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Abstract

Quality education enables people to develop all of their attributes and skills to achieve their potential as human beings and members of society. Quality education provides the foundation for equity in society. Quality education is one of the most basic public services. There is the widespread belief that ICTs can and will empower teachers and learners, transforming teaching and learning processes from being highly teacher-dominated to student-centered and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners. The study aimed to investigate the impact of ICT integration on the quality of education among secondary schools in USA. The study adopted the descriptive research design. The target population included principals, teachers and students in secondary schools based in Network. The research instruments adopted included questionnaires. The study results indicated that ICT Integration has a positive and significant impact on the quality of education among secondary schools in the USA. It was found that ICT in education improves engagement and knowledge retention. Students become more engaged in their work when ICT is integrated into lessons. The application of technology provides different opportunities to make learning more fun and enjoyable by teaching the same things in different ways. Integration of Information, Communication, and Technology (ICT) assists teachers to the global requirement to replace traditional teaching methods with technology-based teaching and learning tools and facilities. The study concluded that ICT integration in education is considered an essential element for improvement and development. The study recommended that schools adopt the use of ICT in the classroom. The government in the USA needs to make it a policy for every school in the country to integrate learning with ICT.

Keywords: *ICT Integration, Quality of Education, Secondary Schools, USA*

1.1 Introduction

Quality education enables people to develop all of their attributes and skills to achieve their potential as human beings and members of society. Quality education provides the foundation for equity in society (Hanushek & Rivkin, 2020). Quality education is one of the most basic public services. A quality education provides resources and directs policy to ensure that each child enters school healthy and learns about and practices a healthy lifestyle. Quality teachers can be key in determining the quality of education (Brophy, 2019). Well-prepared, highly certified teachers are essential if we are to make sure that our students attain the high criteria necessary for them to live fulfilling lives and end up being productive trainees. Educator's certification includes such elements as material understanding, pedagogical understanding, teaching credentials and verbal abilities. Good quality instructors have to understand his/her topic effectively and how to encourage students (Khuan, 2020). Educators have been known to have important influence on pupils' academic success and they additionally play a critical duty in educational achievement since the instructor is eventually responsible for converting academic plans and concepts right into actions based upon technique during communication with the trainees (Sahlberg, 2020). Both training and learning depend on teachers; no wonder an efficient teacher has actually been conceptualized as one that creates wanted outcomes to the course of his obligation as a teacher.

The high quality of instructors shows a more powerful partnership to trainee achievement (Allen, Pianta, Gregory, Mikami & Lun, 2019). Teacher quality appears more important to minority achievement than to that of the majority. The high quality of education not just relies on the teachers showing performances, but likewise on exactly how he/she can manage the school setting successfully. The availability of certified educators is a major determinant in the efficiency of students (Hanushek & Rivkin, 2020). Teachers have actually been stated to have a lot of influence on their classroom practices hence teachers must have and apply particular training abilities and capacities that can be shown in their students' performance in the subject they teach, in which the students will be able to make the connection in between what is educated in school and its application in problem resolving in the real world.

The quality of education and learning depend upon the top quality of training that goes on in the class enhancing the idea that quality teachers offset the shortages in the educational program and in academic resources. ICT in education can improve engagement and knowledge retention. Students become more engaged in their work when ICT is integrated into lessons (Palardy, 2018). The application of technology provides different opportunities to make learning more fun and enjoyable in terms of teaching the same things in different ways. Integration of Information, Communication, and Technology (ICT) assist teachers to the global requirement to replace traditional teaching methods with a technology-based teaching and learning tools and facilities. The ICT integration in education is considered as a key element for improvement and development (Sahlberg, 2020). Thus, the study aimed at determining the impact of ICT Integration on the Quality of Education among the Secondary Schools in the USA

1.2 Research Objective

To examine the impact of ICT Integration on Quality of Education among Secondary Schools in USA

