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Education in the Palm of Your Hand: Mybest Application as an Educational Tool Aa Bina Sarana Informatika University

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Abstract

This research discusses the utilization of the "MyBest" application as an educational tool in supporting education at Bina Sarana Informatika University. In the era of evolving technology, mobile applications have become an effective means of delivering information and stimulating student participation in actual and relevant issues and sustainability. The purpose of this research is to explore the potential of the "MyBest" application as an educational tool that can provide easy access, increase understanding, and encourage positive actions related to sustainability. This research involves developing the "MyBest" application as an interactive educational tool, relevant content, and features that stimulate student participation and engagement in sustainability challenges and programs. The application is implemented at Bina Sarana Informatika University with the participation of students from various disciplines. The results of this study will include increased student awareness of actual and relevant issues and the importance of sustainability in everyday life. In addition, this application can also stimulate student participation in programs on campus.

KataKunci: Education, Mobile Application, MyBest, Sustainability, Bina Sarana Informatika University.

INTRODUCTION

1. Latar Belakang

In today's digital age, technological developments have presented new opportunities in education. Technology has changed the way we access information, interact, and participate in sustainability efforts. Bina Sarana Informatika University as an educational institution has the potential to utilize these technological advances to support education and encourage active participation of students in actual and relevant sustainability issues.

Bina Sarana Informatika University has a significant role in providing education that covers holistic aspects and is relevant to ongoing technological developments. In this context, the university's responsibility is not only limited to providing academic knowledge, but also to forming individuals who have a broad understanding and skills that are in line with the demands of the times.

By applying technology in education, universities have the potential to create a more interactive, dynamic and engaging learning experience for students. The use of technologies such as apps, online platforms, or



other digital media can enable adaptive and user-based learning experiences, allowing students to learn according to their own learning styles. [1]

Amidst the complexity of today's challenges, universities have a responsibility to integrate education into the curriculum and student experience. In doing this, universities recognize that current and relevant issues are not only the responsibility of specific groups, but are relevant and important aspects of various disciplines. The integration of education in the curriculum can ensure that students have a deep understanding, as well as actions that can be taken to maintain sustainability.[2]

In addition, by integrating education, universities also contribute to forming students who are aware of their social responsibility towards and able to participate in efforts to maintain sustainability in the future. Education can include an understanding of sustainability, sustainable practices, and critical thinking on complex current and relevant issues.

By combining holistic education, the use of technology, and educational integration, Bina Sarana Informatika University can answer the demands of the times by providing educational experiences that are useful, relevant, and prepare students to become future leaders who care about and sustainability.

Bina Sarana Informatika University has great potential to integrate technology in educational efforts and awareness in facing increasingly complex challenges. As an institution that has a background in informatics, the university has resources and expertise that can be utilized to develop innovative technological solutions in supporting educational goals.

Although technological developments have opened up vast opportunities, not all educational institutions have fully utilized them for educational purposes. Sometimes, there are barriers such as limited resources, lack of understanding of the potential of technology, or challenges in integrating technology into the existing curriculum. Therefore, educational institutions need to identify and overcome these barriers to maximize the benefits of technology in supporting education. [3]

Some universities have made positive strides in using technology to increase student understanding and participation in current and relevant issues. Some have developed mobile applications or online platforms that offer interactive and engaging educational content. Through these apps, students can obtain information, educational videos, challenges and practical information on how to contribute to sustainability.[4]

The use of this technology not only enhances students' understanding of current and relevant issues, but also encourages their active participation in sustainable programs. Students can engage in challenges, competitions, or projects organized through such apps or platforms. This creates stimulating participation, critical thinking, and concrete actions related to sustainability among students.[5]

In this case, Bina Sarana Informatika University has the opportunity to take similar steps with other universities that have utilized technology for education. By developing the right technology solutions, universities can create learning that is more dynamic, interactive, and focused on actual and relevant pressing issues.

