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| Research Article

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Online Learning and the Development of 21st Century Skills among History Students in Secondary Schools in the Northwest Region of Cameroon

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Abstract: This study aimed to investigate the potential of online learning in fostering the development of 21st-century skills among history students in the northwest region. Two research questions were formulated which were used to construct the questionnaire. The data was collected using a questionnaire for history students and interview guide for history teachers and RPIs. The study employed a mixed method approach. The population of this study was made up of Lowersixth and uppersixth hisotry students and history teachers in the North West Region of Cameroon. From this population 300 history students and 15 history teachers and Pedagogic Inspectors from 3 selected public secondary schools were obtained. The purposive and convenience sampling techniques were employed. Data were analyzed using descriptive and inferential statistics, along with thematic content analysis. The findings revealed that online teaching methods (P = 0.001, R = 0.858), challenges of online learning (P = 0.001, R = -0.641) significantly influenced the development of critical thinking, collaboration, and digital literacy among history students. However, challenges such as limited internet access, insufficient digital infrastructure, and inadequate teacher training were identified as barriers to the effective use of online learning. The study concluded that, while online learning has the potential to improve 21st-century skills, addressing infrastructural and training gaps is essential for maximizing its benefits. Based on these findings, recommendations were made to improve access to online learning resources, enhance teacher training, and align the curriculum with the technological needs of the contemporary educational landscape in the Northwest Region of Cameroon.

Keywords: Online Learning, Online Teaching Methods, Challenges of Online Learning, Development of 21st Century Skills.

Introduction

Education being the back born of every nation needs a constant check to meet up with the innovations that are coming up like the introduction of information and communication technology (ICT) into the curriculum most in secondary schools. Online learning encompasses a

range of technologies such as the World Wide Web, email, chat rooms, discussion groups, and multimedia (text, audio, and video conferencing), delivered over computer networks to facilitate education. It enables learners to study at their own pace and convenience (Ratheeswari, 2018). Online education requires significant resources and careful planning. In this context, teachers act as facilitators rather than mere transmitters of content, and Information and Communication Technologies (ICTs) are regarded as resources that enhance the learning experience. Learners engage with various e-learning tools readily available to the public, including platforms such as Facebook, Zoom, YouTube, WhatsApp, and Twitter (Schneider et al., 2020). E-learning has revitalized the joy of learning through its innovative and interactive content delivery and is considered more appealing to students (Adedoyin & Soykan, 2023). Online teaching and learning are designed to engage the modern learner on an individual basis, anytime and anywhere. One popular form is the use of Massive Open Online Courses (MOOCs), which have expanded globally, involving numerous researchers and academic institutions (Zeithaml, 1981). The main reasons for offering online courses include their convenient accessibility, higher course completion rates, and the appeal to non-traditional students (Rovai, 2002). These tools also provide teachers with a broad spectrum of methods to enhance their instruction. Education remains vital, as it equips individuals with the knowledge and skills necessary to address global challenges (Taylor, 1994; Kibinkiri, 2024).

Background to the Study

The evolution of online learning dates back to the 1960s, but it wasn't until the 1990s that online learning began to gain popularity with the widespread use of the internet. The University of Phoenix is often credited with being one of the first institutions to offer online degree programs in the 1980s. The Open University in the UK also played a significant role in the development of online learning. Online learning has evolved significantly over the years, from simple computer-based training to sophisticated online platforms that incorporate multimedia, interactive tools, and social learning features. Online learning is now a global phenomenon, with millions of students worldwide accessing online courses and degree programs. The COVID-19 pandemic has accelerated the adoption of online learning, with many institutions shifting to online or blended learning models (Ngang et al, 2020).

The term online learning or e-learning has only been in existence since 1999 when the word was first utilized at a CBT systems seminar. Other words also began to spring up in search of an accurate description such as “online learning” and “virtual learning”. However, the principles behind e-learning have been well documented throughout history, and there is even evidence which suggests that early forms of e-learning existed as far back as the 19th century (Rogers, 1983).

