Integration of Hypermedia Instruction: a Change in Pedagogy for Hearing Impaired Students in Kenya

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Abstract: - **Hypermedia is being used increasingly to provide heuristic approach. Integration of hypermedia into pedagogy is on the assumption that it helps students learn. The study determined changes on the role of both students and teachers and challenges experienced in integrating hypermedia. The study employed multiple intelligent (MI) theory. A mixed method approach involving quasi experimental was used. Four schools were selected and assigned randomly to control and experimental. Data was collected through rigorous interview and questionnaire. Descriptive analysis was used to summarize data, which was presented in tables. The results revealed that there are changes in role; students from passive to active, teachers from dispenser of knowledge to facilitator. Hypermedia allows interaction and self-learning, it is difficult to integrate due to varied disabilities and prerequisites.**

Key words: **Hypermedia Instruction, Pedagogical Change, Hearing Impairment**

I. BACKGROUND OF THE STUDY

Integration of instructional media helps students improve retention of information and their academic achievement. In traditional classroom settings, the teacher will begin class by answering questions from the previous work, then teach the new lesson, give notes and sometimes give assignments. Hard-of-hearing students suffer from visual input overload as they simultaneously attempt to pay attention to the teacher, interpreter, and any visual aids that may be presented (Marschark et al., 2006)These static media do not adequately represent, visualize or convey abstract Geomorphology information such as fiords, roche, zeugen, solifluction among others. These teaching methods reinforce the memorization of factual information and do not promote deeper understanding or application of principles involved (Hew & Bush, 2007).Many scholars found that lack of pedagogical innovation in teaching Geography and lack of knowledge by the teachers pose challenges but rather disability poses the greatest challenge for the learners (Mbewe, 2014).Services (2011) notes that the most significant point is fostering improvement and making full use of the learning process. Therefore we sought to enhance the learning process for our students, where teachers move away from transmission teaching and adopt active learning approaches where learners are more engaged, better motivated and acquire a deeper understanding, these would improve understanding. Adaptive hypermedia adopts information towards individual preferences and improves the experience of the learner who is interacting directly with the system. It makes the learner interested about the subject, they decrease learning time, and provide opportunities to learn non-traditional ways. It is transforming the way we teach and learn by transforming the process and the outcome (Eysink et al., 2009).The characteristics of such interactive hypermedia application allow learners to be part of the learning process, experiencing control over the content, initiate search, making selection and manipulate the acquisition of the process. As such hypermedia is interactive nonlinear, user controlled and often determined by a user's interest and curiosity and learners take control of their own destiny. Hypermedia in the classroom holds potential as a tool to allow students to construct their own knowledge by making meaningful connections. It is an effective learning tool as it enables students to participate and involve with the content. As essential factor for effective technology integration is the teacher, since she/he directly indicates the best instructional practices for his/her students (Rehmat, 2014).The teacher should become one of many resources that the student may learn from, engage students in experiences that challenge previous conception of their existing knowledge, allow students responses to drive lesson and seek elaboration. Success hypermedia integration is what makes a difference in reforming a classroom.

However, empirical research has shown that rather than compensating for unsuitable learning prerequisites of some learners, hypermedia tends to increase the gap between good and poor students. And heterogeneous nature of hearing impairment often leads to a lack of organizational and government policy on technology use for deaf education (Zamfirov & Saeva, 2013).Teachers' integration of hypermedia is stalled by lack of successful development opportunities in the constructs of technology and pedagogy (Levin & Wadmany, 2008).It is also noted that few teachers understand how to integrate assistive technology into content area instruction (McLaren et al., 2007). Pirie & Kieren(2008) emphasized the view that technology should be a tool for learning content instead of making technology content. So what is best in the classroom? Many experts say that all these models have their own place. It is for this reason that the study sought if interactive technology can change learning for the HI from expository to heuristic pedagogy.

