Implementing Developmentally Appropriate Learning Experiences for Secondary School Learners: The Zimbabwean Case

Anna Gudyanga[1]; Ephias Gudyanga[1]
[1]Midlands State University, Faculty of Education,
Department of Educational Foundations, Management and Curriculum Studies
Bag 9055, Gweru, Zimbabwe

Abstract: *Teacher preparation emphasizes application of foundational issues anchored in psychological, sociological and philosophical underpinnings. With such knowledge, teachers are expected to effectively organise the learning experiences of children accordingly. This study, therefore, sought to find out to what extend in-service teachers were able to organise learning experiences that are developmentally appropriate. The mixed methods approach guided this study, as it was informed by both the positivist and interpretivist paradigms which acted as lenses through which we viewed this study. Questionnaires, interviews and class observations were the methods used as data collecting tools. Twenty participants (13 females, 7 males), were purposively selected from Gweru urban secondary schools of Zimbabwe. It was noted that teachers are not able to implement Developmentally Appropriate Practices (DAP) for various reasons ranging from heavy teaching loads, big classes, low teaching motivation, inadequate DAP knowledge among others. In the midst of other recommendations, it was highlighted that parents were to meaningfully interact with schools to bridge the gap between the home and the school, notwithstanding challenges facing the teacher which require the urgency which cannot be gainsaid.*
Keywords: *Age, culture, curriculum, environment, experience, teaching.*

I. Introduction

As experienced educators, we noted that teachers have challenges, in synchronising theory with practice. This is a cause for concern. Parents, communities and learners expect teachers to effectively utilise developmentally appropriate teaching practices. Developmentally Appropriate Practice (DAP) describes an approach to education that guides educators in their everyday practice, giving them information from which decisions based on their knowledge of child development can be made. [1] advocate that DAP considers:

• Age appropriateness: what is best for most children of a particular age?
• Individual appropriateness: what is best for a specific child's development?
• Culturally and social context appropriateness: what is most relevant and respectful of a child and the child's family, neighbourhood and community.

Developmentally appropriate learning experiences relate to organised learning that recognises the physical and cognitive developmental milestones of learners as suggested by different psychologists. Based on theories of Dewey, Vygotsky, Piaget, Bruner and Erikson, DAP reflects on interactive, constructivists' view of learning [2-3]. Key to this approach is the principle that the child constructs his or her own knowledge through interactions with the social and physical environments.

The major objective of teacher preparation in Zimbabwe (both pre- and in service) is to educate teachers so that they graduate with relevant skills, which enable them to organise developmentally appropriate learning experiences. This study therefore seeks to find out to what extent in-served teachers are able to organise learning experiences that are developmentally appropriate?

II. The Context And Justification

Developmentally Appropriate Practice (DAP) is both a psychological and a curriculum issue and hence there is no way we can tackle the topic before the terms psychology and curriculum are defined. Psychology is basically a study of human mind and behaviour whereas ccurriculum is the totality of learning experiences provided to students so that they can attain general skills and knowledge at a variety of learning sites [4]. Curriculum is therefore a programme of planned experiences and as a result of those experiences, the child acquires different forms of skills. Consequently, curriculum is the whole of interacting forces of the total environment provided for pupils' experiences in that environment. In light of this, both psychological and sociological issues, albeit philosophical to some extent, all become subsets of, and foundationals of curriculum.

Building on this argument, curriculum becomes the sequence of potential experiences set up in the school for the purposes of disciplining children and youth in ways of thinking and acting.

[5] defines curriculum as a selection from the culture of a society. Zimbabwe is a multicultural society. Learning should be relevant to the children's lives outside the classroom. Students should be able to fit into the society from which they come from and not to be outcasts. Learning experiences become developmentally appropriate if informed by the people's culture since child developmental knowledge is embedded in a socio-cultural context. Children's educational successes require congruence between what is being taught in the school and the values expressed in the home. Parents in homes are children's first teachers and have a life-long influence on their children's values, attitudes and aspiration [6]. If learning is to be meaningful to individual children, teachers must create a culturally responsive and relevant learning environment. [7] also asserts that increasing the continuity and congruence between children's home experiences and school environment is particularly critical to the success of children from diverse cultures and social classes.