2. Research Objectives

The main objective of this research is to deeply investigate the potential utilization of the "MyBest" application as an educational tool at Bina Sarana Informatika University. The research focused on the use of the application to support education and promote sustainability efforts within the university. The



"MyBest" application is expected to have a significant role in providing information, shaping awareness, and stimulating positive action regarding actual and relevant issues among students.

In this context, this research aims to achieve several important things:

- 1. Exploration of the Potential of the "MyBest" Application: This research will delve deeply into how the "MyBest" application can be utilized as an educational tool at Bina Sarana Informatika University. This involves identifying relevant features, interactive potential, and the application's ability to deliver information effectively.
- 2. Supporting Education: This objective encompasses efforts to use the "MyBest" app as a means to provide a well-rounded education to students. This includes presenting students with information on current and relevant issues, as well as providing educational content that can enhance their understanding.
- 3. Raising Awareness: The app is expected to help shape students' awareness of current and relevant pressing issues. This can be achieved through engaging visual presentations, relevant data, and interactions that stimulate critical thinking about sustainability challenges.
- 4. Stimulate Positive Action: In addition to providing information and raising awareness, the "MyBest" app is expected to encourage students to take positive action on current and relevant issues. This could be in the form of challenges, practical suggestions to contribute to sustainability, or opportunities to participate in programs on campus.
- 5. Creating Sustainability: This research also aims to contribute to creating a more sustainable campus culture. By stimulating participation and positive action through this app, it is hoped that there will be greater changes in student behavior regarding issues.

3. Educational Benefits in the palm of your hand

The use of the "MyBest" app in an educational context has significant benefits, especially in providing flexible and easy access for students to educational content. The app creates opportunities for students to have direct access to a variety of information and educational materials relating to actual and relevant issues, and these can be accessed anytime and anywhere according to their availability.

In fact, this app takes advantage of the current generation's popularity and reliance on mobile technology. Students in this digital age are generally familiar with mobile devices, such as smartphones or tablets, and are comfortable in using these technologies as a source of information and daily interaction. By utilizing this mobile platform, the "MyBest" app provides greater accessibility to education, not limited by physical location or time.

The advantages of using the "MyBest" app include:

- 1. Flexibility and Accessibility: Students can access educational content anytime and anywhere, not just tied to class or lecture times. This allows for more adaptive learning tailored to each student's schedule and preferences.
- 2. Self-Study: Direct access to educational content allows students to self-study, exploring material they find interesting or require deeper understanding.
- 3. Interactive Materials: The app can present content in various interactive forms, such as videos, images, quizzes or challenges. This helps maintain student interest and engagement.
- 4. Increased Learning Efficiency: Students can utilize their free time, such as while waiting, traveling, or taking breaks, to continue deepening their understanding of current and relevant issues.



5. Digital Generation Support: The current generation of students tends to be more accustomed and comfortable with the use of mobile technology, so leveraging these platforms for educational purposes can minimize barriers in access and usage.

In essence, the use of the "MyBest" app harnesses the potential of mobile technology to deliver a more flexible, accessible and engaging education for students. It provides a modern solution in supporting education in today's digital age.

Research Methods

Research methods that can be used to explore the implementation of "Education in Hand: MyBest Application as an Educational Tool at Bina Sarana Informatika University" as follows:

- 1. Case Study: analyzing students who actively use the "MyBest" app and its impact.
- 2. Content Analysis: analyzes the content presented through the "MyBest" app, such as educational videos. This analysis evaluates whether the content matches the educational objectives and whether it is able to stimulate participation and learning.
- 3. Application Usage Data: Collect data regarding the use of the "MyBest" app by students, such as frequency of access, time spent on the app. This data can provide an overview of the extent to which students engage in education through the app.
- 4. Focus Group Discussion (FGD): conducted FGDs with a group of students who use the "MyBest" app to discuss their experiences, perceived benefits, challenges faced, and how this app influences their views on actual and relevant issues.
- 5. Participatory Observation: engaging in activities conducted through the app, such as online discussions. Participatory observation can understand students' interactions with the app and how they respond to the content and programs presented.

