Development of Online Video-Based Learning Media as an Alternative for Accounting Education, A Conceptual

Weny Nurwendari
Graduate School, Universitas Syiah Kuala
Jl. Tgk. Hasan Krueng Kalee No. 5, Kopelma Darussalam, Banda Aceh, 23111, Indonesia
E-mail address: nabiyaaceh@gmail.com
ORCID: https://orcid.org/0009-0005-5295-2366

Yusrizal Yusrizal
Department of Physics Education, Faculty of Teacher Training and Education
Universitas Syiah Kuala
Jl. Tgk. Hasan Krueng Kalee No. 4, Kopelma Darussalam, Banda Aceh, 23111, Indonesia
E-mail address: yusrizal_fkip@usk.ac.id
ORCID: https://orcid.org/0000-0003-4959-4519

Said Musnadi
Department of Management, Faculty of Economics and Business, Universitas Syiah Kuala
Jl. Teuku Nyak Arief No 1, Kopelma Darussalam, Banda Aceh, 23111, Indonesia
E-mail address: said.musnadi@feb.usk.ac.id
ORCID: https://orcid.org/0000-0003-3628-5370

Muhammad Yunus
Department of Pancasila and Citizenship Education
Faculty of Teacher Training and Education, Universitas Syiah Kuala
Jl. Tgk. Hasan Krueng Kalee No. 4, Kopelma Darussalam, Banda Aceh, 23111, Indonesia
E-mail address: yunus.msalem@usk.ac.id
ORCID: https://orcid.org/0009-0006-3220-9505

ABSTRACT

Aim. This literature review explores the development of video-based learning media as an alternative to accounting learning through online communication. In the digital

era, the use of technology in education is becoming increasingly important, especially when face-to-face learning is not possible. Video-based learning media offers greater flexibility and accessibility, allowing students to learn at their own pace and time.

Methods. This study method involves the analysis of various academic sources about the use of video and technology in accounting learning.

Results. The results show that video-based learning can improve concept understanding, student engagement, and learning outcomes. Learning videos also allow for a more interactive and engaging presentation of material that can be accessed anytime. Challenges in implementation include the need for technological skills and the quality of infrastructure. Providing sufficient training and technical support and designing videos that align with the curriculum is crucial to address these challenges.

Conclusion. This study concludes that online video-based learning media is a viable and effective alternative for accounting education when executed with careful planning and implementation.

Keywords: learning videos, online learning, accounting education, educational technology, student engagement

Introduction

Integrating technology in education is a must in the increasingly advanced digital era. Conventional learning that relies on face-to-face learning is shifting towards online learning that is more flexible and adaptive to student needs (Castro, 2019). Accounting, one of the complex disciplines requiring a deep understanding, can benefit significantly from using video-based learning media (Pollock et al., 2023). Learning videos provide abstract conceptualizations and allow for a more interactive and engaging presentation of the material (Barut Tugtekin & Dursun, 2022).

This study has high significance in modern education, especially in accounting learning. With the increasing need for flexible and adaptive learning methods, video-based learning media can be an effective solution. Online learning allows for greater accessibility and flexibility in learning time, especially for students with tight schedules or limited access to formal education (Butcher & Rose-Adams, 2015). Additionally, video-based learning can increase student engagement by presenting material interactively and engagingly, improving learning outcomes (Sato et al., 2023). This review can also guide teachers and educational institutions in designing and implementing effective learning media following the needs of the accounting curriculum.

This study stands out for its focus on using video-based learning media in online accounting education, explicitly addressing its effectiveness in teaching complex accounting concepts. While much research has explored online learning and video use in education (Callimaci & Fortin, 2023). This study uniquely examines their application to advanced accounting disciplines. Additionally, it highlights the challenges

of implementing video-based learning, offering practical solutions such as technology training and technical support to address these barriers (Forde & OBrien, 2022). The significance of this research lies in its ability to bridge the gap between traditional accounting education and the demands of the digital era by presenting a scalable and accessible learning alternative. It provides insights into designing engaging and effective instructional media and serves as a framework for addressing educational inequalities by ensuring broader access to high-quality resources.

This literature research provides various advantages for building accounting-related online learning media. First, this study examines how video-based learning media improves accounting students' knowledge and engagement by delivering complicated content in an engaging and interactive style. Second, this study addresses video-based learning's problems, such as technical skills and infrastructure, and suggests solutions. Third, video-based learning media offers long-term benefits such as improved flexibility and accessibility, allowing students to learn at their speed and schedule and enhancing learning outcomes. Finally, our research helps instructors and institutions design and deploy video-based learning media, boosting accounting education in the digital age. This literature review examines the development and use of video-based learning media as an accounting alternative and its effectiveness in improving student understanding and engagement.

Literature Review

As technology advances, education has become more flexible and easy to obtain (Ray et al., 2019). This technology makes learning dynamic and adjustable to student needs, improving motivation, engagement, and outcomes (Dahleez et al., 2021). Video-based learning media, a popular technology, helps students understand complicated topics through visual and aural resources and allows for repetition needs (Hung & Chen, 2018). Online learning is more accessible, flexible, and fits diverse learning styles. Learning films help accountants understand complex concepts and achieve results (Potter & Johnston, 2006). Case studies suggest that adding learning films with real-world examples and simulations to the curriculum improves student outcomes (De Freitas & Oliver, 2006). Video design should incorporate content separation, attractive images, and multimedia to aid comprehension. Video development involves content design, production, evaluation, and feedback-based changes (Muir et al., 2022). Quizzes, online chats, and assignments boost interest and retention. Teachers and students need technology and support to use instructional videos (Pisarenko, 2017). Student satisfaction surveys, learning outcomes analysis, and engagement observation assess effectiveness (Zureick et al., 2018). Improvement requires constructive feedback to identify shortcomings and optimise learning design. Learning videos can im-

prove school quality and offer inclusive, flexible, and paced learning. Effective implementation requires practical guidance for designing and incorporating videos into the curriculum (Al-Htaybat et al., 2018).

Research Questions

The advancement of technology has revolutionised education, offering innovative methods to enhance learning, particularly in accounting education. This study explores the development and implementation of online video-based learning media, focusing on its potential to improve quality, accessibility, and engagement. Key research questions investigate the role of technology in fostering interactivity, the effectiveness of video-based learning in simplifying complex concepts, and the adaptability of online platforms for flexible and collaborative learning. Additionally, the study examines instructional design principles, the impact of interactivity on engagement, the technological skills required, and the importance of continuous evaluation and long-term assessments.

