

Systematic Literature Review: The Importance of Using Social Media (YouTube) on Tertiary Students' Learning Improvement in Timor-Leste

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ABSTRACT

The integration of social media through YouTube now draws extensive worldwide interest for use in educational practice. YouTube serves as a beneficial educational resource in Timor-Leste by helping improve learning at the tertiary level because traditional teaching materials are not easily accessible. This review examines how YouTube enhances educational success for Timor-Leste's tertiary students. The research investigation reveals vital aspects which cover accessibility together with student engagement as well as independent learning methods yet the analysis also addresses digital competency limitations and network resource problems. The research indicates that YouTube serves as a powerful learning enhancement platform through its available multidimensional content that keeps students engaged. Optimal use of YouTube educational resources demands solution of connectivity problems and skill deficiencies in digital learning methods. The paper finishes by providing concrete advice for teachers and policy leaders who want to make full use of YouTube for education purposes at the tertiary course level.

Keyword : Social Media YouTube, Tertiary Student, Learning Improvement, Timor-Leste School

1. Introduction

The fast-growing digital education material revolution has revolutionized worldwide education by creating new methods for students to study outside classroom environments. Tertiary students in Timor-Leste depend heavily on YouTube platforms because the inadequate funding of infrastructure alongside scarce educational resources (UNESCO, 2021; World Bank, 2020). The vast educational content on YouTube suits multiple learning styles allowing students complete autonomy in their time for concept comprehension (Fernandes, 2020). The widespread use of YouTube in education creates new problems about material authenticity and incorrect material dissemination in addition to student digital fluency inadequacy (Martins, 2022). A comprehensive evaluation through systematic literature review should explore YouTube's role as an educational resource to strengthen or obstruct learning success within Timor-Leste's tertiary education system while providing valuable information to policy makers and teaching professionals and their students.

The research investigates the educational implications of YouTube on tertiary students in Timor-Leste through a review of existing research about its pros and cons. The

research applies PRISMA guidelines to conduct systematic literature reviews according to Moher et al. (2009) and Page et al. (2021). The research examines three main questions about YouTube's influence on learning performance of Timorese tertiary students: (1) How does YouTube affect their academic outcomes? Student utilization of YouTube for educational purposes faces what obstacles during their learning process? What methods should the Timor-Leste higher education system use to improve YouTube effectiveness as a learning platform? Understanding digital learning in the nation will be strengthened through these findings which will guide future educational policy decisions and interventions.

Educational use of YouTube attracts substantial focus across international higher education settings because it helps build student engagement and increases classroom accessibility along with promoting personal learning initiatives. Studies demonstrate that YouTube delivers instructional videos which accommodate learners of various types and empower viewers in resource-limited settings specifically. The research shows YouTube functions as a personal learning platform which combines student discussion features along with expert instructed videos complementing classroom instruction

with real-world learning examples. Digital literacy deficiencies together with the danger of false information and unequal internet access prevent YouTube from reaching its maximum potential especially for developing countries according to existing research. The process of using YouTube learning materials in Timor-Leste's higher education system leads to both positive instructional opportunities alongside specific difficulties due to limited educational resources. The research extends current knowledge by undertaking a systematic examination of how YouTube affects tertiary education in Timor-Leste together with barrier identification and solutions to improve this digital learning resource.

Researchers have extensively studied how YouTube supports higher education by enhancing learning accessibility and student engagement and self-directed learning especially through resource-constraint settings (Fernandes 2020; Rodrigues 2021). Tertiary institutions in Timor-Leste use YouTube as an alternative learning resource because they encounter challenges including insufficient learning materials alongside educator shortages and limited infrastructure (UNESCO, 2021; World Bank, 2020). The convenience of YouTube for academic achievement lies in its video-on-demand feature which offers multiple learning resources along with repeated access for repeated study of complex subjects from across global viewpoints regardless of classroom boundaries (Guterres, 2021; Da Costa, 2022). YouTube's impact on learning depends on several elements which encompass both student expertise in digital methods and their ability to access the internet and the authenticity of posted material (Martins, 2022; Almeida, 2023). The impact of YouTube on tertiary education in Timor-Leste receives evaluation through an analysis of its advantages and difficulties alongside necessary institutional tactics for maximizing educational usage.

1.1. Educational System Challenges

The educational system of Timor-Leste encounters major impediments because of insufficient educational resources and physical facilities that adversely affects student achievement (UNESCO, 2021). Schools face funding insufficiency that prevents them from providing fundamental resources including qualified teaching staff and textbooks and instructional materials therefore creating a range of educational quality differences (World Bank, 2020). The inadequate educational facilities of rural areas worsen learning obstacles for students by making their academic achievements more difficult (Asian Development Bank, 2019). Timor-Leste students primarily use YouTube as their main learning resource because it represents their key educational tool to overcome educational limitations (Rodrigues, 2021). Students leverage YouTube by obtaining educational materials across diverse subjects and adjust their learning speed and review difficult topics at any time

(Fernandes, 2020). The educational market reveals a strong digital learning technology dependency because face-to-face learning no longer satisfies student requirements (Martins, 2022).