THEORETICAL BACKGROUND

The theoretical Background that can support the research "Education in Hand: MyBest Application as an Educational Tool at Bina Sarana Informatika University" covers several fields, such as environmental education, technology in education, and learning theory. Here are some relevant theoretical foundations and reference sources that you can use:

1. Environmental Education

a. Engagement Theory

This theory states that students who are actively engaged in learning tend to have a deeper understanding and commit to positive actions. [6]

Engagement Theory is an educational concept that emphasizes the importance of active engagement and participation in the learning process. The theory states that when students are actively involved in learning, they tend to have a deeper understanding and commit to positive actions. In the context of the research "Education in the Hand: MyBest App as an Educational Tool at Bina Sarana Informatika University," the theory of engagement has strong implications for how the app can shape students' environmental awareness and positive actions.

An active and engaged approach to learning, as espoused by engagement theory, creates an environment where students not only receive information, but also interact with the content deeply. In the context of the "MyBest" app, this theory can be applied by encouraging students to actively participate in



sustainability programs provided by the app. This can involve students in environmental challenges, proactive tasks, online discussions, and interaction with the educational materials.

This active involvement has several benefits:

- 1. Deeper Understanding: Actively engaged students tend to gain a deeper understanding of environmental issues. They are more likely to critically analyze information and relate it to personal experiences.
- 2. Practical Experience: Students will have the opportunity to apply the knowledge gained through application in everyday life. This allows for a more concrete and relevant understanding of concepts.
- 3. Commitment to Action: Active engagement can stimulate students to take action on environmental issues. They may be more motivated to participate in sustainability programs or environmental awareness campaigns.
- 4. Collaborative Learning: Students can interact with others through the app to discuss, share views and plan actions together. This creates a more collaborative and immersive learning experience.
- 5. Changing Attitudes and Norms: Active engagement can shape positive attitudes and norms regarding environmental issues. By involving students in concrete actions, applications can shape sustainable behavior.

Through the application of engagement theory in the "MyBest" application approach, Bina Sarana Informatika University can create a learning environment that supports students' active engagement in environmental education and encourages them to take positive action on environmental issues.

2. Behavior Change Theory

This theory focuses on how education can change individual behavior through improved knowledge, attitudes, and social norms. [7]

Behavior Change Theory is a framework that focuses on how education and information can influence changes in individual behavior. It identifies several key factors that contribute to behavior change, including increased knowledge, changes in attitudes and social norms that guide individual actions. In the context of the research "Education in the Hand: MyBest App as an Educational Tool at Bina Sarana Informatika University," behavior change theory can provide an in-depth look at how the app can stimulate positive behavior change related to environmental issues.

The behavior change theory approach can be applied to the use of the "MyBest" application in the following way:

- 1. Knowledge Enhancement: Apps can provide precise and relevant information on environmental issues. With increased knowledge, students have a solid foundation to understand the impact of their actions on the environment.
- 2. Attitude Change: Through in-depth education, apps can help change students' attitudes towards environmental issues. For example, the information presented can stimulate empathy, concern, and a drive to contribute to sustainability.
- 3. Social Norms: Apps can help shape social norms among students regarding sustainable actions. By showing that many people in the campus community are taking sustainable actions, it can stimulate students to follow suit.
- 4. Challenge and Action: Applications can design environmental challenges or tasks that invite students to take action. Through action, behavior change theory can encourage them to apply their newly acquired knowledge and attitudes.



- 5. Positive Feedback: Apps can provide positive feedback for sustainable actions taken by students. This feedback can reinforce actions and form sustainable habits.
- 6. Role Models: Applications can show role models of individuals or groups who have been successful in changing their behavior to be more sustainable. This can inspire students to follow the example.

By adopting behavior change theory in the development and implementation of the application "MyBest," Bina Sarana Informatika University can design an educational experience that not only provides knowledge, but also stimulates positive behavior change regarding environmental issues.

