Attitudes of Tutors on ICT Integration in Teaching Kiswahili in Public Primary Teachers' Colleges in Kenya, the Case of Rift Valley Region

Rebecca Wanjiku-Omollo, Dr. Simon Wanami, Dr. Mosol Kandagor

Abstract— This paper is a report of a study carried out in 2017 in Public Primary Teachers,' Colleges (PTCs) in Kenya, Rift Valley Region. The study sought to establish the attitudes of tutors on ICT integration in teaching Kiswahili in PTCs and was guided by Social Cultural Theory (SCT). The inquiry employed sequential mixed methods design and pragmatic philosophical paradigm. Purposive sampling was used to select five PTCs, 36 tutors, all second year student teachers, five Deans of Curriculum and Director e-Learning at the Kenya Institute of Curriculum Development (KICD); stratified random sampling was used to get 232 student teachers from the colleges. Data was collected using questionnaire, structured observation and interview schedule. Quantitative data was analyzed descriptively, presented using tables and bar graphs in frequencies and percentages while qualitative data was analyzed and presented in themes. The investigation found that tutors' attitudes on application of ICT integration were positive; they were enthusiastic of the new technology. Though the tutors had positive attitude they did not integrate, they failed to utilize ICT integration in the teaching of Kiswahili thus it was not a practice the PTCs. The researcher recommends that, KICD to organize in-service trainings (INSETs) for all the tutors in PTCs on ICT integration in the teaching of Kiswahili. ICT integration in teaching Kiswahili should be mandatory and tutors who integrate should be motivated.

Index Terms— Application, Attitudes, Integration, Kiswahili, Teaching.

I. INTRODUCTION

Attitude is a predisposition to respond favorably or unfavorably to an object, an idea or a new innovation [1]. Tutors attitude in this study refers to the liking or disliking of the use of ICT in teaching Kiswahili. [2] in the study on teachers attitudes and perceptions on the use of ICT in teaching and learning as observed by ICT champions established that, although a number of teachers were motivated, many others felt that integration was an additional bother to their already so huge burden. They did not believe that ICT was an important component in the process of teaching.

[3] states that majority of teachers believe that ICTs have the ability to improve classroom learning, an almost equal number of them still find it difficult to understand ICTs specific benefits or how it can be used so as to achieve maximum results'. More so, Studies by [7], [8], have tried to

Rebecca Wanjiku-Omollo, Department of Curriculum and Instruction, University of Eldoret, Eldoret City, Uasin Gishu County, Kenya

Dr. Simon Wanami , Department of Technology University of Eldoret, Eldoret City, Uasin Gishu County, Kenya.

Dr. Mosol Kandagor, Department of Arts Moi University, Eldoret City, Uasin Gishu County, Kenya

bring to the fore these contrasting perception of teachers and revealed that despite the continuous hype of the advantages of ICTs in teaching and learning, there is still a small group of teachers who do not see any considerable benefit of learners learning while using ICTs.

[4] states that teachers' beliefs about their own efficacy play an important role in integrating technology into instruction. This according to [19] plays a predominant role in how they conceptualize and use ICTs in their teaching. This is applicable to this research in that unless teacher trainers see the connection between technology and subject content they teach, they will not be able to develop technology – supported pedagogy.

The study by [15] on whether teachers who frequently integrate technology and work in technology-rich schools shift their beliefs and practices towards a student-centered paradigm, noted that teachers' attitudes towards technology significantly predict teachers' ability to use technology and variety of instructional strategies. This is relevant to this study because if a tutor will have positive attitude towards ICT then he/she will comfortably integrate it into the teaching of Kiswahili. Research by [11] on Teachers perception of their preparedness to integrate information communication and technology in secondary school mathematics, established that teachers with high qualifications perceived themselves to be more prepared to use and apply ICT in their area of specialization such as mathematics, English and others.

Some of the underlying reasons for the prospective teachers' negative perception of ICT use in the teaching process include lack of exposure to lessons fully designed with ICT tools, lack of opportunities to try ICT, the need to practice in a technology laboratory, lack of educational technology teachers [6]. In addition to these reasons [6] states that an exam driven educational system and studying to learn only what is tested was a reason for negative perception by the teachers. This is applicable since Kiswahili being one of the compulsory subjects in the curriculum, the student teachers only struggles to learn what is likely to be brought in the exam, similarly the tutors are likely to dwell on the examinable area.

