The Future of Teacher Education for Sustainable Development in the 21st Century and Beyond

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Abstract
Teacher have a crucial role to play in helping to bring about the extensive social change needed along the pathway they require a commitment to the principles of education for sustainability without it, they may lack the skills, insight and desire to ensure that their students are provided the opportunities to learn how to contribute to the ways their communities are working to advance the transition to sustainability. The paper also discuss the concept of teacher education, roles of teacher in the near future as well as sustainable development. Conclusion and recommendations was discussed to achieved sustainable development there is need top change the orientation of people as regards their perception of teachers and the teaching job, the profession must be recognized by the government as well as the public to be bale to attract young ones into the profession.

Key words: Teacher, education, sustainable development, future.

Introduction

Education is power, it is a process of acquiring knowledge and ideas that shape and condition man's attitude and achievements. It is a process of developing in child's moral physical, emotional and intellectual power for his contribution in social reform: it is the process of mastering the laws of nature and for utilizing them effectively for the welfare of the individual and for social reconstruction" it is the art of the utilization of knowledge for complete living (Ukeje, 1986). Maclean (2008) state that development and economic prosperity depends on the ability of countries to education all members of their societies and offer them lifelong learning. An innovative society prepares people not only to embrace and adapt to change but also to manage and influence it.

Education enriches cultures, creates mutual understanding that underpins peaceful societies UNESCO is guided by upholding education as an essential element for the full development of human potentials.   Teaching involves the use of wide body of knowledge about the subject being taught. Teachers at all level of the educational system are very important in the overall development of any nation's economy. Teachers education is the process which nurtures prospective teachers knowledge and skills in the form of continuous professional development. It is on this basis that the educational administrators play several roles in development of teacher education in Nigeria. Teachers' education revolves around the policies and procedures designed to equip prospective teachers with the knowledge, attitude behavior and skills required in the performance of effective duties in the classroom and in other social gatherings including Mosque and Churches. Teachers' education is often divided into three stages:

1. Initial teacher training

2. The introduction process involving the training and supports of the trainees during the 1st few years of teaching in a particular school.
3. Teacher development or continuing development and intensive process for practicing teachers.

The teacher stands out as one of the most important factors determining the quality of education and its contributions to national development in any nation economy. At every level people who go to school look on the teacher for the acquisition of the necessary skills to enable them become what they want to be. Thus, students often look on the personal qualities, their educational qualities and professional competence which rewarding to the learners (Onuoha, 2005).

Education is generally regarded as a means to better life and the upliftment of the society at large. Hence, it is seen as a potent instrument for social, economic and political transformation of the nation's economy. This development has thrust a lot of responsibilities on teachers who are the major operators of any education system. It is therefore not an overstatement that the professionalization of teaching and making the teacher the centre of educational reform in Nigeria, will enhance teachers productivity reduce the systematic problems in the educational sector, ensure effective service delivery, engage other sectors of society as well as place education as instrument for excellence for national development (Okemakinde, Adewuyi & Alabi, 2013).

Essentially, teachers have obligations to the development of education and teaching as a profession and these noble objectives can be realized by the training and retraining of teachers through in-service education (Eduwen, 1992). In recent past, Nigeria has witnessed tremendous expansion in the teacher education programmes. It is expected that a well-designed teacher education programme should strive to achieve the set objectives of societal demands and expectations.

Concept of Teacher Education

Teacher education is an organized institution designed for the professional training of those who engaged in the art and science of teaching. Osuji (2009) opined that teacher education is the professional education of teachers towards attainment of attitudes, skills and knowledge that will make them efficient and effective in their work, in accordance with the need of the society at any point in time. It includes training/education of service (pre-service) and educational/training during service (in-service or on the job). Also, teacher education can be defined as the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, and skills they require to perform their tasks effectively in the classroom and the wider society.