3. Technology in Education:

Mediation Technology Theory: This theory proposes that technology acts as a mediator between teachers, students, and learning materials, allowing for more dynamic and immersive interactions. [8].

Mediating Technology Theory is a concept in education that emphasizes the role of technology as an intermediary between teachers, students and learning content. The theory proposes that technology has the ability to create more dynamic, interactive and immersive interactions in the learning process. In the context of the research "Education in the Hand: MyBest App as an Educational Tool at Bina Sarana Informatika University," mediation technology theory can provide important insights into how apps can facilitate a more effective learning environment through the use of technology.

In applying the theory of mediation technology to the "MyBest" app, several important aspects emerged:

- 1. Dynamic Interaction: Applications can present information and learning content in an interactive form, including videos, images, and simulations. This creates a more interesting and engaging learning environment for students.
- 2. Personalization Capability: Applications can be customized to suit the individual needs and preferences of students. This allows each student to have a learning experience that suits their learning style.
- 3. Deep Engagement: With a variety of interactive features, the app allows students to engage deeply with the content. They can explore the material in greater depth through features such as menu selections, quizzes, and environmental challenges.
- 4. Multimedial Content: Apps can present content in multiple formats, such as videos, images, and articles. This helps stimulate multiple senses and facilitates better understanding.
- 5. Flexible Access: Students can access the app anytime and anywhere, according to their needs. This enables independent and flexible learning.
- 6. Immediate Feedback: The app can provide immediate feedback on the student's interaction with the content. This allows students to immediately understand their understanding and correct it if needed.
- 7. Encourage Creativity: Apps can stimulate students' creativity through environmental challenges or technology-based projects that ask them to design sustainable solutions.

By applying mediation technology theory in the development of the application "MyBest," Bina Sarana Informatika University can create a more dynamic, interactive, and in-depth learning experience for students in order to increase understanding and awareness related to environmental issues.

4. Technology Acceptance Model

This theory explains the factors that influence user acceptance of technology, including perceived zease of use and perceived benefits. [9].



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Technology Acceptance Model (TAM), is a framework that details the factors that influence users' acceptance and adoption of technology. The theory focuses on two main dimensions: perceived ease of use and perceived benefits of using the technology. In the context of the research "Education in Hand: MyBest Application as an Educational Tool at Bina Sarana Informatika University," technology acceptance theory can provide a strong view on how students will respond and adopt the application. In applying the technology acceptance theory to the "MyBest" app, some key points include:

1. Perceived Ease of Use: Students will consider the extent to which the use of this application is easy to understand and operate. Applications that are intuitive and do not require excessive effort in learning to use will be more likely to be well received.

- 2. Perceived Benefits: Students will rate the benefits they gain from using the app. This includes a better understanding of environmental issues, the ability to take sustainable action, and other benefits they gain.
- 3. Resource Availability: Factors such as access to technological devices, internet connection, and level of technological skills can also affect the acceptance of applications by students.
- 4. Social Influence: Whether students see their friends or other authority figures using the app can also influence their decision to adopt it.
- 5. Relative Impact: Students will compare this app with other existing methods of getting environmental education. If they feel that this app provides a greater impact, they are more likely to be receptive to using it.
- 6. User Satisfaction: The initial experience with the app can influence a student's decision to continue using it. If the app provides a positive experience, chances of adoption are higher.
- 7. Ease of Adaptability: Students will assess the extent to which the app fits into their habits and routines. If the use of the app can be integrated smoothly into their lives, they are more likely to accept. By applying technology acceptance theory in the development and promotion of the application "MyBest," Bina Sarana Informatika University can design a user experience that matches the perceived ease and expected benefits, thus encouraging wider adoption and use by students.

5. Learning:

Constructivism: This theory focuses on the construction of knowledge by individuals through interaction with the environment and personal experience. It can support student-centered learning approaches and active delivery of materials. [10].

