Website-Based Learning Media Using Weebly Water Cycle Material for Elementary School Teachers

Lebyana Norma Belinda[1*], Yunus Abidin[2] , Dede Trie Kurniawan[3] , Harmawati[4] (iD)

[1,2,3] Universitas Pendidikan Indonesia, Bandung, Indonesia
[4] Prodi PGSD, Universitas Buana Perjuangan, Karawang, Indonesia

A R T I C L E I N F O

A B S T R A K

Kegiatan pembelajaran abad 21 siswa mudah bosan dengan pembelajaran yang monoton. Media pembelajaran yang digunakan masih bersifat tradisional sehingga tidak mengikuti perkembangan zaman. Tujuan penelitian ini untuk menganalisis media pembelajaran berbasis website menggunakan weebly materi siklus air untuk guru SD. Jenis penelitian yang digunakan adalah penelitian survei dengan metode penelitian kuantitatif. Subjek pada penelitian ini yaitu 100 guru sekolah dasar. Teknik pengumpulan data pada penelitian ini yaitu menggunakan kuesioner. Teknik analisis data yang digunakan adalah Structural Equation Modeling-Partial Least Square (SEM-PLS) dengan software yang dimanfaatkan menggunakan aplikasi SmartPLS 4.0. Hasil penelitian menunjukkan Facilitating Condition (FC) memberi pengaruh positif serta signifikan terhadap Behavior Intention (BI) dalam penggunaan media pembelajaran berbasis website untuk Guru SD. Hedonic Motivation (HM) memberi pengaruh positif serta signifikan terhadap Behavior Intention (BI) dalam penggunaan media pembelajaran berbasis website untuk Guru SD. Social Influence (SI) memberi pengaruh positif serta signifikan terhadap Behavior Intention (BI) dalam penggunaan media pembelajaran berbasis website untuk Guru SD. Simpulan penelitian yaitu media pembelajaran berbasis website menggunakan weebly memberi pengaruh positif untuk guru sekolah dasar. Implikasi penelitian ini yaitu media pembelajaran website dapat menyesuaikan gaya belajar siswa yang berbeda-beda, karena terdapat berbagai macam media sesuai dengan kebutuhan siswa.

A B S T R A C T

21st-century learning activities: Students quickly get bored with monotonous learning. The learning media used is still traditional, so it needs to keep up with the times. This research analyzes website-based learning media for elementary school teachers using Weebly water cycle material. The type of research used is survey research with quantitative research methods. The subjects in this research were 100 elementary school teachers. The data collection technique used in this research is a questionnaire. The data analysis technique used is structural equation modeling-partial least square (SEM-PLS) with software using the SmartPLS 4.0 application. The research results show that Facilitating Conditions (FC) positively and significantly influence Behavior Intention (BI) in elementary school teachers' use of website-based learning media. Hedonic motivation (HM) positively and considerably influences elementary school teachers' behavior intention (BI) using website-based learning media. Social Influence (SI) positively and considerably influences behavior Intention (BI) in using website-based learning media for elementary school teachers. The research concludes that website-based learning media, using Weebly, positively influences elementary school teachers. This research implies that website learning media can adapt to different student learning styles because various media types are appropriate for student needs.

1. INTRODUCTION

Education is the most important part of a person's life (Widayanti & Yuberti, 2018; Wu et al., 2020). Education is a process aimed at influencing students in such a way that they can adapt to their environment as best as possible (Yusandika et al., 2018). Education is a place for learning. Therefore, education must continue to develop to achieve better quality than before. Education in Indonesia