According to Imogie (1992), teacher education is therefore a formal programme designed to produce academically qualified and component corps of personnel who will continue the process of transmitting worthwhile knowledge to the present generation through the different levels of the school system. This is aptly articulated by the Federal Republic of Nigeria (2004) in the National Policy of Education when the goals of teacher education were stated:

1. To produce highly motivated, conscientious and efficient classroom teachers for all levels of our education system;
2. To encourage further the spirit of enquiry and creativity in teachers.

3. To help teachers to fit into the social life of the community, and society at large and to enhance their commitment of national goals.
4. To provide teachers with the intellectual and professional background adequate for their assignment and to make them adaptable to any changing situation not only in the life of their country, but in the wider world.
5. To enhance teachers' commitment to the teaching profession.

Role of Teacher in the 21st Century

Luke, A. (2005) list the role of teacher in the 21st century as follows:

a. Provoke students curiosity and intrinsic motivation to learn
b. Establish a safe, supportive, and positive learning environment for all students.
c. Encourage cultural awareness and cultural sensitivity in students.
d. Encourage cooperation amongst students
e. Act as a classroom facilitator.
f. Makes students feel appreciated.
g. Have long and short term plants and communicate.

The Six Key Characteristics of 21st Century Teacher

Adaptability

They are able to adapt to whatever comes here way. As a teacher in today's world, you have to adapt to the ever-changing tools and changes that are being implemented in the schools. Smartboards are replacing chalkboards and tables and replacing textbooks and a 21st century teacher needs to be okay with that.

Lifelong Learners

These educators don't just expect their students to be a lifelong learner, but they are as well. They stay up to date with current educational trends and technology and know how to tweak their old lesson plans from years before to make them more current.

Tech Savvy

Technology is changing at a rapid pace and that means that a 21st century teacher is right along for the ride. The latest technology, whether it's for lesson or grading will allow the teacher and student to be able to learn better and faster. An effective teacher knows that learning about the latest gadget can truly transform their student's education, so they are not just current on the new trends, but really know how to master them.

Know how to Collaborate

An effective 21st century educator must be able to collaborate and work well within a team. Over the past decade, this important skill has grown quite rapidly in schools. Learning is deemed to be more effective when you can share your ideas and knowledge with others, sharing your expertise and experience, and communicating and learning from others is an important part of the learning and teaching process.

Forward Thinking

An effective 21st century educator thinks about their students' future and is aware of the career opportunities that may arise from them. They are always planning to ensure that no

child get left behind so they focus on preparing today's children for what's to come in the future.

Advocates for the Profession

They are advocate not only for their students but their profession. Today's teachers are being watched with a close eye because of all the changes in curriculum and the common core. Instead of sitting back, a 21st century teacher takes a stand for themselves and their profession. They pay close attention to what is going on in education and they address these issues head-on. They also advocate for their students today's classrooms are filled with children who need someone to look out for them, give them advice, encouragement and a listening ear, effective teachers share their knowledge and expertise and act as a role model for their students.

Teachers' World of Work in New Times

Teachers are charged with providing a foundation for life in these new, complex, diverse and uncertain economic and social environments. They must address issues relating to the emergence of new citizenships and identities and the impact of new technologies and new economics. They need to help students develop the skills and knowledge for the knowledge economy and for lifelong learning (Organisation for Economic Co-operation and Development (OECD), 1996, UNESCO, 1996). In addition, they aim to provide intellectual challenge and connect student work to their biographies and to the world outside the classroom.

It is increasingly clear that teachers have to be successful with a wide range of learners in order to prepare future citizens with the sophisticated skills needed to participate in a knowledge-based society. The sort of pedagogy needed to help students develop the ability to think critically, create, solve complex problems and master complex subject matter, is much more demanding than that needed to impart and develop routine skills. Additionally, the student population is increasingly diverse, and in many cases teacher are expected to achieve the same predetermined goals for every student regardless of their different learning needs, starting points and prior experiences. Thus, teachers have to be both knowledgeable in their content areas and extremely skillful in a wide range of teaching approaches to cater for the diverse learning needs of every student. Moreover, there are increasing pressures on schools and teachers to provide students with high levels of social and emotional support. Providing a safe and supportive school environment is a priority, as is the need for students to learn the communication and inter-cultural skills to participate in diverse cultural environments.