Problem

There is increasing concern with poor academic performance in Kenyan schools for the deaf. Kiboss (2012) found that

Kenyan high school student with hearing impairment scored lower in math tasks. Adoyo (2014) indicates that poor performance is attributed to inappropriate teaching methods, like in traditional classroom settings where the teacher will begin class by answering questions from the previous work, then teach the new lesson, give notes and sometimes give assignments. On the other hand special schools are segregated and discriminated against yet classroom achievement is low (Mulambula et al, 2012). Studies reveal lack of instructional materials yet effective teaching contributes to 75% of good academic achievement. It is also evidenced that teachers' use of 85% adapted technology and 25% adapted ICT in pedagogy cannot be realized in a dilapidated instructional environment (EU Report,2012).Other studies consider KSL as a medium of instruction may also contribute to poor performance because exams are set in English, switching between KSL to English may cause misunderstanding (Adoyo, 2001, 2004, Ogada, 2012). Based on the constraints of the typical HI student, the teaching strategies and material used in curriculum for HI student cannot effectively teach the required geographic skills. The previous research shows that hypermedia instruction embodies all instructional forms that accommodate the needs and disabilities of different hearing impaired learners (Andrei et al., 2013), therefore can alleviate this issue in physical Geography. Chickering & Gawson (2011) emphasized that active classroom involvement is not just sitting and listening to the teacher sign but by talking about what they learn, write about it, relate it to past experience and apply it to their daily lives. Teachers need to use alternative media with individual work so that the deaf student does not need to concentrate for long time. To rectify this, teachers need to integrate appropriate image- based and iterative strategies necessary for effective instruction of these students (Lang & Pagliaro, 2007).

Theory

Technology has changed the way we teach and learn. Many learning theories can be used to apply and integrate this technology more effectively. Shatila (2015), humans are their own agents of change because they are in charge of choosing their action. Hypermedia leads to a cognitive pattern of engagement and motivation of instructional tools, which individualizes the mode of delivery, developing special teacher, fortifying the teaching process and encouraging students to stay on task (Kazan, 2015). But hypermedia allows the teacher to expand his/her methods, tools and strategies beyond that are frequently used in the classrooms. The most important features in the development of hypermedia for HI are video, animation, text and graphics. In relation to this theory, visual cue is the most important element in developing the hypermedia for the HI learners (Faizah & Ariffin, 2010). MI theory has the capacity to solve problems encountered by HI learners as they have different disabilities for example in a class a teacher may be having deaf, loss of hearing, deaf and hard of hearing these may have

different degree of profoundness. But hypermedia gives opportunity to choose which way to go.

II. METHODOLOGY

In an attempt to explore and identify possible obstacles for failing standards of education for the HI in Kenya, a mixed method approach which involves the combination of qualitative and quantitative research methods was used to obtain comprehensive view and experiences of the respondents. The study was conducted in Kenya. Four schools were selected for the study, two were control and two were experimental. Respondents were obtained through random sampling. Data was collected through rigorous interview and questionnaire. Descriptive analysis was used to summarize data, which was presented in tables.

III. FINDINGS

Best Media in Learning Process

When information is available in various forms (alternative formats), it reaches everyone who may be interested. This might for instance be a person with HI, who needs visual formats. Therefore each user can adapt the presentation of the content according to their individual needs.

Students were asked to indicate the best media in learning process. Table 1 reveals that hypermedia is the best amongst control (34.21%) and experimental group (51.21%) agreed. This is because so much learning involves visual. Proponents say that even verbal learners need visual support to grasp certain types of concepts. Esera (2008) maintains that among educational needs of this group of students (HI) is using visual approach, and applying evidence based practices in instruction is essential. And over emphasis on sign has contributed to failure in Geography.

Therefore teachers should use hypermedia because it provides many benefits at different levels, HI students learn more effectively (Robleyer & Doering, 2013). Teachers can interact with the students when they do not write any sentence. This has been proven by this study where students who were taught by hypermedia performed better than those who were taught through sign and chalk. However Johnson & Seaton (2012) indicate that students who are deaf and hard-of-hearing do not access a sufficient schooling, and they are not receiving a full range of services that address their unique needs.