continues to change along with the times. The development of the world of education with its various updates is expected to improve the quality and quantity of education. With the help of education, the nation's next generation will be produced with intelligent and qualified individuals. This means that a generation can take maximum advantage of the existing progress (Fitriyani & Solihati, 2022). The quality of education in Indonesia lately is very concerning because the problems in the Indonesian education system cause poor education, such as a weak education management sector, gaps in educational facilities and infrastructure, and weak learning assessment standards. The development of technology and information, especially in Indonesia, is very dynamic and affects all sectors, such as the economy, health, society, and, of course, the education sector. The development of professional ICT competencies by teachers still faces many obstacles due to limited time, facilities, resources, and human resources available, even though teachers have the knowledge, skills, and innovative attitudes for the correct use of ICT. for the benefit of students (Siregar & Marpaung, 2020; Tika & Agustiana, 2021). Educators are often reluctant to follow changes and fear new information technologies. Educators refuse to deal with technological innovations if the technology is not related to the problem of completing assignments. In the 21st century, students are easily bored with monotonous and boring learning media. With the rapid development of technology, students can easily find the information they want (Indarta et al., 2022; Ningtyas & Sihombing, 2023). If the media used by the teacher is not innovative, then students will not be interested in the learning that will be discussed. Therefore, innovative technology-based learning media are needed to support student learning in the classroom.

The solution to overcome problems is using learning media. Learning media is a communication tool teachers use to convey material to students. Learning media will make learning more effective and efficient (Nurrita, 2018; Silalahi, 2020). For learning media to be utilized effectively, a media source that can support the learning process both in class and independently, such as the web, is needed. In this 21st century, technology is increasingly developing, especially in education. The use of technology needs to be implemented. Websites are part of a technology system that can support learning (Safi & Singh, 2023). So that educators can develop websites as learning media. This web-based application is a mobile resource that can be accessed anytime, anywhere, and on any device (Afnan et al., 2022; Nalasari et al., 2021). Website-based learning media can create a fun learning process for students. Web learning media or e-learning is popular because of its flexibility and effectiveness in delivering online learning materials (Adedoyin & Soykan, 2023; Nurrohma & Adistana, 2021). With the internet, all access can be achieved easily, effectively, and efficiently. Internet facilities should be used to consult on learning problems, give assignments, evaluate, and create interactive service activities between students and teachers. However, these media still need to be expanded to secondary and higher education. In basic education, online learning media are still limited to online worksheets and online learning assessments (Anindita et al., 2022; Dharma & Agung, 2021). Thus, innovations are needed in online learning media based on websites for elementary schools.

The findings of previous research on the use of learning media using Google Sites can make students interested and comfortable during the learning process (Adzkiya & Suryaman, 2021; Nugroho & Hendrastomo, 2021). Google Sites' web-based learning media is suitable for learning activities in the f(Salsabila & Aslam, 2022). Google Sites learning media has been accepted and declared feasible by media experts, material experts, and sociology teachers. Google Sites-based learning media to improve the ability to master concepts and critical thinking of high school students is feasible, effective, and efficient so that it can be applied in the learning (Allahawiah et al., 2023; Nugroho & Hendrastomo, 2021). Based on previous research, this study uses website-based learning media. This study uses Weebly, a website-based learning media platform. Weebly is a tool for creating free widget-based websites that allow users to create pages by clicking, dragging, and dropping different page elements such as images, text, interactive content, and others to the page and filling in the content.

There are many advantages to using Weebly. Because Weebly provides a free subdomain for users without time limits, creating a website with Weebly is easy, even if the user has never created one. Weebly's appearance can be developed and created easily. This Weebly-based media is more flexible and can be accessed anytime and anywhere. Weebly-based interactive learning media can be adjusted to various devices and operating systems; its appearance and performance will automatically adjust to the device. In addition to these reasons, the advantages of Weebly-based interactive learning media are that students do not need to log in to access, do not require storage space because Weebly-based media does not need to be downloaded like Google Classroom, Zoom meeting, or others, and the access costs are certainly much cheaper than other media. With the existence of website-based learning media using Weebly, teachers no longer need to increase lecture techniques in the learning process because interactive learning media based on Weebly already contains learning objectives, materials, and practice questions accompanied by a work submission column that is directly connected to the teacher's email and a

comment column as a place for discussion and contains several interesting games. This learning media can provide a place to load student work, which can later be used as a student work gallery media. This will trigger students to create a work so that teachers are helped with assignments. Website-based learning media using Weebly can contain several learning media, such as podcasts (voice recordings), infographics, slides, and games. With this website-based learning media, it is easier for teachers to teach according to the different learning styles of students.

