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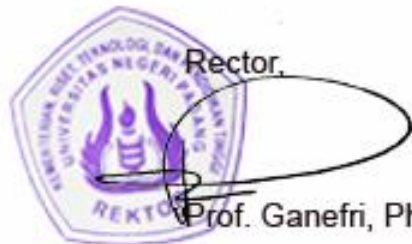
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has actively participated in "International Conference on Education, Science and Technology" (ICESTech)
with the theme "Education, Social Science, and Humanity in Industrial Revolution 4.0"
held by Universitas Negeri Padang on March 15, 2019 in Padang, Indonesia

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It is with great pleasure to inform you that Faculty of Engineering-Ur invite you to submit your papers for ICEE 2019 (Full paper submissi Industrial Engineering and Applied Science and many other topics ir

We are looking forward to meeting you in Padang

Best regards,
Conference chair

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Bersama ini kami menyampaikan bahwa Fakultas Teknik Universita: UNP. Kami mengundang Bapak/Ibu untuk dapat berpartisipasi deng Architecture and Environment Engineering, Electrical and Computer index.php/icee/2nd.

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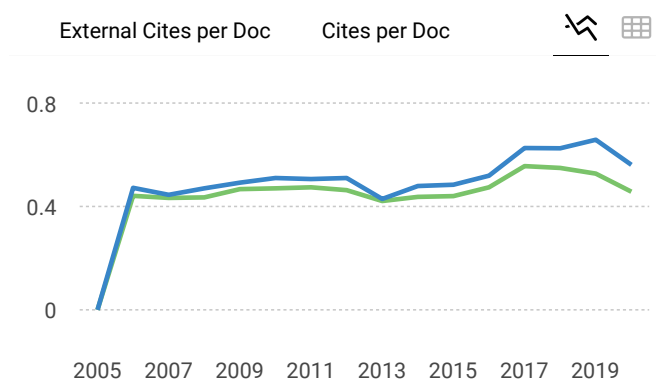
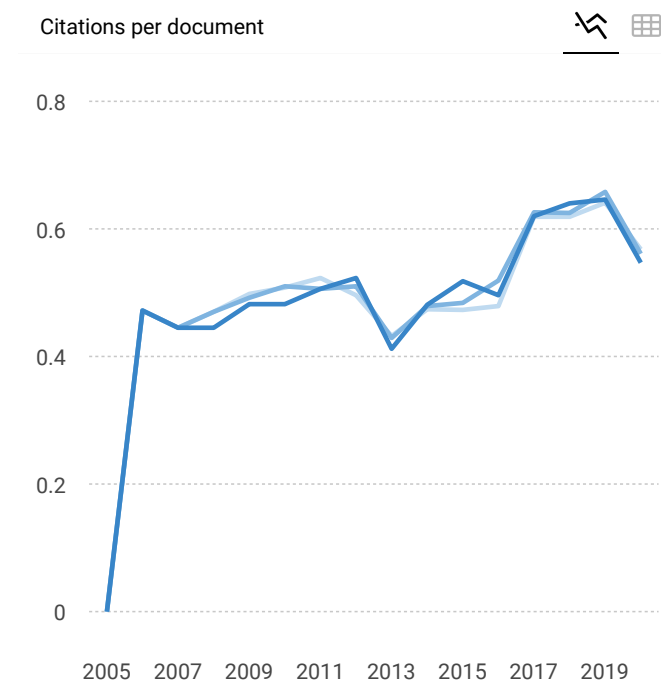
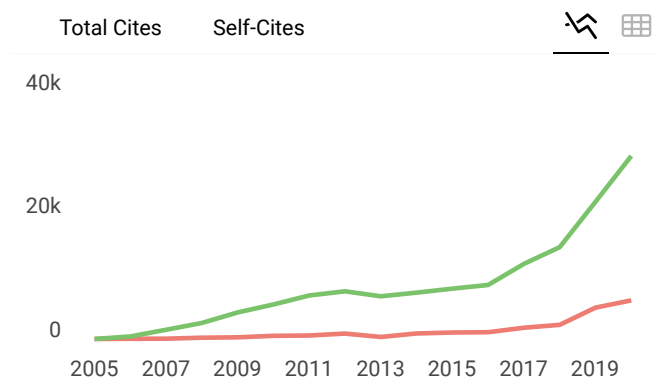
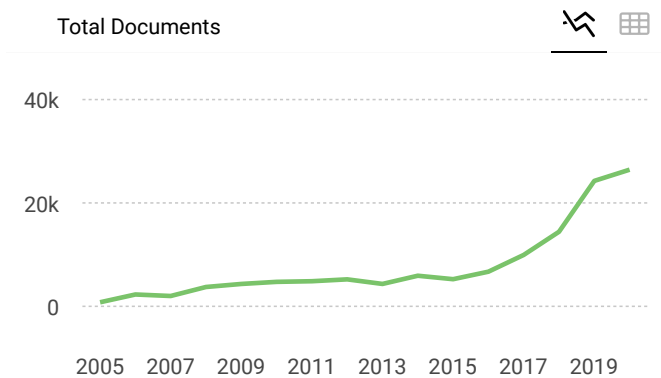
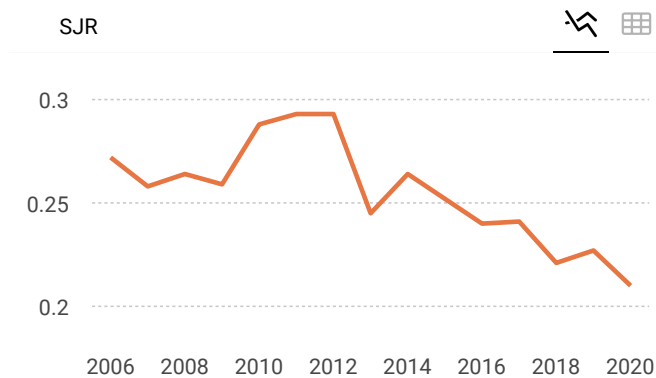
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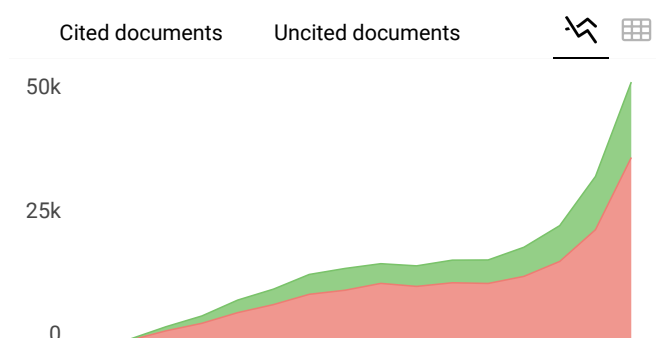
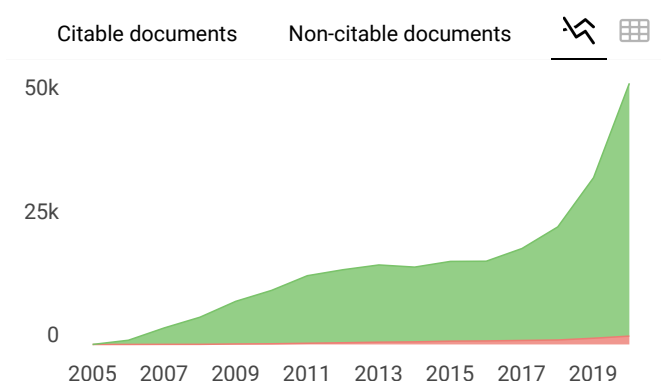
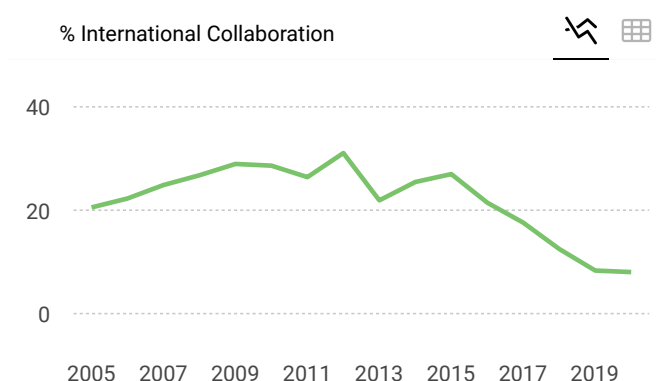
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Preface