- How does integrating modern technology improve interactivity, engagement, and adaptability in accounting education?
- What are the advantages of video-based learning in enhancing students' understanding of complex accounting concepts?
- How does online learning support flexible and collaborative methods in accounting education, particularly for students with limited access to formal education?
- What are the key principles of instructional design that enhance the effectiveness of video-based learning in accounting education?
- How do interactive features like quizzes, discussions, and participatory assignments improve student engagement and retention in accounting education?
- What are the technological skills and support systems required for teachers and students to effectively implement video-based learning?
- How does the continuous evaluation and long-term assessment of video-based learning impact student outcomes and the quality of accounting education?

Methodology

This study uses a literature study method to collect, analyse, and synthesise information from various academic sources related to developing online-based video learning media as an alternative to accounting learning (Anshari et al., 2016). This method involves several systematic steps described below (Figure 1).

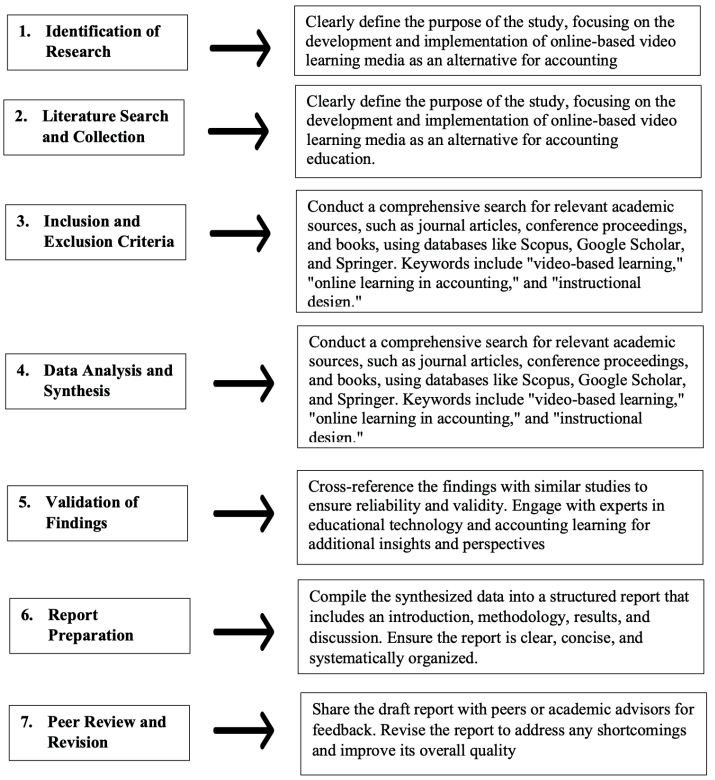
Literature selection using Google Scholar, JSTOR, SpringerLink, and ProQuest are used for literature searches using several publishers, including Taylor & Francis, Wiley, Elsevier, MDPI, Springer, and Frontier.. Search terms include "learning videos",

"online learning", "accounting learning", "educational technology", and "instructional design". This concept review included only relevant publications from the past decade. Relevance, quality, and contribution to the study were used to choose literature from the first search results. The review's Prisma method findings begin with identification, screening, eligibility, inclusion, and synthesis (Figure 2).

Analysing the available literature revealed the key findings of video learning in accounting. The analysis includes identifying video learning media's pros and cons, assessing its effectiveness in improving student understanding and engagement, identifying implementation challenges and solutions, and making literature-based recommendations. Validity and reliability were verified by cross-referencing the literature with similar studies. To learn more, educational technology and accounting education specialists were interviewed. To simplify the reports, they were organised. After initial preparation, peers and academic advisers reviewed and revised the report to improve quality.

Figure 1

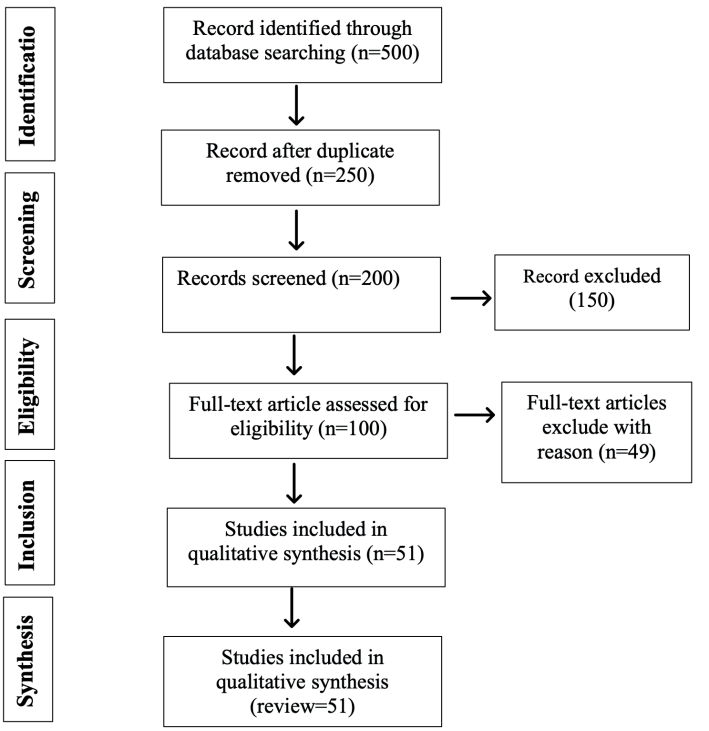
The Study Employs a Literature Study Method Involving Several Systematic Steps



Source. Own research.

Figure 2

Step to Define the Literature Review with Prisma Methods of Development of Online Video-Based Learning Media as an Alternative for Accounting Education



Source. Own research.

Results

The development of online video-based learning media enhances the quality and accessibility of accounting education by leveraging educational technology to improve interactivity, engagement, and understanding of complex concepts. Effective instructional design, including content segmentation and interactive multimedia, supported by collaborative online platforms, provides an alternative for students with limited access to formal education. Addressing challenges like infrastructure limitations and skill gaps, along with continuous evaluation, ensures better learning outcomes, higher engagement, and more inclusive education suited to the digital era. Table 1 outlines the adaptation, methods, goals, and applications of online video-based learning in accounting education. It highlights new technologies, curriculum-aligned video content, and flexible learning approaches with interactive and visually engaging tools. The focus

is on supporting students and teachers, particularly those with limited access or technological needs. Implementation involves streaming videos, collaborative platforms, training, and technical support, with regular reviews of student involvement, satisfaction, and learning outcomes to ensure continuous improvement and long-term effectiveness.