2. METHOD

The type of research used is survey research using quantitative research methods. Quantitative research methods can be interpreted as research methods based on the philosophy of positivism, which studies a particular population or sample and collects information through research tools; the analysis is quantitative/statistical, the purpose of which is to describe the given hypothesis and testing (Sugiyono, 2018). The survey method is a quantitative research method that collects past or current information about beliefs, opinions, characteristics, and behavioral variables. It also uses samples to test several hypotheses about social and psychological variables (Sugiyono, 2018). The subjects of this study were 100 elementary school teachers from West Java Province. The data collection technique used in this study was a questionnaire. The questionnaire measurement scale was made into questions using a 4-point Likert scale, namely 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. The questionnaire consists of three parts: the part about filling instructions, the part about teacher identity, and the content section. In the content section, the questionnaire consists of statements of research variables related to aspects. Performance Expectancy, Effort Expectancy, Social Influences, Facilitating Condition, Behavior Intention, ICT Usage Habits (IUH), Perceived Learning Opportunities, and Hedonic Motivation. The statements made using Google Forms are sent online to West Java province elementary school teachers. The instrument grid is presented in Table 1.

Table 1. Instrument Grid

No	Statement
A	**Performance Expectancy (Shukla, 2021)**
1	Web-based multimodality learning media improves my teaching quality
2	Teaching using web-based multimodality learning media improves my productivity
3	I found that web-based multimodality learning media helps me when teaching elementary school materials
4	I believe that using web-based learning media will increase the effectiveness of my learning process
5	I assume that using web-based media helps me make it easier to prepare for teaching
B	**Effort Expectance**
1	It is easy for me to teach using web-based multimodality learning media
2	I find that web-based multimodality learning media is easy to use
3	Using web-based multimodality learning media for teaching does not require much preparation
4	I feel that using web-based learning media does not require complicated technological skills
5	It does not require much effort to create web-based learning media.
C	**Social Influences (Balkaya & Akkucuk, 2021)**
1	My closest people think I should use web-based multimodality learning media to teach
2	Other elementary school teachers use web-based multimodality learning media when teaching
3	Other elementary school teachers suggest me use web-based multimodality learning media
4	In general, the school supports me using web-based multimodality learning media
5	In general, students support me using web-based learning media
D	**Facilitating Condition**
1	I have the equipment to use web-based multimodality learning media for teaching
2	Some teachers and teams will help me too I have difficulty using web-based multimodality learning media
3	There is training on the use of web-based multimodality learning media for elementary school teachers
4	The school has facilities to support the use of web-based learning media
5	The use of web-based learning media is suitable for use in classroom learning
E	**Behavior Intention**
1	I will continue to use web-based multimodality learning media for teaching

No	Statement
2	I will use web-based multimodality learning media when the situation and conditions allow
3	I think most of my teaching will use web-based multimodality learning media
4	I feel that the use of web-based learning media will always help increase student engagement and participation in learning
5	I will recommend web-based learning media to colleagues
F	**ICT Usage Habits (IUH) (Kim & Lee, 2020)**
1	I have used many technology-based learning media
2	I have learned a lot about technology-based learning media during college (S1/S2/S3)
3	I learned to use technology-based learning media during college (S1/S2/S3)
4	I have attended many trainings on the use of web-based learning media
5	I am used to using web-based learning media
G	**Perceived Learning Opportunities (Balkaya & Akkucuk, 2021)**
1	Web-based multimodality learning media provides an opportunity to teach in a new way
2	Web-based multimodality learning media provides an opportunity to interact with students
3	Web-based multimodality learning media provides an opportunity for creative thinking
4	Web-based multimodality learning media provides an opportunity to motivate students
5	Web-based learning media provides more opportunities to improve competence

Table 2. Respondent Classification

Characteristics	Total	Percentage
Gender		
Male	17	17 %
Female	83	83 %
Aged		
20-25	38	38 %
26-30	12	12 %
31-35	10	10 %
36-40	8	8 %
41-45	10	10 %
46-50	8	8 %
51-55	8	8 %
56-60 t	6	6 %

Based on the respondent profile presented in the form of a table, it can be seen that the number of respondents is 100, consisting of 17% male and 83% female. Women dominate respondents in this study. In addition, we also know the age range of respondents presented in the table above; in this study, respondents are dominated by the age range of 20-25 years. The data analysis technique used is Structural Equation Modeling-Partial Least Square (SEM-PLS) with software utilized using the SmartPLS 4.0 application.

