

## **An Needs Analysis of The Development of The Thematic E-Module by Using Savi Approach**

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### **ABSTRACT**

Online learning during the Covid-19 pandemic experienced several obstacles, one of which students have difficulty following asynchronous learning. The purpose of research to analyze the need for the development of the thematic e-module based on SAVI approach with the assistant of the Sway application. This research is a R&D 4D model development which is limited to define stage. Research Respondents are 29 Grade 5 teachers in Bendosari District, Sukoharjo District selected by Stratified Random Sampling. The time of preparation was conducted in November 2021 to March 2022. Data was taken through questionnaires, interviews, and literature studies. Test valuation of data using credibility test and confirmability test. Technique of data analysis are using Miles and Huberman model consisting of data reduction, display data, and conclusion / verification. Based on the results of data analysis in the concerned there is a need for the development of thematic e-module with SWAY-assisted SAVI approach to accommodate various student learning styles: Somatis, Audio, Visual, and Intellectual as an alternative of asynchronous learning.

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### **1. INTRODUCTION**

Government Regulation No. 19 of the National Education Standards (SNP) stating that the learning process in the educational unit is organized interactively, inspirational, fun, challenging, motivating students to active participation and provide sufficient space for initiative, creativity, and independence in accordance with the talents, interests, and physical development and psychological students. Pandemic Covid-19 of 2019 to 2022 makes the implementation of learning should be implemented online and experience various gaps / problems. Research by Nurjanah (2021) finds online learning issues: unstable internet network, only some students have smartphone facilities,

limited internet access packages, students difficulty to understand learning materials, and low student learning motivation.

Online learning constraints also occur in Bendosari District, Sukoharjo District. Based on data collected with questionnaire instruments in 29 sample of the Bendosari group of teachers at 2022, students have difficulty following synchronous learning due to limitations of facilities and internet quotas for on camera routine to schedule. Synchronous learning is online learning that presents teachers and students directly so that there is two-way communication (Ahmad Saeroji, 2022). Based of the interview, students had been through difficulties of synchronous learning caused time. Data shorts and interviews stated there was a teacher's need for interesting, easy accessible, and easy-to-market learning resources. Biggest question of these problem is solution to do online learning for non-synchronous learning with limitations of facilities and internet quota while fulfill teacher needs. The goals of this research is to finding best learning source design based of Bendosari District online learning problems during Covid-19 pandemic.

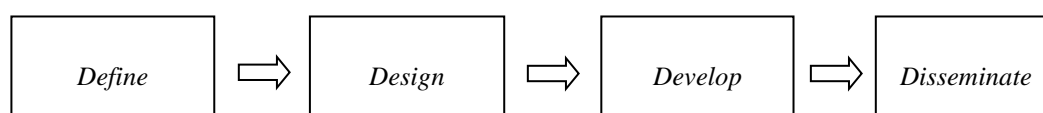
The alternative solution is online learning that does not present teachers and students directly or is called asynchronous learning. All the teaching materials are prepared by teachers and accessible to students without limited places and time. The alternative media that can be used is Sway, a Microsoft's digitalstorytelling app that was launched in 2014. Sway is not paid and can be used by teachers to create e-module learning. Accessibility online so do not burden the smartphone storage space and accessible in anytime and anywhere.

The presentation of material on teaching materials requires design to keep its grooves easy to understand. SAVI Learning Model (Somatic, Auditory, Visualization, Intellectual) was introduced by Dave Meier. The main concept of learning should involve all of the students sense, so this learning model facilitates the learning styles of different students in various subjects. Princess et al., (2019) states that the result of learning the application of SAVI's learning model is higher than the Direct Learning model. Abidin, N.D. (2019) states that students who learn with SAVI approaches are better than conventional approaches. With the advantages of the Sway app and SAVI learning model, it will be a positive collaboration to support teachers in online learning. Therefore, the researcher conducted a survey of the needs in the field as an initial stage of thematic e-modul developing with the SAVI approach.

