



CURRICULUM IDEOLOGIES UNDERPINNING CURRICULUM IN TANZANIA: A PRE-SERVICE SCIENCE TEACHERS PERSPECTIVES

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Abstract:

This paper discusses on the beliefs of pre-service science teachers on ideologies that have informed curriculum process in Tanzania. There are four ideologies that have been used in history of curriculum development namely Scholar Academic Ideology, Social Efficiency Ideology, Learner Centered Ideology and the Social Reconstruction Ideology. The study employed questionnaire that was developed by Schiro in 2008 with six items relating with major components of the curriculum such as school, learning, teacher, childhood, knowledge and evaluation. The participants consist of 202 pre-service science teachers enrolled in Bachelor of Science with education at Mkwawa University College of Education (A constituent college of the University of Dar es Salaam) located in Iringa Region, Tanzania. The obtained data were analyzed using frequencies, percentages, and arithmetic means. The findings indicate that Social Reconstruction is popular ideology concerning the learning, childhood and evaluation while at the same time is the least popular ideology concerning the role of school, role of teachers and knowledge.

Keywords: curriculum ideology, pre-service science teachers, teacher preparation

1. Introduction

In the current century, change has become an inevitable hymn in the contemporary life, and education has not been immune to such changes (Wallace & Priestley, 2011). Hence, individuals would suggest that currently the world is passing numerous social changes and that these changes are having impact on curriculum theory and practice (Wang, 2009). We should bear in mind that a curriculum is part and parcel of the culture and politics of the society in which it is written (Turunen, Määttä & Uusiautti, 2012). Curriculum development especially that insists learning is the collaborative effort of

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different stakeholders such as community, teachers, administrators, parents, other professionals and society. Curriculum policies are always tiresome because for any new policy for the official curriculum provides a set of decisions and enshrines particular values and purposes (Brennan, 2011).

There are beliefs of the educational expression which are called the curriculum ideologies which are defined as *“personal beliefs about what educational institutions should teach, for what ends, and for what reasons”* (Slethaug, 2007, Alanazi, 2016). Curriculum ideologies are believed to be divided into four categories (Schiro, 1978, 2013 Cotti & Schiro, 2004, Marulcu & Akbiyik, 2014). Each ideology indicates the inherent epistemological beliefs on the major aspects of curriculum such as schooling, teaching, learning, childhood, knowledge and evaluation.

The first curriculum ideology is called the Scholar Academic (SA) Ideology that involves all intellectual skills and domains of knowledge. The SA ideology is also called the classical humanism. Schiro (1978) explains that curriculum developers with SA ideology consider curriculum designing from the eye of the academic subjects. They assume *“a loose equivalence between the academic disciplines, the world of the intellect, and the world of knowledge”* (Schiro, 2013, Marulcu & Akbiyik, 2014 *“This ideology views education as process of nurturing children into society so that they become good citizens”* (Schiro, 2013 p.11). This is accomplished by teaching the students the basic or foundational information needed in the contemporary life (Schiro, 2013). The basic information in this essence consists of shared knowledge of culturally adults within academic disciplines found within colleges and universities.

Secondly, the Social Efficiency (SE) ideology or sometimes called instrumentalism ideology believes that the purpose of learning is to meet the societal needs. *“Curriculum developers and educators who adopt the SE Ideology, view the curriculum as an instrument used to prepare students so as to be contributing members of society”* (Schiro, 2013, p 53, Marulcu & Akbiyik, 2014). The main focus is to instil to youth the skills and procedures that they will apply in their working place in future. It aims at preparing students to be an efficient adult and citizen. The knowledge most valued by SE educators' bears two features namely: *“it is by nature a capability for action that can be taught to the learners and its identification and its worth demand the acceptance of the duality of subjective and objective reality”* (Schiro, 2013, p. 85, Duru & Korkmaz, 2010).

The third belief, the Learner Centred (LC) ideology also called progressivism ideology, represents a learner centered perspective. This ideology aims at creating enjoyable school environment where children naturally train themselves for socialization purposes. Teachers in this ideology are to give meaningful experiences for learners so as to contribute to their learning experiences. *“Student centred and allows students to have real life experiences to build up their knowledge and learn new content. Students are in more control of taking their learning further through questioning, exploring and working with others”* (Schiro, 2013, p.96, Marulcu & Akbiyik, 2014). This ideology believes that learners have their own abilities for growth and are agents who must perpetuate their own abilities. Learning is

considered an attribute resulted from the interaction between individual and the environment.