Developmentally appropriate practice is teaching that is attuned to children's ages, experiences, abilities, and interests, and that helps them attain challenging and achievable goals [8]. Teaching in a developmentally appropriate way brings together and meeting the learner where he or she is and helping children achieve goals. Teachers keep the curriculum's learning goals in mind as they determine where children are and the next steps forward. What is challenging and achievable varies from one child to the other, depending on each child's level of development; prior experiences, knowledge, and skills; and the context within which the learning takes place. To be developmentally appropriate, teaching practices must be effective—they must contribute to the children's on-going development and learning. That is, if children are not learning and progressing toward important outcomes, then the practices and experiences in the program are not developmentally appropriate. To ensure that their practices are in fact effective and developmentally appropriate, teachers need to be intentional in everything they do [9].

[10] identifies three fundamental considerations that guide teachers in making decisions about what is developmentally appropriate for children. Teachers are to:
1. Consider what is known about development and learning of children within a given age range. Having knowledge of age-related human characteristics allows teachers to make general predictions within an age range about what materials, interactions, and experiences will be safe, interesting, challenging, and within reach for children, and thus likely to best promote their learning and development. This dimension is sometimes called age appropriateness.
2. Consider what is known about each child as an individual. Gathering information about the strengths, interests, and needs of each individual child in the group enables practitioners to adapt and be responsive to that individual variation.
3. Consider what is known about the social and cultural contexts in which children live. Learning about the values, expectations, and behavioural and linguistic conventions that shape children's lives at home and in their communities allows teachers to create learning environments and experiences that are meaningful, relevant, and respectful for all children and their families.

All learning and development occur in and are influenced by social and cultural contexts [11]. In fact, appropriate behaviour is always culturally defined. The cultural contexts a child grows up in begin with the family and extend to include the cultural group or groups with which the family identifies. Culture refers to the behaviours, values, and beliefs that a group shares and passes on from one generation to the next. Because children share their cultural context with members of their group, cultural differences are differences between groups rather than individual differences. Therefore, cultural variations as well as individual variations need to be considered in deciding what is developmentally appropriate. Children learn the values, beliefs, expectations, and habitual patterns of behaviour of the social and cultural contexts in their lives. Cultures, for example, have characteristic ways of showing respect; there may be different rules for how to properly greet an older or younger person, a friend, or stranger. Attitudes about time and personal space vary among cultures, as do the ways to take care of a baby and dress for different occasions. In fact, most of our experiences are filtered through the lenses of our cultural groups. We typically learn cultural rules very early and very deeply, so they become part of our conscious thought. Social contexts of young children's lives differ in ways such as these: Is the child growing up in a large family, or a family of one or two children or in a single-parent family, a two parent family, with same-sex parents, or a household that includes extended family members, in an urban, suburban, or rural setting? Has the child been in a group care settings from a young age, or is this the first time in a group program? What social and economic resources are available to the family? All of these situations frame the social context and impact children's lives in unique ways. For young children, what makes sense and how they respond to new experiences are fundamentally shaped by the social and cultural contexts to which they have become accustomed. To ensure that learning experiences are meaningful, relevant, and respectful to children and their families—that is, to be culturally appropriate—teachers must have some knowledge of the

social and cultural contexts in which children live. Such knowledge helps teachers build on children's prior experiences and learning so they can help children progress [10].

Developmentally appropriate practice therefore is teaching that is attuned to children's ages, experience, abilities, and interests, and that helps them attain challenging and achievable goals.

• Intentional teachers have a purpose for everything that they do, they are thoughtful and prepared, and can explain the rationale for their decisions and actions to other teachers, administrators, or parents.
• Decisions about developmentally appropriate practice are based on knowledge of child development and learning (what is age appropriate), knowledge about children as individuals, and knowledge of the social and cultural contexts in which children live (what is culturally appropriate).