Teachers have positive attitudes towards the use of ICT as pedagogical tool since most of the respondents felt confident in working with students in the digital environment and believed that ICT can improve their teaching practice [10]. This is relevant to this study since by being positive the tutors will be able to demonstrate to the student teachers the innovative ways of teaching and learning.

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[13] Points out that the use of computers for teaching and learning was dismal. Only the NEPAD e-schools reported some significant activity and most of the teachers saw computers as an important tool for motivating students, supporting teaching as a result improving learning. This implies that the attitudes were negative to some teachers and positive to others especially in NEPAD E-schools.

Majority of the teachers were enthusiastic about computers since it made a valuable teaching tool. Additionally, teachers were quite positive about using computers in the classroom, they supported the integration of computers in the Secondary School Curriculum but since the schools did not have computers to be used for classroom instruction, their enthusiasm amounted to nothing [18].

Attitudes of administrators and teachers to ICT implementation in the secondary schools in Nandi North District were generally positive with and overall mean of 4.06 on a scale of 1-5 [9]. Positive attitude will affect the level of integration of ICT in the teaching process since the tutors understand the importance of technology in the teaching process. [13] states that most teachers saw computers as an important tool for motivating students and that it is a tool that can be used to support teaching as result helping learning to take place.

II. THEORETICAL FRAMEWORK

This study was based on Social Cultural theory by Vygotsky (1987) that states that human mind is always and everywhere mediated primarily by linguistically based communication. Second language acquisition as a mediated process has been viewed in three perspectives: social mediation by experts and peers, self mediation and artifact mediation additionally, Human mental activity is also mediated by other forms of artifacts (like computers, videos, tasks) that entail non linguistic features.

III. RESEARCH METHODOLOGY

Sequential mixed methods design was applied. It yielded both qualitative and quantitative data. Pragmatic philosophical paradigm underpinned this study. Investigation was carried out in PTCs in Kenya, Rift Valley region; Purposive sampling was also used to select five colleges, 36 Kiswahili tutors, five Deans of Curriculum in colleges and Director e-learning. Stratified random sampling was used select 232 student teachers within the colleges, a total of 274 respondents were sampled.

Data collection instruments were questionnaire which was administered to the tutors and student teachers, interview schedule administered to the Deans and the Director e-learning and observation guide. Validity of the instruments was enhanced through expert scrutiny that was sought from the two university supervisors assigned to the researcher as well as a panel of experts from the department of Curriculum & Instruction and department of social sciences in the school of education, University of Eldoret. An expert opinionnaire was issued to different experts; their comments were incorporated into the final draft of the research instruments.

IV. RESULTS

Tutors' responses on attitudes of the tutors on ICT integration in the teaching of Kiswahili are as follows; 13.9%(N=5), 47.2%(N=17) 13.9%(N=5) 25.0%(N=9) 0.0%(N=0), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that many tutors show interest in application of ICT integration in the teaching of Kiswahili in PTCs. The findings establish that more than half of the tutors show interest on application of ICT integration in the process of teaching Kiswahili. The study concurs with the findings of [18] that teachers were quite positive about using computers in the classroom, they supported integration. In this research tutors have shown interest in ICT integration but they have failed to utilize it, yet some of these facilities like computers, internet are in the colleges contrary to the research by [18] where teachers failed to utilize in classroom instruction since the schools did not have facilities such as computers.

30.6%(N=11), 22.2%(N=8), 2.8%(N=1), 44.5%(N=16), 0.0%(N=0), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that many tutors have failed to utilize ICT integration in teaching Kiswahili. The findings establish that more than half of the respondents state that many tutors have failed to utilize ICT integration in the process of teaching Kiswahili. [15] notes that, teachers' attitudes towards technology significantly predict teachers' ability to use technology and variety of instructional strategies. Though in this research tutors have positive attitude towards integration but other factors have influenced the ability to integrate technology. Some of these factors are tutors limited information on ICT integration and inadequate time.

