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Influence of Digital Information Resource Dissemination Among Degree Students in College of Education Hong, Adamawa State

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Abstract

This study examined the impact of digital resources on the educational experiences of Degree Students at Adamawa State College of Education, Hong. The study was guided by four objectives which include: ascertaining the impact of digital resources on the speed and accuracy of information dissemination; determining the role of digital resources in shaping public opinion and influencing decision-making processes; assessing the effectiveness of digital resources in promoting equality access to information and bridging the knowledge gap and, Determine the relationship between gender difference and digital resource information dissemination among Degree Students in Adamawa State College of Education Hong. In line with the objectives, three research questions and one hypothesis were raised and answered. The study adopted a survey design while a questionnaire was used for data collection. Data collected was analyzed using descriptive statistics of mean and standard deviation to answer the research questions where the null hypothesis was tested using regression analysis using SPSS version 20. The study shows that digital resources significantly enhance the speed and accuracy of information dissemination among students as indicated by mean scores ranging from 3.13 to 3.94; The findings show that digital resources have a substantial influence on shaping public opinion and guiding decision-making processes among students as indicated by the mean scores ranging from 2.98 to 4.21; The study found that digital resources are highly effective in promoting equal access to information and bridging the knowledge gap with a mean scores ranging from 3.32 to 3.76 and, A positive high relationship [r = 0.72] exists between gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong. Consequently, a significant relationship exists between gender difference and digital information resource dissemination among Degree Students in the institution studied [0.00 < 0.05]. The study recommends among others that, the College authority should ensure the total Implementation of comprehensive digital literacy programs for both students and faculty members to ensure equal gender access to the world of information sharing, etc.

Keywords: *Digital; Information Resources; dissemination; Students, Adamawa State College of Education; Hong.*

Introduction

In the quickly evolving world of higher education, digital resources have become indispensable. Students at this institution are increasingly using digital tools to access, share, and use academic information, underscoring both the benefits and challenges they face. Through an analysis of usage trends and how they impact learning outcomes, we aim to provide recommendations for future educational policies and practices. The emergence of digital resources has revolutionized education by providing an unprecedented quantity of educational materials and information. Students' educational experience is improved by these resources, which are available in a variety of formats, including e-books, online journals, educational websites, digital libraries, and multimedia content.

The use of digital tools in the classroom has several significant advantages. First of all, by offering flexibility and convenience and allowing students to access materials at any time and from any location, they get beyond the limitations of traditional, location-bound libraries (Okebukola, 2020). This accessibility may be especially helpful to students in underprivileged or rural areas where physical teaching resources may be scarce. Furthermore, digital resources with interactive and multimedia information can enhance comprehension and recall while accommodating a range of learning styles (Anderson & Krathwohl, 2001). For example, visual learners may benefit from infographics and video courses, whereas auditory learners may find podcasts and audiobooks more engaging. Personalized learning benefits greatly from the versatility of digital resources, which also promote collaborative learning and knowledge sharing. Students can engage in group projects, share resources, and have discussions on platforms such as social media, online forums, and cloud-based document sharing, which enhances the learning environment's vibrancy and participation (Johnson et al., 2016).

However, there are challenges associated with adopting digital materials. Issues like digital literacy, having a reliable internet connection, and the cost of digital devices may make it difficult to use these services effectively. Educational institutions must address these concerns to provide equitable access and maximize the benefits of digital learning (Eze et al., 2018). In summary, digital resources are transforming education by making knowledge more accessible, allowing for a variety of learning styles, and promoting student involvement. Teachers and lawmakers must fully utilize emerging technological innovations to enhance the educational experience and outcomes for all students.

In addition to being available from homes and classrooms, digital libraries can also be accessed at central library facilities where specific access, display, and use tools can be shared. Vicarious field trips, virtual guest lecturers, and access to rare and unusual items in the classroom and at home are all made possible by remote access. Better learning through faster, better, and more comprehensive information and communication services is the promise. According to Ahlberg, Williamson, and Shneiderman (2019), one obvious distinction between digital and traditional libraries is that the former provides more opportunities for patrons to both deposit and access material. As a result, educators and students may quickly and accurately access and distribute material, making it easy for them to act as both publishers and readers in digital libraries.