Print was last for control group (18.42%) and experimental group none (0%), Print materials generally provide limited built-in interactions and it may take days or weeks for printed matter to exchange between student and teacher. This media does not allow interaction it advocates for expository method of teaching. This static media does not adequately represent, visualize or convey abstract information on Geomorphology to HI learners. Such teaching methods reinforce the memorization of factual information and do not promote deeper understanding or application of principles involved (Hew & Bush, 2007). This is highly condemned by researcher

like Chickering & Gawson (2011) who have emphasized that active classroom involvement is not just sitting and listening to the teacher sign but by talking about what they learn, write about it, relate it to past experience and apply it to their daily lives.

Table 1: Best Media in Learning Process

Media	Control		Experimental	
	Frequency	Percent	Frequency	Percent
Hypermedia	13	34.21	21	51.21
Print	7	18.42	0	0
Writing board	10	26.31	15	36.58
Illustrations	8	12.05	5	12.20
TOTAL	38	100	41	100

An open-ended question was further asked why they considered the media chosen as the best. Most of these learners chose hypermedia as the best. Because they said ''*the media is interesting and enhances understanding*''. Hypermedia facilitates understanding and is interesting because they are able to utilize variety of teaching tool and are in charge of their own learning as they are able to play and stop and this is interesting and enhances understanding. Students are able to interact with hypermedia freely a change in pedagogical approach from teacher –learner. Hashim et al.

(2013) pointed out that the problems that hard-of-hearing students face in traditional classroom provide opportunity for hypermedia.

However control group had a mixed reaction because other reasons account for 50%. This indicates that there is no one media that can accomplish all the learning priorities and no teaching technique is completely ineffective in delivery of the content. Maryland (2007) affirms that what is effective for one person may not be for the other.

Table 2: Teachers' Opinion on Application of Hypermedia

Opinions			Frequency	Percent
Most effective technique	Illustration		3	30
Employed	Hypermedia		2	20
	Power point		5	50
TOTAL			10	100
Role of students during	Passive		3	30
Presentation	Active		7	70
TOTAL			10	100
Extent to which hypermedia	Not at all		2	20
Change teaching method	Much		5	50
	Very much		3	30
TOTAL			10	100

Opinion of Teachers on Application of Hypermedia in Pedagogy

With reference to table 2, the results revealed negative use of hypermedia in pedagogy that is influenced by teachers' opinion. Their attitude is considered as a major opinion on use of hypermedia in teaching Geomorphology in Geography. Teachers have very important responsibility in promoting the integration of hypermedia in pedagogy because they are one of the pillars in teaching and learning process. The finding revealed that there is a gap in hypermedia use and instructions of the HI. This is confirmed by 20% of teachers accepting that the least effective technique they employed is hypermedia. For the teacher to integrate any media she/he needs to prepare lesson plan and compile lesson materials for the classroom instruction. To prepare hypermedia one has to go through the act of drafting, downloading, editing and revising hence this is a long process which may discourage many teachers from integrating hypermedia in their lessons. Being a multimedia

resource, the teacher may not be sure which among the channels will benefit most the HI students. This is in line with Shtila (2015) in order to teach students with disabilities teachers need proper training on how to design lesson plan using hypermedia that support the strengths and weakness of all students. Hew (2007) contradicts the finding, as more and more activities in the classroom are orchestrated with computers, teachers are realizing that hypermedia is more complex and more capable than other media such as filmstrips or overheads.

HI learners have varied problems such as deaf & dump, heard-of-hearing and dump, therefore teachers are at a fix whether to use hypermedia or not. Friedman & Friedman (2011) report that while this learning can be superior to traditional face-face instruction when pedagogically appropriate methods are used, they sometimes fail to be successful for HI students.

However power point was leading with 50%. Although power point is a type of hypermedia known as linear model, it requires little interaction on the part of teachers and students, it results into nothing more than fleshy text of speech that has taken the place of old posters and visual aids. It had the highest percentage because this tool is commonly used to supplement lecture. This finding concur with Ruffini (2007) who reports that linear model are most basic structures used by teachers and students in presentations but are only fleshy text of speech useful in delivery of lecture notes.