3. RESULT AND DISCUSSION

Result

Based on the outer model analysis results, the measurement model describes the relationship between indicator blocks and their latent variables. The measurement model (outer model) is used to test the construct validity and reliability of the instrument. In this study, the results of the outer model test showed that each indicator of the research variable had an outer loading value ≥ 0.50, so it was said to meet the analysis requirements. After obtaining the results of the outer model test, the validity and reliability tests were carried out by looking at the outer loading value, AVE (Average Variance Extracted), cross-loading, Cronbach alpha, and composite reliability. Outer loadings are tables containing loading factors to show the magnitude of the correlation between indicators and latent variables. The results of the data analysis showed that the loading factor value must be greater than 0.7 so that it is said to be valid (Trenggonowati, D. L., & Kulsum, K. 2018). In Table 2, indicators BI1, BI2, BI3, BI4, BI5, EE1, EE2, FC2, FC3, FC4, FC5, HM1, HM2, HM3, HM4, HM5, IUH1, IUH2, IUH3, IUH4, IUH5, PE1, PE2, PE3, PE4, PE5, PLO1, PLO2, PLO3, PLO4, PLO5, SI1, SI2, SI3, SI4, SI5 can be declared valid because they have a value > 0.7. The reliability test is measured by the composite reliability criteria of the indicator block that measures the

structure. A structure is declared reliable if its composite reliability value is 0.7 (Hair et al., 2022). The results of the construct reliability and validity test are presented in Table 3.

Table 3. Construct Reliability and Validity Test Results

	Cronbach's alpha	**Composite reliability (rho_a)**	**Composite reliability (rho_c)**	**Average variance extracted (AVE)**
BI	0.862	0.874	0.901	0.647
EE	0.842	0.861	0.926	0.863
FC	0.863	0.862	0.907	0.709
HM	0.923	0.924	0.942	0.766
IUH	0.894	0.909	0.922	0.703
PE	0.910	0.916	0.933	0.737
PLO	0.932	0.940	0.949	0.788
SI	0.865	0.876	0.902	0.648

Table 3 shows that all Composite Reliability (CR) values are above 0.7 and Cronbach's Alpha is above 0.5, so it can be concluded that there is no problem in testing the internal consistency reliability test, or it can be stated that the indicators used in each variable have good reliability or can measure its construct. It can also be seen in Table 3 that the AVE Output obtained by each latent variable is > 0.5, which shows that each latent variable is said to be valid. The structural model test aims to test whether or not there is an influence between constructs and R square. The structural model is evaluated using p-value to determine the significance of the structural path parameter coefficient and R Square to determine the influence of the independent latent variable on the dependent latent variable and whether it has a substantive influence. The coefficient of determination is a number that shows the magnitude of the contribution of the influence given by the exogenous latent variable to the endogenous latent variable. Based on the test results using SmartPLS 4.0 software, the R square result was 0.790 or 79%, so it can be concluded that 79% of Behavior Intention (BI) is influenced by the variables Performance Expectancy (PE), Social Influences (SI), Facilitating Condition (FC), and Hedonic Motivation (HM). 21% of behavior intention (BI) is influenced by other variables that were not studied. Hypothesis testing (second-order construct) to conclude whether the hypothesis is accepted or rejected, the p-value is used at a significance of α = 5% or 0.05. If the p-value <0.05, H0 is rejected, meaning there is an influence. Conversely, if the p-value> 0.05, H0 is accepted, meaning there is no influence. The results of the hypothesis test are presented in Table 4.