The status of library users cannot be overlooked because libraries play an important role in acquiring and sharing knowledge. The use of a library, particularly at the undergraduate level, is critical, and all of the facilities provided to students while using the library promote the use of library sources, encouraging them to improve their academic careers and gain more and more up-to-date knowledge. Given the preceding, the use of the library for learning purposes improves undergraduate students' learning capacity. It motivates them to learn, thus affecting public opinion and influencing decision-making processes. Given the performance of undergraduate students, the significance of every academic accomplishment cannot be understated. This implies that undergraduate students play a crucial role in this (Narad & Abdullah, 2016).

In keeping with Ahlberg, Williamson, and Shneiderman (2019), the implementation of ICT-based library services for the user community aims to promote equal access to information and bridge the knowledge gap by providing users with sufficient source material to master their field of study. In a similar vein, Signh, Malik, and Signh (2016) think that while using any digital library for research, users have several options for accessing current material. Because it is simple for them to obtain current information and knowledge, readers will be better equipped to fill the knowledge gap from online sources.

As a result, Signh, Malik, and Signh (2016) asserted that a nation's socioeconomic development is directly impacted by undergraduate academic achievement. Because undergraduate students are crucial to the development of skills and the acquisition of knowledge, their contribution is significant and should not be overlooked (Farooq et al, 2011). Given the aforementioned claims, the purpose of this study was to ascertain how ICT-based library services affected Hong College of Education undergraduate students.

Statement of the Problem

The introduction of digital resources is a serious breakthrough that gave information managers total freedom to disseminate information to a wider user community without much stress or bias. With this development, education sectors have been given the strength to access information from far distance without being restricted to the holdings of their respective information resource centers. The worry is that if, degree students in the College of Education Hong are not allowed to have access to digital resources and be able to access information around the globe, it means, they will be limited to having up-to-date information and will affect their academic strength not being able to compete in the global market. This study is poised to determine whether digital resources have an influence on information dissemination among degree students at the College of Education Hong.

Objectives of the Study

The general objective of the study was to assess the Influence of Digital Resources on Information Dissemination among Degree Students in Adamawa State College of Education Hong, Adamawa State while the specific objectives were to:

1. Ascertain the impact of digital resources on the speed and accuracy of information dissemination.

2. Determine the role of digital resources in shaping public opinion and influencing decision-making processes.
3. Assess the effectiveness of digital resources in promoting equal access to information and bridging the knowledge gap.
4. Determine the relationship between gender difference and digital resource information dissemination among Degree Students at Adamawa State College of Education Hong.

Research Questions

1. What is the impact of digital resources on the speed and accuracy of information dissemination?

2. How do digital resources shape public opinion and influence decision-making processes?

3. How effective are digital resources in promoting equal access to information and bridging the knowledge gap?

4. What is the relationship between gender differences and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong?

Hypothesis

Ho1: There is no significant relationship between Gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong.

Literature Review

Education is becoming more inclusive because of the development of digital resources, which can adapt to various learning styles and information distribution methods. One of the most significant consequences of digital resources is their capacity to make educational content widely and easily available. According to a study by Benkler et al. (2018) and Okebukola (2020), students can access a variety of materials from anywhere at any time, eliminating geographical and temporal barriers to learning like the speed and accuracy of information delivery. According to a different study by Bates (2015), students who might not have access to traditional educational resources—such as those who reside in rural or undeveloped areas—may particularly profit from this as the problem of distance is completely resolved by this one piece of technology. Mayer (2019) went on to expound on the value of digital resources in terms of the speed and accuracy of information dissemination, adding that they facilitate learning because they can support learning at high speed and accuracy to a larger audience. Videos, infographics, and interactive simulations are helpful resources for visual learners, while podcasts and audiobooks are helpful for auditory learners.

According to The research of Johnson et al. (2016), digital resources such as e-books, online databases, and instructional websites provide rapid access to information and significantly speed up the dissemination of knowledge. Unlike traditional print media, which must be physically disseminated and take time to reach users, digital resources may be accessed instantly from any

location with an internet connection. Digital resources are quicker, but they have different consequences on accuracy. High-quality digital resources that adhere to stringent standards to ensure the accuracy and dependability of data include peer-reviewed publications and accredited databases (Khan et al., 2017). However, the internet's wealth of information also makes it more likely that you will encounter inaccurate or deceptive content.