The goal of developmentally appropriate education is to optimise the developmental potential of each child, enhancing children's ability and propensity to think critically, empathetically and imaginatively. The children must be able to use their multiple intelligences in the real world. There are keys to success in providing developmentally appropriate practices (DAP) according to [1] argues that focussing on relationship by creating a caring community of learners is critical. DAP supports the development relationships between adults and children, among children, among teachers and between families and teachers. Both children and schools benefit when teachers use knowledge about children's families and experiences outside the classroom to create individually and culturally relevant learning experiences. [12] asserts that DAP guidelines emphasise school program-family continuity and regular communication between family and staff, the parent- staff relationship or partnership.

Understanding age-related child development is opined by [1] as being very important in applying DAP. Teachers are to aim at creating a learning environment that supports children's growth and development by safe and healthy interesting experiences and encouraging exploitation and discovery. There's therefore need to teach to enhance development and learning. Teachers are to present problems to children that are meaningful and relevant to the child's experience and development. This is a critical issue in the constructivists approach.

[1] contend that knowing each individual child is of essence for DAP to succeed. Developing a curriculum that considers knowledge about each individual learner including interests, temperaments, gifts, talents, needs, rate of learning and social and cultural background is what teachers should aim to do. There is therefore need to construct an appropriate curriculum.

Being flexible and responsive, is one other key factor in achievement of DAP [1]. There is need to access children's learning and development. In other words, assessment of individual children's development and learning is essential for planning and implementing appropriate curriculum. Teachers are to be responsive to the needs of the children. Teachers are also expected to establish partnership with families. DAP evolves from a deep knowledge of individual children and the context within which they develop and learn. The younger the child, the more necessary it is for caregivers and teachers to acquire this knowledge through mutually beneficial relationships with families. The more we learn about teaching and learning in each childhood environments, the better our children will grow and prosper.

The teaching strategies provide opportunities for active learning experiences that promote children's active exploration of environment. Children manipulate real objects and learn through hands-on, direct experiences. Piaget is well known in the field of Educational Psychology for arguing that children construct knowledge through their active interaction with environments, where "mouthing" is key for infants ranging 0-2 years of development. There· should be opportunities for children to explore, reflect, interact and communicate with other children (group interactions) and adults, [8].

[13] state the criteria for selecting the method as:
1. Variety: Varied instructional strategies increase the likelihood of efficient learning. This is because students develop at different rates and learn more quickly through the use of different methods.
2. Scope: This is the range of methods, which must be broad enough to give life experiences. Scope is difficult to satisfy in that there may be a wide variety of stated methods but none of them may be suitable to achieve a particular objective.
3. Validity: It means that the teacher must relate specific objectives to specific methods. It is important to note that a method is only valid if it helps to achieve the objectives.
4. Appropriateness: This implies that the methods should be related to students' interests, abilities and level of development. Effective learning only takes place when the student is motivated to learn.
5. Relevance: The selection of methods should be related to lives of students. Teachers therefore need the ability to use the educative potential of the community.

[14] says that psychology, sociology and philosophy of education are considered key disciplines, which inform the pedagogy of teacher training. It is a foregone conclusion that when student teachers have completed their training, they become better teachers in the way they carry out their teaching duties. The assumption is that

they would have been equipped with the most recently generated methods of teaching, the most current content and psychologically, sociologically and philosophically correct classroom practices.

On the other hand, [15] say that the theory studied in foundations of education by teachers is too theoretical and too remote from the classroom. Consequently, teachers may not be able to synchronize theory with practice. This explains why teachers are unable to organise developmentally appropriate learning experiences.

In addition, [16] found out that teachers who would have completed their training often have their own personal theories about teaching in relation to what is important, what is normal and what is right so that they may not easily accommodate the psychological, sociological and philosophical theories into teaching. They may continue to use their own personal theories in their teaching, which do not recognise developmentally appropriate learning experiences for the learners.

The central research question in this study is to find out to what extend in-service teachers were able to organise learning experiences that were developmentally appropriate.

III. Methodology

The main design used was the mixed methods (both quantitative and qualitative). Quantitative approach follows a positivist paradigmatic design. This "scientific" research paradigm strives to investigate, confirm and predict law-like patterns of behaviour [17], whereas qualitative research approach is intended to explain social phenomenon from the inside in a number of ways [18-20] Positivist paradigm is purely quantitative design and interpretivist paradigm is qualitative design. The interpretivist paradigm partly informs this study. The interpretive researcher views the participants' world experiences from the participant's lens [21] hence we explained our findings as how the interviewws narrated them.