The fourth industrial revolution (4.0) is marked by the advancement of technologies and powered by artificial intelligence which creates opportunities and challenges for education systems. University and vocational school graduates face a world transformed by technology which in turn transforms the workplace from task-based to human-centered characteristics. Certain skills such as critical thinking, emotional intelligence, problem solving, cognitive flexibility, and knowledge production are required. To address this demand education system should put revolutionary innovation in its agenda. Scholars, researchers, and practitioners are invited to share their ideas, research outcomes, and best practices about education, social sciences and humanities now and in the future in an The 1st International Conference on Education, Science and Technology (ICESTech) 2019.

ICESTech 2019 has been held on March, 13th - 16th 2019, at the Universitas Negeri Padang, West Sumatera, Indonesia. ICESTech 2019 is to bring together innovative academics and industrial experts in the field of education, science, and technology to a common forum. The primary goal of the conference is to promote research and developmental activities in education, education, science, and technology and another goal is to promote scientific information interchange between Scholars, researchers, students, and practitioners working all around the world.

ICESTech 2019 has received 312 papers and the papers come from both academia on the international flavor of this event in the topics of Industrial Revolution 4.0. Based on the peer review reports, 175 papers were accepted to be presented in ICESTech 2019 by the editors. All the accepted papers have been presented on the conference, mainly by oral presentations in three sessions: education, science, and technology.

We sincerely express our thanks to all the members ICESTech 2019. Thanks are also given to IOP JPCS for producing the proceeding.

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Ifdil Ifdil

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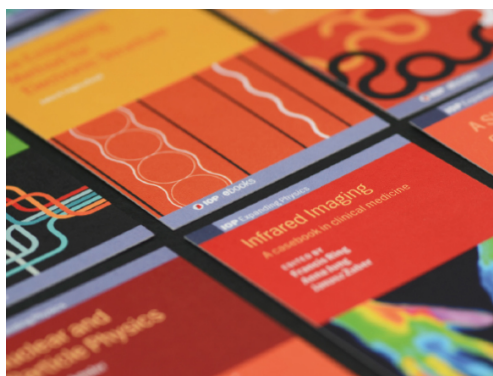
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All papers published in this volume of *Journal of Physics: Conference Series* have been peer reviewed through processes administered by the proceedings Editors. Reviews were conducted by expert referees to the professional and scientific standards expected of a proceedings journal published by IOP Publishing.



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Yuniarti Koniyo, Cyska Lumenta, Abdul Hafidz Oliy and Rose O.S.E. Mantiri

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Enrichment in the Electrical Engineering Vocational and Education (EEVE) Study Program by Augmenting the Image Processing Study Course

R Mukhaiyar, Dedy Irfan, Hambali, A Frismelly and N Utari

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Totok Heru Tri Maryadi, Toto Sukisno, Ariadie Chandra N. and A. Widi Atmoko

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Developing A Problem-Based Learning/PBL Model for Improve Students' English Speaking Problem Solving Ability and Self Confidence at Economic Department of University

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Educating and mentoring of broiler intensification programs through KKN-PPM activities for the community of Talise Village, Likupang Barat Subdistrict, North Minahasa Regency

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Misconception profile of students in senior high school iv Sidoarjo East Java in work and energy concepts and the causes evaluated using Four-Tier Diagnostic Test

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Needs analysis of pedagogical project management literacy of technology used in vocational school. Pivotal with the approach of project base learning in higher education



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E Roesminingsih and E Winarko

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The Development of Learning Motivation Video as Guidance and Counseling Media for Senior High School (Equivalent) Students

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The innovation of guidance and counseling media is indispensable for having qualified guidance and counseling services at schools. One of the intended media innovations is service media to improve the learning motivation of high school students. Therefore, the aim of this research was to develop learning motivation video as a media for guidance and counseling services for high school students. This research applied Research and Development (R & D) method, through following steps: (1) analysis of potential and problem, (2) data collection, (3) product design, (4) product validation, and (5) product revision. The product validation was conducted by three experts namely Indonesian linguists, Educational Technology experts, and Guidance and Counseling experts. The finding of research showed that the product of learning motivation video as guidance and counseling media developed in this research could be used to help improve the learning motivation of high school students.