In a study conducted by Watson and Watson (2017), digital resources simplify the teaching and learning process of students by providing resources for shaping public opinion and influencing decision-making processes. According to them, with the use of learning management systems (LMS) like Moodle and Blackboard, instructors may effectively manage course materials, monitor student progress, and interact with learners. These platforms facilitate the incorporation of multimedia information, quizzes, and assignments, hence enhancing the dynamic and captivating nature of the learning experience. Based on an intriguing observation made by Bonk and Graham (2012), the availability of digital technologies empowers students to take charge of their education by enabling them to research topics of interest, access additional resources, and participate in self-paced learning. They contend that this autonomy fosters motivation and a sense of duty in pupils and inspires them to pursue lifelong learning. Additionally, they stated that students can concentrate on areas in which they require improvement through tailored learning opportunities offered by digital tools, which will improve their overall academic performance.

Intriguingly, Mayer-Schönberger and Cukier (2013) and Kitchin (2014) assert that digital resources offer vast amounts of data that may be assessed to aid in decision-making in a variety of fields, such as government policy, corporate strategy, and educational planning. With the advent of big data and analytics tools, decision-makers may now base their choices more on facts and less on intuition. Chen et al. (2012) emphasize the value of such data by stating that it helps create targeted marketing campaigns and product offerings, which in turn affects consumer preferences and market dynamics. Academic research and innovation greatly benefit from the use of digital resources. Online databases, digital libraries, and academic publications provide students and scholars with access to the newest studies, data, and scholarly papers. This access fosters the development of critical thinking and research abilities, enabling students to perform extensive and up-to-date research (Björk et al., 2010). Moreover, digital tools such as data analysis software and simulation programs promote sophisticated research approaches and new projects.

According to Weller (2014), the advent of digital resources has made information widely available and practically accessible from any location with an internet connection. E-books, instructional websites, and online databases are a few examples of these resources. The widespread availability of educational resources helps to overcome financial and geographic barriers that could otherwise limit access. Digital libraries and the Internet are important information sources that provide users with equal access to research and advancements, including academic materials and knowledge that were previously exclusive to certain institutions or limited to physical locations (Smith, 2019). In addition to its worldwide circulation, scholars and students from many backgrounds can access high-quality content.

In contrast, consumers can access digital resources for free or at a very low cost. Open educational resources (OER), for example, are free for anyone to use and access, relieving teachers

and students of some of their financial load (Hewlett Foundation, 2013). A study conducted by Tam et al.,)2020) found that a significant number of students (particularly boys) have a more positive view of ICT and utilize it to improve their learning While significant progress has been made in ICTs, there remains a severe territorial and gender technological inequality. Many studies exist that contradict each other on the matter of gender differences in ICT use, while some studies have shown differing results in that some claim benefits for females. Studies showed that females have less access to ICT than their male counterparts (Mumporeze & Prieler, 2017). Despite the widespread use of ICT by educational institutions, many studies have shown a gender imbalance in ICT usage and skill development. A significant number of students (particularly boys) have a more positive view of ICT and utilize it to improve their learning Tam et al., 2020).

A meta-analytic study, carried out by Else-Quest, Hyde, and Linn (2010) showed that, negligible gender differences in the results of standardized mathematics tests. Similarly, Ajai and Imoko (2015) found that male and female students did not significantly differ in achievement and retention scores in mathematics. Similarly, Ghazvini and Khajehpour (2011) found that female students showed more internal locus of control in academic performance than male students. However, no differences were found in academic self-concept as a function of gender. They also found that boys use learning strategies to a lesser degree than girls and that girls take greater responsibility for their academic failure while Carvalho (2016) highlighted the role of personality dimensions (e.g., aggressiveness) as potential mediators in the relationship between gender and educational performance.

Similar to Yuan and Powell (2013), the advent of platforms like Khan Academy and MOOCs (Massive Open Online Courses) has made educational information more accessible, opening up learning opportunities for those residing in rural or impoverished areas. Siemens (2013) indicates in another submission that digital tools provide tailored learning experiences. Digital educational platforms and adaptive learning technologies can be used to meet a variety of educational needs and gaps by tailoring information to each student's demands.