Table 1

Development of Online-Based Video Learning Media in Accounting Learning

Topic Subheadings	Adaptation Process	Approach	Goal	Application in Learning
Use of Technology in Education	Integrate the latest technology into the learning process.	Utilise digital tools and platforms, such as LMS and learning applications.	Students and teachers at all levels of education.	Use technology to enhance interactivity and adaptability in accounting learning.
Video-Based Learning Media	Develop video content aligned with the accounting curriculum.	Design compelling videos with visualisations of complex concepts.	Students requiring an in-depth understanding of accounting concepts.	Create interactive learning videos that are accessible anytime for students to review as needed.
Online Learning in the Context of Accounting	Adapt flexible and collaborative learning methods.	Facilitate independent and collaborative learning via online platforms.	Students with limited access to formal education or flexible schedules.	Implement online platforms that promote interaction and collaboration among students.
Learning Video Design and Development	Structure engaging video content based on instructional design principles.	Segment content, utilize appealing visuals and audio, and include supportive multimedia.	Students who learn visually and auditorily.	Develop videos with appropriate segmentation and multimedia to enhance understanding.
Student Interactivity and Engagement	Add interactive elements such as quizzes, discussions, and assignments.	Integrate interactive features into videos and online learning platforms.	Students require active involvement in the learning process.	Utilize interactive quizzes, discussion forums, and participatory assignments to boost engagement.
Technology Implementation and Skills	Provide training and technical support for teachers and students.	Implement training programs and ensure adequate infrastructure.	Teachers and students requiring technological proficiency for online learning.	Conducted comprehensive training sessions and provided technical tools and support.

Topic Subheadings	Adaptation Process	Approach	Goal	Application in Learning
Evaluation and Long-Term Implications	Conduct periodic evaluations using surveys, outcome analysis, and observation.	Assess the effectiveness and long-term impact of learning videos.	Students and teachers involved in online learning processes.	Use feedback to improve continuously and assess long-term impacts on learning outcomes.

Source. Own research.

Use of Technology in Education

Technology in education has revolutionised learning by offering tools that enhance interactivity, engagement, and adaptability. In accounting education, technology supports the visualisation of complex concepts, making them easier to understand through interactive and multimedia-based tools like learning management systems (LMS), video-based content, and simulation software. These technologies enable flexible learning environments, allowing students to access materials anytime and tailor their learning pace to individual needs. Research shows that integrating technology increases motivation, improves learning outcomes, and fosters student collaboration. However, challenges such as limited infrastructure, digital skill gaps, and unequal access to devices and internet connections must be addressed. Effective implementation requires proper teacher training, adequate technological support, and policies that ensure inclusivity and equity. Integrating technology provides a pathway to more dynamic, accessible, and compelling learning experiences in accounting education.

Video-Based Learning Media

Video-based learning media has proven to be effective in enhancing educational outcomes, particularly in accounting education. This approach leverages visual and auditory elements to simplify complex concepts, making them more accessible to students with diverse learning styles. Compelling video content integrates curriculum-based material, interactive features like quizzes and discussions, and engaging visuals to maintain student interest and promote active participation. Additionally, video-based learning provides flexibility, allowing students to access content anytime and repeat lessons as needed, supporting personalised learning experiences. Studies show that incorporating video media improves comprehension, retention, and engagement, especially when aligned with instructional design principles. Despite technological limitations and the need for teacher training, video-based learning offers a scalable and impactful solution for modern education.

Online Learning in the Context of Accounting

Online learning in the context of accounting offers significant advantages, such as flexibility in time and place, accessibility to diverse resources, and support for both independent and collaborative learning. It enables students to tailor their learning experiences according to their pace and needs, making it particularly beneficial for individuals with limited access to formal education or rigid schedules. Online platforms provide tools for real-time interaction, collaborative projects, and access to multimedia resources that enhance engagement and comprehension of complex accounting concepts. However, technological infrastructure limitations, digital literacy gaps, and connectivity issues must be addressed to ensure equitable learning opportunities. Research shows that well-designed online learning environments in accounting can significantly improve learning outcomes, foster active participation, and prepare students for real-world applications of their skills. By integrating interactive elements, ensuring access to resources, and offering adequate training for students and teachers, online learning can be a robust alternative to traditional accounting education.

Table 2 addresses the essentials of creating online-based accounting video learning media for effectiveness and impact. Specifics include learning objectives, content segmentation, effective instructional design, quizzes, and online conversations to engage students. Accessibility includes gadgets, internet infrastructure, teacher and student training, and technical assistance. Student satisfaction surveys, learning outcome analyses, and participation observations provide helpful feedback. Learning films are projected to increase learning outcomes, self-learning, and inclusive and flexible education throughout time.

Table 2

Instructional Matrix for the Development of Online-Based Video Learning Media as an Alternative to Accounting Learning

Aspects	Description	Implementation Strategy	Expected Results
Learning Objectives	Convey accounting concepts in an easy-to-understand way	Define specific, measurable, and realistic learning objectives	Improving students' understanding of accounting concepts
Learning Content	Complex accounting materials	Segment content into small parts, focusing on one concept per video	Materials that are easier for students to understand and remember
Instructional Design	Effective design principles	It uses segmentation principles, compelling visual presentation, and supportive multimedia.	Engaging and effective learning videos

Interactivity	Active involvement of students in the learning process	Integration of quizzes, online discussions, and participatory assignments	Higher student engagement and increased information retention
Accessibility	Device availability and Internet connection	Provision of loan devices, development of internet infrastructure, and cooperation with service providers	Equal access for all students, reducing the digital divide
Training and Technical Support	Technology skills for teachers and students	Comprehensive training for teachers' technical support is available	Technological upskilling and quick solutions to technical problems
Learning Evaluation	Assessment of the effectiveness of learning videos	Student satisfaction surveys, analysis of learning outcomes, observation of student participation	Feedback for continuous improvement, data for effectiveness evaluation
Feedback and Revisions	Continuous improvement based on feedback from students	Gathering constructive feedback from students, revising videos based on feedback	Learning videos that are constantly improving in quality and relevance
Long-Term Impact	The effect of the use of learning videos on student learning outcomes and education quality	Long-term impact research, video integration as part of a sustainable curriculum	Improved learning outcomes, independent learning skills, more inclusive and flexible education

Source. Own research.

Learning Video Design and Development

The design and development of learning videos are critical to ensuring their effectiveness in improving educational outcomes. Key principles include content segmentation to prevent cognitive overload, engaging visuals and multimedia to simplify complex concepts, and alignment with curriculum objectives to ensure relevance. Videos should incorporate interactive features like quizzes and real-world case studies to engage learners and actively enhance their understanding. Research indicates that well-structured videos and appealing visual and auditory elements significantly improve comprehension and retention. Moreover, iterative development involving testing with small groups of students allows for feedback-based refinements, ensuring the videos meet learner needs. By following these principles, learning videos can be powerful tools for delivering effective, engaging, and accessible education.

Student Interactivity and Engagement

Student interactivity and engagement are crucial to effective learning, particularly in video-based education. Interactive elements, such as embedded quizzes, discussion forums, and participatory assignments, promote active involvement and maintain student interest. Research shows that interactivity fosters more profound understanding, improves retention of information, and enhances motivation by transforming passive learning into an active experience. Features like real-time feedback from quizzes and collaborative activities encourage students to reflect on their learning progress and apply concepts practically. Additionally, engaging students through visually appealing and dynamic content helps sustain attention and promotes a more immersive learning environment. Video-based learning can significantly enhance student engagement and educational outcomes by integrating these interactive strategies.