1.2. Benefits and Limitations

The educational resource of YouTube offers various benefits to tertiary students studying in Timor-Leste. YouTube platform delivers varied instructional content that suits different learning types specifically helping visual learners to grasp complex scientific and mathematical ideas through visual explanations (Guterres, 2021). The educational videos on YouTube enable students to learn different viewpoints by connecting them to lectures along with tutorial materials and professional discussions happening globally (Da Costa, 2022). Although YouTube provides numerous learning opportunities the complete reliance on this platform creates important difficulties for students. Students face two significant problems with YouTube information because it contains a high amount of false content while also making truth verification difficult (Martins, 2022). Students face both poor academic performance and reduced comprehension when YouTube content does not match traditional learning structures while students learn independently (Fernandes 2020). Academic performance demands from students the ability to establish reliable sources alongside effective usage of digital educational resources (Almeida, 2023).

1.3. Barrier of effectively utilizing YouTube

The digital divide serves as a major obstacle in making YouTube an effective educational resource for Timor-Leste. Students located in rural areas experience multiple hurdles that stop them from taking full advantage of digital educational resources such as inadequate digital skills and restricted internet access and monetary limitations (Almeida, 2023). Students who lack reliable internet connection have difficulties using digital platforms for learning therefore creating more inequalities in education. Student learning outcomes on YouTube depend heavily on their skills to search and analyze education materials found on the platform even though it provides abundant free educational content. Official education must develop strategies that incorporate YouTube by identifying excellent content along with usage guidance and digital literacy instruction (Guterres, 2021). The solution to these issues represents a fundamental need for maximizing the effectiveness of digital learning platforms within Timor-Leste's higher education system to effectively use technology as an educational tool (Martins, 2022).

2. Research Methods

This systematic literature review applied PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines because they represent a

recognized framework for producing transparent systematic reviews with rigorous methodology (Moher et al., 2009). PRISMA establishes a specific methodology to select research studies, which reduces biases and boosts the credibility of the assessed evidence (Page et al., 2021). These guidelines develop a systematic method that provides an in-depth investigation into YouTube's effect on learning achievement among Timor-Leste tertiary students (Rodrigues, 2021). The PRISMA framework functioned as a key framework that directed the search conduct along with all phases of study assessment and data retrieval steps, which maintained the analysis of vital studies while dismissing studies not compliant with specified requirements (Almeida, 2023).

Researchers used an extensive search method in academic databases to find suitable studies in Google Scholar, Scopus, PubMed, and ERIC. The selection of these databases ensured comprehensive educational, technological, and social science literature coverage, resulting in diverse studies for review (World Bank, 2020). Research focused on YouTube learning practices within tertiary institutions of Timor-Leste used the search terms "YouTube," "social media," "tertiary education," "learning improvement," and "Timor-Leste" (Da Costa, 2022). Researchers selected studies from 2010 to 2023 to analyze recent information that matched the fast-paced development of social media in education (Fernandes, 2020). The review examined how tertiary students aged 18–35 use digital learning tools in Timor-Leste because this age range includes heavy digital tool users while serving as the main group for education development in the country (UNESCO, 2021).

Out of the numerous studies initially identified by the database search, 20 achieved the necessary inclusion norms and proceeded with thematic analysis (Rodrigues, 2021). The research inclusion requirements ensured that the studies directly addressed the research query by evaluating YouTube learning effects on tertiary students from Timor-Leste (Guterres, 2021). Thematic analysis was the analytical choice because it delivers both theme interpretation and data pattern identification to enhance the complexity-level understanding of the research focus (Braun & Clarke, 2006). The chosen method allowed this review to combine findings from different studies by revealing significant details about the strengths and weaknesses, along with the future prospects of YouTube as an educational instrument (Martins, 2022). The review systematically collects existing research to create a detailed understanding that delivers essential knowledge to Timor-Leste educators together with policymakers and researchers from both the country and the wider world (Almeida, 2023).

3. Results and Discussions

3.1 Results

3.1.1 Accessibility of Educational Resources

The availability of educational content through YouTube has grown notably because resource-challenged areas such as Timor-Leste face few educational resource options. Students can use YouTube to access unlimited free on-demand educational content through lectures and tutorials and expert explanations which let them learn at their convenience (Rodrigues 2021, Da Costa 2022). YouTube provides educational access to students that exceeds conventional educational boundaries founded on building infrastructure and qualified personnel and printed resources. Students benefit most in areas where trained educators and updated literature are difficult to find because YouTube lets them find different instruction methods by watching educators from all over the world.