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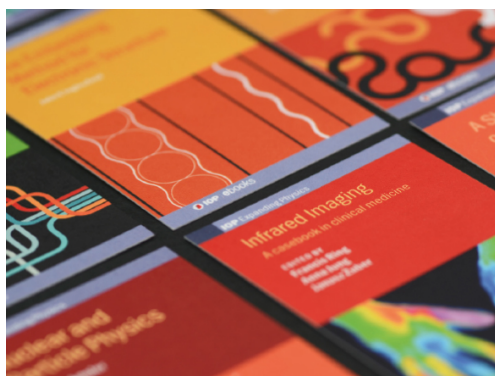
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The Development of Learning Motivation Video as Guidance and Counseling Media for Senior High School (Equivalent) Students

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Abstract: The innovation of guidance and counseling media is indispensable for having qualified guidance and counseling services at schools. One of the intended media innovations is service media to improve the learning motivation of high school students. Therefore, the aim of this research was to develop learning motivation video as a media for guidance and counseling services for high school students. This research applied Research and Development (R & D) method, through following steps: (1) analysis of potential and problem, (2) data collection, (3) product design, (4) product validation, and (5) product revision. The product validation was conducted by three experts namely Indonesian linguists, Educational Technology experts, and Guidance and Counseling experts. The finding of research showed that the product of learning motivation video as guidance and counseling media developed in this research could be used to help improve the learning motivation of high school students.

Keywords: *The Development of Learning Motivation Video, Guidance and Counseling Medium*

1. Introduction

Learning is a paramount thing for human life due to its activity will lead individual or student to obtain various knowledge required in daily life. Learning is a core activity in education. Education can be interpreted as an aid of students development through learning activities. The learning activities can engender various problems both for students and for educators (teachers). The problem for teachers, for example, is related to how to create good learning conditions, the one which can make students learn optimally. On the other hand, the success of student learning is influenced by several factors, namely, factor originated from students (internal factors), and factor originated outside of students (external factors). These factors can support student learning activities and can also be a cause of learning problems. One of the internal factors that can influence student success in learning is the motivation to learn.

Students' motivation in learning requires to be developed and improved continuously so that all student always have high learning motivation. Based on direct observation towards students of high school or equivalent, particularly in Gorontalo City, there were still students who had low learning motivation. The condition could be spotted from their behavior in which they often truanted, skipped in certain subjects, did not really do the assignments given by the teacher, and did activities that disrupt the teaching and learning process.

To overcome the previous problems, it is deemed necessary to provide guidance and counseling services that are expected to be attractive to students as an effort to improve their motivation. The use



of media in counseling and guidance services is expected to generate guidance and counseling services that attract students' interest and attention to follow them, which will influence the improvement of students' learning motivation. Factors of interest and attention that arise due to the use of media will stimulate activity in learning or in guidance and counseling services.

Literally, media means an intermediary or introduction. Media is an intermediary or delivery message from the sender to the recipient [1]. The Association for Education and Communication Technology (AECT) defines media as all forms applied for the information distribution process. Meanwhile, the National Education Association (NEA) defines media as all forms of an object that can be manipulated, seen, heard, read, or discussed along with the instruments used for these activities [2]. One of the types of media that can generate students' interest and attention in guidance and counseling services is video. According to [2], video is also called by a motion picture, which is a series of still pictures that slide rapidly and projected to create an impression as if alive and moved. Video or film is a media that presents audiovisual messages and motion. Therefore, video/ film gives an impressive impression to the viewers.