Table 4. Path Coeficient

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (O/|STDEV|)**	**P Values**
EE -> BI	-0.150	-0.141	0.094	1.599	0.110
FC -> BI	0.259	0.244	0.112	2.302	0.021
HM -> BI	0.367	0.371	0.142	2.582	0.010
IUH -> BI	0.009	0.012	0.074	0.118	0.906
PE -> BI	0.206	0.200	0.110	1.872	0.061
PLO -> BI	0.030	0.034	0.110	0.273	0.785
SI -> BI	0.273	0.273	0.125	2.180	0.029

Based on Table 4, if the value in T Statistics > 1.96, then it is said to be significant; if the value in T Statistics < 1.96, then it is said to be insignificant. Based on Table 7, it is obtained that EE with BI has T statistics of 1.599 which states that the value of 1.599 <1.96, then Effort Expectance (EE) has a positive but insignificant influence on Behavior Intention (BI), then FC with BI has T statistics of 2.302 which states that the value of 2.302 > 1.96, then Facilitating Condition (FC) has a positive and significant influence on Behavior Intention (BI), after that HM with BI has T statistics of 2.582 which states that the value of 2.582 > 1.96, then Hedonic Motivation (HM) has a positive and significant influence on Behavior Intention (BI), then IUH with BI has T statistics of 0.118 which states that the value of 0.118 <1.96, then ICT Usage Habits (IUH) has a positive but insignificant influence on Behavior Intention (BI), then PE with BI has T statistics of 1.872 which states that the value of 1.872 <1.96, then 1.96 then Performance Expectancy (PE) has a positive but insignificant effect on Behavior Intention (BI), then PLO with BI has T statistics of 0.273 which states that the value of 0.273 <1.96 then Perceived Learning Opportunities (PLO)

has a positive but insignificant effect on Behavior Intention (BI), and SI with BI has T statistics of 2.180 which states that the value of 2.180> 1.96 then Social Influence (SI) has a positive and significant effect on Behavior Intention (BI). Based on the results of the significance, it states that there are significant and insignificant variables. EE with BI, IUH with BI, PE with BI, PLO with BI have a positive but insignificant effect, while FC with BI, HM with BI, and SI with BI have a positive and significant effect. It can be concluded that Facilitating Condition (FC) positively and significantly affects Behavior Intention (BI) in using website-based learning media for Elementary School Teachers. Hedonic Motivation (HM) has a positive and significant influence on Behavior Intention (BI) in the use of website-based learning media for Elementary School Teachers, and Social Influence (SI) has a positive and significant influence on Behavior Intention (BI) in the use of website-based learning media for Elementary School Teachers. The appearance of the Weebly website for the fifth-grade water cycle material is presented in Figure 1, Figure 2, Figure 3, Figure 4, and Figure 5.

Figure 1. Home view of the Weebly website for fifth-grade water cycle material

Figure 2. Podcast learning media display

Figure 3. Infographic learning media display

Figure 4. Slide learning media display

Figure 5. Game display with wordseacrhlabs.com

Discussion

The results of the study showed that website-based learning media using Weebly had a positive influence on elementary school teachers, Facilitating Condition had a positive and significant influence on Behavior Intention in the use of website-based learning media for elementary school teachers, Hedonic Motivation had a positive and significant influence on Behavior Intention in the use of website-based learning media for elementary school teachers, and Social Influence had a positive and significant influence on Behavior Intention in the use of website-based learning media for elementary school teachers. The website ruangbelajarleby.weebly.com is an interesting and exciting learning media. This is because Weebly can be accessed for free via the weebly.com link. The Weebly website is easy for teachers to use and can train creativity because it contains various learning media (Stewart, 2023, 2024). In

addition, the Weebly website can work with other Google applications by simply inserting an embed link on the website display. Weebly is a website that is easy for everyone to set up and use. In addition to being easy to set up, Weebly can be viewed by everyone anywhere and anytime, making it easier for users. There are various types of learning media that students can access. The multimodality learning media can be adjusted to each student's learning style; with the existence of website-based multimodality learning media, students will not get bored with the material that will be delivered, and teachers can achieve learning objectives appropriately (Bashori et al., 2021; Chiou et al., 2010). With website-based multimodality learning media, it is easier for teachers to deliver materials, and it takes little time to achieve learning objectives. In addition to learning media, teachers also provide several games that students can access on the website that has been provided. In addition to interesting multimodality learning media with various types, this website has the advantage of collaborating with applications or game websites on Google. You can see the games on this website by entering the embed link. With these games, not only do they understand the material presented by the teacher, but students can also play games that contain questions about the material presented in several previous media and can answer questions correctly.