## 2. METHODS

This type of research is Research and Development (R & D). The development model is used 4D: Define, Design, Development, and Disseminate. Research is limited only to define stage. Here's the design of the 4D development model:

Picture 1.1 Design of the 4D Development Model



The initial stage in this 4D model includes collecting activities and analyzing data to know the developmental urgency of the car. In the context of this research, the define stage to analyze the need for the development of the themed e-modulates based on SAVI's profile of Sway assistant app. Researchers use the help of previous research, literature studies, and new data collection. The result will be used as a basis in doing product development. The time of research implementation took place in January - March 2022. Research Respondents is 29 Grade 5 teachers in Bendosari District of Sukoharjo District. The object of research is the need for the development of the thematic e-module with a Sway-assisted SAVI approach. Researchers chose Bendosari's district because there has never been a similar study before in the agency.

Data is taken with questionnaires, interviews, and literature studies. The survey data-taking instrument needs by using the questionnaire via Google Forms with Guttman Scale. The Guttman scale used in the form of answer options "yes" or "no". The respondent's answer was confirmed using the interview. Literature studies use previous studies and relevant books. The data is then integrated with technical triangulation.

Validity of the data research is known through 2 tests. Test credibility test is the test of trust to the results of qualitative research through technical triangulation. The confirmability test is the objectivity test of the results of the research with the indicator that the results are agreed by experts, in this research: Dr. Djalal Fuadi, MM., Dr. Anatri Desstya, M.Pd., and Yeny Prastiwi, S.Pd., M.Hum., Ph.D. The last stage is interesting the conclusion of the research that has been done.

### 3. FINDINGS AND DISCUSSION

#### 3.1. Result

Researchers took data from 29 respondents of fifth grade teachers in Bendosari District. The instrument used is a google form containing 22 questions. Aspects of the question include: problems that encourage product development, the needs for product development, and product development potential.

**Table 1.1 Questionnaire question**

No.	Question	Yes (%)	No (%)
1.	Does the teacher can carry out the online learning ?	100	0
2.	Do all the students using their smartphone to following the online learning?	55,2	44,8
3.	During the covid-19 pandemic teachers are doing the online learning with the help of Zoom, Google meet, or Webex applications?	41,4	58,6
4.	Does the majority of the students can follow synchronous online learning?	48,3	51,7
5.	Whether during the Covid-19 pandemic the teachers do the online learning asynchronous by using YouTube assistance, video recording, web, e-module, or Whatsapp?	93,1	6,9
6.	Does the majority of students can follow synchronous online learning?	62,1	37,9
7.	Does the teacher can used Sway Applications to implement the online learning?	51,7	48,3
8.	Is the smartphone that is used by the students belonged to their parent?	100	0
9.	Will the majority of students be able to follow the study on a school schedule each day? example: 7:00 a.m. to 10:00 a.m.	34,5	65,5
10.	Is the majority of parents students are able to provide Internet quota to do online learning that requires 'on camera' during school schedule? example: 07.00 a.m until 10.00 a.m	34,5	65,5
11.	Does the teacher ever use the somatic media when online learning? example: torso, IPA kit tool that can be held.	65,5	34,5
12.	Does the teacher ever take advantage of audio media during online learning? example: the sound recordings that the student can hear.	96,6	3,4
13.	Do teachers ever use visual media during online study?	100	0

	examples: text, pictures, PPT, soundless videos that students can see.		
14.	Does the teacher ever use the intellectual media when online learning? example: experimental equipment that can make students think and conclude the results.	79,3	20,7
15.	Do teachers ever use the collaboration of somatic, audio, visual, and intellectual media during the online learning?	86,2	13,8
16.	Do teachers need more than one study source?	93,1	6,9
17.	Does the module become one of the study sources that is the teacher used?	72,4	27,6
18.	Do students' parents mind buying additional modules as additional learning resources outside of need for books and LKS?	34,5	65,5
19.	Does it need to be an e-module that you can create by the teacher and accessible to students for free and easy to support online learning?	100	0
20.	Could an e-module possibly be one of the easy and cheap online learning resources for both teacher and student?	100	0
21.	The Sway application is the new application from the Microsoft Office that makes it easy for anyone to make and share interactive reports, stories, and presentations, and a lot of other things free of charge. Are you willing to use the e-module by using Sway application?	93,1	6,9
22.	The SAVI learning model is a learning model that accommodates a variety of student learning styles. Would the teacher be willing to use somatic, audio, visual, and intellectual (SAVI) e-modules?	96,6	3,4