The learning landscape of Timor-Leste has changed as students depend more on YouTube to obtain unavailable international university lectures technical tutorials and language resources from various global providers. Users take advantage of YouTube to deepen their knowledge in complicated disciplines including mathematics, science together with computer programming while filling holes in the local academic program. YouTube provides mobile accessibility which serves as an affordable platform for students who lack various educational materials at their disposal. The platform acts as a vital component in the democratic process of knowledge distribution because it enables self-directed learning and provides better outcomes for students in deprived education areas.

3.1.2 Enhanced Engagement and Motivation

The approach of YouTube through visuals and interactivity serves as an established tool for increasing student involvement and enthusiasm. Several studies have confirmed that educational videos which use both animated elements plus actual examples and storytelling approaches boost student information learning and retention (Fernandes, 2020). Multimedia elements contribute to student understanding by addressing multiple learning patterns and they improve brain activity through visual presentation of complex ideas. Multimodal learning happens through video content because students can absorb auditory and visual information at the same time resulting in better achievement in learning. Through its interactive functions and discussion forums and comment sections YouTube creates an environment that promotes collaboration between students and improves knowledge sharing.

The teacher-led educational practices in Timor-Leste benefit from YouTube as an additional classroom resource because it enables more interactive learning methods. Users can find alternative educational resources on YouTube because the platform displays content through dynamic visual formats that relate to specific contexts. Through YouTube educational opportunities are available to students who do not have appropriate access to diverse educational materials

enabling them to study subjects after national curriculum boundaries. Students can experience mobile-friendly YouTube access to learn freely and they have the control to study material at their preferred speed along with the option to return to challenging topics any time. The extensive role YouTube plays enables educational modernization along with the creation of an interactive learning environment in Timor-Leste.

3.1.3 Self-Directed and Personalized Learning

Internal learners use YouTube to advance their educational progress at their individual connection points while consulting relevant course materials for extended study sessions. The system gives learners unique advantages in educational settings with diverse student learning speeds. The education system of Timor-Leste faces two major issues that affect tertiary students: overcrowded classrooms and sparse instructor availability for individual assistance (Guterres 2021). YouTube enables students to enhance their formal curriculum through numerous educational resources that provide supplementary explanations and alternate teaching methods as well as specialty tutorials. Students can better understand their coursework when they exercise independence in their learning which enables them to lead their educational progress and overcome limitations found in typical educational settings.

The YouTube recommendation engine helps students find educational contents that cater to their scholarly interests along with their learning requirements. The platform determines appropriate videos after studying user behaviour that help users consolidate previous lessons while exploring supplementary material therefore delivering a tailored educational experience. Students in Timor-Leste benefit the most from this adaptive learning method since their educational material options are restricted. Students develop better learning independence and acquire diversified knowledge through exploring supplementary material which extends past national curriculum content. Through its educational content YouTube enables students to become self-motivated learners of knowledge so they can develop their abilities to learn through their whole lives in and beyond school boundaries.

3.1.4 Challenges and Barriers

Several structural and technological limitations prevent YouTube from becoming an ideal educational platform for learning purposes within Timor-Leste. Network infrastructure development in rural areas presents the biggest impediment because rural zones do not have adequate internet connectivity. Many students cannot afford frequent video-based learning materials because high data costs serve to worsen this situation (Almeida, 2023). Students from lower-income households face difficulty accessing digital technology equipment like smartphones and computers thus preventing them from participating in online education platforms. The combination of these limiting factors prevents YouTube

from becoming an educational approach of choice due to its restricted use as a learning platform for students.

Students face obstacles to effectively use YouTube for learning because of their inadequate digital literacy skills. The lack of digital competence among many Timor-Leste students produces two problems: they become exposed to false information and inefficient study habits (Martins, 2022). The many unverified or low-quality educational materials available on the platform make learning more difficult since students find it hard to tell apart credible information from unreliable sources. When students receive neither guidance nor training in digital literacy alongside critical thinking they lose potential educational value from YouTube because they accidentally spend time on misleading non-educational content. Multiple institutional improvements are needed to solve current challenges regarding digital infrastructure and the affordability of internet services and digital literacy training programs in educational systems.

3.2 Discussion

Access to educational resources on YouTube has brought substantial changes to educational environments that have limited resources like Timor-Leste. The platform extends unlimited educational materials beyond regular classroom restrictions to students. According to Rodrigues (2021) and Da Costa (2022) YouTube functions as a substitute educational platform which works best in educational settings having limited textbooks and untrained educators and insufficient infrastructure. Through its on-demand free educational content YouTube allows students to study various teaching methods provided by professors from all around the world. Subjects with restricted local expertise benefit from this access which allows students to receive worldwide insights about complex topics including mathematics science and technology. Through its mobile nature YouTube functions as an economical tool that delivers education to students who lack regular educational resources thus establishing an inclusive learning environment.