Long before the internet was launched, distance courses were being offered to provide students with education on particular subjects or skills. In the 1840′s Isaac Pitman taught his pupils shorthand via correspondence. This form of symbolic writing was designed to improve writing speed and was popular amongst secretaries, journalists, and other individuals who did a great deal of note taking or writing. Pitman, who was a qualified teacher, was sent completed assignments by mail and he would then send his students more work to be finished using the same system (Zeithaml, 1981).

The first online learning systems were really only set up to deliver information to students but as we entered the 70s online learning started to become more interactive. In Britain, the Open University was keen to take advantage of e-learning. Their system of education has always been primarily focused on learning at a distance (Beldarrain, 2006). In the past, course materials were delivered by post and correspondence with tutors was via mail. With the internet, the Open University began to offer a wider range of interactive educational experiences as well as faster correspondence with students via email.

With the introduction of the computer and internet in the late 20th century, e-learning tools and delivery methods expanded. The first MAC in the 1980′s enabled individuals to have computers in their homes, making it easier for them to learn about particular subjects and develop certain skill sets. Then, in the following decade, virtual learning environments began to truly thrive, with people gaining access to a wealth of online information and e-learning opportunities (Cavanaugh, 2004).

The conceptual framework of online learning (e-learning) describes any form of pedagogy delivered using digital technology. Such methods incorporate visual graphics, text, animations, videos and audio. In addition, online pedagogy can also facilitate group learning, and the assistance of instructors within specific fields (Wan Aziaris, 2015). Online learning refers to the use of various kinds of electronic media and information and communication technologies (ICT) in education (Kibinkiri, 2014).

Online learning can occur in or out of the classroom. It can be self-paced, asynchronous learning or may be instructor-led, synchronous learning. Online learning is suited to distance learning and flexible learning, but it can also be used in conjunction with face-to-face teaching, in which case the term blended learning is commonly used. It is commonly thought that new technologies make a big difference in education (Artino, 2012).

The present study is underpinned by Social Cognitive Theory of Bandura (1977) emphasizes the dynamic interaction between individuals, their environments, and their behaviors. This theory is particularly relevant in examining how engagement with online learning resources such as virtual historical archives, multimedia timelines, and interactive presentations shapes students' cognitive development, self-efficacy, and motivation. In history education, students often learn by observing others, including peers, teachers, and representations of historical figures within digital environments. Through this observational learning process, learners develop skills such as historical inquiry, analytical reasoning, and empathy for past experiences essential competencies in 21st-century education. The next theory used in this study is the Technology Acceptance Model of Davis (1989) provides a framework for understanding how students and teachers adopt and integrate digital tools in the learning process. TAM posits that individuals' acceptance of technology is primarily influenced by perceived usefulness and perceived ease of use. In the context of online history education, students' and teachers' attitudes toward platforms, content delivery tools, and interactive digital resources are shaped by how effective, accessible, and engaging they perceive them to be. These perceptions directly affect the implementation of online learning objectives, the effectiveness of teaching methods, and ultimately, the development of digital literacy and other 21st-century skills.

Contextually, the integration of online learning into secondary education is a complex endeavor shaped by numerous socio-economic, cultural, infrastructural, and pedagogical factors. Educational systems in the region often face significant challenges, such as limited access to quality learning resources, poor infrastructure, unreliable internet connectivity, electricity issues, and insufficient in-service teacher training in digital tools. These difficulties contribute to disparities in instructional quality and access to education (UNESCO, 2019). In countries like Cameroon, rural and marginalized communities are disproportionately affected, with factors such as poverty, inadequate infrastructure, and cultural barriers compounding educational inequities (Sifuna & Otiende, 2014).

Cameroon, located in Central Africa, mirrors these regional challenges. Although the nation is rich in cultural and linguistic diversity, its educational sector grapples with numerous systemic issues, including overcrowded classrooms, inadequate facilities, and limited access to teaching and learning materials (Mba, 2016). Despite efforts by the government to improve access and quality in education, stark disparities persist, particularly in rural and underserved areas. This highlights the need for innovative strategies, such as the integration of digital technologies and

online learning resources, teaching methods, and evaluation strategies to meet the diverse learning needs of students.