Therefore a mixed methods approach is whereby the two designs complement each other in one study. The territory of mixed-method designs remains largely uncharted [22]. In this study; we carefully and thoughtfully applied convergence type of mixed methods, where corroboration and correspondence of results from different methodological underpinnings complemented all the three in describing triangulation in its true sense [22].

The sample participants comprised 20 teachers (13 females, 7males), purposively selected from Gweru urban secondary schools, with a teacher per school teaching a form. Therefore for every school amongst the 5, every form between one and four had a teacher teaching it. In qualitative design, purposive selection involves the pursuit of the kind of person whom the researcher is interested in, [21]. For the purposes of this study, we had to "hunt" for teachers who were to complete our questionnaires, respond to our interviews and whom we were to observe teaching. All the teachers / participants were teaching Forms 1 to 4. Form 5 teachers were left out because at the time of data collection [January to February, 2015], Form 5 learners had not yet commenced classes.

Same questions were used for both interviews and questionnaires. Interviews were used to gain an in-depth understanding of participants and further questions were asked in a bid to gain insights into what participants were saying through respondents' incidental comments, facial and bodily expressions and tone of voice. An interviewer acquired information that could not be conveyed in written replies. One can penetrate initial answers, follow up unexpected clues, redirect the enquiry into a more fruitful channel on the bases of emerging data and modify categories to provide meaningful analysis of data.

Five teachers were interviewed, all from different schools, and each one of them teaching a different form, save for the last two who were teaching form 4. Class observations were done using a different cohort of 5 teachers, each from a different secondary school, this time the last 2 teachers were teaching form 1. A teacher was observed teaching a class only once. The other remaining 10 teachers completed the questionnaire. The focus of all three methods of data collection was to find out if teachers were able to organise developmentally appropriate learning experiences for their learners.

3.1 Ethical Considerations

Permission was granted by my University to carry out the study, and the Ministry of Primary and Secondary Education granted us authority to visit schools. Participants were informed of the research objectives prior to commencement of the study. They were informed of their freedom to withdraw from the study anytime they felt like for whatever reason. Participant consent was sought in writing. Confidentiality and anonymity were granted to participants in writing hence data collecting instruments were alpha-numerically coded for anonymity.

IV. Results And Discussion
4.1 Results from questionnaire and Interview

All the teachers agreed that age and individual appropriateness make learning experiences developmentally appropriate. However, half the teachers disagreed that culturally and social context appropriateness is a curriculum issue that is a very important factor in DAP. It is argued that learning experiences should be compatible with children's culture to enable them fit into their own society as discussed previously. The teachers therefore, are not in a hundred percent position to provide learning experiences that are developmentally appropriate. Additional phases which participants used to explain their understanding of DAP included the use of more aids and a variety of methods; apart from the content being related to predicted child's mental capacity, it must be applied to real life experiences; learning that meets the country's needs.

All the 5 interviewed teachers agreed that some developmentally and culturally appropriate knowledge is not applied in science learning in schools. There is wasted knowledge. For instance, the rural, 15 year old Zimbabwean African boy, with his catapult around his neck, herding cattle in the tropical rain forest, is quite aware of many herbs and shrubs, which can be used for medicinal purposes. Such cultural appropriate knowledge is not captured by modern science curriculum planners.

The technology involved in making the catapult and its application in bringing down a flying bird, the making of toy cars by 7 year olds, the survival skills when hunting, such skills if harnessed by teachers, it is developmentally appropriate knowledge suitable for high technological advancement with time.

The challenge with curriculum developers is to downgrade black African rurally home based generated, unwritten knowledge from the poor stricken villagers as no knowledge at all. We argue here that such culturally generated knowledge if appropriately harnessed and applied, it could be of great intellectual investment to our school learners. DAP should fit every child in every environment. We suggest and argue that we can teach anything to anyone provided we apply DAP. Teachers are called upon to teach in an honest intellectual manner, that is developmentally appropriate manner.