The use of media in guidance and counseling services is expected to stimulate students. Video is one type of media that is able to activate students in the process of guidance and counseling services. Video is also called by motion picture, which is a series of still pictures that slide rapidly and projected to create an impression as if alive and moved. Video or film is a media that presents audiovisual messages and motion. Therefore, video/ film gives an impressive impression to the viewers [1] [2]

Based on the previous elaboration, the research was conducted to develop video as a media for guidance and counseling services to improve students' learning motivation, as it is seen from its own strengths, as stated by [3] that reveals some strengths of video/ film media , such as: (1) giving messages that can be received by students more equally (2) very good for explaining a process, (3) overcoming space and time limitations (4) more realistic, can be repeated and stopped according to need (5) giving a deep impression, which can influence students' attitude. Motivational videos developed through this research contain content related to students' learning motivation.

2. Theoretical Review

2.1 The Definition of Learning Motivation

Motivation is a mental strength which encourages individual to do an activity to reach certain goals. Also, it is a strength to actuate person to do something. The motivation can appear by itself (intrinsic motivation) and by an external factor (extrinsic motivation). The presence of motivation can lead a person to do something enthusiastically.

According to Sudarwan [4], motivation is defined as strength, courage, need, spirit, pressure or mechanism of psychology which urge person or a group of people to reach particular achievement based on the desired. Meanwhile, according to Hakim [4], motivation is courage of desire which causes a person to do certain action to reach certain goals. Motivation can be defined as strength (energy) of a person which may provoke persistence and enthusiasm rate in doing an activity, whether from the individual itself (intrinsic motivation) or individual external (extrinsic motivation).

Baharuddin and Esa [5] express that learning process is a series of activity occurring in the nerve center of individual that studies. Learning is an activity which can generate change in behavior at cognitive, affective, and psychomotor domains. It is a change of attitude that relatively permanent and potentially occurred as a result of reinforced practice which is driven by goals to achieve particular goals. Motivation and learning are two interplay things. Students will be viable in learning if they have the motivation to learn, yet on the other hand, students may have motivation through learning something. As stated by Uno [6], motivation and learning are two interplay things.

Based on the definition of motivation and learning, thus learning motivation can be defined as mental strength urging activity in order to reach the learning goals. According to [7], learning motivation is a mental strength which urges the learning process. Motivation plays an important role in learning in which its absence will not enable students to do a learning activity [8].

2.2. Factors Affecting Learning Motivation

Fernald and Fernal [9] reveal that there are four factors influencing achievement motivation for person, which are: (1) family and cultural influences. The freedom given by parents to children, job type of parents, and number and children sequence in one family has a very significant influence in the development of achievement motivation, (2) the role of self-concept. The self-concept is about how a person thinks about himself/herself. If the individual believes that he/she is able to do something, thus the individual will be motivated to do so, thus it influenced the attitude, (3) the influence of sex roles. High achievement is commonly identified as masculinity, hence the woman has a trend to be fear of success which meant they are worried about themselves particularly about a rejection of society if they reach success, and (4) recognition and achievement. The individual will be motivated to work hard if they have the attention of others.

2.3. Characteristics of Learning Motivation

According to [6], the nature of learning motivation is an internal and external urge to students who are learning to make behavioral changes, commonly with some supporting indicators or elements. It plays a big role in one's success in learning. The learning motivation indicators can be classified as follows: (1) the existence of desires and desires to succeed, (2) the existence of encouragement and needs in learning, (3) the existence of future hopes and aspirations, (4) the appreciation in learning, (5) interesting activities in learning, and (6) the existence of conducive learning environment.

2.4. The Definition of Guidance and Counseling Media

The word media comes from Latin which is *kamak* form of word medium which literally means "intermediary" or "introduction". According to AECT [2], media is all forms and channels used for message delivery process. Media of guidance and counseling is all things that can be used to distribute guidance and counseling messages that can stimulate thoughts, feelings, attention, and willingness of students/ counselees to understand themselves, direct themselves, make decisions and solve problems that are encountered [2]. According to some earlier opinions, it was concluded that: (1) guidance and counseling media is a container of messages, (2) the material to be conveyed is a message of guidance and counseling, (3) the goal to be achieved is optimal students' development. Furthermore, the use of creative media will increase the possibility for students to be interested in counseling and guidance services, as well as to learn more, keep in mind what they learn better, and improve their appearance in performing skills according to the goals of guidance and counseling.