The Northwest Region of Cameroon represents a microcosm of these broader national challenges. It comprises urban, semi-urban, and rural communities, each with distinct educational needs and limitations (Ndomo, 2017). Though rich in culture and historical significance, secondary schools in the region face difficulties including infrastructure deficits, insufficient instructional materials, and disparities in educational quality. These realities underscore the potential role of online learning in promoting educational equity and enhancing student outcomes in the region.

In the field of history education, the adoption of online learning offers both challenges and opportunities. The emergence of digital tools and platforms has the potential to promote historical literacy, critical thinking, and inquiry-based learning among secondary school students (Njobe, 2017). Online platforms provide access to primary documents, multimedia content and virtual simulations that can enrich students' understanding of historical themes and concepts. However, effective implementation requires sensitivity to local socio-cultural contexts, technological infrastructure, and pedagogical practices (Kinyanjui, 2018).

Online Learning in Cameroon: Developments and Policies

Online learning is a relatively recent development in Cameroon, with significant progress made primarily over the last decade. The COVID-19 pandemic acted as a catalyst, accelerating the adoption of online and blended learning models. Earlier, a 2001 law had recognized the potential of online learning across all educational levels, mandating the establishment of ICT centers in most secondary schools and the distribution of laptops to students to support digital learning (Bozkurt et al., 2020; Kibinkiri, 2023). The efforts to ensure online learning is to enable students to develop digital literacy, critical thinkers, problem solvers, to collaborate, communicate freely which are 21st century competencies that are required by the students to adapt into the contemporary society. With the realities on ground students upon graduating will be critical thinkers, problem solvers, and digital literates? These are all questions still to be answered.

Statement of the Problem

The inadequate development of 21st century skills amongst history students in Cameroon in general and northwest region in particular is due to the fact that history solely depends on traditional base teaching methods like lectures, notes giving, assignments and outdated content, inadequate textbooks, in a traditional classroom, and inadequate trained qualified history teachers proficient in modern historical instructions has made history students to be more passive in the teaching learning process and has equally hinder the development of necessary competencies like collaboration, communication, critical thinking, digital literacy needed in the contemporary society thereby making history to be considered by many students to be abstract.

The situation is equally clear as the number of history students in the region keeps dropping from 63,400 students in 2014 to 48,200 students in 2025 witnessing a 15,200 students dropping (GCE Board 2025) and through subject seminars because of the view that history as a subject offers very limited opportunities and professional development upon graduating from schools coupled with the challenges faced by history students in embracing innovations like online learning, integration of modern pedagogical strategies, improve access to educational resources, and curriculum reforms that reflects the diverse historical and cultural contexts in the region which came during the period of Covid-19 Pandemic.

It was against this backdrop that the researcher seeks to investigate the extent to which online learning can support the development of 21st century skills among history students which are usually lacking upon graduation and how such digital innovations and interventions can better prepare them to participant fully in the contemporary society.

Research Objectives

- To evaluate the extent to which online teaching methods influence the development of 21st-century skills among history students.
- To identify the challenges faced in implementing online learning for the development of 21st-century skills.

Research Questions

- To what extent do online teaching methods influence the development of 21st-century skills among history students?
- What are the challenges faced in using online learning to develop 21st-century skills among history students?

Research Hypotheses

H_{o1}: Online teaching methods do not significantly affect the development of 21st-century skills among history students.

H_{o2}: The challenges faced in online learning do not significantly affect the development of 21st-century skills among history students.

Methodology

This study adopts a mixed method research approach as stated by Creswell & Plano.

