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## **Development of Prezzi Media in Landslide Disaster Mitigation Learning in Indonesia**

**(Case Study at SMA Xavarius in Bukittinggi)**

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### **Abstract**

The purpose of this research and development was to develop Prezi presentation media in the learning of landslide disaster mitigation that was feasible to be used in the learning process and to know the effectiveness of media at class X SMA Xavarius in Bukittinggi. This research model used to research and development based on Borg and Gall (1983) development model. The steps used include: 1) initial needs analysis, 2) product development, 3) expert validation, 4) product revision I, 5) field trials, 6) product revisions II, and 7) final product. The result of this research shows that Prezi media in learning landslide disaster mitigation was valid / proper to be used, proved by scoring by media expert 96,84% (valid/worth using); material experts of 89.00% (valid/worth using); student trial test score of 89.53% (valid/worth using); and teacher user experiments of 86.89% (valid/worth using). Suggested of this research for subsequent development are developing Prezi media with other materials and using the 2013 curriculum

**Keywords:** Learning Media, Landslide Disaster Mitigation, Prezi media

### **Introduction**

Learning fun can be created by teachers using appropriate media as a tool to achieve learning objectives. According to Wulandari (2014) the rapid technological development in the world of education today led to the development of learning media is also increased, varied. Therefore, teachers are required to master developing technology in order to create more interesting learning or to utilize the existing learning media. According Hamalik in Arsyad (2011) media utilization in learning can generate new desires and interests, increase motivation and learning stimuli and even psychologically influential to the students. One of the benefits of instructional media in the classroom as a media presentation. Many presentations using innovative learning media will create more effective learning activities today. One of the media can be an innovative alternative is the presided medium in the learning of landslide disaster mitigation. According to Rosadi (2012), Prezi is one of the software of making the presentation online slides. Prezi provides a more free space for pouring creations in making presentation slides rather than powerpoint. Prezi has a look like a mind map, making it easier for students to understand the material about landslides disaster mitigation so that all components or media used in the presentation can be integrated in accordance with the concept. The advantages of Prezi learning media is the zoomable canvas, so it can focus the slide to every sentence with the movement of the slide is quite dynamic and varied. This will make it easier for students to understand the information presented. Ease of Prezi insert images, photos, or videos into the slide also supports the ease in preparing the desired slide presentation (Rosadi, 2012).



Based on observations conducted by researchers at the School Xavarius Bukit Tinggi can be seen that students were feeling difficulties while learning the landslide disaster mitigation. Media presentation used by teachers in the classroom were still using media powerpoint with a very simple view. Teachers still use conventional methods when describing the subject matter of the landslide disaster mitigation. The results of interviews conducted by investigators on several graders Xavarius Bukit Tinggi states find it difficult and less interested in the subject of landslides disaster mitigation. The result of observations conducted by researchers showed that the existing facilities in the classroom were very supportive of teachers in improving creativity in delivering material. There is an LCD projector in the classroom, but there are still many teachers who do not utilize the existing facilities. The development of this media applies and adopts constructivist learning theory embodied in a learning media product. The constructivist theory states that learning should be generative, the act of creating a meaning from what is learned. Differences with the behavioristic that understands the nature of learning as a mechanistic activity between stimulus responses, Constructivist better understand learning as human activities to build or create knowledge by giving meaning in accordance with his experience. Constructivism is actually not a new idea, what is passed in life, it is the set and coaching experience. This causes a person to have a knowledge and become more dynamic (Kartika, 2011).

Media Prezi can be used by students in preparing the knowledge to be obtained by these students about landslide disaster mitigation. The substance of Prezi media is easier for students to understand and support resources of learning utilization. Practical and innovative media are packaged in an attractive can build mental students in building a knowledge-based cognitive maturity structure. While the constructivist learning objectives also confirmed that students can develop the skills of students who have found and become an independent thinker with emphasis on the learning process itself, which the media functions also contributes as a tool to facilitate students in comprehending information. In the presence of prezzi in learning disaster mitigation can improve the ability of students. Therefore this media used the realization, the purpose of this research aimed at the development to develop media presentations Prezi in learning of landslides mitigation in decent used in the learning process and examine the effectiveness of the media at class X SMA Xavarius Bukit Tinggi.