2.5. Selection Criteria of Guidance and Counseling

The basis for consideration in the selection of media is the fulfilment of needs and the achievement of guidance and counseling goals. Mc. Connel [1] firmly says "if the medium fits, use it", meaning that if the media is appropriate, then use it. There are several general criteria that need to be addressed in media selection. [10] suggests three things that are taken into consideration in selecting the media, which are: the availability of media, teachers are used to use the media, and suitability with learning goals. Convey the things to be appraised in selecting media are: suitability with learning objectives and media availability [11].

In regards of the selection of counseling and counseling services media, Nursalim (2018: 47) suggests the following criteria: (1) suitability with the goal namely reviewing the guidance and counseling goals, what is to be achieved in an activity of guidance and counseling services. In guidance and counseling, there are differences between the goals for guidance services and counseling services. The goals of guidance service are formulated first, as well as the learning objectives. While the goals of counseling service can be formulated if the problems experienced by the counselee have been thoroughly discussed, (2) suitability with the guidance and counseling material, namely the material or study that will be discussed in the guidance and counseling service activities. This means to look at the subject matter of the media regarding the depth that must be achieved so that the media can be considered suitable for the delivery of the material, (3) suitability of the media with the

characteristics of students. In this case, the media must be familiar with the characteristics of the students or teachers of guidance and counseling, namely reviewing the characteristics of media that will be applied in the implementation of services. This means that the media applied must be in accordance with students. Students who have visual impairment will be difficult to understand the service material presented by the guidance and counseling teachers using video media, (4) suitability with the theory. The media selection must be based on suitability with the theory, which means that the media is selected not based on the fanaticism of the guidance and counseling teachers on a preferred or best media to use, (5) suitability with students' learning styles, namely suitability with students' psychological conditions, that students learning is also influenced by the learning style.

2.6. Video Media

According to Nursalim [2], video media is a media which presents information in the form of audio and visual. The audio element is presented in the form of narration, dialogue, sound effect, and music, while the visual elements were a picture/still image, motion picture, animation, and text. Video media, like other media, has strength and weakness. The strength and weakness of video media according to Nursalim [2] are:

a. Strengths

- 1) Giving messages that can be received by students more equally
- 2) Very good for explaining a process.
- 3) Overcoming space and time limitations.
- 4) More realistic, can be repeated and stopped according to the need.
- 5) Giving a deep impression, which can influence students' attitude.

b. Weaknesses

- 1) The production cost is sufficiently expensive
- 2) The making requires lots of time and energy
- 3) Requiring a particular operator to operate

3. Research Methodology

The research was a Research and Development in which its development procedure follows research and development steps as expressed [12], wherein this study limited to 5 stages, namely: (1) determining potential and problems, (2) collecting data, (3) product design, (4) design validation, and (5) product design revisions. The subject of validation consisted of three experts, namely Indonesian linguists, educational technology experts, and expert in guidance and counseling. Data collection in this study used a questionnaire. The collected data are then processed in qualitative descriptive analysis to find and describe the eligibility of learning motivation video products that have been developed.

4. Research Finding and Discussion

4.1. Research Finding

This developmental research created a video product of learning motivation as media of guidance and counseling services to improve learning motivation of high school students. The development of a product of learning motivation video was performed through the following stages:

4.1.1 Stage 1: Determining potential and problem

Based on the results of the initial survey of high school students, especially in Gorontalo City, there have been found students who have low learning motivation where if no attention is given to this case, it will have an impact on the low learning outcomes they achieve. The low motivation of student in learning can be improved through guidance and counseling services, due to the guidance and counseling services in schools are aimed to optimally develop students in various aspects, including aspects of learning. In high school in Gorontalo City, guidance and counseling services have been performed to improve student learning motivation, but it is still constrained by the

unavailability of media services that may improve students' interest and attention in following counseling and guidance services to improve students' motivation in learning.