Clark (2011), to investigate the relationship between online learning and the development of 21st-century skills among history students in public secondary schools in the Northwest Region of Cameroon. This design is chosen to leverage both quantitative and qualitative methods. The total population for this study consists of all the history students, history teachers, and administrators (RPIs), in the Northwest Region of Cameroon, totaling 19,678 history students, 1,250 history teachers and 5 history regional pedagogic inspectors according to data obtained from the Northwest Regional Delegation of Secondary Education. The focus of this study is on lower sixth and upper sixth history students from three selected government schools: Government Bilingual High School (GBHS) Ntamulung, GBHS Down Town Bamenda, and GBHS Bamendankwe. The choice of this region is motivated by its educational significance and the accessibility challenges faced in other divisions due to the ongoing socio-political crisis in the two English-speaking regions of the country. The target population includes 10,223 history students from the selected public secondary schools (92), specifically focusing on lower sixth and upper sixth history students. The accessible population, which refers to the portion of the target population available for the study, comprises 4,176 history students from the three selected public secondary schools. Additionally, the target population for history teachers is 76, with an accessible population of 48 history teachers and regional pedagogic inspectors (RPIs). The accessible population is determined by the availability and reachability of these students and teachers on campus. The sample for this study is derived from the accessible population outlined with a total of 300 history students from the lower sixth and upper sixth classes were selected from the three public secondary schools, along with 15 history teachers and regional pedagogic inspectors. This sample size is considered appropriate based on the sampling guidelines provided by the Krejcie and Morgan table (1970), ensuring that the sample is representative and statistically significant for the study's objectives. Both the purposive and convenience sampling techniques were employed to select participants. Purposive sampling was utilized to specifically target participants who met predefined criteria that aligned with the study's objectives. The researcher focused on selecting lower sixth and upper sixth history students, as well as history teachers, from three specific public secondary schools; Government Bilingual High School (GBHS) Ntamulung, GBHS Down Town Bamenda, and GBHS Bamendankwe. Selection criteria included enrollment in history courses,

availability for data collection, and experience with online learning resources. This approach ensured that participants possessed relevant characteristics essential for effectively addressing the research questions. Convenience sampling was employed for practical reasons, particularly considering the challenges posed by the socio-political crisis in the region and the limited accessibility of certain areas within the Northwest Region. The choice of this region as the study area was based on convenience and accessibility, allowing for feasible data collection within accessible schools and communities despite the prevailing circumstances. Within the selected schools, convenience sampling enabled the researcher to recruit participants (students and teachers) who were readily available and willing to participate in the study, facilitating efficient data collection under challenging conditions. By combining purposive sampling to target specific participants who met the study criteria and convenience sampling to navigate logistical constraints, the study maximized the feasibility and relevance of participant selection. This strategic use of sampling techniques allowed the researcher to gather meaningful insights into the utilization of online learning resources and competency development among history students, contributing to the study's overall validity and effectiveness in addressing the research objectives. This study utilized two instruments for data collection: a questionnaire and a semi-structured interview guide. The questionnaire for history students was structured to gather comprehensive insights into their engagement with online learning and perceptions of the development of 21st-century skills in history. Similarly, the interview guide for history teachers was structured to capture educators' perspectives on integrating online resources into history education and curriculum. A systematic and thoughtful approach to data analysis was devised to derive meaningful conclusions from the gathered data. The Statistical Package for Social Sciences (SPSS) software version 23.0 was utilized to analyze the quantitative data collected, particularly from the close-ended questionnaire items. Qualitative data analysis was conducted using a content analysis approach, facilitated by ATLAS.ti version 8 software.

The findings of the work were done based on the objectives. **Research objective One:** To what extent do online teaching methods influence the development of 21st-century skills among history students in the North West Region of Cameroon?

Table 1: Questionnaire Responses on Online Teaching Methods and the Development of 21st Century Skills

Item Statement	Strongly Disagree	Disagree	Agree	Strongly Agree	N	Mean	St. Dev
I am familiar with various online teaching methods used in history education.	4% (12)	8% (24)	55% (165)	33% (99)	300	3.17	0.84
Online teaching methods enhance my engagement with historical content.	5% (15)	10% (30)	50% (150)	35% (105)	300	3.15	0.85
I prefer online teaching methods over traditional methods for learning history.	7% (21)	12% (36)	45% (135)	36% (108)	300	3.13	0.88
Online teaching methods allow for more interactive learning experiences.	3% (9)	7% (21)	56% (168)	34% (102)	300	3.21	0.83
I find online teaching methods more effective for developing my historical skills.	5% (15)	6% (18)	54% (162)	35% (105)	300	3.19	0.84
I feel comfortable participating in online teaching methods.	6% (18)	9% (27)	53% (159)	32% (96)	300	3.11	0.85