## **Method**

The development of Prezi presentation media using Borg and Gall (1983) development model has been modified according to need, in this research there are seven stages, namely (1) initial needs analysis, (2) product development (3) expert validation, (4) revision product I, (5) limited field test, (6) product revision II (7) final product. Prezi media that have been made need to be validated and tested the validity. Prezi media by using the content validation performed by the validator to complete a questionnaire in order to provide an assessment of the products which have been made. Expert validation was obtained while the material of data from teachers a geography at SMA.Xavarius Bukit Tinggi in this Prezi media development using one test was limited field trial (the teachers and students). Teacher user trial data obtained from SMA geography teacher Xavarius Bukit Tinggi. Field trials were 33 students at class X IPS 2 SMA Xavarius in Bukit Tinggi. Trial design in the development of this media using pre-post experiment, data collection instruments was done by using a questionnaire. Data analysis techniques of expert validation and testing using descriptive analysis and percentage, namely the means used to change the quantitative data into the form of a percentage then interpreted in the form of sentences that are qualitative. While the data analysis to determine the effectiveness of Prezi media using paired samples t-test.



**Table 1.** Eligibility Criteria Product

Percentage	Description
80%-100%	Valid/ Worthy
60%-79%	Simply Valid/ Fairly Eligible
50%-59%	Less valid/ Less Feasible
<50%	Invalid/ Not Eligible

If the results obtained from minimal validation has reached 60% -79%, then the media presentation of Prezi already be used as a medium in learning activities, such as the percentage of the media said to be quite valid. Conversely, if the result obtained is less than 60%, then it is considered less valid Prezi media so that the necessary revisions to improve to be eligible to be used in learning activities.

## Results and Discussion

### Needs Analysis

Needs analysis in this development was done by researcher through observation and interview to geography teacher and some students of class XI IPS 2. Based on the result of observation and interview, the researcher finds that the school still use KTSP curriculum in learning activity of landslide disaster mitigation delivered by the teacher at researchers carry out research in SMA Xavarius Bukittinggi. Delivery of geographic material landslide disaster mitigation by the teacher still use the lecture method and do not use them. The non-media lecture method used by teachers in the classroom makes the students less active and less interested in teaching and learning activities. Students at class XI IPS 2 tend to prefer interesting than the lessons commonly used by teachers in the classroom. After the observation and interviews of geography teachers and students in SMA Xavarius BukitTinggi then the development of Prezi media is expected to improve the effectiveness and quality of learning in the activities of learning geography in class.

### Product Development

Product development consists of planning to formulate products that containing grains of material was done by looking at the syllabus that has been made by SMA Bukit Tinggi Xavarius. Researchers also collect some relevant sources to support the material to be developed in this media. Next stage was a manufacture of the product, an application to create Prezi media was an online application that can be accessed in [www.prezi.com](http://www.prezi.com). In making the presentation Prezi media researchers to share some views, among others: the initial display, display materials, display instructional videos, and view exercises.

#### *Initial View*

Display media opening the home page is beginning to see that the title and the general look of the material to be delivered. This aims of this page to let users know the material that will be presented in the media geography learning. There are some preliminary views on Prezi media for landslide mitigation material. At the beginning of this Prezi presentation in the media, users can see the overall teaching materials to be delivered. At the beginning of the display will be seen title material along with all the material display, if the user wants to continue to see the basic competence and teaching materials, the user must press the "next" is on the display.

#### *Content View*

On this page, the user can open the content in accordance with the steps that have been made, by pressing the "next" then come out to see. Here's one view of material in Prezi media.