### 3.1.1 The Problem that Drives Product Development

The problems arising on online learning are still technical. 55.2% of teacher respondents said that all the students in their class use smartphones to follow online studies while those with no more than 44.8%. Based on the interview, Mrs. Setya Ratna Dianuri (fifth grade teacher) states that this is because some students use other media in the form of laptops, tablets, or even not following online learning.

All respondents claim that 100% of their students use their parents' smartphones. The majority of students cannot keep up with learning on a school schedule by 65.5% each day while others can do as much as 34.5%. Mrs. Yani Dwi Hastuti, as a fifth grade teacher, states that the reasons for students not being able to follow the online learning are on a routine basis because the smartphone from their parents is being brought to work at different work hours. The amount of money it takes to buy quotas is a problem for disadvantaged students. Parents who can afford to provide the Internet quota of only 34.5%.

### 3.1.2 The Needs for Product Development

93.1% of respondents agree that they need more than one source to learn while carrying out online learning. 72.4% of respondents stated that modules become one of the learning resources used. Mrs. Yani Dwi Hastuti claims that his teacher module was acquired from various publishers in several years. But not all parents agreed to purchase student modules out of mandatory textbooks due to urgency when the pandemic. That fact drives 100% of teacher respondents to say they need self-created e-modules that are easily and freely accessible to students to support online learning. As many as 100% of respondents also thought the e-modules might be one of the easy and inexpensive

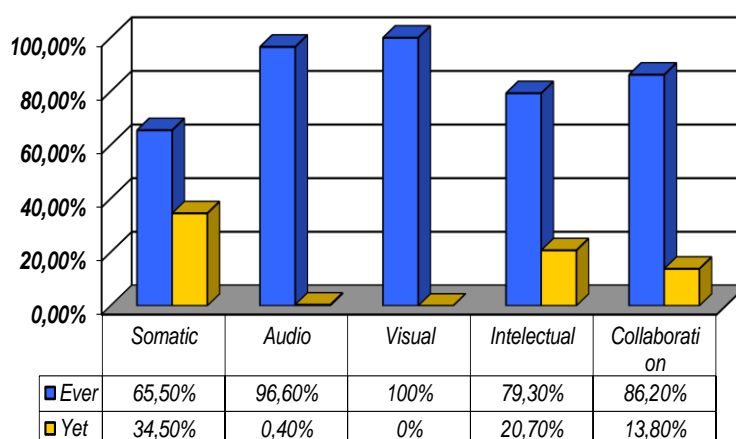
online learning resources for both teachers and students. The data above provides evidence of potential e-module development in bendosari district. 96.6% of teachers are available and are willing to use somatic, audio, visual, and intellectual (SAVI) modules in online learning.

### 3.1.3. Product Development Potential

A hundred percent of teacher respondents say they can carry out online learning. During the Covid-19 pandemic, teachers synchronous online learning at 58.6% while at less than 41.4%. Applications used such as: Zoom, Google meet, or Webex. The majority of their students can synchronous online learning by 51.7% and which is not 48.3%. There were also teachers who performed asynchronous online learning at 93.1% and not at 6.9%. Applications used such as: youtube, video footage, web, e-modules, or Whatsapp. It is known that the majority of students can participate in asynchronous online learning by 62.1% while at no. 37.9%. The results of Agustin et al research (2021) also point out that the practice scores 90% of all that is blocked by gadgets and Internet. It can be inferred that students can follow asynchronous learning more than synchronous.