I believe that online teaching methods cater to different learning styles.	4% (12)	5% (15)	58% (174)	33% (99)	300	3.18	0.82
Online teaching methods provide me with diverse resources to study history.	3% (9)	8% (24)	57% (171)	32% (96)	300	3.18	0.83
I regularly engage with online teaching methods in my history classes.	6% (18)	7% (21)	56% (168)	31% (93)	300	3.14	0.84
I think online teaching methods make learning history more enjoyable.	4% (12)	5% (15)	58% (174)	33% (99)	300	3.22	0.83
Cumulative Total (Average)	**4.9%**	**7.3%**	**53.4%**	**34.4%**	**300**	**3.16**	**0.84**

Table 1 presents responses from history students regarding the impact of online teaching methods on the development of their 21st-century skills. The majority of students expressed positive views on online teaching methods, with 85% agreeing or strongly agreeing that online teaching methods enhance their engagement with historical content, and 87% appreciating the interactive learning experiences these methods provide. Additionally, 90% of students agreed or strongly agreed that online teaching methods cater to different learning styles, highlighting their effectiveness in addressing diverse educational needs. The cumulative percentages across all categories show that 88% of students agreed or strongly agreed with the effectiveness of online teaching methods in history education, with a mean score of 3.16 and a standard deviation of 0.84**,** indicating a strong consensus and moderate variation in responses. These findings suggest that online teaching methods are highly regarded by students for fostering engagement, promoting interactivity, and enhancing their historical learning experience, ultimately contributing to the development of essential 21st-century skills.

H_{01}: Online teaching methods do not significantly affect the development of 21st-century skills among history students in the Northwest Region of Cameroon.

Table 2: Correlation between Online Teaching Methods and the Development of 21st Century Skills

Variable	Online Teaching Methods	Development of 21st Century Skills
Online Teaching Methods	1	0.858**
Development of 21st Century Skills	0.858**	1
p-value	0.001	
N	300	300

The Pearson correlation coefficient of 0.858 indicates a strong positive correlation between online teaching methods and the development of 21st-century skills. The p-value of 0.001 is less than the significance level of 0.05, confirming that the relationship is statistically significant.

As a result, the null hypothesis H02 is rejected, and the alternative hypothesis Ha2 is retained, indicating that online teaching methods significantly affect the development of 21st-century skills in history students. The analysis confirms that online teaching methods significantly contribute to the development of 21st-century skills in history students, including digital literacy, critical thinking, and collaborative skills. The findings support the conclusion that these teaching methods are effective in enhancing students' overall learning experiences and skill development.

Research Objective Two: To identify the challenges faced in implementing online learning for the development of 21st-century skills in the Northwest Region of Cameroon.

Table 3: Questionnaire Responses on the Challenges of Online Learning and the Development of 21st Century Skills

Item Statement	Strongly Disagree	Disagree	Agree	Strongly Agree	N	Mean	St. Dev
Limited access to reliable internet connection affects my use of online resources.	10% (30)	12% (36)	48% (144)	30% (90)	300	3.02	0.91
I find it challenging to discern credible information from unreliable sources online.	8% (24)	10% (30)	55% (165)	27% (81)	300	3.01	0.89
The overwhelming amount of online information makes it difficult to find relevant historical content.	9% (27)	11% (33)	52% (156)	28% (84)	300	3.03	0.88
I encounter technical issues or glitches when accessing online history resources.	6% (18)	9% (27)	56% (168)	29% (87)	300	3.08	0.86
There is a lack of guidance on how to effectively use online resources for historical studies.	7% (21)	10% (30)	54% (162)	29% (87)	300	3.05	0.87
Online learning can be time-consuming and distracting.	10% (30)	13% (39)	48% (144)	29% (87)	300	3.02	0.90
I feel overwhelmed by the variety of online resources available.	8% (24)	11% (33)	50% (150)	31% (93)	300	3.04	0.89
I experience difficulty in collaborating online due to technical issues.	6% (18)	9% (27)	55% (165)	30% (90)	300	3.05	0.87
I believe online learning can sometimes feel isolating.	8% (24)	11% (33)	50% (150)	31% (93)	300	3.04	0.88
I struggle to find high-quality online resources for my history studies.	7% (21)	10% (30)	54% (162)	29% (87)	300	3.03	0.86
Cumulative Total (Average)	**7.5%**	**10.4%**	**52.5%**	**29.6%**	**300**	**3.03**	**0.88**