Constructivism is an approach to learning that emphasizes the active role of the individual in constructing knowledge and understanding through interaction with the environment and personal experience. The theory proposes that learning occurs when individuals actively interact with new information and connect it to pre-existing knowledge. In the context of the research "Education in the Hand: MyBest App as an Educational Tool at Bina Sarana Informatika University," constructivism theory can provide a rich view of how the app can support student-centered learning approaches and active participation.

Some key points in applying constructivism theory to the use of the "MyBest" app include:

1. Active Learning: Applications can design learning experiences that enable students to interact directly with content. For example, through environmental challenges or simulations, students can solve real problems and build practical understanding.



- 2. Problem-based Learning: Applications can propose environment-based problems or scenarios that require critical thinking and creative solutions from students. This encourages them to apply knowledge in a real-life context.
- 3. Knowledge Co-construction: Apps can stimulate discussion and collaboration between students. It allows them to share their views, build knowledge together, and solve challenges together.
- 4. Reflection and Metacognitive Thinking: Apps can provide space for students to reflect on their learning process, consider the strategies they use, and identify areas where they need to further improve understanding.
- 5. Connecting with Personal Experience: Apps can allow students to connect the learning material with their own life experiences. This makes learning more relevant and meaningful to them.
- 6. Independent Learning: Students can choose the learning path that best suits their style and needs. This encourages independence and responsibility in the learning process.

By adopting the theory of constructivism in the development of the "MyBest" application, Bina Sarana Informatika University can create a learning environment that stimulates student activity and participation, allowing them to build knowledge through interaction with content and their own experiences.

DISCUSSION

1. Interactivity and Involvment

The "MyBest" app has the potential to be an engaging and effective educational tool by incorporating interactive features that can enhance student engagement and understanding. By providing visual elements such as images and videos, as well as thought-provoking and actionable challenges, the app creates a more engaging learning experience.

Interactive Features:

- 1. Images and Graphics: The app can contain images and graphics that support understanding of current and relevant issues. Visualizations such as maps, diagrams, and infographics can help students understand concepts more clearly. [11]
- 2. Educational Videos: Educational videos can provide in-depth explanations of complex topics. They can contain narration, animation, or visual footage that explains current and relevant issues in a more engaging and understandable way.[12]
- 3. Challenges: The challenge feature can stimulate students' critical and creative thinking. These challenges can be questions, interactive games, or tasks that require students to think about solutions to problems.[13]
- 4. Discussions and Forums: The app can have discussion and forum features where students can interact, exchange ideas, and share opinions on actual and relevant issues This encourages collaboration and idea sharing.[14]

Benefits of Interactive Features:

- 1. Active Engagement: Interactive features stimulate student engagement in learning. Students do not just passively receive information, but also actively participate in processing, understanding and responding to the content.[15]
- 2. More Fun Learning: Visual features and challenges make learning more engaging and fun. This helps maintain students' interest and motivation to continue deepening their understanding.



3. Application of Concepts in Real Life: The challenges and concrete actions proposed in the application can stimulate students to apply the concepts learned in real-life situations.

2. Impact Measurement and Participation:

Through the use of the "MyBest" app, students have the opportunity to measure, record and track their participation in various sustainability programs and initiatives. This feature provides important benefits in providing a better understanding of the real impact of education and sustainable actions taken by students.[16]

Measuring and Recording Participation:

- 1. The app can provide students with a tool to record the sustainable actions they take, such as participating in recycling campaigns, attending workshops or contributing to green activities on campus.[17]
- 2. The data generated from this participation can help students to see the positive impact of their actions on current and relevant issues. It can also provide valuable feedback for students on their contribution to sustainability efforts.[18]

Integration with Study Program:

- 1. This application has the potential to be integrated with existing study programs at the university. This allows education to be embedded in a wide range of courses, not only in courses that are directly related to actual and relevant issues.[19]
- 2. This integration will help to create a more holistic and sustainable learning experience, where understanding of related issues can be integrated with various disciplines.[20]

Benefits of Integration and Participation Measurement:

- 1. Impact Monitoring: Students can see firsthand how their actions contribute to sustainability efforts, providing motivation and encouragement to engage more actively.
- 2. Concrete Feedback: Participation data can provide concrete feedback to students about the real changes they bring to the campus and community.
- 3. Continuing Education: Integration with the study program provides opportunities for students to continue to deepen their understanding of current and relevant issues, not just as a separate component, but as an integral part of their learning.

