning model for SMKN I Seyegan, but the results were unsatisfactory. It was recorded that the percentage of students' learning motivation increased from 63.62% to 68.96% after one cycle of CAR was applied. Hayuwari (2016), through his research, seeks to improve the motivation of class XI students in the Godean Vocational High School accounting program by developing photo comic learning media. This study showed that the developed media could increase learning motivation with a gain score of 0.42 or the moderate category because it was in the range of 0.3 to 0.7.

Meanwhile, Djumali (2013), in his research, also attempted to increase the learning motivation of class VIII B students of SMP Negeri 2 Sawit Boyolali using the index card match learning strategy in social studies learning. The classroom action research used two cycles with the result that students' learning motivation increased, as seen from the enthusiasm of participating in class learning and the percentage of achieving KKM scores of 85%. Nevertheless, there are fundamental differences between this study with previous studies. It can be seen in earlier research that increasing motivation is always associated with certain subjects or concepts, so its use is also limited. While in this development research, SUBMOTIVA media will be developed to increase learning motivation in general so that its use becomes wider. The developed SUBMOTIVA media is expected to help the learning process and add innovation and can be used by teachers to increase motivation and help students to have a good perception of learning.

RESEARCH METHODS

This research is a type of Research and Development (R&D) research using the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation) (Mulyatiningsih, 2016). Sugiono (2016) says the ADDIE development model is more systematic, detailed, and practical than others. In addition, selecting the ADDIE model supports the SUBMOTIVA media development process because the five design stages are simple, structured, and easy to learn. This is supported by Benny (2011), who says that the ADDIE model is a development design that shows the design stages are simple and easy to learn.

The analysis phase consists of an analysis of the situation and condition of the school, an analysis of student characteristics, and an analysis of media needs. Analysis of the school situation was carried out to find out information about the situation and condition of the school/madrasah that will be used

as a research site. Data were obtained through observation and interviews with teachers and madrasah heads of MTSN 3 Mojokerto. The results of interviews and observations of class VII teachers were that most students did not follow the lesson well, and it was difficult for teachers to condition themselves because remote locations constrained them.

Student characteristics were analyzed to determine the characteristics of class VII students at MTsN 3 Mojokerto. Data collection was carried out by giving a learning motivation questionnaire and showing that students get bored quickly and are not motivated in lessons because the learning process is monotonous, and pandemic conditions force students to work part-time to help parents.

Media analysis was carried out to determine the suitable media to overcome the problem of decreased enthusiasm and interest in student learning during the pandemic. The activity was carried out through interviews and observations with mathematics teachers and students. The results of interviews and observations of class VII students and teachers as the researcher's capital in making media can arouse students' intrinsic motivation.

The following is a student learning motivation questionnaire grid adapted from motivation indicators (Sardiman, 2014):

Table 1. Indicators of student learning motivation

No	Aspects rated	Number of statement
1	Diligently do the task	1, 2
2	Tenacious face adversity	3*, 4
3	Have an interest in the lesson	5*, 6
4	Prefer to work independently	7, 8
5	Not quickly bored in routine tasks	9, 10*
6	Can defend opinion	11, 12, 13
7	It's not easy to let go of things you believe in	14*, 15
8	Happy to find and solve problems	16, 17
Total		17

Note: * Negative statements

This study aims to determine the validity, effectiveness, and practicality of SUBMOTIVA media to increase students' motivation to learn mathematics at MTsN 3 Mojokerto. Researchers analyzed media needs through interviews and observations of teachers who teach class VII MTsN 3 Mojokerto.

SUBMOTIVA media plans to increase learning motivation by compiling an outline of media content, including sentence scripts, instructional scripts, relaxation music audio accompaniment, and applications used to develop SUBMOTIVA media. In the design validation stage, the researcher consulted the experts on the script that had been prepared. Namely Psychologist and Manager of little finger school Yogyakarta Theresia Sugiarti, M.Psi, and a Lecturer who is also a Subconscious mind expert from the Indonesian Hypnotic House Mr. Sholehun M.Pd., Ch. C.Ht. CI RHI. After that, the SUBMOTIVA script was recorded and packaged in an enhanced mp3 format file and combined with relaxation music and subconscious music using the Filmora 7.0 application. Next, the percentage of the average validation score is determined and adjusted according to the criteria adopted by Akbar (2013). The results of the development of SUBMOTIVA media are categorized as valid if the validation test of the media meets the valid criteria, namely, the percentage of the average score of the validation results (S_v) has reached a minimum of 75% ($75\% \leq S_v \leq 100\%$).

The results of the SUBMOTIVA media are said to be effective if the student learning motivation questionnaire on SUBMOTIVA media is in a good category (i.e., the average score of the student learning motivation questionnaire with a gain score (GS) reaches a minimum of 0.3 ($GS \geq 0.3$) adjusted to the criteria adapted from (Alfarabi, 2020)). Calculation of the gain score can be done in the following way:

$$\text{Gain Score} = \frac{\text{Final motivational questionnaire scores} - \text{Preliminary motivational questionnaire scores}}{\text{maximum score} - \text{initial motivational questionnaire score}}$$

To test the practicality of SUBMOTIVA media, we must pay attention to student responses. The student response questionnaire grid was adapted from Kurniyawan (2019), including tools, subconscious language, sound, and other aspects. Then the results of student responses are calculated and look at the criteria adapted from Saadah (2018). The results of the SUBMOTIVA media are said to be practical if the student response questionnaire to the SUBMOTIVA media is in a good category (i.e., namely, the average score of the teacher's response questionnaire (S_r) has reached a minimum of 2.51 ($S_r \geq 2.51$)).