Table 3 presents responses from history students regarding the challenges they face in online learning and its impact on the development of 21st-century skills. A significant portion of students reported encountering challenges, such as 78% agreeing or strongly agreeing that limited access to reliable internet affects their use of online resources, and 85% agreeing that they find it challenging to discern credible information from unreliable sources. Additionally, 85% of students agreed that the overwhelming amount of online information makes it difficult to find relevant historical content. The cumulative percentages across all categories show that 82% of students faced challenges that could impact their learning, with a mean score of 3.03 and a standard deviation of 0.88**,** indicating a moderate level of agreement with these challenges and their potential effect on the development of 21st-century skills. These findings highlight the difficulties students face in online learning environments and the need for solutions to overcome these barriers to support skill development effectively.

Table 4: Correlation between Challenges of Online Learning and the Development of 21st Century Skills

Variable	Challenges of Online Learning	Development of 21st Century Skills
Challenges of Online Learning	1	-0.641**
Development of 21st Century Skills	-0.641**	1
p-value	0.000	
N	300	300

The Pearson correlation coefficient of -0.641indicates a strong negative correlation between the challenges faced by online learning and the development of 21st-century skills. The p-value of 0.000 is less than the significance level of 0.05, confirming that the relationship is statistically significant. As a result, the null hypothesis H04 is rejected, and the alternative hypothesis Ha4 is retained, indicating that the challenges faced by online learning significantly affect the development of 21st-century skills in history students. The analysis confirms that the challenges faced by students in online learning, including issues like internet access, technical difficulties, and the overwhelming amount of information, significantly affect their ability to develop 21st-century skills such as critical thinking, problem-solving, and collaboration. These challenges contribute to a moderate hindrance in the overall development of skills that students would otherwise improve through online history education.

Discussion of findings

Online Teaching Methods and the Development of 21st Century Skills in History Students

The findings of this study indicate that online teaching methods have a significant and positive effect on the development of 21st-century skills among history students in secondary schools in the Northwest Region of Cameroon. This conclusion aligns with the perspectives of several scholars who have explored the role of digital teaching methods in education and their impact on students' cognitive, collaborative, and communication skills. The findings of this study align with the research of **Fischer (2014),** who explored the role of interactive and collaborative online teaching methods in fostering critical 21st-century skills. He found that online teaching methods that emphasize active participation such as online discussions, peer feedback, and group projects are crucial for developing communication, critical thinking, and collaboration skills. The findings also resonate with the work of **McKeachie & Svinicki (2013),** who examined the role of active learning in online environments. They noted that active learning in online environments allows students to engage with the material, participate in discussions, and apply their knowledge through projects or simulations, which strengthens their problem-solving abilities and critical thinking skills. The findings also resonate with **Dabbagh & Kitsantas (2012)** on the role of feedback in online teaching methods highlights its importance in fostering skill development. They argued that online feedback, when integrated into instructional design, encourages students to reflect on their learning progress, identify areas for improvement, and adjust their approaches accordingly. The findings underscores the importance of providing ongoing feedback in online learning environments, as it not only supports the development of critical thinking and problem-solving skills but also enhances students' self-regulation, which is essential for lifelong learning.

Challenges of Online Learning and the Development of 21st Century Skills in History Students

The findings of this study indicate that the challenges of online learning have a significant and negative effect on the development of 21st-century skills among history students in secondary schools in the Northwest Region of Cameroon. This conclusion aligns with the perspectives of several scholars who have explored the role of the challenges of online learning in education and their impact on students' cognitive, collaborative, and communication skills. The findings of this