Technology Implementation and Skills

Successful technology implementation in education relies on teachers' and students' technological readiness and skills. Effective use of video-based learning requires educators to have competencies in video production, instructional design, and the use of online platforms. Comprehensive training programmes for teachers are essential, covering aspects such as creating engaging content, managing virtual classrooms, and utilising learning management systems effectively. On the other hand, students need basic digital literacy to navigate and benefit from online learning platforms. Challenges such as limited device access, unreliable internet connections, and the digital divide must be addressed to ensure equitable implementation. Providing infrastructure support, loaning devices, and partnering with internet service providers are critical strategies to overcome these barriers. Research highlights that bridging the technology skill gap through targeted training and support significantly enhances the effectiveness of online learning, fostering inclusive and equitable education for all learners.

Evaluation and Long-Term Implications

Evaluation and long-term implications are essential for ensuring the sustained success and effectiveness of video-based learning in education. Regular assessments, such as student satisfaction surveys, learning outcome analyses, and participation observations, provide valuable insights into the quality and impact of learning videos. These evaluations help identify areas for improvement, ensuring that the content remains relevant, engaging, and aligned with educational goals. Long-term assessments, including longitudinal studies, measure the enduring effects of video-based learning

on student achievement and educational equity. Research highlights that continuous feedback loops and iterative improvements enhance immediate learning outcomes and establish video-based learning as a scalable and sustainable solution. By addressing evolving student needs and incorporating technological advancements, this approach ensures the long-term relevance and effectiveness of online learning in diverse educational contexts.

Conceptual Strategies

This review outlines strategic solutions for developing online video-based learning media in accounting education, focusing on advanced technologies, interactivity, accessibility, and collaborative stakeholder participation. It emphasises aligning clear objectives, quality content, and continuous evaluation to enhance outcomes while addressing digital equity and skill gaps. These efforts aim to create inclusive and effective learning environments.

Alternative Concepts

Table 3 highlights key concepts for innovating online-based learning media in accounting education. It emphasises clear objectives, effective instructional design, appropriate technology, and interactivity to enhance engagement and outcomes. Teacher training, technology access, and continuous evaluation ensure quality and relevance, while inclusive designs address diverse learner needs. These strategies aim to create accessible and effective learning environments.

Table 3

Alternative Concepts to Support Innovation in Online-Based Learning Media for Accounting Education

Alternative Concept	Description	Implementation
Clear Learning Objectives	Establish specific learning objectives for each accounting topic to be taught through videos.	Identify expected learning outcomes and align them with the accounting curriculum.
Appropriate Technology Selection	Choose an LMS (Learning Management System) and video editing software that supports the creation of high-quality educational content.	Use platforms like Moodle, Blackboard, or Canvas and editing software like Adobe Premiere or Camtasia.

Alternative Concept	Description	Implementation
Effective Instructional Design	Design instructional videos with segmented content, engaging visuals, and multimedia to support understanding.	Create storyboards and add graphics, animations, and interactive quizzes to enhance student engagement.
Teacher Training	Provide comprehensive training for teachers in creating and using instructional videos.	Conduct workshops and online training sessions on recording techniques, video editing, and instructional design principles.
Adequate Technology Access	Ensure all students can access instructional videos on the necessary devices and stable internet connections.	Provide device loan facilities and develop internet infrastructure, especially in remote areas.
Interactivity in Videos	Add interactive video elements like quizzes, online discussions, and participatory assignments to increase student engagement.	Integrate interactive features into the LMS and use collaborative tools like forums and breakout rooms.
Evaluation and Feedback	Conduct student satisfaction surveys, analyse learning outcomes, and observe student participation to measure the effectiveness of instructional videos.	Collect data through the LMS, analyse exam and assignment results, and observe online discussions.
Continuous Improvement	Use feedback to improve and develop instructional video content and teaching methods continuously.	Adjust content based on student feedback and evaluation results to enhance learning quality.
Long-Term Impact Assessment	Assess the long-term impact of instructional videos on student learning outcomes and education quality.	Conduct longitudinal research to monitor the development of learning outcomes and student satisfaction over time.
Inclusive and Flexible Education	Provide education accessible to all students, including those with physical disabilities or in remote areas.	Design videos and learning content that are accessibility-friendly and can be accessed on various devices.

Source. Own research.

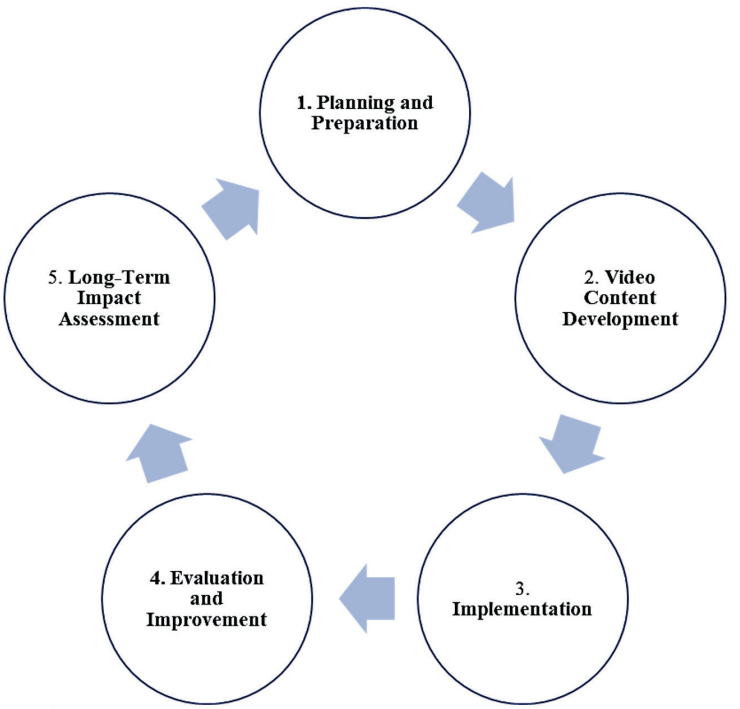
Framework Concept

Figure 3 outlines the five steps in developing online video-based learning for accounting education: planning and preparation, video content development, implementation, evaluation and improvement, and long-term impact assessment. Planning involves setting objectives, choosing technologies, and designing curriculum-aligned content.

Development focuses on creating and testing engaging, interactive videos. Implementation includes teacher and student training, ensuring access to devices and the internet, and integrating videos into classrooms with participatory tasks. The evaluation uses surveys and feedback to refine content, while long-term assessments analyse the sustained impact on learning outcomes, ensuring effective and adaptable educational experiences.