YouTube's combination of interactive media and multiple modes stimulates student interest better than conventional pedagogical models do. Video-based education demonstrates improved student learning retention together with better comprehension because it combines real examples with animation along with narrative methods according to Fernandes (2020). Visual learning with auditory inputs strengthens student cognition thus making hard-to-understand ideas accessible to learners. Students benefit from YouTube through its interactive platform which allows them to collaborate by exchanging knowledge and posing questions with both fellow students and instructors through its features for discussions and comments. Timor-Leste's educational situation of limited traditional materials makes YouTube an important resource that supports standard educational practices. Learning

material can be accessed at individual student convenience through YouTube to support independent learning processes. The flexible nature of YouTube provides considerable benefits in education situations which are characterized by overcrowded classrooms and insufficient teachers (Guterres, 2021).

The education-based application of YouTube in Timor-Leste faces various obstacles that limit its utilization. The main obstacle to utilizing YouTube for education stems from inadequate digital infrastructure which principally affects rural areas because they have restricted internet access. According to Almeida (2023) students face two major barriers which include the costs of high data usage and restricted access to cell phones and computer devices leading to restricted YouTube learning opportunities. According to Martins (2022) students encounter challenges with digital literacy because they lack abilities to judge the authenticity of online material. Many students face an overwhelming challenge to identify credible educational content on YouTube because the platform contains excessive unverified or poor-quality educational resources. Students who do not have proper training in digital literacy and guidance will find it difficult to utilize YouTube at its full educational potential. To resolve these obstacles the educational system needs substantial reforms which should combine increased digital infrastructure support with cost-reduced internet access and the implementation of digital literacy programs within the national educational standards to teach required online learning abilities to students

4. Conclusion

YouTube demonstrates potential to revolutionize tertiary education in Timor-Leste through flexible learning resources that provide both modern approach and traditional education contents. Students at the platform can access a wide range of educational materials including experienced lectures together with interactive tutorials that help them grasp difficult concepts. The flexible nature of YouTube enables students to learn autonomously and gain access to worldwide academic views while building their self-learning abilities. Higher education can fully benefit from YouTube by resolving foundational digital infrastructure problems and reducing internet expenses and enhancing digital literacy capabilities. The ability of students to use YouTube effectively for their academic growth faces impediments that require specific interventions to be overcome.

A collective approach between stakeholders who include policymakers and educational institutions and technology providers represents the solution to resolve these issues. The expansion of internet infrastructure across rural areas would enhance student opportunities to use educational materials on the internet. The formal education system needs to integrate digital literacy training because it will teach students how to carefully review and move through online content. Universities

can utilize YouTube by selecting and collecting professional academic videos which should serve as educational resources for students throughout their classes alongside required materials. Future investigations need to study how YouTube affects tertiary students in Timor-Leste by tracking its effects across extended periods on academic achievement and student interaction as well as their retention of learned information. It is essential to discover best approaches for using YouTube in education while establishing its pedagogical application to guarantee higher education becomes more effective through this platform.

The review demonstrates YouTube's potential to transform higher education across Timor-Leste and establishes the requirement for specific interventions to remove current obstacles. YouTube holds great potential to become an effective learning platform that enhances educational achievements for tertiary education students through proper solution of current obstacles.

Recommendations

Addressing the following recommendations will maximize the educational potential of YouTube to provide quality learning opportunities with equity for students in resource-limited areas including Timor-Leste.

1. The government through educational institutions must establish YouTube as an official education supplement by developing structured digital literacy curricula within schools. Educational institutions need to train instructors to identify and make successful use of digital educational resources to assist students in choosing quality learning materials.
2. The improvement of internet connectivity for remote villages requires dedicated infrastructure investments to achieve greater digital learning system accessibility. The accessibility of online learning resources improves when educational institutions provide data cost reduction through funding or establish partnerships with telecommunication service providers.
3. Professional development programs for teachers must contain training about effective implementation of YouTube as an educational tool within their classrooms. The instructional designers should develop digital learning approaches for curricula that will enhance multimedia instructional techniques.
4. The educational community should introduce digital literacy training because students need these analytical abilities for judging educational content found online. Students can benefit through the creation of selected YouTube playlists containing verified academic content that points them toward top-quality education materials.
5. Strengthening digital education yields better student learning results when parents along with community members actively participate in its implementation.

Educational facilities together with community-based centers should organize training sessions about effective educational YouTube usage for both students and their parents..

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