The limited trial phase was conducted on 16 students of class VII H. The test was conducted by listening to SUBMOTIVA media for seven consecutive days. The results of the questionnaire assessment aim to perfect and improve the media that will be tried out in operational field trials. There is a product revision if the product is still ineffective with product trials, and comments are received if there are still weaknesses so that they can be corrected first. Furthermore, this field test was carried out on 31 students of class VII A. The test was carried out using SUBMOTIVA media which had been revised and corrected according to the results of the data obtained. After being repaired and fixed and looking for a gain score to see the effectiveness of this media.

The final SUBMOTIVA media product is packaged in an enhanced mp3 file format and combined using the Filmora 7.0 application. Furthermore, the media is stored on the drive and then arranged in the form of a barcode to make it easy to access, disseminate, and use in the broader scope.

RESULTS

Analysis Stage

The initial stage is to prepare an analysis of the condition of the school, teachers, and students regarding the learning conditions that have been carried out. The information obtained is that students are getting bored and lazy to study because the online learning process is monotonous. The condition of Covid 19 also limits movement because they are required to stay at home more. Researchers analyzed media needs through interviews and observations of teachers who teach class VII MTsN 3 Mojokerto. The information obtained states that different learning innovations are needed, but more important is to motivate students to participate in learning well.

Design Stage

SUBMOTIVA media design planning by compiling an outline of media content, including sentence scripts, usage guide scripts, relaxation music audio accompaniment, and applications used to develop SUBMOTIVA media.

Development Stage

This stage focuses on testing the validity, effectiveness, and practicality of SUBMOTIVA media. To test the validity of the design, researchers consult experts on the scripts that have been prepared (i.e., a little finger school psychologist and a subconscious mind expert from the Indonesian Hypnotic House Institute). Validators provide ratings, comments, and suggestions for revisions. The analysis results are known from the validator showing that the psychology expert validator gave a score of 86%, and the subconscious mind expert validator gave a score of 90%. So it can be concluded that the SUBMOTIVA media developed can be categorized as valid and feasible to be tested on subjects.

The effectiveness of SUBMOTIVA media is included in the good category based on the results of the student learning motivation questionnaire with a gain score (GS) of 0.709 ($GS \geq 0.3$). Meanwhile, based on student response questionnaire data, an average score of 3.38 ($S_m \geq 2.51$) was obtained, and it can be concluded that SUBMOTIVA media is categorized as practical.

Implementation Stage

A limited trial was carried out in this implementation phase, followed by a field trial. After the SUBMOTIVA media had been validated and revised, a field trial was then carried out on 16 students of class VII H. The researcher explained to the students how to fill out the online questionnaire and use SUBMOTIVA media which had to be carried out for seven consecutive days. The limited trial produced a gain score of 0.707, categorized as good. The questionnaire assessment (questionnaire) results aim to improve and refine the media to be tested in operational field tests.

The field trial was applied to 31 class VIIA students using the revised and refined SUBMOTIVA media. By revising the product, the props are improved according to the results of the data obtained. After being corrected and further revised to see the effectiveness of the media, the gain score calculation is ready to be perfected. The field trial shows the gain score as shown in table 4 below:

Table 2. The results of measuring student motivation using the Gain Score

No	Student Learning Motivation Questionnaire	Total Score	Gain Score	Criterion
1	Student Learning Motivation Questionnaire before using SUBMOTIVA media	1173	0.709	Good
2	Student Learning Motivation Questionnaire after using SUBMOTIVA media	1751		

Based on the data presented in table 5, it was found that the average increase in student learning motivation was in a good category with a score of 0.709 ($GS \geq 0.3$), so the media was categorized as effective. The increase in student learning motivation is seen from the eight aspects presented in diagram 1 below:

Diagram 1. Increasing student motivation



Information :

Aspect 1: Diligently doing the task

Aspect 2: Tenacious in the face of adversity

Aspect 3: Have an interest in the lesson

Aspect 4: Prefer to work independently

Aspect 5: Get bored quickly with routine tasks

Aspect 6: Can defend an opinion

Aspect 7: It is not easy to let go of things you believe in

Aspect 8: Enjoys finding and solving problems

Evaluation Stage

The practicality analysis of SUBMOTIVA media can be seen from the student response questionnaire data given on October 4, 2020. After being analyzed, a score of 3.38 was obtained, and based on the criteria adopted by Saadah (2018), it can be concluded that the student response obtained a score of 3.38 ($S_m \geq 2.51$) is in a good category, so according to predetermined criteria, the SUBMOTIVA media is categorized as practical.

CONCLUSION

The results of psychologists' initial trial validation calculations were 86%, and subconscious experts were 90%, so the media was categorized as very valid. So that SUBMOTIVA media is appropriate as a medium to increase student motivation in the learning process. Based on the qualitative data from the results of expert validation, criticism, suggestions, and general opinions were obtained that (1) replace negative sentences with positive sentences, (2) revise sentences that have double meanings, (3) add several metaphorical sentences, (4) greeting words the subject is replaced by "you" (5) The sentence break is given a pause as comfortable as possible.

The result of calculating the gain score for the field trial of 31 students for the media developed by the researcher is 0.709, so it can be said that the SUBMOTIVA media is categorized as effective. Calculating the average student response questionnaire to the SUBMOTIVA media obtained a value of 3.38, so this media can be categorized as practical.

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