Figure 3

Framework for the Concept of Learning Application for the Development of Online-Based Video Learning Media in Accounting Learning



Source. Own research.

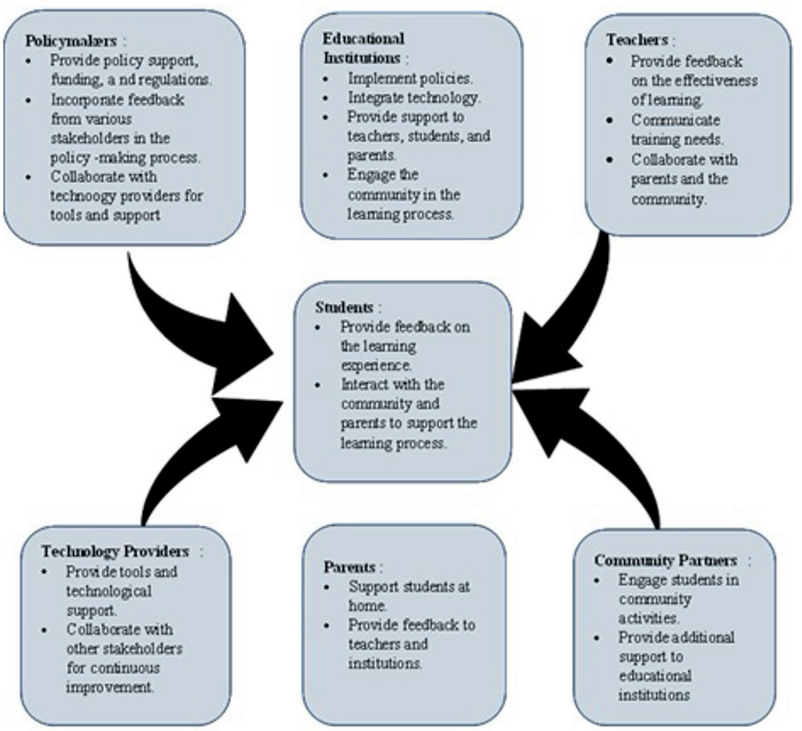
Stakeholder Participation

Figure 4 illustrates the collaborative involvement of key stakeholders in developing policies for online video-based learning media in accounting education. Policymakers provide policy support, funding, and regulations while incorporating stakeholder feedback. Educational institutions implement policies, integrate technology, and support teachers, students, and parents. Teachers contribute feedback on learning effectiveness and collaborate with parents and the community. Students offer input on their learn-

ing experiences and engage with the community. Parents support students at home and provide feedback to educators. Technology providers deliver tools and support while collaborating with other stakeholders, and community partners engage students in activities and provide additional institutional support. This collaborative approach ensures the effective and inclusive implementation of learning media.

Figure 4

The Involvement of Stakeholders in Formulating Policies for the Development of Online Video-Based Learning Media as an Alternative to Accounting Education



Source. Own research.

The involvement of stakeholders in formulating policies for the development of online video-based learning media as an alternative to accounting education is analysed due to the multidimensional support required in accounting education, which involves various parties. Policymakers, educational institutions, teachers, students, parents, and technology providers are crucial in providing resources, setting priorities, and addressing implementation challenges like the digital divide and limited access to technology. Through collaboration, stakeholders can ensure video-based learning media's relevance, quality, and sustainability by expanding infrastructure, providing devices and technical support, and offering technological training for teachers and students.

Their participation also promotes more inclusive and effective policies that reflect real needs on the ground while supporting learning beyond the classroom. This approach allows video-based learning media to serve as an innovative solution for enhancing the accessibility, engagement, and quality of accounting education in the digital era.

Discussion

The discussion explores the critical aspects of developing and implementing online video-based learning media as an innovative approach to accounting education. It highlights the importance of integrating advanced technology, designing engaging instructional content, and fostering interactivity to enhance learning outcomes. The collaborative role of stakeholders, including policymakers, educators, students, parents, technology providers, and community partners, is essential for ensuring accessibility, inclusivity, and sustainability. Key challenges such as infrastructure limitations, digital skill gaps, and the need for continuous evaluation are addressed through strategic solutions, including training programmes, improved technology access, and iterative feedback processes. This comprehensive approach aims to create flexible, engaging, and effective learning environments aligned with the needs of the digital era.

Integrating technology in education offers many benefits, such as increased interactivity, engagement, and learning adaptability (Hershkovitz et al., 2023). However, limited technology infrastructure and the digital divide hinder effectiveness, especially in underdeveloped areas (Abu Talib et al., 2021). Teachers often feel unprepared due to a lack of training and support (Hofer et al., 2021). Education policymakers and institutions must collaborate to create effective and inclusive technology integration strategies to enhance education quality and prepare students for a complex digital world (Bati & Workneh, 2021). Videos provide real-life case examples and simulations that help apply theory in practice. Learning videos improve the quality of accounting education through visualisations, flexible access, and interactive elements (Reichert-Schlax et al., 2023). Integrating additional resources such as learning videos, interactive simulations, and e-learning modules enriches the learning experience and helps students better understand accounting concepts (Table 2). Online learning in the context of accounting offers flexibility of time and place, supports independent and collaborative learning, and provides access to various online educational resources (Mystakidis, 2019)

Some best practices in learning video design have been identified through research (Miller & Zhou, 2014). According to Erhan Delen et al. (2014), interactive videos that actively engage students are more effective. The design and development of compelling learning videos require special attention to instructional design principles, production quality, and continuous evaluation (Castelli & Sarvary, 2021). Learning videos can improve student understanding and engagement with proper content segmentation, engaging visual presentation, and relevant multimedia (Seo et al., 2021).

Systematic planning, production, and evaluation will ensure that learning videos are engaging and effective in achieving learning goals (Abdulrahaman et al., 2020). Adopting best practices in learning video design and utilising student feedback can continue to improve the quality of education and ensure a better learning experience for all students (Serrano et al., 2019).

Interactivity is critical to improving student engagement and learning outcomes in learning videos. Interactive features such as quizzes, online discussions, and participatory assignments can make learning more engaging and effective (Lin et al., 2019). Technical support is also essential for teachers and students. Educational institutions must provide a technical support team to help solve any technological issues encountered during the learning process (Johnson et al., 2016). Preview research shows that adequate technical support can reduce frustration and barriers experienced by teachers and students, allowing them to focus on the teaching-learning process by Japhet E. Lawrence and Usman A. Tar (2018).

