In the teaching-learning process, the use of instructional materials is very important because they facilitate learning. This essay seeks to discuss the competencies which teachers should possess for the successful use and integration of technology in their work. The essay will define the crucial terms which are Teacher competencies, educational media and technology. However, for the media to be successfully used during the teaching-learning process, particularly in the teaching and learning process teachers should possess certain competencies such being computer literate, deep knowledge on curricular issues, communication skills, technical skills, presentation, Evaluation and Follow-up skills.

There is no single definition that can satisfy anyone pertaining to educational media They are given different terms such as teaching aids, learning materials, learning resources, audio-visuals, instructional media, among others. According to Olowu (2005) Instructional media are the information carriers that are used in any teaching-learning process to facilitate the rate of learning (in the learners) and so also to enhance the teacher's presentation of the learning content (subject matter). Alaku (1998) says that instructional media are variety of resources, and equipment, which can be used to supplement or complement the teachers' efforts in ensuring effective learning by students. The Association of Education, Communication and technology (AECT) in Rwambiwa (2001, p5) defines it as

"An integrated process involving people, procedures, ideas,

devices and organisations for analysing problems and

devising, implementing, evaluating and managing solutions

to those problems involving all aspects of learning"

Good (1973:592) in Defaru (2016) says 'instructional technology refers to the comprehensive organization of principles, resources, personnel and logistics that combine to produce gains in learning.' This may include traditional materials such as chalkboards, handouts, charts, slides,

overheads, real objects, and videotape or film, as well newer materials and methods such as computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing. Heinich (1996) in Rwambiwa & Dischroll (1984). Therefore this demands teachers must be computer literate enough to search for information from the Internet and other accessories such as the CD-ROM.

Teacher competences are defined by González & Wagenaar (2003) in Guzman & Nussbaum(2009,p454) as the set of learnings that an individual develops from a formative programme; it includes knowledge (conceptual knowledges), skills (procedural knowledges) and attitudes attitudinal and/or knowledge associated with this implementation. It is in light of this definition that the this essay will discuss the competencies teachers should have for the successful use of media and integration of technology in their work. According to Pacific Policy Research Center (2010) teachers should be able to replace the basic skill competencies and knowledge expectations of the past. It also suggests that to meet this challenge schools must be transformed in ways that will enable learners to acquire the creative thinking, flexible problem solving, collaboration and innovative skills they will need to be successful in work and life.

For teachers to be successful at using and integrating media and technology in their work they should have both technical and conceptual competences. Balogun (2002) puts forward two approaches to educational media and technology that is the hardware approach and the systems software approach. The hardware approach means application of machines, gadgets or equipment to improve the quality of education. It also involves the use of pieces of instructional material such as audio-media, visual-media, projected media, graphics, computers and other teaching machines like 'Ruzivo' a learning software developed by econet in Zimbabwe. The software approach refers to application of theories and laws/rules in education and related disciplines for the purpose of improving the quality of education. Such

related disciplines such as sociology and sociology of education, philosophy and philosophy of education, psychology and psychology of education, communication and technology. Therefore one can agree that the above are requisite competences if teachers are to successfully integrate and use media and technology in their work.

Balogun (2001) says that eachers should be competent with the concept of preparation which consists of many steps such as teacher self-preparation. Teacher should prepare correctly the media to be used before going to the classroom. The media should be previewed properly in terms of visual and audio aspects of the media. Drawing from the writers teaching practice at Seke 1 such preparation was required not to be done randomly but systematically written in a lesson plan. There is also class Preparation which involves both the learning environment and class preparation for the use of the media. The teacher should make sure that the learners are properly arranged for free movement and light if charts are used. The media should be properly arranged for easy sight and hearing.

Teachers must also be equipped with technical capacity to utilize the media in the Classroom. Gwarinda (1993) argues that the use of the media in the classroom by the teacher can be during the introduction, presentation and evaluation of the lesson. However Lumsdaine (1964) claims that the media can be used continuously and consecutively depending on the teacher's discretion and areas where she or he wants to lay emphasis for the learners to take note. However it is important that media are not underused or overused so that they do not constitute distractions.