4.1.2 Stage 2: Data collection

Based on the findings of the problem related to the availability of media guidance and counseling services to improve students' motivation, thus the data were collected to clarify the problem. Data collection was performed through interviews with guidance and counseling teachers in high schools of Gorontalo City, supported by observations on the availability of available media guidance and counseling services. Based on interview data and observations, it found that the media used in guidance and counseling services to improve students' motivation in learning was limited to media carts made by teachers and modules. According to the teachers of guidance and counseling, the media does influence the motivation of students to take part in guidance and counseling services conducted by counseling and guidance teachers, in this case, students are less interested in attending services. Based on these data, it is deemed necessary to develop guidance and counseling services media that can engender the interest and attention of students in attending services, namely learning motivation videos.

4.1.3 Stage 3: Product Design

In the development of learning motivation video draft, the following stages were done: (1) designing a script/ learning motivation video scenario by following the procedure of developing the script, (2) casting or selecting actors in the learning motivation video, (3) writing shoot list or list of all shoots to be included in the film/ video, (4) making a schedule for filming, (5) filming or a process of recording scenes that have been written in a prepared scenario first, (6) the process of editing videos from pieces of scenes according to the scenario become a whole story.

4.1.4 Stage 4: Design Validation

- 1) Design validation is started by developing an instrument of expert validation which encompassed: (1) Indonesian linguist, (2) educational technology expert, and (3) guidance and counseling expert.

a) Indonesian linguist validation instruments

Validation of Indonesian linguists aims to validate the language used in dialogue in each scene, seen from the terms of use of good and correct Indonesian language. Specifically, the aspects assessed are: (a) video preliminary, (b) video opening (beginning), (c) video introduction, (d) video content, and (e) video closing.

b) Educational technology expert validation instrument

Validation of educational technology experts aims to assess videos from the aspects of acting actors in the video, suitability between dialogue content and video content, the ability of messages revealed in videos to improve students' learning motivation. Specifically, the aspects assessed are: (a) access, (b) costs, (c) technology, (d) interaction, (e) organization, and (f) novelty.

c) Guidance and counseling expert validation instruments.

The guidance and counseling expert validation aims to validate all parts of the scene in the video as well as dialogue and expressions of supporting actors to convey clearer messages of service. Specifically, the aspects assessed are: (a) suitability with service goals, (b) suitability with the characteristics of guidance and counseling services, media (c) suitability with students' characteristics, (d) suitability with the theory of learning motivation, (e) suitability with students' learning styles, and (f) suitability with supporting environment conditions and facilities.

- 2) Implementing validation and doing revision

After the learning motivation video as a media for guidance and counseling has been developed, the validation instruments are available, and then the next step is expert validation. The results of expert validation of motivational learning video as a medium of guidance and counseling are as follows.

1) Validation result of Indonesian Linguist was showed by following table 1:

Table 1. Validation Result of Indonesian Linguist

No	Aspect	Category			
		Very Appropriate	Appropriate	Less Appropriate	Inappropriate
1	Video Preliminary		√		
2	Video Opening Show	√			
3	Video Introduction		√		
4	Video Content		√		
5	Closing		√		

Based on the results of the Indonesian linguist assessment, there were several suggestions, namely: (1) the use of the Indonesian language should pay attention to the principles of use of good and correct Indonesian. The use of vocabulary still contained non-standard words such as the word "*bikinan* or made". However, it is much better to find another more appropriate vocabulary, (2) less consistent in using good and correct Indonesian. Comments and suggestions were: the dialogue had not fully used good and correct Indonesian, there were dialects, for example, "*Kok*" and "*Sih*", (3) the closing sentence used at the end of dialogue should be delivered by the narrator to convey the contents of the dialogue, (4) every actor, both as students and as teachers, should try to inspire each of his roles, because this dialogue is a medium that is expected to help students having high learning motivation.