Teacher's work is increasingly becoming embedded in communities, both inside and external to the school. Being a teacher in the 21st century goes beyond work in the classroom; it requires an understanding of the multiple contexts of teaching, the multiple players in education, and the diverse roles of the teacher. It also involves ongoing professional learning in the form of further study, participation in professional development programs, and engagement in professional school-based learning communities.

Teacher Education in New Times

Within this rapidly changing environment, teacher education is in the position of preparing teachers to work in emerging and yet to be known contexts, and to select entrants most likely to develop as quality teachers with the ability to work effectively within the rapidly changing societal and schooling context of teachers' work. Like teachers in schools,

teacher education face the challenges of rapid change, new technologies, new work places, new citizenships and the need for pedagogical and curriculum innovation. To do this, they work in partnerships with schools and redefine the work of university and school-based teacher educators. Programs often include site, problem and enquiry based approaches in an attempt to address the so-called theory-practice divide, and use information and communication technologies to enhance teaching and learning processes.

The knowledge base for teaching typically encompasses knowledge of content, learners and learning, general pedagogy, pedagogical content knowledge, curriculum context, and self, although being definitive about this is somewhat problematic (Hiebert, Gallimore & Stigler, 2002). However, because pre-service teachers are 'insiders' who already have a strong sense of what it means to be a teacher, they begin their programs with well-established and resilient beliefs about teaching and learning. Teacher education programs that reject a view of learning to teach as presenting knowledge and skills about teaching and operate within a more constructivist orientation where pre-service teachers examine their own beliefs and then build upon those, seem to be more effective in facilitating learning to teach (Floden & Ferrinimundy, 2001). Increasingly, performance-based, outcome-oriented structures are being included in teacher education programs where the knowledge base is located in the intersection of curriculum knowledge, pedagogy and communication (Queensland Board of Teacher Registration, 2002). It is also important that programs aim to develop socially critical practitioners focused on enhancing the life chances of all children, recognizing curriculum, pedagogy and assessment as equity issues (Cochran-Smith, 2000, Niete, 2000).

The Role of the Teacher in the Near Future

1.   Know the Student

The teacher will always be best at the big picture of each student showing strength of history, interest, background, family, hopes, dreams, failures and triumphs. Working together with technology like artificial intelligence, teachers can reconcile data with the human view of the student in front of them.

2.   The teacher will always be the best resources to understand how the content can and should be 'applied' locally. The teacher will ideally know how the content relates to students individually and know the content well enough to see all priorities, traps, tricks and shortcuts the make sense for that student in that place.

3.   Know the Place

All 'content is applied in a place' and no one can know this better than people and until and al;-driven robot can do this better than a human being, this will be best done by a teacher who themselves have a history and connection with that place. Douglas (2007) mentions that "teachers can play many roles in the course of teaching and this might facilitate learning. Their ability to carry these out effectively will depend to a large extent on the rapport they establish with their students and on their own level of knowledge and skills.

1.   The Controller: The teacher is in complete charge of the class what students do, what they say and how they say it. The teacher assumes this role when a new language is being introduced and accurate reproduction and drilling techniques are needed.

2.   The Prompter: The teacher encourages students to participate and makes suggestions about how students may proceed in an activity. The teacher should be helping students only

when necessary when learners are literally 'lost for words', the prompter can encourage by discreetly nudging students.

3.   The Resource: The teacher is a kind of walking resource center ready to offer help if needed, or provide fearness whatever language they lack when performing communicative activities. Teacher must make his or herself available so that learners can consult her when it is absolutely necessary.

4.   The Assessor: The teacher assumes this role to see how well students are performing; feedback and correction are organized and carried out. The roles of an assessor give teacher an opportunity to correct learners.