Role of the Students During Hypermedia Presentation

Teachers were asked to state the role of the students during hypermedia presentation. The finding in table 2 indicates that 70% of the students were active. Hypermedia is an interactive learning media. New technology has drastically changed students' role from traditional instruction to virtual learning. Hypermedia is shifting the emphasis from teaching to learning. An active student will have more responsibilities of their own learning as they can share their knowledge with others.

Employing active learning strategies serves two fold purpose; they make a dynamic classroom ever changing environment in which students have a voice and allowed them to view teachers as people who are flexible enough to take risks in the classroom instruction. It also encouraged students to stay interested and learn more from class when teachers used many medium in single application. Hypermedia provides powerful tools to support the shift from teacher centered to learner centered paradigm and new roles of teacher-learner and new media. It is believe that the most important characteristic of hypermedia is its ability to encourage students to be proactive learners (Drayton et al., 2010).

Changes in Learners

From	To
Passive learner	Active learner
Reproducer of knowledge	Producer of knowledge
Solitary learner	Collaborative learner

Solely learning content	learning to learn, think, create and communicate

However 30% teachers agreed that learning with hypermedia is a passive way of learning. As stated earlier in literature, hypermedia is in three categories that is linear, network organization and hierarchical organization. These teachers could have used linear model which is a passive way of presenting information. In this model both the learners and teachers have very little to do. It is also likely that there are some teachers who have not had experience with hypermedia therefore they are not sure whether hypermedia can encourage passive or active learning. Sivapalan & Crega (2005) concurs that the main challenge is how to enhance students' participation during presentation. Classroom experience has demonstrated that students who contribute to Geography discussion tend to succeed academically, thus there is relationship between classroom participation and student achievement.

Extent to which Hypermedia Change Teaching Method

Table 2 reveals that 50% of teachers agreed that use of hypermedia greatly changes their teaching method. Hypermedia application involves use of several medium at ago. This relieves the teacher from carrying into class more medium. Hypermedia has potential to transform achievement of the HI through instructional technique.

Changes in Learners

From	To
Single sense stimulation	Multi-sensory stimulation
Single media application	Multimedia application
Delivery of information	Exchange of information
Monologue communication	Dialogue & collaboration
Analogue resource	Digital resource

All these changes in pedagogy demand a new learning environment to effectively harness the power of hypermedia (Zhu, 2003; Kim & Gilman, 2008).

Table 3: Media which Achieves Positive Outcome

Variables		Frequency	Percent (%
Achieves equitable learning outcome	Hypermedia	7	70
	CD-ROM	0	0
	Sign it	3	30
	Hyper- studio	0	0
TOTAL		**10**	**100**
Hypermedia extends learning	Yes	7	70
	No	3	30
TOTAL		**10**	**100**

N = 10

From table 3 it reveals that use of hypermedia leads with 70% teachers accepting that hypermedia achieves equitable learning outcome. This is because hypermedia offers multiple learning styles and therefore each learner could meet his/her learning preference through the use of multimedia which employs the four senses. Students would benefit from the way

in which the textbook contents are demonstrated. The use of technology in learning has helped them largely. This motivates their self- learning abilities by pursuing audio-video supported illustrations, texts, graphics and drawings. Chowdhuri et al. (2012) agree that deaf students cannot be exempted from e-learning approach.

None of the teachers agreed that CDROM and hyper-studio can achieve a positive outcome. CDROM is non-visual media thus audio aid therefore many learners are not able to benefit from the lessons in which it is used because majority of the learners in this study have conductive deafness. Berndsen & Luckner (2010) state that use of CD-ROM in the classroom is still pedestrian. Teachers were not familiar with variety of teaching strategies that can be used with CD-ROMs in order to increase its effectiveness. This is most likely a consequence of lack of available resources.

However CD-ROMs help to standardize the sign for particular concepts. This helps in avoiding to use interpreters who may lack sign for technical terms. This is one of the problems in teaching Geomorphology. Cooshna & Teelock (2006) report that the problem with teaching and learning Geography are terminology, symbols and interpretation of language. In this way technology has become a way of extending and developing good practice and providing permanent visual record. None use of hyper-studio was also noticed, this is a rare technique used in teaching the HI. Hence it is one of the most appropriate media because it can pull a variety of resources together, for example the teacher can have scrolling text for subtitles and video clips for signing, together with still pictures, text and sound. It seems teachers have no idea for this technology and that is why it was not regarded as one of the medium which can provide a positive outcome.