Questionnaire data states that teacher respondents are accustomed to using a variety of media on online learning, such as: somatic, audio, visual, and intellectual media. Descriptions of the spread of media use by teacher respondents are shown on the following diagram:

**Diagram 1.1** Use of a Kind of Media by Teachers During Online Learning



Based on the diagram above, 65.5% of respondents once made use of somatic media, such as: the student can hold torso and science kit. At one time 96.6% of respondents made use of audio media, such as: audio recordings that students can hear. All teachers have used visual media, examples: text, pictures, PPT, silent videos that students can see. 79.3% of respondents have also used intellectual media, such as: experimental devices that can cause students to think and deduce results. An 86.2% of respondents have already made use of somatic, audio, visual, and intellectual media collaboration during online learning. The data above shows that teachers have the basic ability to use the e-module help sway application with the SAVI approach, where the design of the e-module combines four types of media. Even the number of teachers able to use the Sway application is 51.7%.

### 3.2 Discussion

The principle of learning is doing. Doing to change behavior. That is why learning will not happen if there is no learning activity. Rosseau in Sardiman (2016) states that all the knowledge should be obtained by their own observations, their own experience, its own investigation, by working alone, with its own created facilities, both spiritually and technically. Paul D. Dierich in Sardiman (2016) explains that student activities are classified into: visual activities, oral activities, listening activities, writing activities, drawing activities, motor activities, mental activities, and emotional activities. The more learning activities undertaken by the students, the students will know

the more knowledge. UMS (2013) quotes from the Grinder (1991) research proves that of each group containing 30 students, as many as 22 students can learn effectively when teachers provide visual, auditory, and kinesthetic activities at once. This research proves that the majority of students love learning with various methods and strategies. Therefore, learning should be done by involving multi-sensory and filled with various variations, both methods, techniques, strategies, and media.

Based on the problems, researcher take a bold line: that teacher and student needs to do online learning for non-synchronous learning with limitations of facilities and internet quota while fulfill teacher needs about interesting, easy accessible, and easy-to-market learning resources. There are many researcher had been doing relevant research. Arzfi et al. (2021) did RnD that develop literature-based integrated thematic learning source using Sway for fifth grade student but didn't include multi learning style aspect. Lestyanto (2021) developed online LKPD guided discovery-based using Sway for prism and pyramid but without any learning model. Merliana et al. (2021) who did research about Sway as learning media only for Sosial Science for elementary school grader. Fajriah, L., Nurfitriani, M., & Permana, R. (2020) researched SAVI learning model affect to student's mathematics learning achievement only. Gandasari, N. (2021) researched of Problem-Based Learning model using Sway affect to student's PPKN learning achievement only. The last three are only focusing on one course, meanwhile Curriculum 2013 for elementary school is held with thematic system, not for one course only. Causes of this research is focusing on identifying problem learning at teacher and fifth grade student at Bendosari District and designing the solution, so researcher made the best solution: designing development of e-modul thematic that combine thematic course, Sway, and SAVI learning model which suitable for fifth grade student.

The e-module development plans are presented with SAVI approach. SAVI stands for: Somatic which means body movement (hands-on, physical activity) where learning by experiencing and doing something; Auditory means that learning must be by listening, paying attention, speaking, presentations, arguments, expressing opinions, and responding; Visualizes meaningful to learn to use the eyes of the eye through observing, drawing, demonstrating, reading, using media and props; Intellectual meaning that learning must use thinking ability (minds-on) and with mind concentration and practice using it through the fence, investigate, identify, discovers, created, constructing, solving problems, and applying (Ngalimun, 2012). Steps of Learning Model SAVI according to Meier (Rusman, 2012) namely: 1) the preparation is preparation to stage the students to learn, 2) preparation steps aiming to students help disclosure learning in an interesting and fun, 3) practice to serve the learner integrates and absorb new knowledge and skills in various ways, 4) performance appearance aimed to help learners implement and develop their new knowledge and skills on work so that the length of the stays remain inherent and achievement continues to increase.