Teachers must be very competent in terms of the content in their various subjects. The media to be selected and used should be in accordance with the stated objectives in the topic or subject matter to be taught. Drawing from various leaning theories media should facilitate the achievement rate of the objectives whether is in the area of cognitive, affective or

psychomotor domains. Agun and Imojie (1988) argue that the information being conveyed by the media using current technology such as internet should be reliable, precise, valid and current and should be within the content of the topic to be taught.

Communication is a crucial aspect of one of the competences teachers should possess for the successful use and integration of educational media and technology in their work. Chappell and Read (1984) simply define communication is any means by which a thought is transferred from one person to another. From this definition one can add that communication is not just the giving of information, it is the giving of understandable information and receiving and understanding the message. Teachers should use current technology as a venue for information sharing for example posting information on emails which is done by some competent lectures such as Ms Phiri from the University of Zimbabwe who interacts with her pupils using Gmail an email software that transfers files from one computer to another in particular the Internet to give pupils details on future tasks, lecture notes pertaining to course of study and important feeds and updates.

Teachers must also know their learners in order to successfully use media and integrate technology in their work. Gwarinda (2002) is of the notion that learners' Characteristics in terms of learners' number, age, ability among others in the classroom will determine the type of media to be selected and utilized. For example, for small group of about 30 learners, chart, models, realia or non-projected media can be used, while in a large class of about 500 learners, projected media like overhead projector, computer power point should be more appropriate to be used.

In addition to the above, Piaget's theory of cognitive development implicates that the teacher should make sure that the messages being carried by the media are within the learners' ability, comprehension, age from a sociological point of view one can add the background,

and from philosophy the kind of knowledge among others. Therefore vocabulary and visualization should be within the learners' level of understanding. For example it can be dangerous to teach science experiment using explosives and other dangerous substances with pupils who are not yet mature such as form ones.

It is also important for teachers to consider the issue of media availability that is teacher should be sure if the materials to be used for the media production are available locally or are commercially produced. Or, if they are available in the school or they have to be loaned from other school or learning resources centre within the locality. Or sometimes the teacher can improvise them. Gwarinda (2002) even suggests that pupils themselves should be taught to make aids such as tool handles in Agriculture or simply collect aids such as old batteries for examining in Physics. In addition the information being carried by the media should be authentic, accurate, valid and current and should be within the content of the topic to be taught.

Innovation and creativity are also some of the competencies teachers should have for the successful use and integration of media in their work. In a review of the interconnection between technology, learning and creativity, Downess (2005) shows how technology allows individuals to produce high quality work in a range of media that provide opportunities for creativity. According to Owusu (2009) teachers lack the requisite skills and creativity to use them effectively in their teaching. Some teachers also lack innovation in finding suitable local substitutes to help their pupils understand their lessons. From this argument one can agree that teachers should be creative to avoid teaching of abstract lessons, misunderstanding of concepts and skills, and ineffective learning that negatively affect learner performance and teacher output in terms of what is taught and learned by means of instructional media.

Teachers must also be competent with skills pertaining to practicability in the use of media and integrating technology. The teacher should make sure that necessary facilities for putting the media selected into practical use in the classroom are available such as source of power

such as electricity, battery generators, solar or any other means of generating power. Fabian (2001 cements that these are particularly essential for projected media such as projector and computer. For non-projected media such as realia, or real objects, they should not be harmful or frightening to the students the use of a live snake in the classroom is not practicable. The teacher can be more appropriate and use model of snake or picture.

Educational media and technology in order to be used and integrated successfully in the work of teachers requires teachers to be competent with skills of evaluation. Otang (2007) purports that the visual and audio aspects of the media should be of good quality. When using Microsoft powerpoint for example the lettering should be legible, bold, simple and attractive. Appropriate colour should be used for example blue for water and green for vegetation. Competent teachers in evaluation avoid multiple focal messages they let messages focus on simple information not on complex so as not to distract attention.