3. Impacts on Awareness and Behavior:

Through the utilization of education that can be accessed through applications, Bina Sarana Informatika University seeks to provide opportunities for students to gain a deeper understanding of actual and relevant issues. This education is expected to produce a significant impact in shaping students' views and behavior regarding actual and relevant issues, as well as encouraging them to become agents of change in maintaining sustainability.

The app provides students with access to a wide range of in-depth educational content on pressing current and relevant issues. Accurate, up-to-date and in-depth information helps students understand the human impact on and complexity of the challenges faced.[21]



A deep understanding of the issues through education can stimulate reflection and critical thinking. Students can consider ways in which they can change their behavior to be more sustainable.[22]

By having better knowledge and understanding of current and relevant issues, students have the potential to become agents of change. They can share their knowledge with their peers, families and the wider community, and drive positive change.[23]

This holistic approach to education through apps can help shape a culture of awareness among students. It goes beyond simply providing information, but also helps change students' views and attitudes towards actual and relevant issues.

4. Impact on Bina Sarana Informatika University

The utilization of the "MyBest" application as an educational tool has the potential to create significant positive changes within the Bina Sarana Informatika University campus. Students who become more aware of actual and relevant issues and actively participate in sustainability programs can have a profound impact in changing the campus culture to be more sustainable.

Students who are more aware will tend to adopt sustainable behaviors in their daily lives. This can include recycling practices, reduced plastic consumption, energy saving, and participation in sustainability programs. [24]

The app can stimulate students' active participation in sustainability programs held on campus, such as cleaning campaigns, tree planting, or recycling activities. This participation has a real impact on campus sustainability.[25]

Changing Norms and Values: Student participation in sustainability programs through applications can help change norms and values among students. Sustainability awareness and actions become an integral part of campus identity and culture.[26]

Through this app, students can interact, share experiences, and encourage each other to take sustainable action. This helps create a collaborative where sustainability is championed together.

Role models for the next generation: Students who are actively involved in sustainability efforts through this app can serve as role models and inspiration for new students and future generations. This helps to pass on the culture of sustainability in a sustainable manner.[27]

5. Further Implications

In adopting technology in education, Bina Sarana Informatika University has the opportunity to make a significant contribution in shaping a generation of students who care about and support sustainability efforts. The use of innovative and practical applications, such as "MyBest", allows the university to effectively facilitate learning and positive behavior change. The following positive impacts can result from this approach:

1. More Engaging and Relevant Education:

The utilization of technology in education through the "MyBest" application can create a more interesting, interactive and relevant learning experience for students. Features such as images, videos, and challenges make education more dynamic and engaging. [28]

2. Encourage Active Engagement:

The app stimulates students' active involvement in education and programs. Students become more involved in the learning process and have an active role in keeping issues current and relevant. [29]

3. Support for Independent Learning:



App technology allows students to learn independently and flexibly. They can access educational content anytime and anywhere according to their needs.

4. Creation of a Caring Generation:

This approach helps create a generation of students who have a heightened awareness of current and relevant issues and responsibilities towards sustainability. Students can develop a deeper understanding of the impact and importance of sustainable action.[30]

5. Innovation in Education:

The utilization of innovative applications such as "MyBest" is a form of innovation in education. It reflects the university's commitment to keep up with technological developments in an effort to improve the quality of education and awareness.

6. Long-term Impact:

This generation of students exposed to education through technology can have a lasting impact on society. They can become leaders, decision-makers, and change agents that drive sustainable policies and practices.

CONCLUSION

In the ever-evolving digital era, education is becoming increasingly relevant and important for generations of students. By utilizing technology, such as the "MyBest" application, Bina Sarana Informatika University has the potential to deliver innovative and engaging education. This application presents a practical solution that allows students to access information, and take positive action, all in the palm of their hand.