The games used are exciting and train students' concentration. In addition to having advantages, the Weebly website has a disadvantage, namely that it cannot insert videos or slides directly due to limited space. This is because this website is free, so you can only insert embed links, and the videos or slides we use automatically appear. In addition, we need to pay attention to the image resolution we will use on this website; if it is not considered, the image will be blurry and cropped. For example, when inserting a website header, the final result will be satisfactory if the image matches the resolution. With some of the shortcomings found on this Weebly website, the quality of the website can be improved so that users are comfortable and do not have difficulty. This finding is reinforced by previous research findings stating that social influence reflects the influence of environmental factors, such as suggestions or opinions from family, friends, or relatives, to invite people to use technology (Argo & Dahl, 2020; Ciranka & van den Bos, 2021). Hedonic Motivation describes an individual's joy or pleasure from their interest in using technology (Al-Azawei & Alowayr, 2020; Nikolopoulou et al., 2021). Facilitating Condition is the level of individual confidence in the infrastructure and supporting facilities owned by the company or organization that are available to support the use of existing systems. Learning media such as Google Sites can make students interested and comfortable during the learning process (Adzkiya & Suryaman, 2021; Nugroho & Hendrastomo, 2021). Google Sites web-based learning media is suitable for learning activities (Salsabila & Aslam, 2022). However, it cannot be denied that website-based learning media using Weebly is very helpful for teachers in delivering learning, making it easier for teachers, and can attract students' attention because the Weebly website still needs to be used in education. This study implies that website learning media can adjust to different learning styles of students because various types of media are appropriate for student needs.

4. CONCLUSION

Website learning media using Weebly is suitable for elementary school teachers. Website-based learning media using Weebly can positively influence elementary school teachers. The existence of website-based learning media can make students interested and happy to use technology supported by existing facilities. In addition, students feel energized, and learning is more interesting and enjoyable. Website learning media can adjust to different learning styles of students; various types of media are appropriate for student needs. This media can be a new learning medium, especially in elementary schools.

5. REFERENCES

Adedoyin, O. B., & Soykan, E. (2023). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, *31*(2), 863–875. https://doi.org/10.1080/10494820.2020.1813180.

Adzkiya, D. S., & Suryaman, M. (2021). Penggunaan Media Pembelajaran Google Site dalam Pembelajaran Bahasa Inggris Kelas V SD. *Educate: Jurnal Teknologi Pendidikan*, *6*(2), 20–31. https://doi.org/10.32832/educate.v6i2.4891.

Afnan, M., Lasmawan, I. W., & Margunayasa, I. G. (2022). Media Pembelajaran IPS Berbasis Android pada Topik Globalisasi di Sekitarku Bermuatan Tri Hita Karana untuk Siswa Kelas VI Sekolah Dasar. *MIMBAR PGSD Undiksha*, *10*(1), 1–8. https://doi.org/10.23887/jjpgsd.v10i1.44487.

Al-Azawei, A., & Alowayr, A. (2020). Predicting the intention to use and hedonic motivation for mobile

learning: A comparative study in two Middle Eastern countries. *Technology in Society*, *62*, 101325. https://doi.org/10.1016/j.techsoc.2020.101325.

Allahawiah, S., Altarawneh, H., & Almajaly, N. (2023). The Impact of Virtual Classrooms and Google Sites on Teaching Computer Skills Courses: Karak University College-Jordan. *International Journal of Emerging Technologies in Learning*, *18*(7). https://doi.org/10.3991/ijet.v18i07.36591.