From the results in table 3, most of teachers (80%) agreed that hypermedia can extend learning. Students are able to self-adjust the time and determine the information based on preference since hypermedia provides different alternatives that individual learner can benefit from. Students can use hypermedia on their own time, place and speed to learn the concepts. Ma, O'Toole & Keppel (2008) support the finding reporting that based on individual differences students self-adjust the time and determine alternatives in learning.

However few (30%) teachers agreed that hypermedia cannot extend students' learning. This could be attributed to teachers who did not have experience with hypermedia. Hypermedia is one of the recent technologies which have just been introduced in the classroom instruction. These teachers find it difficult to incorporate hypermedia hence believe it cannot extend learning. The finding is supported by several researchers. Mishra & Sharma, 2004; Mantin & Kleion (2008) who assert that, it is challenging to produce and incorporate multimedia enable learning methods into existing practice without creating unnecessary frustration in the learning process.

A further inquiry by an open-ended question was made by asking the reason why the media could extend students learning. Those who said that hypermedia can extend learning beyond classroom gave the following reasons; *TE[1], it improves understanding because students could see the process of various landforms for example formation of headlands and bays, TE[2], it can be used anytime anywhere and facilitates creativity.*

The results further revealed that hypermedia is the best because students can access information on their own through navigation. This motivates them hence learn better therefore teachers should always keep learning at the center of learners. Technology is the central focus and heart of all activities and pedagogy in classroom instruction. National Teacher Institute (2006) concludes that I hear I forget, I see I remember, I do I understand.

Challenges of integrating hypermedia in HI Pedagogy

Hearing impairments (HI) present challenges to quality education both pedagogically and logistically. Many of the learning strategies used by other students who can hear and processes are unavailable for students with HI, and teaching methods tend to be visually (sign) based. Therefore teachers experience various problems in attempting to teach this group.

Table 4 reveals that many teachers (60%) ranked difficulties to access hypermedia as the most popular problem they encounter in thinking about selecting materials /activities for teaching Geography. Access to instructional media is an important factor affecting selection of hypermedia for instruction. Teachers can only use what they are able to get. Slobodzian (2009) reports extra learning resources may not be accessible in class and there is a widespread lack of accessible interactive materials (Parton, 2006). Hypermedia is an instructional material that is assembled by the user according to the content, it is not a material that is readily available. Since most teachers are lacking technical skills, they are not able to access it easy. This finding is supported by other researchers, Flick (2007) affirms that availability of and access to technology is important factors that determine the use. Individual difference (30%) was another popular difficulty encountered by teachers in selecting hypermedia. HI students have varied disabilities for example in a class there may be dump, deaf, partial deaf, deaf and individual differences. Therefore it becomes difficult for a teacher to select media that can suit all of them. The finding is supported by several researchers Yang &Tsai (2008); Graf et al. (2009); Naimie et al. (2010) indicate, identifying the uniqueness of learning style is important in encouraging students' involvement in the learning process.

Number of student in class was seen as insignificant, because class size was (50%) ranked last by many teachers. Medium such as hypermedia is suitable for any number of the students in a class whether large or small. In this study classes were generally large. HI classes should have a maximum of twelve students but all the sampled schools had fifteen and above. Technology can be the great equalizer in a classroom with diverse learners. Whereas teachers can find it difficult to differentiate instruction for 30+ students in one class, all with different needs and abilities, Machnaik (2007) postulates, teaching style, like learning are highly personal and influenced by extrinsic and intrinsic factors.