2.1 Literature Review

Abubakar, Madugu and Idris (2020) this study concentrated on the impact of instructor quality on the academic efficiency of Junior Secondary schools Pupil in Texas State. Educator quality below implies educator qualification, teacher experience and workshop, seminar and meetings participation. 3 goals, research inquiries and theories each were developed, increased and formulated. The study took on surveying approach and a total amount of seventy educators and three-hundred fifty trainees were entailed. Two tools were structural set of questions and success test administered for the instructor and trainees respectively. The finding of the research exposed that, educator experience, certification, workshop, conferences and seminar participation significantly affected students achievement in social researches bring about the rejection of all the three null hypotheses. Based upon the finding for, the research exposed that teacher's certification considerably impacted trainees scholastic performance. It is advised that experience instructor with requisite credentials and normal presence of workshops, seminars and conferences be offered concern. The research suggested that workshops, seminars be arranged on routine basis to enable social researches educators maintain abreast with modern occurring in their areas of specialization. In addition, in-service training must be offered to social researches instructors.

Khuan (2020) performed a study to check out the effect of educator quality on scholastic performance amongst public senior secondary schools, Kentucky State. Two objectives and 2 void theories were made use of for the research. Correlational design was used. The overall population of the study was 1,236 teachers and 10,349 trainees out of which 371 educators and 3,105 students were tasted via simple random sampling. SSCE results for 5 successive years (2014-2018) were acquired for the research. Set of questions and Pro-forma were used for information collection at reliability index of 0.74. Information gathered were evaluated making use of Pearson Product Moment Correlation coefficient at 0.05 degree of relevance. The research exposed a significant impact of instructors' credentials, mentor experience on students' scholastic performance. Based upon the findings, it was recommended that ministry of education and learning must organize workshops and seminars to re-train educators in senior high schools in Kentucky State, Teaching Service Board should ensure that certified and well-trained are hired in the schools in Kentucky State.

Gbollie and Keamu (2017) the study investigated instructors' quality as correlates of students' academic performance in Biology in senior secondary schools in Nevada State. To guide the research, four research concerns were raised. The multi-stage sampling strategy was made use of to collect data from two hundred instructors as participants. A confirmed questionnaire entitled: Educator quality as Correlates of Student Academic Performance with the used of easy regularity matters and percent for analysis. From the information analysis it was exposed that: the duty of properly qualified/trained educators is an important teacher quality which enhances students' scholastic achievement in biology, teaching approaches taken on by the instructors dramatically affect achievement of the behavior goals. Several colleges in the population of the research lacked modern-day instructional products without which reliable training and discovering cannot be utilized and instructors' experience significantly affect students' scholastic performance; capability structure forms a significant facet of educators' experience that is yet to be offered adequate focus.

Its significance cannot more than stress because senior high school student's poor performance in both interior and external evaluations.

Goldhaber and Anthony (2019) present research sought to take a look at the relationship in between teacher quality and student achievement in public grade schools in a community area institution of the New York City. It has 23 grade schools, greater than 7,600 trainees and around 350 instructors. For this research, individuals contain a sample of 117 full-time instructors who were working in third, fourth and fifth grade throughout the 2006-2007 academic years. By recognizing the link between qualities training and trainee success, this research addressed the broad question: What is the partnership between teacher top quality and trainee achievement. The survey made use of here was adapted by the scientist to explore 3 specific instructor quality characteristics: academic background, qualification & training status, and specialist advancement programs. Data analysis and the connection in between quality mentor and student achievement were taken a look at through 2 primary analytical examinations: the multivariate analysis of difference (MANOVA) and several regression evaluation tests. As this research attempted to explain how visible instructor attributes belong to the student accomplishment, this research ended that some visible educator quality features such as the academic background, certification & training status and expert advancement activities are dramatically pertaining to the student success. Specifically, this research confirmed that instructors' instructional history features such as highest possible level earned, major discipline and the pre-teaching tests are substantially related to the student success. In the same way, this study validates that instructors' qualification area is dramatically related to the trainee success. Additionally, this study verifies that educators' specialist development elements such as engagement in expert development activities, support received, benefits acquired and cooperation activities are statistically related to the student achievement in Mathematics and ELA test. This information can be especially valuable in directing policies regarding just how to employ, whom to award, to retain the most effective teachers and how to distribute available teachers across institutions and also classrooms. In addition, they might lead strategic choices; primarily those described apply plans to improve educator quality and various other education and learning plans to encourage high-quality teaching in elementary schools.