study align with research that highlights the critical role of infrastructure in determining the effectiveness of online learning, especially in regions with limited technological resources. Al Lily, Wahbeh, and Alhazmi (2013) extensively explored the challenges that unreliable internet connectivity, inconsistent power supply, and inadequate access to computing devices pose to students in developing regions. Their research revealed that these infrastructural challenges significantly hinder students' ability to fully engage with online learning environments, leading to disengagement and frustration. When students face constant interruptions or are unable to access the necessary resources, their ability to develop essential 21st-century skills such as digital literacy, problem-solving, and critical thinking is severely compromised. The finding is in line with **Liu, McKelroy, & Sakamoto (2010) who** shed light on the difficulties students encounter with time management, self-regulation, and motivation in online learning settings. Their research indicated that students who lack access to reliable online resources or face technical issues struggle with managing their learning. The authors found that online education demands a high level of self-discipline, as students must regulate their own learning schedule; stay focused on their objectives, and monitors their progress independently. However, when faced with frequent disruptions due to connectivity or resource limitations, students often find it difficult to maintain motivation and stay on track with their learning. The absence of real-time feedback and structured guidance can lead to procrastination, disengagement, and a lack of progress in skill development. The finding is in line with **Bates (2015)** addressed the challenges of pedagogical adaptation in online education, focusing on how the design of online learning environments affects student engagement and skill development. He found that poorly designed courses that lack interactive elements, clear learning objectives, or adequate support for students can severely limit their ability to develop critical skills such as digital literacy and self-regulation. This highlights the importance of ensuring that online courses are designed with the needs of students in mind, particularly those in underserved regions who may already face additional barriers. Effective pedagogical strategies that incorporate interactive learning, real-time feedback, and collaborative opportunities are crucial for enabling students to develop the skills necessary for success in today's digital age.

Implications of Findings

The findings of the study have theoretical, practical, policy implications to Curriculum Planning and Design research and practice. The study adds empirical evidence to theoretical frameworks, particularly in the context of history education, demonstrating that online learning resources can effectively enhance critical skills such as critical thinking, collaboration, and digital literacy. By applying theories such as Social Cognitive Theory, Technology Acceptance Model, and Socio-Cultural Theory, this research extends the understanding of how digital tools shape students' cognitive processes, social interactions, and learning behaviors. From a practical perspective, the findings of this study offer concrete guidance for educators, curriculum designers, and school administrators. The study demonstrates that online learning resources can enhance the development of essential 21st-century skills, which are vital for students' success in modern society. The study also carries important policy implications, particularly in the context of educational reform and the integration of technology into curricula. Policymakers can use the findings to inform the development of policies that encourage the widespread adoption of online learning resources in secondary education. The study emphasizes the need for greater investment in digital infrastructure, including internet access, devices, and teacher training, to ensure that all students can benefit from online learning opportunities. It also underscores the necessity of ensuring equitable access to online learning resources, particularly in rural or underserved areas where technological infrastructure may be limited. By adopting evidence-based policies that promote the use of online learning in history education, policymakers can create an inclusive, modern educational system that fosters the development of essential skills for future generations. Additionally, the findings suggest that policies should prioritize the integration of skills-based learning objectives into curricula to align with the demands of the 21st-century workforce.

Conclusion

The study demonstrates that online learning, when effectively integrated with suitable teaching methods and resources, significantly enhances the development of 21st-century skills in history students. It underscores the importance of addressing technical challenges and creating an environment conducive to online learning in order to maximize these benefits. The findings suggest that educators and policymakers should continue to innovate and refine the use of digital tools in secondary education to equip students with the competencies needed to thrive in the modern world.

Suggestions for Further Studies

Given the limitations of this study, several areas for further research are suggested to expand on and enhance the findings. These suggestions include the following:

- Future studies could explore the impact of online learning across different regions of Cameroon, including both Anglophone and Francophone regions. This would provide a more comprehensive understanding of how online learning affects students in diverse educational contexts across the country, particularly in urban and rural areas where infrastructure and access to technology may vary.
- A study with a larger and more diverse sample of participants, say 1000 participants including a wider range of students, teachers, and educational stakeholders, could provide more representative and generalizable findings. This would also allow for a deeper exploration of how different demographic factors (such as socioeconomic status, gender, and location) influence the effectiveness of online learning.
- Future research could use a more randomized sampling approach to reduce the potential biases introduced by purposive and convenience sampling. This would ensure that a broader and more representative sample of students and educators is included, leading to more reliable and valid results.

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