Shoimin (2014) said SAVI led the student to build his or her own knowledge through learning that involved physical activity with intellectual activity. Students are trained to get used to thinking, expressing their opinions, and explaining. More enjoyable, interesting, and effective presentation of learning Settings made students concentrate. A variety of students' abilities are increasing: the cognitive, affective, and psychomotor aspects (Udayaran et al., 2020), enhanced student understanding (W. Sari et al., 2017), improving student skills (Victorina et al., 2019), improved learning and developing skills 4C in elementary school (Lestari, 2020), effective on mathematical learning outcomes (Fajriah et al., 2020), improving IPA learning outcomes (Kusumawati, 2018), improving PPKn learning outcomes (Gandasari, 2021), improving motivation of joining english class and speaking ability (S. Lestari & Wahyuni Chatanatanun, 2018). SAVI is also effective as an approach in developing the website media (Istiqomah. A. P. Sari et al., 2019), mathematical materials (Siagian et al., 2020), integrated literacy on thematic teaching materials (Arzfi et al., 2021), online learning media read description (Usman, 2020), and teaching materials of traditional song that is called the Dolanan Song (Endang Sri Maruti and Panji Kuncoro Hadi, 2018) to the results of cognitive, affective, and psychomotor students.

Shoimin (2014) explained that the SAVI learning model had some shortcomings. Application requires thorough learning tools and infrastructure that can cost a lot. Students who are used to passive receive information will find it difficult to build up their own knowledge through this learning model. The above research has not been arably cooperating between the SAVI learning model with the Sway media. With the advantages of these two variables, it is expected that the thematic e-module products become the right alternative to students who are difficult to follow synchronous online learning in the Covid-19 pandemic. Making e-modules using a Sway application can minimize the need for tools and infrastructure. Teachers doesn't need provide additional projector equipment, printed pictures, CD players, or speakers. Sensory, audio, visual, and intellectual content (text, pictures, documents, videos, charts, etc.) may be put on a sway application (Sudarmoyo, 2018) with the help of a laptop, package book, and an unlimited amount of Internet. Specialized sensory media can be obtained from objects around students' homes. A ward's staff would be invaluable in preparing a teacher's ability to better SAVI learning (Arbis, 2021).

Sway can be used in the form of alternative online learning media for reading media for reading is descriptive text (Usman, 2020), online LKPD (Itsnanayah, 2021), to a unified thematic based literation (Arzfi al., 2021) that can be distributed in the form of a easily distributed url link. Zutiasari (2021) states students were posted in and easily posted teaching materials via url and digital teaching materials were equipped with videos, animations, pictures and graphic information to support lecture materials. The media made of Sway is creative, and practical (ardian et al., 2020), effective and satisfying (merliana et al., 2021), interactive and independent (listianah et al., 2022), updates, easy to use, support physics learning with fun, and helps in explanatory activities (khoirun nissa & lorenza dheanti, 2021). Media Sway increases higher order thingking skills in students effectively (age, 2021). Learning self-reliance students after learning the long distance system use Sway is in the self-reliant category (sadat et al., 2021). Better use of learning and motivation than conventional media (poernamasari, 2022). This means that sway can minimize concern for the emergence of a student's passive nature during literacy. Teacher responders express a Microsoft based digital learning training 365 (One Note, Sway, Forehead) according to their need for online learning (Amirullah & Maesaroh, 2020) so thematic e-module with SWAY-assisted SAVI is effective and easy to use as alternative media at online learning.

#### 4. CONCLUSION

The conclusion of the research is some of the problems of implementation of online learning, one of which students struggle to follow the synchronous learning regularly. Triangulation of the technique demonstrates the need and potential for developing a handy, cost-effective, and practicaly module of the bendosari district, sukoharjo. E-module are designed with a SAVI approach to accommodate a variety of student learning styles: somatic, audio, visual, and intellectual. It is hoped that the development of an e-thematic module can be an alternative to the online learning of asynchronous for students who struggle with synchronous learning on a regular basis. Limitation of the study is Sway is online based application, it is not provided in offline mode. Subject of the research are 5<sup>th</sup> grade students, lower grade students could have different result. It is best for each teacher to conduct an evaluation of the learning that has been performed in order to identify the problems and obstacles students face, so that the teacher can formulate appropriate solutions to overcome them for the success of learning. Researcher recommending to every education researcher and teacher to keep in touch with development of technology and try better feature application, such as offline mode, for future studies of learning source or learning media.

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