The fourth ideology is the Social Reconstruction (SR) that represents a social perspective. *“The social deconstructionists are aware of the problems of the society and injustices done to its members such as those emerging from racial, gender, social and economic inequalities”* (Schiro, 2013, p. 142). They assume that the purpose of education is to pave a way towards the construction of new and more just society that offers maximum satisfaction to all of its members. In US for example the teaching commission published the report titled *“Teaching at risk: A call for action”* (2004) with the emphasis on restricting the content, ways and improving personnel in the teaching vocation towards eradicating the contemporary emerging issues such as corruption and terrorism.

“It assumes that society is fragile and therefore should be reconstructed. In this reconstruction process educators and schools are seen as active agents of this transformation. Social Reconstruction developers assume that education of the masses is the social process through which the society is to be reconstructed. These developers have supreme faith in the ability of education, through the medium of curriculum, to educate students to understand the nature of their society in such a way that they will develop a vision of a better society, and then act so as to bring that vision into existence” (Schiro, 2013, p.144).

The ideas of this ideology parallels to the ideas given by Freire (1970) on pedagogy of the oppressed and Freire (1998) on pedagogy of freedom.

In 2005, Tanzania adopted the competence-based curriculum in all levels of education. This was triggered by the need of competences needed in the labour market. It was further speculated that one cannot contribute in developing the society if there are no remarkable competences inherently to a specific learner. For instance, the aims and objectives of education in Tanzania are:

“To promote the acquisition and appropriate use of literacy, social, scientific, vocational, technological, professional and other forms of knowledge, skills and attitudes for the development and improvement of the condition of man and the society.

To promote and expand the scope of acquisition, improvement and upgrading of mental, practical, productive and other skills needed to meet the changing needs of industry and economy.

To promote love for work, self and wage employment and improved performance in the production and services sectors.” (MoEVT, 2005, p.iv).

Basing on these aims and objectives, then it is inevitable to survey to teachers on their beliefs on ideologies that underpin the curriculum in Tanzania. This is important as ideologies have influences in day to day life of teachers during delivery of education in terms of teaching, learning, evaluation and school environment.

2. Aim

The aim of this study is to reveal the beliefs of pre-service science teachers at Mkwawa University College of Education on curriculum ideologies underpinning the curriculum in Tanzania.

3. Methodology

The study was conducted as a survey type. Data were collected using survey which was developed by Schiro in 2008. The survey had six items relating with major components of the curriculum such as school, learning, teacher, childhood, knowledge and evaluation. For each one of these concepts, participants were expected to supply their beliefs using four scaled survey (1 meaning strongly disagree and 4 meaning strongly agree). The participants of the research consisted of science teacher students studying at Mkwawa University College of Education. The sample of the study consists of 202 randomly selected teachers from science program majoring Chemistry and Biology (CB), Biology and Geography (BG), Mathematics and Physics (MP), Chemistry and Physics (CP) and Mathematics and Chemistry (MC). The data collected was entered into SPSS, where descriptive analyses were conducted to obtain frequencies, percentages, and arithmetic means.

4. Results

4.1 Beliefs on the role of school

Table 1 indicates results concerning the beliefs of pre-service science teachers on the role of school. The most popular curricular ideology was found to be SA ($\bar{X} = 2.926$). On the other hand, SR ideology was the least popular ideology ($\bar{X} = 2.050$).

Table 1: Beliefs of pre-service science teachers on the role of school

Ideology	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{X}
SA	29(14.4%)	34(16.8%)	62(30.7%)	77(38.1%)	2.926
LC	45(22.3%)	46(22.8%)	42(20.8%)	69(34.2%)	2.668
SR	68(33.7%)	74(36.6%)	42(20.8%)	18(8.9%)	2.050
SE	72(35.6%)	49(24.3%)	51(25.2%)	30(14.9%)	2.193

4.2 Beliefs on the role of the teacher

Table 2 shows the results of beliefs of pre-service science teachers about the role of the teacher. As depicted from the Table, the LC ideology was most popular ($\bar{X} = 2.559$) with slight different from that of SA ideology ($\bar{X} = 2.550$). Social reconstruction ideology was the least popular ($\bar{X} = 2.168$).