Methodology

The study adopted a survey research design as being a common and effective method for gathering information from a large number of respondents, allowing for the collection of quantifiable data that can be analyzed to identify patterns and draw conclusions (Creswell, 2014). The population for this study is made up of 300, 167 degree students at ASCOE Hong. A stratified random sampling method was employed to draw equal representatives of the students' level which stood at 375 based on Krejcie and Morgan's formula. The data collection instrument used was a self-structured questionnaire. The collected data was analyzed using descriptive statistics of mean and standard deviation to answer the research questions while regression analysis was used to test the null hypothesis using Statistical Package for Social Sciences (SPSS) version 20. Decisions are taken when the mean sore is less than

Response Rate

Out of the three hundred and fifty-seven (375) instruments administered to the respondents, three hundred and fifty (350) were duly filled and found usable for the analysis. The result also shows that the bulk of the respondents are females with 189(54%) while 161(46%) are males.

Result and Presentation

Research Questions 1: What is the impact of digital resources on the speed and accuracy of information dissemination?

Table 1: ***Mean of Response rate of Students on the Impact of digital resources on the speed and accuracy of information dissemination***

Impact of digital resources on the speed and accuracy of information dissemination	N	Mean	Std	Ranking	Decision
The use of digital resources improves the accuracy of the information I receive	350	3.67	.56	2nd	Agree
Digital resources provide more reliable and Precise information for my academic needs	350	3.94	.81	1st	Agree
The use of digital resources reduces the time taken for information to reach the intended audience	350	3.21	.74	4th	Agree
Digital resources allow me to access information more quickly compared to traditional methods	350	3.43	.65	3rd	Agree
Digital resources enhance the speed of information dissemination in my educational activities.	350	3.13	.41	5th	Agree
Cluster Mean	**350**	**3.46**	**.64**		

The data presented in Table 1 highlights the impact of digital resources on the speed and accuracy of information dissemination among Degree Students at Adamawa State College of Education, Hong. The responses to the five items indicate a strong consensus, with all respondents either agreeing or strongly agreeing with the statements. The mean scores for these items range from 3.13 to 3.94, underscoring the positive perception of digital resources' role in enhancing information dissemination. However, the cluster mean scores of 3.46 suggest that digital resources significantly influence both the speed and accuracy with which information is shared among students. The consistency in high mean scores across all items further reinforces the conclusion that digital resources are a crucial factor in improving the efficiency and precision of information dissemination in the educational context of Adamawa State College of Education, Hong.

Research Question 2: How do digital resources shape public opinion and influence decision-making processes?

Table 2: Mean of Responses of Students on the impact of digital resources in shaping public opinion and influence decision-making processes

Impact of digital resources in shaping public opinion and influence decision-making process	N	Mean	Std	Ranking Decision
I believe that digital resources influence my decision-making processes. Agree	350	2.98	.69	5th
I often rely on digital resources to make informed decisions on important matters Agree	350	3.87	.77	3rd
Digital resources significantly shape public opinion on various social and political issues. Agree	350	4.21	.65	1st
Digital resources have a strong impact on the collective opinions of my peers and community Agree	350	3.85	.92	4th
The information I access through digital resources plays a crucial role in forming my opinions Agree	350	3.98	.78	2nd
Cluster Mean	**350**	**3.78**	**.64**	

The data in Table 2 illustrates the influence of digital resources on shaping public opinion and guiding decision-making processes among Degree Students at Adamawa State College of Education, Hong. All respondents consistently agreed with the five items presented, with mean scores ranging from 2.98 to 4.21. This uniform agreement indicates a shared belief among students in the significant role digital resources play in these areas. However, the calculated cluster mean score of 3.78 affirms that digital resources are instrumental in shaping public opinion and influencing the decision-making processes of students. The variation in mean scores, while still positive, suggests differing levels of perceived impact, but overall, the data confirms the strong influence of digital resources in these critical aspects of student life.

Research Questions 3: How effective are digital resources in promoting equal access to information and bridging the knowledge gap?

Table 3: **Mean of Responses of Students on the digital resources in promoting equal access to information and bridging knowledge gap**

Impact of digital resources in promoting equal ccess to I information and bridging knowledge p	N	Mean	Std	Rank	Dec
Digital resources provide equal access to information for individuals from diverse backgrounds.	350	3.52	.70	4th s	VGL
The use of digital resources reduces the disparity in knowledge acquisition among students from different educational institutions.	350	3.69	.64	2nd	VGL
I believe digital resources make educational content more accessible to underprivileged communities	350	3.54	.66	3nd	VGL
The availability of digital resources helps bridge the gap between different socio-economic groups knowledge Digital resources effectively promote	350	3.76	.65	1st	VGL
inclusive access to information regardless of geographical location	350	3.32	.75	5th	VGL
Cluster Mean	**350**	**3.57**	**.68**		