3.1 Research Methodology

The study adopted the descriptive research design. The target population included principals, teachers and students in secondary schools based in Network. Notably, the target population was 419 respondents. The data collection instruments included questionnaires. The data was analyzed using both descriptive and inferential statistics.

4.0 Research Findings and Discussion

4.1 Correlation Analysis

The correlation analysis was conducted to examine the association between the variables. The results presented in Table 1 describe the correlation analysis

Table 1: Correlation Analysis

		Quality in Education	ICT integration
Quality in Education	Pearson Correlation	1.000	
	Sig. (2-tailed)		
ICT integration	Pearson Correlation	.408**	
	Sig. (2-tailed)	0.000	0.000

The correlation results from Table 1 show that ICT integration was positively and significantly associated with quality in education ($r=.408$, $p=.000$). The results concur with Abubakar, Madugu and Idris (2020), who exposed ICT integration is positively and significantly associated with quality in education. Abdellahi, Bagherzadegan and Aghakasiri (2020) articulated that e-learning success rests on the fundamental requirement that teachers and students possess, such as adequate technical skills to use e-learning tools effectively. Teachers' level of interaction with computers (e-learning systems) is dependent on their technical competency and computer literacy. Further, Kushwah, Panda, Krishna, Alam and Srivastava (2021) intimated that schools that adopted e-learning have quality education.

4.2 Regression Analysis

The section comprised of model fitness, analysis of variance and regression of coefficient. The results presented in Table 2 indicate the model fitness

Table 2: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.176 a	0.238	0.213	0.000

The results from Table 2 show that ICT integration was found to be satisfactory in explaining the quality in education among the Secondary Schools in the USA. This was supported by the coefficient of determination, also known as the R square of 0.238. This signified that teacher ICT integration explains 23.8% of the variations in the quality of education among secondary schools.

Table 3: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.485	1	2.285	16.80	.000b
	Residual	1.087	7	0.136		
	Total	3.572	8			

The results in Table 3 indicate that the overall model was statistically significant. The results imply that ICT integration is a good predictor in explaining the quality of education among the Secondary Schools in the USA as the reported p-value was 0.000, which was less than the conventional probability significance level of 0.05. Therefore, the school can work on increasing the ICT integration to increase the quality of education in the county.

Table 4: Regression of Coefficient

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.0161	0.002		8.050	0.005
Teacher quality	0.1469	0.071	0.237	2.069	0.012

Based on the results presented in Table 4, it was found that ICT integration was positively and significantly related to quality in education ($\beta=0.1469$, $p=0.012$). This was supported by a calculated t-statistic of 2.069 that is larger than the critical t-statistic of 1.96. The results implied that when the ICT integration increased by one unit, the quality in education will increase by 0.1469 units while holding other factors constant. The ICT in education improves engagement and knowledge retention. Students become more engaged in their work when ICT is integrated into lessons. The application of technology provides different opportunities to make learning more fun and enjoyable by teaching the same things in different ways. Integration of Information, Communication, and Technology (ICT) assists teachers to the global requirement to replace traditional teaching methods with technology-based teaching and learning tools and facilities. The results agree with Abubakar, Madugu and Idris (2020), who exposed that ICT integration is positively and significantly associated with quality in education. Abdellahi, Bagherzadegan and Aghakasiri (2020) articulated that e-learning success rests on the fundamental requirement that teachers and students possess, such as adequate technical skills to use e-learning tools effectively. Teachers' level of interaction with computers (e-learning systems) is dependent on their technical competency and computer literacy. Further, Kushwah, Panda, Krishna, Alam and Srivastava (2021) intimated that schools that adopted e-learning have quality education.

5.1 Conclusion and Recommendation

The study concluded that ICT integration improves the effectiveness of education. It aids literacy movements and enhances the scope of education by facilitating mobile learning and inclusive education. Moreover, it is concluded that ICT integration in education facilitates research and scholarly communication. Further, it is concluded that ICT can lead to improved students' learning and better pedagogical practice. The importance of ICT integration is that it prepares the students to be well equipped, given that technology is the order of the day in the current century. The study concluded that ICT integration in education is considered an essential element for improvement and development. The study recommended that schools adopt the use of ICT in the classroom. The government in the USA needs to make it a policy for every school in the country to integrate learning with ICT.

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