Table 2: Beliefs of pre-service science teachers on the role of teacher

Ideology	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{X}
SA	62(30.7.5%)	37(18.3%)	33(16.3%)	70(34.7%)	2.550
LC	46(22.8%)	46(22.8%)	53(26.2%)	57(28.2%)	2.559
SR	63(31.2%)	64(31.7%)	53(26.2%)	22(10.9%)	2.168
SE	47(23.3%)	56(27.7%)	57(28.2%)	42(20.8%)	2.465

4.3. Beliefs on the process of learning

Table 3 shows the results of beliefs of pre-service science teachers about the process of learning. The SR ideology is the most accepted ($\bar{X} = 2.950$) and LC ideology is the least accepted ($\bar{X} = 1.663$).

Table 3: Beliefs of pre-service science teachers on the process of learning

Ideology	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{X}
SA	43(21.3%)	51(25.2%)	49(24.3%)	59(29.2%)	2.604
LC	117(57.9%)	48(23.8%)	25(12.4%)	12(5.9%)	1.663
SR	23(11.4%)	46(22.8%)	51(25.2%)	82(40.6%)	2.950
SE	31(15.3%)	49(29.2%)	71(35.1%)	41(20.3%)	2.604

4.4 Beliefs on Knowledge

Table 4 illustrates the results of the beliefs of pre-service science teachers about knowledge. The SA ideology is the most accepted ($\bar{X} = 2.931$). The SR ideology is the least accepted ideology ($\bar{X} = 2.030$).

Table 4: Beliefs of pre-service science teachers on knowledge

Ideology	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{X}
SA	20(9.9%)	46(22.8%)	64(31.7%)	72(35.6%)	2.931
LC	69(34.2%)	38(18.8%)	50(24.8%)	45(22.3%)	2.351
SR	84(41.6%)	55(27.2%)	36(17.8%)	27(13.4%)	2.030
SE	41(20.3%)	67(33.2%)	45(22.3%)	49(24.3%)	2.505

4.5 Beliefs on Childhood

Table 5 shows the results of beliefs of perspectives of pre-service science teachers on the childhood. As can be depicted from the Table, the SR is the most popular ideology ($\bar{X} = 2.772$) compared to the others ideologies while the SA ideology is the least popular ($\bar{X} = 2.208$).

Table 5: Beliefs of pre-service science teachers on childhood

Ideology	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{X}
SA	67(33.2%)	53(26.2%)	55(27.2%)	27(13.4%)	2.208
LC	48(23.8%)	52(25.7%)	33(16.3%)	69(34.2%)	2.609
SR	30(14.9%)	51(25.2%)	56(27.7%)	65(32.2%)	2.772
SE	70(34.7%)	44(21.8%)	56(27.7%)	32(15.8%)	2.248

4.6 Beliefs on Evaluation

Table 6 indicates the results of beliefs of pre-service science teachers on the evaluation. Here pre-service teachers favor the SR ideology more than the others ($\bar{X} = 2.658$). The SE ideology is the least accepted ideology regarding the evaluation ($\bar{X} = 2.218$).

Table 6: Beliefs of pre-service science teachers on evaluation

Ideology	Strongly Agree	Agree	Disagree	Strongly Disagree	\bar{X}
SA	45(22.3%)	50(24.8%)	49(24.3%)	58(28.7%)	2.594
LC	63(31.2%)	45(22.3%)	39(19.3%)	55(27.2%)	2.426
SR	39(19.3%)	46(22.8%)	62(30.7%)	55(27.2%)	2.658
SE	65(32.2%)	59(29.2%)	47(23.3%)	31(15.3%)	2.218

5. Discussion

Curriculum ideologies are very crucial in shaping educational decisions to policymakers and educators especially during this time when curriculum is experiencing changes. As such changes are touching education system especially in 21st century, it is necessary to investigate educational stakeholders including teachers on the perspectives of curriculum ideologies. These ideas are very important as are the ones which will necessitate revisiting and applying them in new situations. The main purpose of the present study is to explore the curriculum ideologies of pre-service science teachers enrolled in Bachelor of Science with education in a Faculty of Science in Mkwawa University College of Education. The findings of the study indicate that the SR ideology is the most popular followed by scholar academic ideology. The majority of pre-service science teachers accept the SR ideology for the domain of learning, childhood and evaluation. The scholar academic ideology is the most popular ideology regarding the role of school and knowledge. Despite being the most accepted ideology on learning childhood and evaluation, the SR ideology was least accepted in three aspects of school, teacher and knowledge.