5.   The Organizer: Serve as a demonstrator, this role allows a teacher to get involved and engaged with learners. The teacher also serves to open and neatly close activities and give content feedback.

6.   The Participant: This role improves the atmosphere in the class when the teacher takes part in an activity; the teacher takes a risk of dominating the activity when performing it.
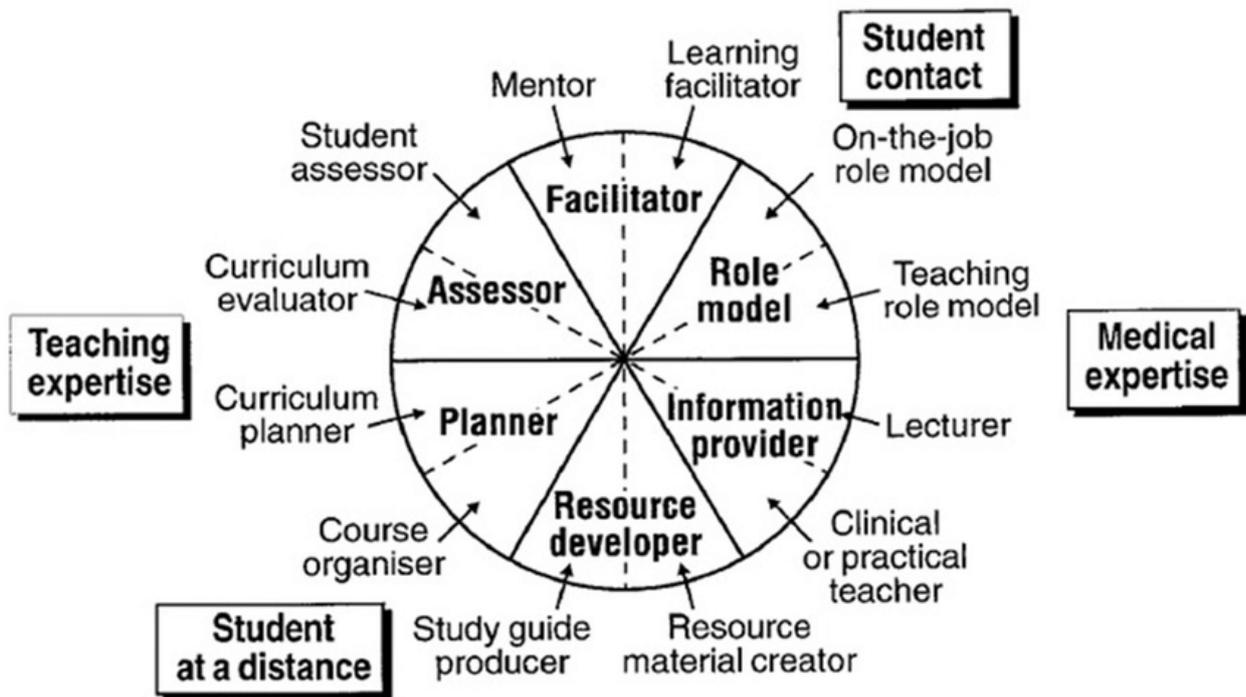
Fig. 1: The 12 Roles of the Teachers

Concept of Development

Development implies change in a people's life style. It also mean a change in the structural facilities of a people, community or society to some scholars development is the power of the people to solve their problems with their own wisdom, knowledge, experience and resources with a view to eliminating poverty pestilence and starvation.

Concept of Sustainability

Sustainability is the ability to sustain, maintain provide for something for an indefinite period without damaging it. In recent years, an understanding of the concept of sustainability has been firmly established by many scholars and researchers.

Sustainability Consists of Three Dimensions: The protection of natural environment, the maintenance of economic vitality and observation of specific social considerations about human development.

Concept of Sustainable Development

Bruntland Commission (1987) defined sustainable development as "the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs. Manasinghe (2004) sustainable development is a process of improving the range of opportunities that will enable individual humans and communities to achieve their aspiration and full potential over a sustained period of time while maintaining the resilience of economic social and environmental systems.