*Display Exercise*

At the end of the display, Prezi media presentation was given exercises to students. Views exercises made as attractive as possible so that students are motivated to work on the problems. Here's the display of exercise questions that exist in Prezi media. The next step was the validity test that involves two validators namely the validation of the media expert and the validation of the material expert. Here was the quantitative data obtained from the validation of the media and material.

**Table 2.** Quantitative Data of media competence expert validation

Competence	Percentage	Validity criteria
Technical quality	100%	Valid
Presentation	93,33%	Valid
Interactivity	93,33%	Valid
Exercise	100%	Valid
Others	100%	Valid
<b>Average</b>	<b>96,84%</b>	<b>Valid/ can be used</b>

**Tabel 3.** Quantitative data of Material Expert Validation

Competence	Percentage	Validity criteria
Presentation	92%	Valid
Interactivity	90%	Valid
Feedback	80%	Valid
Exercise	80%	Valid
Others	100%	Valid
<b>Average</b>	<b>89,00%</b>	<b>Valid/ can be used</b>

Based on test results validation of media experts from table 2, obtained an average of 96.84% and it can be concluded that the Prezi media that has been developed by researchers valid and can be used in the process of geography learning. The validation of the material obtained an average percentage of 89.00 % and it can be concluded that the Prezi media, which has been developed by researchers valid and eligible for use in the learning process Geography. The next stage was a trial of students and teachers. The material used in user trials was landslide disaster mitigation. User trials were conducted to determine the feasibility and attractiveness of products generated based on the user's perspective of teachers and students. The following was the quantitative data obtained from trials of student and teacher users.

**Table 4.** Trial Data of Student User

Competence	Percentage	Validity criteria
Technical quality	92,10%	Valid
Presentation	88,56%	Valid
Interactivity	84,80%	Valid
Feedback	87,20%	Valid
Effectiveness	89,60%	Valid
Exercise	87,80%	Valid
Others	89,83%	Valid
<b>Average</b>	<b>89,53%</b>	<b>Valid</b>

**Tabel 5.** Trial data of teacher user

Competence	Percentage	Validity criteria
Presentation	90,00%	Valid
Interctivity	80,00%	Valid
Feedback	80,00%	Valid
Effectiveness	87,10%	Valid
Others	93,33%	Valid
<b>Average</b>	<b>86,89%</b>	<b>Valid</b>

From table 4 can be seen the highest percentage was the aspect of technical quality as 92,10% and the lowest percentage was the interactive aspect as 84,80%, the average obtained from user trial was 89,53% in students user aspect. The results of the experimental data obtained teacher in Table 5 was the highest other aspects of 93.33%, the lowest score on the aspect of interactivity and feedback gained by 80% and the average of the test was obtained for 86.89% of teachers so that they can conclude that the media have been developed Prezi was eligible for use in the process of learning geography. Learning is a concept of two dimensions activity (learning and teaching) that must be planned and actualized and directed to the achievement of goals or mastery of a number of competencies and indicators as a picture of learning outcomes (Majid, 2013). Exciting learning can be created by teachers using the appropriate learning methods and the use of learning media as a tool to achieve learning objectives. Nowadays, a computer and communications technology have grown rapidly, teachers are required to master technology in order to create exciting learning by utilizing technology.

Hamalik *in* Arsyad (2011) states that the use of media in learning can generate student motivation. One type of media in the classroom is a presentation. Many media presentations that can be used at this time, presentations using innovative instructional media will create a more effective learning activities. Media presentations can also help teachers to deliver learning materials to make it more attractive. One application of innovative alternative presentation media is Prezi. Prezi is a presentation slide creation software online. In contrast to the power point, Prezi provides a more free space for express creations in presentation slides. Prezi media is superior to powerpoint because uses zooming user interface, allowing Prezi users to zoom in and out on presentation. It has a look like a mind map, making it easier for students to understand the material presented, so all components or media used in the presentation can be combined in accordance with the concept (Rosadi, 2012).