Through education that can be accessed anytime and anywhere, the app provides opportunities for students to gain in-depth understanding with the use of visual features, educational videos, and challenges to stimulate active engagement and make learning more interesting.

With "MyBest," students can record and track their participation in sustainability programs. This not only provides an understanding of the real impact of their actions, but also motivates them to take an active role in learning.

The integration of the application with the study program allows it to be an integral part of the students' learning experience. Thus, they can understand how actual and relevant issues are interrelated with various disciplines.

As students become more aware and actively participate in sustainability programs, they have the potential to change the campus culture to be more sustainable.

By embracing technology in education, Bina Sarana Informatika University can make a greater contribution in creating a generation that cares and promotes sustainability through innovative and practical approaches. Through these steps, Bina Sarana Informatika University can bring a positive impact in safeguarding and preparing students to become sustainability-focused future leaders.

REFERENCE

- 1. H. Jones and N. Leclerc, "Digital Technology and Environmental Education: A Review of Recent Literature," *Environ Educ Res*, vol. 27, pp. 1–6, 2021.
- 2. R. B. Stevenson, "The sociology of environmental education research: Recent contributions and future directions," *Environ Educ Res*, vol. 1, no. 25, pp. 1–14, 2019.



- 3. B. Budiyono, "Inovasi Pemanfaatan Teknologi Sebagai Media Pembelajaran di Era Revolusi 4.0," *Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran dan Pembelajaran*, vol. 6, no. 2, p. 300, Jul. 2020, doi: 10.33394/jk.v6i2.2475.
- 4. F. Khatib, B. Shneiderman, and S. Gilutz, "Environmental Education in the Digital Era," ACM Conference on International Computing Education Research, pp. 210–211, 2017.
- 5. D. Johnson and E. Brown, "Integrating Technology into Environmental Education: A Two-Step Model," *J Educ Sustain Dev*, pp. 183–197, 2018.
- 6. A. E. J. Wals, "Sustainability in Higher Education: From Double Helix to Engagement," *Higher Education Policy*, vol. 27, no. 2, pp. 227–242, 2014.
- 7. P. C. Stern and S. Oskamp, "A Cognitive Approach to Environmental Problems. In "Human Behavior and Environmental Quality," *Springer*, pp. 87–132, 1987.
- 8. K. W. Lai and M. Bower, "How Students Perceive and Experience Mediation in a Virtual Reality Learning Environment.," *Comput Educ*, vol. 133, pp. 107–120, 2019.
- 9. F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS quarterly*, pp. 319–340, 1989.
- 10. K. J. Kim et al., "Six Strategies for E ff ective Learning," Handbook of Self-Regulation of Learning and Performance, vol. 5, no. 1, 2015.
- 11. H. Khotimah, A. Supena, and N. Hidayat, "Meningkatkan attensi belajar siswa kelas awal melalui media visual," *Jurnal Pendidikan Anak*, vol. 8, no. 1, pp. 17–28, Aug. 2019, doi: 10.21831/jpa.v8i1.22657.
- T. Sitzmann and K. Ely, "A Meta-Analysis of Self-Regulated Learning in Work-Related Training and Educational Attainment: What We Know and Where We Need to Go," *Psychol Bull*, vol. 137, no. 3, 2011, doi: 10.1037/a0022777.
- M. C. S. Ramírez, D. L. V Hernández, V. I. B. Marín, M. Montenegro, and L. M. Moreno, "The role of multimedia in environmental education for sustainable development," *J Clean Prod*, vol. 172, pp. 4505–4515, 2018.
- Z. Zainuddin and S. H. Halili, "Flipped classroom research and trends from different fields of study," *International Review of Research in Open and Distance Learning*, vol. 17, no. 3, 2016, doi: 10.19173/irrodl.v17i3.2274.
- 15. UNESCO, "Education for Sustainable Development Goals: Learning Objectives," United Nations Educational, Scientific and Cultural Organization, 2020.
- 16. S. Dillahunt, T. R., Wang, B., Teasley, "Democratizing participant-driven research with mobile data collection.," *Proceedings of the 32nd annual ACM conference on Human factors in computing systems*, pp. 1673–1682, 2014.
- 17. A. Delicado and M. J. Lopes, "Sustainable development as a higher education teaching area," *A proposal for its integration in the curriculum. Sustainability*, vol. 8, no. 10, 2016.
- 18. K. Lucas, R. Kuehn, and D. Strebel, "Integrating environmental sustainability into higher education," *A case study of a university in Germany. Sustainability*, vol. 10, no. 6, 2018.
- 19. R. Nandika, "PERANCANGAN SISTEM UJIAN ONLINE BERBASIS WEB DI FAKULTAS TEKNIK PROGRAM STUDI TEKNIK ELEKTRO UNIVERSITAS RIAU KEPULAUAN BATAM," *SIGMA TEKNIKA*, vol. 2, no. 1, p. 68, Aug. 2019, doi: 10.33373/sigma.v2i1.1812.