Teachers should also possess skills in (ICT) for the successful integration of technology in their work. For example a Guidance and Counselling teacher can use mobile phones E-mailing in counselling services. These can be used to assist and parents by providing direct channels of communication through Internet services and pupils with parents who are far away and boarders' parents can benefit. In addition to this Otang and Mbangwano (2007) say that teleconferencing, telesurveillance, video recording in counselling approaches provide impressive results in the art of counselling especially during group counselling where groups of people with similar problems are involved such as those encountering bullying.

Notwithstanding the benefits that can be brought in by using technology in the classroom, teachers must also be aware on basic disadvantages and challenges associated with the use of technology. Cox (1997) mentions a lot of challenges in integration of technology which include irregularities of electricity supply, poor and slow internet connection, inadequate skills and knowledge of ICT usage. One can also add that some technologies are expensive hence before integration in class teachers should be competent with budget issues in terms of cost financial implication. The cost effectiveness of the media should also be considered. For

instance using power point computer projector for a class of few students may not be cost effective, but cost wise like for large group.

Teachers should have a clear and sound knowledge learners ability and level of operation and studies have shown that people learn differently from different experiences interestingly 30% from what they see. Riddle (2009) argues that students need good visualization skills to be able to decipher, interpret, detect patterns, and communicate using imagery. Media has been classified differently by several scholars they may be perceived according to the levels of technology According to Ellington and Race (1993) in Agnew (1996say that media is also be grouped according to the senses they stimulate visual media such as pictures, audio media and audio visual media such as televisions, or classified as projected and non-projected media. From the above knowledge the teacher will then select form a pool of media as he or she will know the then which media and technology to use and integrate in his or her lessons.

Teachers should also possess deep knowledge on curricular issues. This is because all information taught to pupils, methods and instructional material are drawn from the curriculum. In addition the teachers should have adverse knowledge on multimedia approach. The term multimedia is defined by Agnew, Kellerman and Meyer, (1996) as the combination of various digital media types such as text, images, sound and video, into an integrated multi-sensory interactive application or presentation to convey a message or information to an audience. From this definition one can agree that teachers will then offer new insights into the learning process as the designers and forces them to represent information and knowledge in a new and innovative ways.

Rodwell (1978, p58) in Bello (2008) claims that "it is not enough to look at the media and devise uses for them. To work fully, they must be used at the right time, in the right place and in the right way." Therefore teachers must have technology competence which is the ability

to select and apply contemporary forms of technology to solve problems or compile information. In selecting material from the internet for example teachers should understand available networking tools such as web search engines and web sites then select, tell apart and evaluate sources for credibility and appropriateness then select facts from opinion. This is because there are other websites that have information but written by laymen and not academics.

Planning and preparation is a key competence teachers should possess. The exchange of roles between the teacher and the media should be however deliberate and therefore systematically planned. The list of media that could be used as teacher alternate are very plenty. These include: the radio, the television, computer, textbooks, charts, films, video tapes. Balogun (1999) posits that the choice as to which of the instructional approaches to be used depend on the task to be performed. One can also add that media choice is also influenced by the objectives of the lesson. Hence forth teachers should be careful and use judicious methods of planning and preparation.

To put in a summary Instructional media and technology are no doubt the information carriers that facilitate teaching learning process. There are numerous other competencies but this essay has discussed the competences some of the significant ones that teachers should posses for the successful integration of media and technology in their work. Therefore basically the selection and utilization of these media should be based on certain criteria such as learners' characteristics, instructional objectives, suitability, technicality, practicability, and the teacher's capability among others. Most importantly despite the existence of many competences teachers should have the requisite ones as discussed in this essay so that they successfully use and integrate them in their work of systematically transmitting educational to learners in a reliable manner.

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