0.0%(N=0), 16.7%(N=6), 16.7%(N=6), 47.2%(N=17), 19.4%(N=7) of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that ICT integration is a practice in classroom in PTCs. The findings show that 63.9% of the tutors' disagreed that application of ICT integration is a practice in classroom in PTCs. Implying that application of ICT integration in Kiswahili is not practiced in most of the PTCs. This concurs with the findings from the Deans of Curriculum interview that they have not seen the Kiswahili tutors integrate ICT in their teaching. One of the Deans said:

> I have not seen them integrated in the process of teaching Kiswahili but one thing I have come to establish is the passion of using ICT. When one is Passionate about ICT then one is able to utilize ICT hence one is able to integrate totally. I have one tutor who teaches mathematics, she is so passionate about ICT and totally integrates ICT in the process of teaching mathematics.

2.8% (N=1) 27.8% (N=10), 22.2% (N=8), 8.3% (N=3), 38.9% (N=14) of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration has prompted students

understanding of Kiswahili. The findings established that most of the tutors' disagreed that application of ICT integration has prompted students understanding of Kiswahili. This is because most of the tutors' do not integrate ICT in the process of teaching Kiswahili, thus understanding of Kiswahili could have been prompted by other factors.

8.3%(N=3), 16.7%(N=3), 55.6%(N=20), 19.4%(N=7), 0.0%(N=0), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration weakens tutors' authority in teaching Kiswahili, The findings indicate that most of the tutors were undecided whether application of ICT integration weakens tutors authority. The table shows that, none of the tutors' strongly agreed that ICT integration strengthens tutors' authority in teaching Kiswahili.

0.0%(N=0), 72.2%(N=26), 13.9%(N=5), 5.6%(N=2) 8.3%(N=3), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration strengthens tutors' authority in teaching Kiswahili. The findings establish that more than half of the tutors agreed that application of ICT integration strengthens tutors' authority in the teaching of Kiswahili.

27.8%(N=6), 52.8%(N=19), 11.1%(N=4), 8.3%(N=3), 0.0%(N=0), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration in teaching Kiswahili demonstrates to the student teachers the innovative way of teaching Kiswahili. The findings establish that the majority of the tutors agreed that application of ICT integration demonstrates to the student teachers the innovative way of teaching Kiswahili. The student teachers exist in the technology saturated environment and they are going to teach in the same environment that has smart phones computers laptops and other ICT tools. Thus it is vital for the lecturers to apply ICT in the teaching of Kiswahili so that the student teachers can emulate. [3] states that the 21st century classroom teaching requires knowledge of the basic of technological operations such as internet, presentation soft ware, word processors, databases, spreadsheets and others.

0.0%(N=0), 27.8%(N=10), 22.2%(N=8) 36.1%(N=13) 13.9%(N=5), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that it is difficult to integrate ICT in the teaching of Kiswahili in PTC. The finding shows that more than half of the tutors disagreed that application of ICT integration in the teaching of Kiswahili was difficult. Implying that the tutors have a positive attitude and have embraced the fact that integration is possible while teaching though they are not practicing what they believe in.

11.1%(N=4), 52.8%(N=19), 8.3%(N=3), 27.8%(N=10), 0.0%(N=0), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration in classroom instructions is time consuming The findings indicate that more than half of the tutors agree that application of ICT integration is time consuming. In fact, through the researchers' observation the PTCs had busy schedules such as teaching practice,

co-curriculum activities that affected the teaching time. The challenge concurs with the findings by [5] that explained ICT adoption in teaching as time consuming especially in preparation of electronic materials.

0.0%(N=0), 2.8%(N=1), 5.6%(N=2), 47.2%(N=17), 44.4%(N=16), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that there is no Kiswahili content matter that can be taught using ICT. The findings indicate that the majority of the tutors disagree that there is no content matter that can be taught using ICT. This implies that the content in Kiswahili can be taught using ICT. This was observed as the researcher found a tutor teaching *aina za maneno* (types of word) in *sarufi* (grammar) using a DVDs in one of the colleges. This shows that some tutors have negative attitude since the content is there that can be taught using ICT yet the tutors are not integrating. Findings established from the student teachers' indicated that there was no, content matter that can be integrated this is because most of the tutors' do not integrate.