The data in Table 3 examines the effectiveness of digital resources in promoting equal access to information and bridging the knowledge gap among Degree Students at Adamawa State College of Education, Hong. The responses indicate strong agreement, with all participants either quite agreeing or strongly agreeing with the five items presented. The mean scores, ranging from 3.32 to 3.76, reflect a positive consensus on the role of digital resources in enhancing information accessibility and reducing knowledge disparities. However, the calculated cluster means a score of 3.69 confirms that digital resources play a crucial role in ensuring equal access to information and addressing the knowledge gap among students. The consistently high mean scores across all items underscore the effectiveness of digital resources in fostering a more inclusive and equitable educational environment at the institution.

Research Question 4: What is the relationship between gender differences and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong?

Table 4: ***Pearson's Correlation Analysis of the Relationship between relationship between gender differences and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong***

Variables	Mean	Std	N	R	r^2
Gender difference	31.96	4.05	350	0.72	.55
Digital information resource dissemination	31.51	5.03	350		

Model	Sum of Squares	df	Mean Square	F	Sig	Decision
Regression	1984.957	1	1984.957	254.269	0.00	Significant
Residual	1787.692	348	7.807			
Total	3772.649	349				

Std = Standard Deviation, N = Population size, r = Correlation Coefficient, R^2 = Coefficient of determination

Table 4 presents the results of the relationship between gender differences and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong. It reveals that the correlation coefficient [r] is 0.72. This suggests that there is, a positive high relationship between gender differences and digital information resource dissemination among Degree Students. This result implies that the wider the gap between male and female exposure to ICT, the more it will positively reflect on the efficacy of accessing digital information resource dissemination among students. The table also reveals that the coefficient of determination [r2] associated with the correlation coefficient [r] of 0.72 is .55. This implies that 55% of gender difference among the students in the College of Education Hong could predict digital information resource dissemination carried out in a library.

Ho_1: There is no significant relationship between Gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong.

Table 5: ***ANOVA test on the Relationship between Gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong Education Hong***

df = Degree of freedom, Sig = Level of Significance p 0.05, F = F-ratio

Table 5 shows that the obtained F-ratio 254.269 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 level of significance set for the study Therefore, it can be inferred that a significant relationship exists between Gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong.

Summary of the Findings

The findings based on the data from Tables 1, 2, and 3 reveal several key insights regarding the impact of digital resources on Degree Students at Adamawa State College of Education, Hong:

1. The study shows that digital resources significantly enhance the speed and accuracy of information dissemination among students. The high mean scores, ranging from 3.13 to 3.94, indicate a strong consensus that digital tools are crucial in improving the efficiency and precision of how information is shared.
2. The findings reveals that, digital resources have significant influence on shaping public opinion and guiding decision-making processes among students with mean scores ranging from 2.98 to 4.21. It is evident that digital resources plays a pivotal role in these areas, though the perceived impact varies slightly among the respondents.
3. The study found that digital resources are highly effective in promoting equal access to information and bridging the knowledge gap. The mean scores, which range from 3.32 to 3.76, reflect a strong belief among students that digital resources contribute to creating a more equitable and inclusive educational environment.
4. A positive high relationship [r = 0.72] exists between gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong. Consequently, a significant relationship exists between gender difference and digital information resource dissemination among Degree Students in the institution studied [0.00 < 0.05].

Discussion of Findings

The study's conclusions are consistent with more extensive research on the revolutionary potential of digital tools in education. According to the research, degree students at Adamawa State College of Education, Hong, greatly benefit from the speed and accuracy of knowledge transmission made possible by digital tools. This revelation was made known by previous researchers, which highlights how digital tools facilitate information flow and provide for faster access to and more accurate delivery of instructional content (Spector, 2015). The study's high mean ratings, which range from 3.13 to 3.94, highlight how positively students view digital resources and are consistent with a global trend wherein digital technologies are becoming more and more viewed as necessary for contemporary educational practices (Selwyn, 2016).

The study also found that digital resources play a crucial role in shaping public opinion and influencing decision-making processes among students, as evidenced by mean scores between 2.98 to 4.21. This finding supports the argument made by scholars like Anderson (2018), who note that digital resources, particularly social media and online platforms, are powerful tools for shaping opinions and guiding decisions in educational settings. The ability of digital resources to provide diverse perspectives and up-to-date information allows students to make more informed decisions, aligning with the findings of this study.