2) Validation Result of Educational Technology Expert

Validation result of educational technology expert was shown in the following table 2:

Table 2. Validation Result of educational technology expert

No	Aspect	Category			
		Very Appropriate	Appropriate	Less Appropriate	Inappropriate
1	Access	√			
2	Cost		√		
3	Technology		√		
4	Interaction	√			
5	Organization	√			
6	Novelty	√			

The result of educational technology expert assessment was accompanied by the suggestion which was: the story was too short thus it seemed not being able to improve deep impression at students, in this case, was improving students' learning motivation.

3) Validation Result of guidance and counseling expert

Validation Result of guidance and counseling expert was shown in the following table 3:

Table 3. Validation Result of Guidance and Counseling Expert

No	Aspect	Category			
		Very Appropriate	Appropriate	Less Appropriate	Inappropriate
1	Suitability with goals		√		
2	Suitability with guidance and counseling media		√		
3	Suitability with students' character		√		
4	Suitability with theory		√		

5	Suitability with students' learning style		√		
6	Suitability with condition of supporting environment and facility		√		

Based on the results of guidance and counseling expert assessment, there were following suggestions namely: (1) the duration of the video was too short for only about 5 minutes, thus the duration should be extended (15.20), (2) the narrative in video emphasized the need for students' learning motivation. This role was delivered by guidance and counseling teachers so that there were clear conclusions.

d. Stage 5: Revision of Product Design.

Based on the results of expert validation, revisions were made to aspects in accordance with the input/suggestions from experts, namely Indonesian linguists, educational technology experts and guidance and counseling expert. The revision produced a product "Learning Motivation Video" that has been proper to use as a media for guidance and counseling services to improve learning motivation of high school students.

4.2 Discussion

Based on the results of assessment performed by the three expert validators namely Indonesian linguists, educational technology experts, and counseling and counseling expert, it can be concluded that the video of learning motivation as a medium of guidance and counseling for students is considered proper based on material content, good and correct Indonesian language principles, and the video form thus it is proper to use by guidance and counseling teachers/ counselor as media for guidance and counseling services to improve students' motivation in learning.

Several studies have been conducted on motivational video media, namely: (1) The research finding of Aqidha Nurul Mutmainnah, Rizki Yulidah, Sinta Yuniarti (2017) entitled "Hypermedia-Based Guidance and Counseling Media" showed that the use of hypermedia in counseling and guidance gave students many advantages to find out and find what they need in accordance with learning style, thinking and how to process their own information so as to give confidence to students that they can be independent in encountering developmental times, (2) The research finding of Eko Ribawati (2015) entitled "The Effect of Use of Media Video to Students' Motivation and Learning Outcomes" showed that there was an effect of using video media on students' motivation and learning outcomes in social studies in SMP Negeri 2 Tempeh Lumajang, (3) the research finding of Resky Azis, A. Mushawwir Taiyeb, and Abd Muis (2018) entitled "The Effect of Using Learning Video to Student s' Motivation and Learning Outcomes in Blood Circulatory System Material" showed that students' motivation and learning outcomes learned by Power Point Media are in the high category with an average value of 78.71 and 70.93. Students' motivation and learning outcomes learned with Media Video are in the high category with an average value of 83.79 and 77.17. There was an effect of using Media Video on students' motivation and learning outcomes with a significance value of 0.002 and 0.016.

The research and development that has been conducted have produced a video of learning motivation that has been used properly by the guidance and counseling teachers in performing services to improve students' learning motivation. In accordance with the characteristics of the video, the video can attract attention and improve students' interest, it is expected that the use of this video media can make students' activities in following services to be more optimal. When learning or guidance and counseling activities are active, students will do something [13] or it is associated with activities during the service to the behavior that is developed through the service. Related to learning motivation, thus the use of learning motivation videos as a media for guidance and counseling services will considerably enable students to show behavior as students who have high learning motivation.

5. Conclusion

The results of expert validation which comprised validation of Indonesian linguists, educational technology experts and guidance and counseling expert, have been revised to improve the video media, hence the learning motivation video as a guidance and counseling media for high school students or equivalent was as effective and efficient as possible in its use. In conclusion, the motivational learning video as a media of guidance and counseling for students is considered proper based on the material content, good and correct Indonesian principles, and the video form thus it was proper to use by guidance and counseling teachers/ counselors.

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