Table 4: Difficulties Encountered in Selecting Hypermedia

	1	2	3	4	5	6	7
Difficulties in selection	F %	F%	F%	F%	F%	F%	F%
Student's preference approach	1(10)	1(10)	3(30)	2(20)	1(10	2(20	0(0)
Students individual difference	3(30)	3(30)	1(10)	0(0)	0(0)	2(20)	1(10)
It is difficult to access	6(60)	2(20)	1(10)	1(10)	0(0)	0(0)	0(0)
Lack of guide books	1(10)	2(20)	0(0)	1(10)	1(10)	4(40)	1(10)
Students' attitude does not allow	0(0)	0(0)	4(40)	1(10)	1(10)	2(20)	2(20)
Class roll doesn't allow	0(0)	0(0)	1(10)	1(10)	0(0)	3(30)	5(50)

N = 10

Note; percentage is in parentheses

There was no doubt with the ranking as HI classes in many parts of Kenya may have between eighteen to thirty students. One goal of Education in Kenya gives equal educational opportunities irrespective of any real or imagined disabilities (EFA, 2004). This has given rise to population of children with disability. Many teachers consider that these classes are too large and they give rise to a number of problems. The problems include discomfort, control, individual attention and learning effectiveness. However this was not experienced during hypermedia presentation because the media was interesting and students' attention was captured due to its high interactivity. Schmidt et al. (2009) contend that hypermedia allows the students to engage more fully with the subject matter at hand and facilitates deep understanding because of its interactivity.

Opinion of Teachers on use of Hypermedia in Teaching Geography

With reference to table 5, the result reveals a positive response on use of hypermedia. Teachers were asked to rank their opinion on use of hypermedia. A significant finding indicated that hypermedia is suitable for teaching abstract information, makes lesson learner-centered and caters for individual difference and all these statements were ranked number one at 30%. Teachers have found hypermedia more positive in learning because students were able to identify a great variety of Geomorphology resultant features such as avalanches, yardangs and mesas. It is proven that experience with hypermedia results in improved attitudes and perceptions. Teachers' attitude and beliefs often stop them from fully integrating hypermedia into their instruction (Toe, 2008).

Majority (60%) of teachers also agreed that combining several media does not create confusion, this was ranked sixth. Fabio & Antoniett (2012) report that alleged benefits of hypermedia have been supported by several studies, such benefits have been proven also for showing learning problems. Swelle (2005) further supports, using multiple channels can increase the amount of information that the brain can process but there is still risk of cognitive load.

Most of teachers (60%) ranked the statement that said hypermedia is too involving for the teacher to prepare as number three, this indicates that teachers if facilitated can use hypermedia in their lessons. It does not take too much time to prepare compared to drawing accurate diagrams and illustrations. Illustration requires use of colour, appropriate shape and size, texture among others which must portray the features being discussed in attractive manner. Shin et al. (2009), teacher preparation effort is a challenge to technology integration into classroom instructions. The finding is in line with Fang (2006) who asserts that materials should also conform to the cognitive flexibility theory. Hew (2007) reaffirms, teachers are finding a decreasing amount of time allowed for preparation while responsibilities increase therefore teachers need more time to prepare.

Table 5: Teachers Opinion on use of Hypermedia in Teaching Geography

Rank	1	2	3	4	5	6
Opinion	F %	F %	F %	F %	F %	F %
Technique for teaching abstract	3(30)	0 (0)	0 (0)	1(10)	1(10)	2 (20)
Too involving for teacher to prepare	2(20)	1(10)	6(60)	1(10)	1(10)	0 (0)
Limited time on timetable	1(10)	0(0)	0(0)	2 (20)	5 (50)	2 (20)
Makes lesson learner-centered	3 (30)	5 (50)	1 (10)	0 (0)	1 (10)	0 (0)
Caters for individual difference	3 (30)	2 (20)	4 (40)	0 (0)	0 (0)	1 (10)
Combining several media confuse	0 (0)	0 (0)	1 (10)	2 (20)	6 (60)	1(10)