0.0%(N=0), 19.4%(N=7), 8.3%(N=3), 55.6%(N=20), 16.7%(N=6), of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT is a burden to the tutor. The findings clearly indicated that majority of the tutors disagreed that application of ICT integration was a burden to the tutors. Though application of ICT is not a burden and it is not difficult to integrate ICT in the teaching of Kiswahili, many tutors have failed to utilize ICT in the process of teaching Kiswahili. The attitude towards integration is positive though the tutors are not integrating in the process of teaching Kiswahili. The findings concur with the research by [16] who points out that positive attitude towards ICT or constructivists' perspective on learning will not automatically lead to the uptake of ICT or innovative way of teaching.

0.0%(N=0), 16.7%(N=6), 16.7%(N=6), 47.2%(N=17), 19.4%(N=7) of the tutors strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that the application of ICT in teaching Kiswahili is for the young tutors in the profession in PTCs. The findings established that more than half of the tutors disagreed that the application of ICT in teaching Kiswahili is for the young tutors in the profession in PTCs. This implies that application of ICT in the teaching of Kiswahili is for all the tutors' of all ages; this shows a positive attitude from the tutors.

Student Teachers' Responses on the Attitudes of Tutors on ICT Integration
Student teachers responses on attitudes of tutors on ICT integration in the teaching of Kiswahili include: 28.9%(N=67), 32.3%(N=75) 15.9%(N=37), 17.7%(N=41), 5.2%(N=12) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that many tutors show interest in ICT integration in PTCs. The findings established that more than half of the student teachers agreed that many tutors show interest in ICT integration in PTCs; the findings are similar to those of the tutors'.

25.4%(N=59), 31.9%(N=74), 15.5%(N=36), 23.7%(N=55), 3.4%(N=8) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that many tutors have failed to utilize ICT integration in teaching Kiswahili. The findings established that more than half of the student teachers that is 56.4% agreed that many tutors have failed to utilize ICT integration in teaching of Kiswahili. The percentage of the student teachers that agreed to this are more than the tutors, this implies that integration of ICT in the process of teaching Kiswahili is rarely done even though the tutors show interest in ICT integration. This concurs with the researchers observation that very few tutors were found integrating in the process of teaching Kiswahili, in addition, there were very few ICT products from tutors' and the student teachers'.

0.0%(N=0), 19.0%(N=44), 31.4%(N=73), 26.3%(N=61), 23.3%(N=54) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that ICT integration is a practice in classroom in PTCs. The research established same findings as those of the tutors' that application of ICT integration in the teaching of Kiswahili was not a practice in classrooms in PTCs. The findings agree to those of the Deans interviewed, all the deans stated that, ICT integration is not there in Kiswahili but it is there in Mathematics and Science. One of the Deans said:

> I have not seen them integrated in the process of teaching Kiswahili but one thing I have come to establish is the passion of using ICT. When one is Passionate about ICT then one is able to utilize ICT hence one is able to integrate totally. I have one tutor who teaches mathematics, she is so passionate about ICT and totally integrates ICT in the process of teaching mathematics (D2).

6.9%(N=16), 19.4%(N=45), 21.1%(N=49), 24.1%(N=56), 28.5%(N=66) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that integration has prompted students understanding of Kiswahili. The findings showed that most of the student teachers' that is 52.6% disagreed that integration has prompted students understanding of Kiswahili. This implies that ICT has not played a major role in their learning of Kiswahili since the tutors' do not practice integration in the classrooms. Such findings are similar to those of the tutors' mentioned above.

12.1%(N=28), 20.7%(N=48), 19.4%(N=45), 32.3%(N=75), 15.5%(N=36), of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that ICT integration weakens tutors' authority in teaching Kiswahili. The finding shows that most of the student teachers disagreed that application of ICT weakens tutors' authority in the teaching of Kiswahili. The findings are different from those of the tutors who were undecided on whether ICT integration weakens tutors' authority. This implies that the student teachers embraced the tutors' efforts to integrate ICT in their teaching as it shows the innovativeness and strength the tutor has in the delivery of Kiswahili content.

29.3%(N=68), 31.4%(N=73), 19.4%(N=45), 12.1%(N=28), 7.8%(N=18) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration strengthens tutors' authority in the teaching of Kiswahili. The findings indicate that most of the student teachers agreed that application of ICT strengthens tutors' authority in the teaching of Kiswahili.