Video-based learning media has a significant long-term impact on student learning outcomes and the quality of education (Sablić et al., 2021). Learning videos improves students' understanding and engagement in the short term and builds self-study skills that will be useful in the future (Shyr & Chen, 2018). Students used to video-based learning tend to have better time management and problem-solving skills (Lang et al., 2023). Video also provides inclusive and flexible education, reducing educational disparities by enabling access for students in remote areas or with physical limitations (Rice & Dunn, 2023). Practical recommendations for teachers and institutions include engaging students in learning video design by asking for feedback, training teachers in creating and using videos, providing technical support to ensure accessibility, and designing videos that support different learning styles with interactive elements (Race, 2019).

Figure 4 illustrates the involvement of various stakeholders in formulating policies for the development of online video-based learning media as an alternative to accounting education. Policymakers provide essential policy support, funding, and regulations, incorporating feedback from various stakeholders to ensure a robust educational framework (Viennet & Pont, 2017). They collaborate with technology providers to secure the necessary tools and support (Jhurree, 2005). Educational institutions implement these policies, integrate technology into their curriculum, and support teachers, students, and parents, fostering a comprehensive and conducive learning environment (Kong, 2018). Equipped with training and resources, teachers offer valuable feedback on learning effectiveness and collaborate with parents and the community to enhance the educational process. Their frontline insights help adapt the learning materials to suit students' needs better (Evans, 2015).

Students play a crucial role by providing feedback on their learning experiences, helping to tailor the educational content to their preferences and requirements (Wanner & Palmer, 2015). Technology providers ensure the availability of up-to-date tools and infrastructure, working with other stakeholders to continuously improve

the technological aspects of education. Parents support students at home and provide feedback to educational institutions, ensuring a holistic support system for the learners (Yazdani et al., 2023). Community partners engage students in activities beyond the classroom and offer additional support to academic institutions (Stefanski et al., 2016). This collaborative approach among all stakeholders ensures that online video-based learning media is effectively developed and implemented, enhancing learning outcomes, increasing student engagement, and preparing students for the complexities of the digital world.

Table 3 reported that implementing alternative concepts in online-based learning media can significantly enhance accounting education. Clear learning objectives provide focused direction while selecting appropriate technology, such as LMS platforms (Kasim & Khalid, 2016) and video editing tools (Adobe Premiere, Camtasia), which are crucial for creating high-quality content (Cavus, 2013). Effective instructional design with segmented content, engaging visuals, and multimedia supports comprehension and engagement (van Merriënboer & Kester, 2014). Comprehensive teacher training in creating and using instructional videos is vital, with workshops and online sessions equipping teachers with the necessary skills (Gaible & Burns, 2005). Ensuring all students have access to essential devices, stable internet connections, device loan facilities, and improved infrastructure helps bridge the digital divide (Jaggars et al., 2021). Interactive quizzes and discussions increase engagement and retention (James et al., 2024).

Evaluation through student satisfaction surveys, learning outcomes analysis, and observation helps measure the effectiveness of instructional videos, providing data for continuous improvement (Murillo-Zamorano et al., 2019). Long-term impact assessments through longitudinal research monitor learning outcomes and satisfaction, offering insights for further enhancements (Knight et al., 2007). Providing inclusive and flexible education ensures access for all students, including those with disabilities or in remote areas (Chambers & Varoglu, 2023). Systematic implementation of these concepts enhances accounting education through online video learning media, creating engaging and effective learning environments (Figure 3). These efforts contribute to improved learning outcomes, increased engagement, and more inclusive education, preparing students for the complexities of the digital world (Carenys & Moya, 2016).

The involvement of stakeholders is essential for the successful development and implementation of online video-based learning media in accounting education (Figure 4). Policymakers provide the framework, funding, and regulations, incorporating feedback from educators and students to ensure inclusivity and effectiveness (Ní Bhroin & King, 2020). Educational institutions integrate these policies into curricula, offering resources and training to teachers and students (Khan & Law, 2015). Teachers contribute by sharing feedback on instructional methods and seeking training to enhance their use of technology, which is linked to improved student engagement (Henrie et al., 2015). Students provide insights into their learning experiences, enabling content refinement to meet diverse needs (Boelens et al., 2018). Parents and community partners support

students and create a conducive environment for online learning, while technology providers address infrastructure challenges and deliver technical support (Kong, 2018). This collaborative approach ensures that online learning media is accessible, engaging, and adaptable, addressing digital equity challenges and enhancing education quality.

Conclusion

This study highlights that online video learning for accounting enhances student enthusiasm, engagement, and comprehension by using educational technology to visualize complex ideas. Videos support individual and collaborative learning and improve flexibility despite device and connectivity challenges. Effective instructional design, including segmented content, appealing visuals, and multimedia, boosts comprehension and retention, while interactive elements like quizzes and feedback enhance learning. Overcoming access difficulties with technology and support is essential. Continuous improvement through surveys, learning outcomes analysis, and student observation ensures the effectiveness of the videos. These efforts make education more inclusive and flexible, significantly improving the quality and accessibility of accounting education. Establishing clear learning objectives, selecting suitable technology, designing effective materials, training teachers, and continuously refining content lead to better learning outcomes, increased engagement, and preparation for the complexities of the digital world.

Acknowledgements

This paper is part of a dissertation review in the Social Sciences and Education doctoral program at Syiah Kuala University, Darussalam, Banda Aceh, Indonesia.

REFERENCE

Abdulrahaman, M., Faruk, N., Oloyede, A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V., Imam-Fulani, Y. O., Fahm, A., & Azeez, A. L. (2020). Multimedia tools in the teaching and learning processes: A systematic review. *Heliyon*, *6*(11), Article e05312. https://doi.org/10.1016/j.heliyon.2020.e05312

Abu Talib, M., Bettayeb, A. M., & Omer, R. I. (2021). Analytical study on the impact of technology in higher education during the age of COVID-19: Systematic literature review. *Education and Information Technologies*, *26*(6), 6719-6746. https://doi.org/10.1007/s10639-021-10507-1

Al-Htaybat, K., von Alberti-Alhtaybat, L., & Alhatabat, Z. (2018). Educating digital natives for the future: accounting educators' evaluation of the accounting curriculum. *Accounting Education*, *27*(4), 333-357. https://doi.org/10.1080/09639284.2018.1437758

Anshari, M., Alas, Y., & Guan, L. S. (2016). Developing online learning resources: Big data, social networks, and cloud computing to support pervasive knowledge. *Education and Information Technologies*, *21*, 1663-1677. https://doi.org/10.1007/s10639-015-9407-3

Barut Tugtekin, E., & Dursun, O. O. (2022). Effect of animated and interactive video variations on learners' motivation in distance Education. *Education and Information Technologies*, *27*, 3247-3276. https://doi.org/10.1007/s10639-021-10735-5

Bati, T. B., & Workneh, A. W. (2021). Evaluating integrated use of information technologies in secondary schools of Ethiopia using design-reality gap analysis: A school-level study. *The Electronic Journal of Information Systems in Developing Countries*, *87*(1), Article e12148. https://doi.org/10.1002/isd2.12148