Regarding the beliefs on the role of school, most of pre-service science teachers believe that school should be a place where the knowledge accumulated in books and other documents is transmitted to students (SA). This belief seems to contradict with the curriculum that the pre-service science teachers went through at ordinary level and high school that required them to be contributing members by learning issues that are relevant to their surroundings (MoEVT, 2005). Following to that, teachers believe that school should be a place where learners enjoy and hence stimulate them to learn (LC). This belief probably seems to align with the curriculum that Tanzania is implementing since 2005 that insisted the shift from teacher-centred to learner-centred.

Regarding the role of the teacher, the pre-service science teachers prefer LC ideology more than the others. They believe that teachers should be companion to learners using the environment within which the learner endures to help them learn. Next to that, pre-service science teachers prefer scholar academic by believing that

teachers should be knowledgeable so as to transmit such knowledge to those who do not have it. Less has been accepted by pre-service science teachers concerning their belief on the role of the teacher. They believe that teachers should be supervisors of student learning by using strategies that will maximize student learning. This is in contrast to the emphasis that the curriculum in use insists the role of the teacher to be that of facilitator while learners are the centre of learning. Generally, regarding the belief of pre-service science teachers on the role of teachers they give almost equal importance to the LC, SA and SE ideologies. This result indicates that teachers see teachers as professionals who use the curriculum as a tool for transmitting knowledge to learners (SA), preparing children for society (SE), and for presenting meaningful learning experiences to children (LC). The results on the role of teachers is parallel to that of Marulcu and Akbiyik (2014) where majority favoured the concept of teachers compared to other ideologies.

Regarding learning, majority of the pre-service science teachers see learning best occurs when a student is presented with problem on real social crisis such as Corona outbreak, climatic changes, Ebola and hence participates in the construction of a solution to such social problems (SR). Similarly, pre-service science teachers believe that learning proceeds when students are given with appropriate stimulus, materials and positive reinforcement (SE).

The results regarding the beliefs on knowledge, majority pre-service science teachers prefer the SA ideology. They believe that the knowledge of most worth is the one that is structured together with ways of thinking that are valued by the culture over a period of time. Also, the pre-service science teachers have less preference on SR regarding knowledge that believes that knowledge of the most worth is the specific skills that a learner can use in solving problems so as to have better life in future.

Regarding the childhood domain, pre-service science teachers favor the SR ideology more followed closely with LC ideology. The results are similar to that of Marulcu and Akbiyik (2014) where SR ideology was popular among teachers and SA ideology being the least popular ideology. Regarding the beliefs on evaluation, pre-service science teachers showed that they prefer more on the SR followed with SA ideology. They believe that evaluation should indicate whether or not students can or cannot perform specific skills with the purpose of certifying learner's competence to perform specific tasks.

6. Conclusion and Recommendation

The majority of pre-service science teachers accept the SR ideology for the concepts of learning, childhood and evaluation. The SA ideology seems to be another popular ideology among teachers regarding the role of school and knowledge. Despite being the most accepted ideology on learning, childhood and evaluation, the social reconstruction ideology was least accepted in three aspects. This ideology is the least preferred one regarding school, teacher and knowledge. The overall findings from this study indicate that pre-service science teachers perceive society in Tanzania as both fragile and

problematic. Though the new curriculum adopted in 2005 insisted the consideration of learners as centre of learning where the construction of knowledge is highly left to students, pre-service science teachers preferred scholar academic ideology in their beliefs on the role of school and knowledge. They believe that schools should be just communities where the knowledge accumulated in the curriculum such as knowledge of Physics, Chemistry, Biology and Mathematics should be transmitted to students. The changes in curriculum which have occurred in many countries are being driven by the changes that stress the need for education systems to prepare school students for participation in a competitive global economy (Yates & Young 2010, MoEVT, 2005, Winter, 2012). The findings of this study may be explained by the scientific and technological advancement, the economy, global integration, and culture that are taking place today. It is therefore recommended that, the country's economical, political, and educational agendas can be addressed by considering the changing beliefs of stakeholders such as teachers and students.

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