36.6%(N=85), 29.3%(N=68), 17.3%(N=40), 9.9%(N=23), 6.9%(N=16) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that integrating ICT in Kiswahili demonstrates to the student teachers the innovative way of teaching Kiswahili. The findings established that more than half of the student teachers agreed that application of ICT integration in teaching Kiswahili demonstrates to the student teachers the innovative way of teaching Kiswahili. This implies that the attitude tutors have played a major role. Tutors that integrate ICT in the teaching of Kiswahili play a role in mentoring student teachers to embrace new technology into the teaching of Kiswahili. This can only be done if the attitude of the tutor is positive. [14] in the study teacher preparedness in integrating information and communications technologies in public primary teachers training colleges in Kenya established that, integration of ICTs brings revolutionary changes in the teaching methodologies. More so, in the role it plays towards student–centered form of teaching and learning [17], [12]. Therefore, the teaching and learning demands that a teacher and in this case a tutor integrates so as to empower learners in this digital era.

6.9%(N=16), 24.1%(N=56), 25.0%(N=58), 28.5%(N=66), 15.5%(N=36) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that it is difficult to integrate ICT in the teaching of Kiswahili in PTC. Majority of the student teachers stated that it was not difficult for the tutors to integrate ICT into the teaching of Kiswahili; similar findings were established from the tutors'.

31.0%(N=72), 22.8%(N=53), 14.7%(N=34), 12.1%(N=28), 19.4%(N=45), of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT integration in classroom instructions is time consuming. The findings show that most of the student teachers concur to the fact that the tutors find application of ICT into the teaching of Kiswahili time consuming. The findings concur to that of the tutors, implying that they had negative attitude toward ICT integration in the teaching of Kiswahili.

13.4%(N=31) 12.5%(N=29), 16.8%(N=39), 27.6%(N=64), 29.7%(N=69), of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that there is no content matter that can be taught using ICT. The findings established that more than half of the student teachers disagreed that there was content matter that tutors can integrate in the process of teaching Kiswahili. This implies that most of the tutors do not apply ICT integration in the process of teaching Kiswahili; failure to apply clearly indicates a negative attitude towards ICT integration. The

findings explain the reason why the student teachers' stated that there is no content that can be integrated. This is because if tutors embraced ICT and created time to integrate the student teachers could experience ICT integration and would encounter Kiswahili content that is being integrated.

8.7%(N=20), 13.8%(N=32), 18.1%(N=42), 29.7%(N=69), 29.7%(N=69), of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that application of ICT is a burden to the tutor. The findings are similar to those of the tutors that application of ICT integration is not a burden to the tutors.

17.2%(N=40), 16.0%(N=37), 14.7%(N=34), 25.4%(N=59), 26.7%(N=62) of the student teachers strongly agreed, agreed, were undecided, disagreed and strongly disagreed respectively that the application of ICT in teaching Kiswahili is for the young tutors in the profession in PTCs. The findings concurs to those of the tutors in that more than half of the student teachers disagreed that application of ICT integration is for the young tutors in the profession in PTCs. This implies that ICT integration is for all tutors' of different ages, this is positive attitude toward ICT since it has no age boundary.

The findings from the five Deans of curriculum interviewed established that tutors' had positive attitude towards ICT integration in the teaching of Kiswahili. D2 added that,

Generally they are enthusiastic. They want to integrate; it is natural that new things are experimented. They wish to embrace ICT but they are incapacitated.

V. SUMMARY

Some tutors had positive attitudes while others negative attitude towards application of ICT integration in teaching of Kiswahili. More tutors had positive attitude as compared to those that were negative as indicated in various statements that were asked. Despite having positive attitude, integration was not a practice in classroom teaching in PTCs.

VI. CONCLUSION

The inquiry established that tutors' attitudes on application of ICT integration were positive; they were enthusiastic of the new technology. Though the tutors had positive attitude they did not integrate, they failed to utilize ICT integration in the teaching of Kiswahili.

VII. RECOMMENDATIONS

That the KICD organize in-service trainings (INSETs) for all the tutors in PTCs on ICT integration in the teaching of Kiswahili. ICT integration in the process of teaching Kiswahili should be made mandatory and tutors who integrate should be motivated.

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