Age (2005) identify some objectives which sustainable national development is expected to realize increase capital income and employment, promoting human welfare satisfying basic needs: protecting the environment. Considering the path of future generation, achieving equity between rich and poor and participation on a broad basis in development and decision making is important.

Kundan in Ugoh (2008) describes sustainable development as a construct, which envision development as meeting the need of the present generation without compromising the needs of the future generation. It implies that while education meets the needs of the present it does not compromise the ability of the future generation to meet own needs. This ability to meet the needs is determined by human capital through education, technology advance and through physical capital Kundan also argues that continued sustainable development is only possible when it is agreed and indeed concrete steps are taken to raise the level of literacy and numeracy in any society. Education institutions and their programmes are therefore, the tools which to achieve development and its sustainability.

Sustainable development defined by the Nigeria Study/Action Team (NEST) (1991) in Osuji (2004) as "an approach that combines the development needs and aspirations of the present without compromising the ability of the future while also maintaining ecological integrity". According to Osuji a development process that is equitable and sensitive to ecological and environmental issues. It depends on the initiative resourcefulness and discipline of human beings who are the managers of developmental programmes.

The present issues on sustainable development stated that we need to bring our educational programmes a new ethic via, the teaching of skills embedded in the three e's such as skills that must fall into one or more of three realms of sustainable development – environment, economic and equity, according to McClare in McKeown (2002):

a. The ability to communicate effectively both orally and in writing.
b. The ability to think about system both natural and social science;
c. The ability to think in time forecast, to think ahead, and to plan;
d. The ability to think critically and value issues;
e. The ability to work co-operatively with other people;
f. The ability to separate number, quantity, quality and value;
g. The capacity to move from awareness to knowledge to action.

The use all these processes knowing, inquiring, acting, judging, imagining, connection, valuing and choosing can be utilized and used to direct attention of school to issues of development in post-secondary school level of education.

The sustainable development scenario describes a future world in which policy follows an integrated approach to economic, social and environmental goals and major institutional change occurs, with the overall goal of development that meets and needs of the present without compromising the ability of future.

Roles of Education for Sustainable Development

Education empowers people for their roles. Formal, non-formal and informal educations are key actors in education for sustainable development alone. Because education for sustainable development is a life-long process, the formal, informal and non-formal education sectors should work together to accomplish education for sustainable development goals and objectives.

Education for sustainable functions to educate, train and undertake research to contribute to the sustainable development of the society.

Education produces leaders of the country who manage the affairs of government and private sector industries who constitute the stakeholders of sustainable development. By so doing, the education system creates a vanguard group of leaders in each sector of society, who will take primary and leading roles in promoting the values for sustainable development (Bedawy, 2014). Education should provide learners with skills, perspectives, values and knowledge to live sustainably in their communities.

Conclusion

The future of teacher education, to achieved sustainable development there is need to change the orientation of people as regards their perception of teachers and the teaching job, the profession must be recognized by the government as well as the public to be able to attract young ones into the profession, there is also the need for improvement in the level of the infrastructural facilities in school. This depends to a large extent, on the level of funding made available to the system.

Recommendations

1. For the teacher to keep abreast of the goings in the world and in his area of specialization there is the need for the teacher to be (ICT) information, communication Technology compliant. The teacher education curriculum needs to be reviewed so as to incorporate ICT in all levels of teacher education.
2. Teachers must show high level of dedication to their job. They should demonstrate good sense of responsibility in carrying out their duties. They must not deviate from their traditional role of modeling and nation building. To provide sound teacher education in the future, the present curriculum need to be reviewed so as to provide more time for students in the practical aspect of teaching.
3. Mobility projects should be integrated into initial and continuous professional development programmes for teachers. It is accepted that teacher constitute the most important input in the system that determines the quality of output, more important than the amount of resources on ground.

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