Boelens, R., Voet, M., & De Wever, B. (2018). The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning. *Computers & Education*, *120*, 197-212. https://doi.org/10.1016/j.compedu.2018.02.009

Butcher, J., & Rose-Adams, J. (2015). Part-time learners in open and distance learning: Revisiting the critical importance of choice, flexibility and employability. *Open Learning: The Journal of Open, Distance and e-Learning*, *30*(2), 127-137. https://doi.org/10.1080/02680513.2015.1055719

Callimaci, A., & Fortin, A. (2023). The impact of teacher video presence on student performance and satisfaction in undergraduate accounting courses. *Accounting Education*, 1-27. https://doi.org/10.1080/09639284.2023.2257676

Carenys, J., & Moya, S. (2016). Digital game-based learning in accounting and business education. *Accounting Education*, *25*(6), 598-651. https://doi.org/10.1080/09639284.2016.1241951

Castelli, F. R., & Sarvary, M. A. (2021). Why students do not turn on their video cameras during online classes and an equitable and inclusive plan to encourage them to do so. *Ecology and Evolution*, *11*(8), 3565-3576. https://doi.org/10.1002/ece3.7123

Castro, R. (2019). Blended learning in higher education: Trends and capabilities. *Education and Information Technologies*, *24*, 2523-2546. https://doi.org/10.1007/s10639-019-09886-3

Cavus, N. (2013). Selecting a learning management system (LMS) in developing countries: instructors' evaluation. *Interactive Learning Environments*, *21*(5), 419-437. https://doi.org/10.1080/10494820.2011.584321

Chambers, D., & Varoglu, Z. (2023). *Learning for all: Guidelines on the inclusion of learners with disabilities in open and distance learning (ODL)*. UNESCO Publishing.

Dahleez, K. A., El-Saleh, A. A., Al Alawi, A. M., & Abdel Fattah, F. A. M. (2021). Student learning outcomes and online engagement in time of crisis: The role of e-learning system usability and teacher behavior. *The International Journal of Information and Learning Technology*, *38*(5), 473-492. https://doi.org/10.1108/IJILT-04-2021-0057

De Freitas, S., & Oliver, M. (2006). How can exploratory learning with games and simulations within the curriculum be most effectively evaluated? *Computers & Education*, *46*(3), 249-264. https://doi.org/10.1016/j.compedu.2005.11.007

Delen, E., Liew, J., & Willson, V. (2014). Effects of interactivity and instructional scaffolding on learning: Self-regulation in online video-based environments. *Computers & Education*, *78*, 312-320. https://doi.org/10.1016/j.compedu.2014.06.018

Evans, M. P. (2015). Educating preservice teachers for family, school, and community engagement. In R. Quezada, V. Alexandrowicz, & S. Molina (Eds.), *Family, school, community engagement and partnerships* (pp. 9-19). Routledge. https://doi.org/10.4324/9781315713687

Forde, C., & OBrien, A. (2022). A literature review of barriers and opportunities presented by digitally enhanced practical skill teaching and learning in health science education. *Medical Education Online*, *27*(1), Article 2068210. https://doi.org/10.1080/10872981.2022.2068210

Gaible, E., & Burns, M. (2005). *Using technology to train teachers: Appropriate uses of ICT for teacher professional development in developing countries*. infoDev / World Bank. http://www.infodev.org/en/Publication.13.html

Henrie, C. R., Halverson, L. R., & Graham, C. R. (2015). Measuring student engagement in technology-mediated learning: A review. *Computers & Education*, *90*, 36-53. https://doi.org/10.1016/j.compedu.2015.09.005

Hershkovitz, A., Daniel, E., Klein, Y., & Shacham, M. (2023). Technology integration in emergency remote teaching: teachers' self-efficacy and sense of success. *Education and Information Technologies*, *28*(10), 12433-12464. https://doi.org/10.1007/s10639-023-11688-7

Hofer, S. I., Nistor, N., & Scheibenzuber, C. (2021). Online teaching and learning in higher education: Lessons learned in crisis situations. *Computers in Human Behavior*, *121*, Article 106789. https://doi.org/10.1016/j.chb.2021.106789

Hung, I.-C., & Chen, N.-S. (2018). Embodied interactive video lectures for improving learning comprehension and retention. *Computers & Education*, *117*, 116-131. https://doi.org/10.1016/j.compedu.2017.10.005

Jaggars, S. S., Motz, B. A., Rivera, M. D., Heckler, A., Quick, J. D., Hance, E. A., & Karwisch, C. (2021). *The digital divide among college students: lessons learned from the COVID-19 emergency transition.* Midwestern Higher Education Compact. https://files.eric.ed.gov/fulltext/ED611284.pdf

James, W., Oates, G., & Schonfeldt, N. (2024). Improving retention while enhancing student engagement and learning outcomes using gamified mobile technology. *Accounting Education*, *34*(3), 366-386. https://doi.org/10.1080/09639284.2024.2326009

Jhurree, V. (2005). Technology integration in education in developing countries: Guidelines to policy makers. *International Education Journal*, *6*(4), 467-483. https://files.eric.ed.gov/fulltext/EJ855000.pdf

Johnson, A. M., Jacovina, M. E., Russell, D. G., & Soto, C. M. (2016). Challenges and solutions when using technologies in the classroom. In Crossley, S. A., & McNamara, D. S. (Eds.), *Adaptive educational technologies for literacy instruction* (pp. 13-30). Routledge. https://doi.org/10.4324/9781315647500

Kasim, N. N. M., & Khalid, F. (2016). Choosing the right learning management system (LMS) for the higher education institution context: A systematic review. *International Journal of Emerging Technologies in Learning*, *11*(6), 55-61. http://dx.doi.org/10.3991/ijet.v11i06.5644

Khan, M. A., & Law, L. S. (2015). An Integrative approach to curriculum development in higher education in the USA: A theoretical framework. *International Education Studies*, *8*(3), 66-76. https://doi.org/10.5539/ies.v8n3p66

Knight, A. M., Carrese, J. A., & Wright, S. M. (2007). Qualitative assessment of the long-term impact of a faculty development programme in teaching skills. *Medical Education*, *41*(6), 592-600. https://doi.org/10.1111/j.1365-2923.2007.02770.x

Kong, S.-C. (2018). Parents' perceptions of e-learning in school education: implications for the partnership between schools and parents. *Technology, Pedagogy and Education*, *27*(1), 15-31. https://doi.org/10.1080/1475939X.2017.1317659

Lang, F., Gerhäuser, A., Wild, C., Wennberg, E., Schmidt, M., Wagner, M., Müller-Stich, B., & Nickel, F. (2023). Video-based learning of coping strategies for common errors improves laparoscopy training—a randomized study. *Surgical Endoscopy*, *37*, 4054-4064. https://doi.org/10.1007/s00464-023-09969-w