The products resulting from the research and development of this form of media that can be used Prezi presentation in geography learning activities. These products have been through the revision process based media expert validation, validation of subject matter experts and user trial of students and teacher. Based on data obtained from paired sample T-test it is known that there were differences in student learning motivation before and after learning using Prezi. This media also have a deficiency that is for the size is too large, large up to 100 MB. If you want to present media results without an internet connection (offline), users must save filter for the first in the form. Rar then extracts into Prezi files. Teachers who use this medium are expected to operate a computer.

Prezzi is a presentation application that we can use to make online or offline more interesting so that the ideas we have more easily in the learning landslide disaster mitigation such as, understanding landslides, types of landslides, the symptoms of landslides as well as actions taken in landslide mitigation. The advantages of using Prezi in the subject of landslide disaster mitigation are as follows: 1) make presentation online and offline 2) make it possible presentation with one canvas 3) using circular system or called path used to manage one other objects in the canvas, the displacement does not occur linearly but can appear zooming effect, 4) provides facilities to insert images, video and some shapes included in the diagram5)



provides an interesting display for import facilities to convert content in powerpoint and Prezi , 6) allows for edits wherever and whenever. According to (Rosadi *in* Rodhi, 2014), Prezi is programmed for displaying visual media, audio, and animation. Prezi application program is also a unique medium for which there is a very different form of the presentation in general. Prezi media focus on a single field of the play called virtual canvas. Afterwards, the user can explore parts of the section the canvas to the smallest part, so the main concept to be conveyed clearly. The use of Zooming User Interface (ZUI) facility makes the presentation look dynamic because it can be minimized, enlarged and even rotated 3600. In addition, Prezi is an adobe water-based application, so video and flash animation can run lighter than when using powerpoint, initially this application only can be used online, but currently, users can already use this offline with the launch of Prezi desktop.

In using Prezi based media with landslide mitigation material (Hartuti, 2009), is the sudden transfer of a plot of land in large quantities, usually in the rainy season. It's line with Heinich *et al* (1982) who argued the medium term as an intermediary that transmits information between the source and the receiver (Arsyad, 2013). The opinion gives the sense that the media has a role or function as an introduction to the information or message. Gerlach and Elly (1980) stated that the media is a chart, graph photo, electronic or mechanical devices to presenting, projecting, and explain verbal or visual information. So, graphics, photographs graphics, electronics, television, movies, photos, radio, recording, and the like is a medium of communication (Padmono, 2011). We can conclude that instructional media is everything whether it be people or things that can be used to notice the information from the communicator to the communicant which allows students receive the knowledge, attitudes, or skills. From that sense, it can be said that teachers, lecturers, teaching materials, and the environment is a medium of learning.

Prezi is an Internet-based presentation software. In addition to presentations, Prezi can also be used as a tool to explore and share ideas on virtual canvas. Prezi is superior Zooming User Interface (ZUI) which allows users to zoom in or out on their presentation media. Prezi is used as a tool for making presentations in both linear and nonlinear form. In Prezi, text, images, or video and other media are placed on canvas presentation and can be grouped into frames that have been provided. The user then determines the relative sizes and positions between all presentation objects and can surround and can highlight those objects. To create a linear presentation the user can build a predefined presentation navigation path.

## **Conclusion**

Prezi created media has been used as a tool worthy teacher in the G class because it has been tested for validity and user testing of students and teachers. Prezi media feasibility assessment based media expert with an average percentage of 96.84%, a material obtained an average of 89.00%, a student user trial gained an average of 89.53%, the test users gained an average teacher 86, 89. The researcher suggests that Prezi presentation media can be used maximally, that is Prezi media usage should not be separated from monitoring and teacher guidance. So that the learning process goes smoothly teachers should have studied this presentation media beforehand, the operation of the media are advised Prezi support tools such as LCD and speakers and it caused the sound can be heard clearly in the video. Some suggestions further product development is a product made only to certain materials that landslides disaster mitigation, therefore it is advisable to further research to be developed, it still using the curriculum KTSP, further research is expected to develop media Prezi with 2013.



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