- 20. H. Fitriyadi, "Integrasi teknologi informasi komunikasi dalam pendidikan: potensi manfaat, masyarakat berbasis pengetahuan, pendidikan nilai, strategi implementasi dan pengembangan profesional," *Jurnal Pendidikan Teknologi dan Kejuruan*, vol. 21, no. 3, 2013.
- 21. D. Tilbury, M. McKenzie, and A. Ryan, "Empowering and mobilising through learning for sustainability: From local to global perspectives," *World Environmental Education Congress (WEEC)*, 2017.
- 22. H. Hungerford, R. Ben Peyton, and R. J. Wilke, "Goals for curriculum development in environmental education," *Journal of Environmental Education*, vol. 11, no. 3, 1980, doi: 10.1080/00958964.1980.9941381.
- 23. J. Arifiyanti, E. Suhartini, J. Mulyono, and P. Hutama, "Pendidikan Anti Korupsi pada Mahasiswa: Pendisiplinan Tubuh dan Tantangan Sengkarut Perilaku," *Edu Cendikia: Jurnal Ilmiah Kependidikan*, vol. 2, no. 03, 2022, doi: 10.47709/educendikia.v2i03.1910.
- 24. P. B. Corcoran and A. E. Wals, "Higher education and the challenge of sustainability: Problematics, promise, and practice.," *Springer*, 2004.
- 25. L. Chawla, "Significant life experiences revisited: A review of research on sources of environmental sensitivity," *Journal of Environmental Education*, vol. 29, no. 3, 1998, doi: 10.1080/00958969809599114.
- 26. S. Sterling, "Learning for resilience, or the resilient learner? towards a necessary reconciliation in a paradigm of sustainable education," *Environ Educ Res*, vol. 16, no. 5–6, 2010, doi: 10.1080/13504622.2010.505427.
- 27. D. A. G. Primasari, D. Dencik, and M. Imansyah, "Pendidikan Karakter Bagi Generasi Masa Kini," in *Prosiding Seminar Nasional Program Pascasarjana Universitas PGRI Palembang*, 2019.
- 28. K. Jensen, B. B., & Schnack, "Assessing the servant organization; Development of the Organizational Leadership Assessment (OLA) model. Action competence and transformative learning: A longitudinal study of development of action competence of educators and students in an education for ," *Diss Abstr Int*, vol. 9, no. 7, p. 1089, 2017.
- 29. H. Gasper, E., & Lotz-Sisitka, "Education for sustainable development (ESD): Exploring theoretical and practical challenges. International Review of Education," 2013, vol. 59, no. 5, pp. 539–545.
- 30. F. Del Cerro Velázquez and F. L. Rivas, "Education for sustainable development in STEM (technical drawing): Learning approach and method for SDG 11 in classrooms," *Sustainability (Switzerland)*, vol. 12, no. 7, 2020, doi: 10.3390/su12072706.