Lawrence, J. E., & Tar, U. A. (2018). Factors that influence teachers' adoption and integration of ICT in teaching/learning process. *Educational Media International*, *55*(1), 79-105. https://doi.org/10.1080/09523987.2018.1439712

Lin, L.-C., Hung, I.-C., Kinshuk, & Chen, N.-S. (2019). The impact of student engagement on learning outcomes in a cyber-flipped course. *Educational Technology Research and Development*, *67*, 1573-1591. https://doi.org/10.1007/s11423-019-09698-9

Miller, K., & Zhou, X. (2014). Learning from classroom video: What makes it compelling and what makes it hard. In R. Goldman, R. Pea, B. Barron, & S. J. Derry (Eds.), *Video research in the learning sciences* (pp. 321-334). Routledge. https://doi.org/10.4324/9780203877258

Muir, T., Wang, I., Trimble, A., Mainsbridge, C., & Douglas, T. (2022). Using interactive online pedagogical approaches to promote student engagement. *Education Sciences*, *12*(6), Article 415. https://doi.org/10.3390/educsci12060415

Murillo-Zamorano, L. R., Sánchez, J. Á. L., & Godoy-Caballero, A. L. (2019). How the flipped classroom affects knowledge, skills, and engagement in higher education: Effects on students' satisfaction. *Computers & Education*, *141*, Article 103608. https://doi.org/10.1016/j.compedu.2019.103608

Mystakidis, S. (2019). Motivation enhanced deep and meaningful learning with social virtual reality.

Ní Bhroin, Ó., & King, F. (2020). Teacher education for inclusive education: a framework for developing collaboration for the inclusion of students with support plans. *European Journal of Teacher Education*, *43*(1), 38-63. https://doi.org/10.1080/02619768.2019.1691993

Pisarenko, V. (2017). Teaching a foreign language using videos. *Social Sciences*, *6*(4), 125. https://www.mdpi.com/2076-0760/6/4/125

Pollock, M., Schmulian, A., & Coetzee, S. A. (2023). Do team-based written or video explanations of course content enhance accounting students' knowledge, communication, and teamwork skills? *Journal of Accounting Education*, *65*, Article 100873. https://doi.org/10.1016/j.jaccedu.2023.100873

Potter, B. N., & Johnston, C. G. (2006). The effect of interactive online learning systems on student learning outcomes in accounting. *Journal of Accounting Education*, *24*(1), 16-34. https://doi.org/10.1016/j.jaccedu.2006.04.003

Race, P. (2019). *The lecturer's toolkit: A practical guide to assessment, learning and teaching* (5th ed.). Routledge. https://doi.org/10.4324/9780429060205

Ray, A., Bala, P. K., & Dasgupta, S. A. (2019). Role of authenticity and perceived benefits of online courses on technology based career choice in India: A modified technology adoption model based on career theory. *International Journal of Information Management*, *47*, 140-151. https://doi.org/10.1016/j.ijinfomgt.2019.01.015

Reichert-Schlax, J., Zlatkin-Troitschanskaia, O., Frank, K., Brückner, S., Schneider, M., & Müller, A. (2023). Development and evaluation of digital learning tools promoting applicable knowledge in economics and german teacher education. *Education Sciences*, *13*(5), Article 481. https://doi.org/10.3390/educsci13050481

Rice, M. F., & Dunn, M. (2023). Inclusive online and distance education for learners with dis/abilities. In M. F. Rice & M. Dunn (Eds.), *Inclusive online and distance education for learners with dis/abilities* (pp. 1-6). Routledge. https://doi.org/10.4324/9781003412076

Sablić, M., Mirosavljević, A., & Škugor, A. (2021). Video-based learning (VBL)—past, present and future: An overview of the research published from 2008 to 2019. *Technology, Knowledge and Learning*, *26*, 1061-1077. https://doi.org/10.1007/s10758-020-09455-5

Sato, S. N., Condes Moreno, E., Rubio-Zarapuz, A., Dalamitros, A. A., Yañez-Sepulveda, R., Tornero-Aguilera, J. F., & Clemente-Suárez, V. J. (2023). Navigating the new normal: Adapting online and distance learning in the post-pandemic era. *Education Sciences*, *14*(1), Article 19. https://doi.org/10.3390/educsci14010019

Seo, K., Dodson, S., Harandi, N. M., Roberson, N., Fels, S., & Roll, I. (2021). Active learning with online video: The impact of learning context on engagement. *Computers & Education*, *165*, Article 104132. https://doi.org/10.1016/j.compedu.2021.104132

Serrano, D. R., Dea-Ayuela, M. A., Gonzalez-Burgos, E., Serrano-Gil, A., & Lalatsa, A. (2019). Technology-enhanced learning in higher education: How to enhance student engagement through blended learning. *European Journal of Education*, *54*(2), 273-286. https://doi.org/10.1111/ejed.12330

Shyr, W. J., & Chen, C. H. (2018). Designing a technology-enhanced flipped learning system to facilitate students' self-regulation and performance. *Journal of Computer Assisted Learning*, *34*(1), 53-62. https://doi.org/10.1111/jcal.12213

Stefanski, A., Valli, L., & Jacobson, R. (2016). Beyond involvement and engagement: The role of the family in school–community partnerships. *School Community Journal*, *26*(2), 135-160. http://www.adi.org/journal/2016fw/StefanskiValliJacobsonFall2016.pdf

van Merriënboer, J., & Kester, L. (2014). The four-component instructional design model: Multimedia principles in environments for complex learning. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (2nd ed., pp. 104-148). Cambridge University Press. https://doi.org/10.1017/CBO9781139547369.007

Viennet, R., & Pont, B. (2017). *Education policy implementation: A literature review and proposed framework* (Working paper No. 162). OECD Publishing. https://doi.org/10.1787/fc467a64-en

Wanner, T., & Palmer, E. (2015). Personalising learning: Exploring student and teacher perceptions about flexible learning and assessment in a flipped university course. *Computers & Education*, *88*, 354-369. https://doi.org/10.1016/j.compedu.2015.07.008

Yazdani, M., Pamucar, D., Erdmann, A., & Toro-Dupouy, L. (2023). Resilient sustainable investment in digital education technology: A stakeholder-centric decision support model under uncertainty. *Technological Forecasting and Social Change*, *188*, Article 122282. https://doi.org/10.1016/j.techfore.2022.122282

Zureick, A. H., Burk-Rafel, J., Purkiss, J. A., & Hortsch, M. (2018). The interrupted learner: How distractions during live and video lectures influence learning outcomes. *Anatomical Sciences Education*, *11*(4), 366-376. https://doi.org/10.1002/ase.1754