Anindita, R., Pramitaningrum, I. K., & Kusumawati, A. (2022). Identifikasi Telur Parasit Helminth Berbasis Aplikasi Android untuk Pembelajaran Praktikum Daring di Era Pandemi Covid-19. *Journal Of Health*, *9*(1), 24 – 30. https://doi.org/10.30590/joh.v9n1.389.

Argo, J. J., & Dahl, D. W. (2020). Social influence in the retail context: a contemporary review of the literature. *Journal of Retailing*, *96*(1), 25–39. https://doi.org/10.1016/j.jretai.2019.12.005.

Balkaya, S., & Akkucuk, U. (2021). Adoption and use of learning management systems in education: The role of playfulness and self-management. *Sustainability (Switzerland)*, *13*(3), 1–27. https://doi.org/10.3390/su13031127.

Bashori, M., van Hout, R., Strik, H., & Cucchiarini, C. (2021). Effects of ASR-based websites on EFL learners' vocabulary, speaking anxiety, and language enjoyment. *System*, *99*(July 2021), 102496.1-16. https://doi.org/10.1016/j.system.2021.102496.

Chiou, W. C., Lin, C. C., & Perng, C. (2010). A strategic framework for website evaluation based on a review of the literature from 1995–2006. *Information & Management*, *47*(5–6), 282–290. https://doi.org/10.1016/j.im.2010.06.002.

Ciranka, S., & van den Bos, W. (2021). Adolescent risk-taking in the context of exploration and social influence. *Developmental Review*, *61*, 100979. https://doi.org/10.1016/j.dr.2021.100979.

Dharma, P. K. D., & Agung, A. A. G. (2021). Pengembangan Multimedia Online pada Muatan Pelajaran IPA. *Jurnal Ilmiah Pendidikan Dan Pembelajaran*, *5*(1), 115–123. https://doi.org/10.23887/JIPP.V5I1.32164.

Fitriyani, W., & Solihati, N. (2022). The Effect of Powtoon-Based Audiovisual Media on Indonesian Language Learning Outcomes. *Mimbar PGSD Undiksha*, *10*(1), 148–154. https://doi.org/10.23887/jjpgsd.v10i1.46996.

Indarta, Y., Jalinus, N., Waskito, W., Samala, A. D., Riyanda, A. R., & Adi, N. H. (2022). Relevansi Kurikulum Merdeka Belajar dengan Model Pembelajaran Abad 21 dalam Perkembangan Era Society 5.0. *Edukatif: Jurnal Ilmu Pendidikan*, *4*(2), 3011–3024. https://doi.org/10.31004/edukatif.v4i2.2589.

Kim, J., & Lee, K. S. (2020). Conceptual model to predict Filipino teachers ' adoption of ICT-based instruction in class : using the UTAUT model. *Asia Pacific Journal of Education*, *00*(00), 1–15. https://doi.org/10.1080/02188791.2020.1776213.

Nalasari, K. A., Suarni, N. K., & Wibawa, I. M. C. (2021). Pengembangan bahan ajar berbasis web google sites pada tema 9 subtema pemanfaatan kekayaan alam di Indonesia untuk siswa kelas IV sekolah dasar. *Jurnal Teknologi Pembelajaran Indonesia*, *11*(2), 135–146. https://doi.org/10.23887/jurnal_tp.v11i2.658.

Nikolopoulou, K., Gialamas, V., & Lavidas, K. (2021). Habit, hedonic motivation, performance expectancy and technological pedagogical knowledge affect teachers' intention to use mobile internet. *Computers and Education Open*, *2*, 100041. https://doi.org/10.1016/j.caeo.2021.100041.

Ningtyas, D. N., & Sihombing, A. A. (2023). Blended Learning : Pembelajaran Abad 21 Sebagai ' Jalan - Tengah ' Menjaga Kualitas Pendidikan Di Era Pandemi Covid-19. *Edukasi: Jurnal Penelitian Pendidikan Agama Dan Keagamaan*, *21*(1), 59–75. https://doi.org/10.32729/edukasi.v21i1.1420.