N = 10

Note; percentage is in parentheses

Factors which Prevent Teachers from Using Hypermedia Frequently

Teachers were asked to rank the statements in order of priority how they prevent them from using hypermedia frequently. From table 6 the findings indicated that 60% agreed that lack of prerequisites for using hypermedia is an issue, therefore teachers must have both knowledge and skills. Use of hypermedia requires several techniques because it involves combination of several media in single application and the teacher may not be efficient in these entire medium. This finding is supported by MoEST (2011) who reports those who use hypermedia for instructions are individual who are self-driven depending on their technical knowledge. Further Park & Son (2009) revealed that internal factors such as teachers' limited computer skills, knowledge about computers and beliefs and attitudes significantly affects teachers' decisions on the use of hypermedia in teaching. Availability was also ranked first, 60% agreed that they cannot use hypermedia frequently because it is not available in school. Even if a teacher has prerequisite skills if the media is not within his/her reach, then it cannot be used for classroom instructions. Flice (2007) on a study on mathematics teachers and instructional media found that unavailability of computers for instruction was among the factors that impede their utilization. However Wagner et al. (2006) contradicts stating '' teachers do not have adequate technological knowledge and skills to serve the increasing number of students with disabilities who participate in education classrooms''.

Teaching students with special needs was ranked last (30%). This is because all teachers in this study have gone for special education and most of them are specialized in handling hearing impaired learners therefore teaching them is not a problem. Still, some felt that teaching them is a problem because it is really hard to teach geomorphological terms since their experience are limited. Teachers at times lack suitable signs to explain further. In order to address this longstanding issue researchers in the practitioner-driven, literature have stressed a need for teachers to have more confidence in the abilities of their students (Kritzer & Pagliaro, 2007). Class size was rated low by 50%. Number of student in a class is not an impediment on use of hypermedia. Hypermedia is suitable for any class size big or small. None of the teachers rated objectives as low, it was high (60%). This indicates that objective of the lesson is one of the most important factors which determine the integration of instructional media. Paolucci (2007) supports the finding that the complexity of hypermedia in the classroom should be based on the subject matter, learners' characteristics and subject objectives. Li-Ling & Suh-ing (2014), reaffirm that teaching method was easier to acquire knowledge getting closer to your learning objectives.

However several researchers contradict this finding Abdo & Semela (2010) concluded that teacher's ability to integrate instructional media is affected by the strength of school leadership. And Shin et al. (2009), teacher preparation effort is a challenge to technology integration into classroom instructions. Content of the lesson was rated 40% high and medium, this implies that before integrating instructional media the teacher must consider the content. It is the content that should direct the teacher on the type of media to use. This is in line with the finding of Pirie & Kieren (2008) who assert that teachers' use of hypermedia is promoted by the nature of the content. They emphasized the view that technology should be a tool for learning content instead of making technology content. Therefore they endorsed that there is need for teachers to rethink the use of technology.

Lack of refresher methodology course was rated last (30%) factor which prevent them from integrating hypermedia. With emergence of new technology teachers need to upgrade their skills but this is lacking in Kenyan system of education and it is noted that only interested teachers may upgrade themselves at their own cost. Hence it is a rare practice therefore teachers have not adequately integrated hypermedia in pedagogy. Adegbija & Fakomogbon (2012) found that teacher qualifications and in-service training through workshops and conferences promoted utilization of instructional media. This finding is further supported by McLaren et al. (2007) who say few teachers understand how to integrate assistive technology into content area.

Table 6: What Prevents Teachers from Using Hypermedia Frequently

	Rank	1	2	3	4	5	6
		%	%	%	%	%	%
I don't have prerequisites skills		60	20	0	10	0	10
Lack of administration management		20	10	40	20	10	0
Lack of time due subject load		0	10	30	30	20	10
Have not gone for methodology course		10	20	10	20	10	30
Teaching special students is a problem		10	20	10	10	20	30
Lack of self-efficacy		20	0	30	20	10	20
Availability		60	20	10	0	0	10

IV. CONCLUSION

This study intended to integrate hypermedia to find out if it will help change the students' role. The finding has showed that the role was changed from passive to active and teachers changed from dispenser of knowledge to facilitator**.** Hypermedia is the best media for learning process among the listed medium in the study. It provides benefits at different levels; it improves performance, allows interaction, promotes deeper understanding and motivates self-learning ability. It achieves equitable outcome as it meets different learning preference. Therefore it can be concluded that interactivity was associated with learning achievement and retention of knowledge. However it pause challenges such as availability, accessibility, students' varied disabilities, lack of prerequisites for using hypermedia.

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