With mean scores ranging from 3.32 to 3.76, the study also shows that digital resources are successful in fostering equitable access to information and closing the knowledge gap. This result

is consistent with the findings of Warschauer and Matuchniak (2010), who contend that because digital resources make a wide range of knowledge and learning opportunities accessible, they are essential in reducing educational inequities. The study's high result is a pointer to the success of digital resources in fostering a more diverse and inclusive learning environment at Adamawa State College of Education. This finding is in line with worldwide trends in educational technology.

A positive high relationship [r = 0.72] exists between gender difference and digital information resource dissemination among Degree Students in Adamawa State College of Education Hong. Consequently, a significant relationship exists between gender difference and digital information resource dissemination among Degree Students in the institution studied [0.00 < 0.05]. This is in line with the findings of Mumporeze and Prieler (2017) in their studies which showed that females have less access to ICT than their male counterparts. Despite the widespread use of ICT by educational institutions in the country, many studies have shown a gender imbalance in ICT usage and skill development that boys have a more positive view of ICT and utilize it to improve their learning (Tam et al., 2020).

Conclusion and Recommendations

In conclusion, the study's data highlights the critical significance that digital resources play in degree students' educational experiences at Adamawa State College of Education, Hong. The results show that the use of digital tools can greatly improve the speed and accuracy of information transmission, as well as influence public opinion, decision-making processes, and equal access to information, all of which help close the knowledge gap that exists between students. These results emphasize how crucial it is to keep funding and incorporating digital resources into the curriculum to create a more effective, knowledgeable, and fair learning environment.

Based on the findings of this study, several recommendations can be made to enhance the impact of digital resources on the educational experience of Degree Students at Adamawa State College of Education, Hong:

1. The library management should invest in strong digital infrastructure, such as fast internet, contemporary hardware, and software updates, in order to maintain and enhance the benefits that have been noted. This will guarantee that every student has constant and dependable access to digital resources, which will accelerate and enhance the transmission of information.
2. The College authority should ensure the total Implementation of comprehensive digital literacy programs for both students and faculty members. These programs should focus on how to enhance the skills needed to effectively utilize digital resources for research, decision-making, and information sharing. A higher level of digital proficiency will maximize the impact of these resources.
3. Targeted measures should be started to ensure that all students, regardless of background or socioeconomic position, have equal opportunities to benefit from digital resources to address any residual inequities in access. This can entail giving students with little digital experience individualized help, increasing access to digital libraries, and subsidizing gadgets.

4. Establishing a system for regular assessment of the effectiveness of digital resources and gathering feedback from students based on gender, will help identify areas for improvement to align with the evolving needs of the student

References

Ahlberg, C., Williamson, C., & Shneiderman, B.(2019). Dynamic queries for information exploration: An implementation and evaluation. In B. Shneiderman (Ed.). The sparks of innovation in human-computer interaction. Ablex, Norwood, NJ. 1994, pp. 281-294.

Ajai, J. T., and Imoko, B. I. (2015). Gender differences in mathematics achievement and retention scores: a case of problem-based learning method. *Int. J. Res. Educ. Sci.* 1, 45–50

Anderson, L. W., & Krathwohl, D. R. (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York:

Anderson, T. (2018). *The Theory and Practice of Online Learning*. Athabasca Universit Press.

Bates, T. (2015). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. Tony Bates Associates Ltd.

Benkler, Y., Faris, R., & Roberts, H. (2018). *Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics*. Oxford University Press.

Björk, B.-C., Roos, A., & Lauri, M. (2010). Scientific Journal Publishing: Yearly Volume and Open Access Availability. *Information Research*, 15(1), paper 429.

Bonk, C. J., & Graham, C. R. (2012). *The Handbook of Blended Learning: Global Perspectives, Local Designs*. John Wiley & Sons.

Bryman, A. (2012). *Social Research Methods* (4th ed.). Oxford University Press.

Bugler, M., McGeown, S. P., and St Clair-Thompson, H. (2015). Gender differences in adolescents' academic motivation and classroom behavior. *Educ. Psychol.* 35, 541–556. doi: 10.1080/01443410.2013.84932

Carvalho, R. G. G. (2016). Gender differences in academic achievement: the mediating role of personality. *Personal. Individ. Differ.* 94, 54–58. doi: 10.1016/j.paid.2016.01.011

Chen, H., Chiang, R. H. L., & Storey, V. C. (2012). *Business Intelligence and Analytics: From Big Data to Big Impact*. MIS Quarterly, 36(4), 1165-1188.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th Ed.). Sage Publications.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (4th ed.). John Wiley & Sons.