Nugroho, M. K. C., & Hendrastomo, G. (2021). Pengembangan Media Pembelajaran Berbasis Google Sites Pada Mata Pelajasan Sosiologi Kelas X. *Jurnal Pendidikan Sosiologi Dan Humaniora*, *12*(2), 59–70. https://doi.org/10.26418/j-psh.v12i2.48934.

Nurrita, T. (2018). Pengembangan Media Pembelajaran Untuk Meningkatkan Hasil Belajar Siswa. *MISYKAT: Jurnal Ilmu-Ilmu Il-Quran, Hadist, Syari'ah Dan Tarbiyah*, *3*(1), 171. https://doi.org/10.33511/misykat.v3n1.171.

Nurrohma, R. I., & Adistana, G. A. Y. P. (2021). Penerapan Model Pembelajaran Problem Based Learning dengan Media E-Learning Melalui Aplikasi Edmodo pada Mekanika Teknik. *Edukatif: Jurnal Ilmu Pendidikan*, *3*(4), 1199–1209. https://doi.org/10.31004/edukatif.v3i4.544.

Safi, A., & Singh, S. (2023). A systematic literature review on phishing website detection techniques. *Journal of King Saud University-Computer and Information Sciences*, *35*(2), 590–611. https://doi.org/10.1016/j.jksuci.2023.01.004.

Salsabila, F., & Aslam, A. (2022). Pengembangan media pembelajaran berbasis web google sites pada pembelajaran IPA Sekolah Dasar. *Jurnal Basicedu*, *6*(4), 6088–6096. https://doi.org/10.31004/basicedu.v6i4.3155.

Shukla, S. (2021). M-learning adoption of management students': A case of India. In *Education and*

Information Technologies (Vol. 26, Issue 1). Education and Information Technologies. https://doi.org/10.1007/s10639-020-10271-8.

Silalahi, M. V. (2020). Development of E-Modules Based on Exe-Learning on Topics of Reaction Rate Against Student Learning Outcomes Mechanical Engineering. *IJECA (International Journal of Education and Curriculum Application)*, *3*(2), 114–120. https://doi.org/10.31764/ijeca.v3i2.2672.

Siregar, Z., & Marpaung, T. B. (2020). Pemanfaatan Teknologi Informasi dan Komunikasi (TIK) Dalam Pembelajaran di Sekolah. *BEST Journal (Biology Education, Sains and Technology)*, *3*(1), 61–69. https://doi.org/10.30743/best.v3i1.2437.

Stewart, O. G. (2023). Using digital media in the classroom as writing platforms for multimodal authoring, publishing, and reflecting. *Computers and Composition*, *67*, 102764. https://doi.org/10.1016/j.compcom.2023.102764.

Stewart, O. G. (2024). Analyzing High School Students' Mulitmodal Compositions with Digital Media Platforms Using Metafunctions. *LANGUAGE AND LITERACY: A CANADIAN EDUCATIONAL E-JOURNAL*, *26*(1). https://doi.org/10.20360/langandlit29608.

Tika, I. N., & Agustiana, I. G. A. T. (2021). The Effect of a Blended Learning Project Based Learning Model on Scientific Attitudes and Science Learning Outcomes. *Jurnal Ilmiah Sekolah Dasar*, *5*(4), 557–566. https://doi.org/10.23887/jisd.v5i4.39869.

Widayanti, W., & Yuberti, Y. (2018). Pengembangan alat praktikum sederhana sebagai media praktikum mahasiswa. *JIPFRI (Jurnal Inovasi Pendidikan Fisika Dan Riset Ilmiah)*, *2*(1), 21–27. https://doi.org/10.30599/jipfri.v2i1.161.

Wu, Z., He, T., Mao, C., & Huang, C. (2020). Exam paper generation based on performance prediction of student group. *Information Sciences*, *532*(September 2020), 72–90. https://doi.org/10.1016/j.ins.2020.04.043.

Yusandika, A. D., Istihana, I., & Susilawati, E. (2018). Pengembangan media poster sebagai suplemen pembelajaran fisika materi tata surya. *Indonesian Journal of Science and Mathematics Education*, *1*(3), 187–196. https://doi.org/10.24042/ijsme.v1i3.3593.