Else-Quest, N. M., Hyde, J. S., and Linn, M. C. (2010). Cross-national patterns of gender differences in mathematics: a meta-analysis. *Psychol. Bull.* 136, 103–127. doi: 10.1037/a0018053

Eze, S. C., Chinedu-Eze, V. C., & Bello, A. O. (2018). The Utilisation of E-Learning Facilities in the Educational Delivery System of Nigeria: A Study of M-University. *International Journal of Educational Technology in Higher Education*, 15(1), 34.

Farooq, M., Chaudhry A., Shafiq M. and Berhamu G. (2011). Factors Affecting Students' Quality of Academic Performance: A case of secondary school level. J. *of Quality and Technology Manag*.. 7(2), 01-14.

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). Sage Publications.

Ghazvini, S. D., and Khajehpour, M. (2011). Gender differences in factors affecting academic performance in high school students. *Procedia Social Behav. Sci.* 15, 1040–1045. doi: 10.1016/j.sbspro.2011.03.236

Hewlett Foundation. (2013). *Open Educational Resources: Breaking the Boundaries of Education*. Hewlett Foundation.

Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2016). *NMC Horizon Report: 2016 Higher Education Edition*. Austin, Texas: The New Media Consortium.

Khan, S., Saeed, A., & Qureshi, M. A. (2017). *Ensuring Accuracy in Digital Information: The Role of Quality Control Mechanisms*. Information Processing & Management, 53(2), 346-358.

Kitchin, R. (2014). *Big Data, New Epistemologies, and Paradigm Shifts*. Big Data & Society, 1(1), 1-12.

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607-610.

Kumar, R. (2019). *Research Methodology: A Step-by-Step Guide for Beginners* (5th ed.). Sage Publications.

Mayer, R. E. (2019). *Multimedia Learning*. Cambridge University Press.

Mayer-Schönberger, V., & Cukier, K. (2013). *Big Data: A Revolution That Will Transform How We Live, Work, and Think*. Houghton Mifflin Harcourt.

Narad, A., & Abdullah, B. (2016). Academic performance of senior secondary school students: Influence of parental encouragement and school environment. Rupkatha *Journal on Interdisciplinary Studies in Humanities,* Special Issue, 3(2), 12-19

Okebukola, P. (2020). Adapting to the New Normal in Education: The Impact of COVID-19 on Teaching and Learning. *African Journal of Educational Research*, 24(1), 1-12.

Olajide, O. & Adio, G. (2017). Effective Utilization of University Library Resources by Undergraduate Students: A Case Study of Federal University Oye-Ekiti, Nigeria: Library Philosophy and Practice (e-journal). 1503. http://digitalcommons.uni.edu/libphilprac/1503

Selwyn, N. (2016). *Education and Technology: Key Issues and Debates*. Bloomsbury Academic.

Siemens, G. (2013). *Learning Analytics: The Emergence of a Discipline*. American Behavioral Scientist, 57(1), 35-50.

Singh, S. P., Malik, S. & Singh, P. (2016). Factors affecting academic performance of students. *Indian Journal of Research*, 5(4), 176-178.

Smith, D. (2019). *Digital Libraries and Information Access: A Global Perspective*. Library Management, 40(1/2), 56-70.

Spector, J. M. (2015). *Foundations of Educational Technology: Integrative Approaches and Interdisciplinary Perspectives*. Routledge.

Warschauer, M., & Matuchniak, T. (2010). New Technology and Digital Worlds: Analyzing Evidence of Equity in Access, Use, and Outcomes. *Review of Research in Education*, 34(1), 179-225.

Watson, W. R., & Watson, S. L. (2017). An Argument for Clarity: What Are Learning Management Systems, What Are They Not, and What Should They Become? *TechTrends*, 51(2), 28-34.

Weller, M. (2014). *The Digital Scholar: How Technology Is Transforming Scholarly Practice*. Bloomsbury Academic.

Yuan, L., & Powell, S. (2013). *MOOCs and Open Education: Implications for Higher Education*. JISC CETIS.