All teachers agreed that the theory (curriculum issues) which they learnt in the Colleges of Education is useful and relevant to their work as curriculum implementers. All the five (5) teachers who were interviewed concurred that they do not wait for all students to understand concepts because the syllabus won't be covered. This is evidenced by what one teacher said, "if I wait for all students to understand, the syllabus won't be covered, hence I go own with the fast learners to cover the syllabus." One other teacher said that "DAP is good but its implementation on the ground is a problem because my hands are tied, there are no resources for use and the syllabus must be covered before students write their examinations". This means that slow learners are not catered for. Hence teachers take an approach that is characterised by teacher controlled learning, quantifiable and pre-determined outcomes. In agreement, [9] argues that teachers often emphasise vertical learning i.e. the learning of skills and facts at the expense of horizontal learning i.e. the deepening of understanding. Developmentally appropriate learning experiences are time consuming in that an in-depth study through discussion; open-ended questioning and multiple modes of enquiry require considerable time for both the teacher and learners. The teachers therefore are working hard to produce students who know what the syllabus demands, [the psychometric approach, according to [23], rather than creating students who want to know (the developmental approach)]. They are struggling to meet the requirements of two incompatible systems.

Teachers become exhausted by the end of the day with little time left for thorough lesson preparation. Large classes of 50-55 learners, make teachers fail to effectively guide students' learning since more time is spent marking students' work. It is important to note that the interactions between the teacher and students can be increased with small class numbers. [24] asserts that smaller numbers enable the teacher to direct more attention to individual students and that it also results in more desk space and therefore more free space available for informal activities or specialist equipment. They all said that class size is a factor in DAP.

Low salaries may force teachers to be absent from work, as they would be trying to make ends meet. Most teachers are ill due to the AIDS epidemic, they have no vigour for effective work, at times some may go on indefinite sick leave and this in a way attributes to the heavy load the remaining teachers are having. Teachers are not consulted when policy issues that affect them are made [25]. They strongly felt that the heads and deputy heads of schools need some kind of training as administrators. The training could be in terms of workshops and conferences, such that they can facilitate the teachers' work in the classrooms. [26 p. 5] concurs when he says "that responsibility would be most effectively exercised when the people entrusted with making decisions are those who are also responsible for carrying them out".

Teaching mixed ability groups is a debatable issue. Half the teachers wanted students streamed while the other half said students get affected once labelled. Three teachers said that some parents do work hand in glove with the school. They said that low income parents especially those who do not speak English may face some barriers when they attempt to collaborate with schools. [27] outlined these barriers as: insufficient time and energy, lack of language proficiency, feeling of insecurity and low self esteem, lack of understanding about structure of schools and accepted communication channels, race and class biases on the part of the school personnel and perceived lack of welcome by teachers and administrators, all these affect implementation of DAP.

4.2 Results from observation guide

As shown by Table 1, interaction patterns are just teacher-pupil and pupil- pupil / group interactions. These are teacher directed hence time was not sufficient for an in-depth study.

Table 1: What was observed at Secondary Schools?

1. Interaction Patterns		Teacher- Pupil interaction Pupil-pupil interaction
2. Organisation of Learning experiences		Learning in groups Individual written exercises
3. Teacher methodology		Lecture method Group work
4. Learning materials		Chalk and board A few text-books Pupils exercise books
5. Feedback		Question and answer Texts and written exercises Homework

Organisation of learning experiences included, group work and individual exercises. Variety of teaching methods was very limited as shown above.

It is mainly teacher exposition or lecturer method and group work. Learning materials are just chalk and board, children's text and exercise books. A few textbooks of about 5-10 were shared amongst 50 students. We were told that the schools were encouraging the parents to buy textbooks for their children, but most of the parents did not afford. Feedback was mostly in the question and answer form and teachers seemed to call upon the same students who seemed to be academically gifted. Individual written exercises and tests as well as homework questions were also used. Teachers used teacher centredness approach at the expense of child-centredness. Teachers taught for examinations and not for true understanding which normally leads to application of content learnt and skills gained.

The teachers are "worn-out" and "tired". There is no "fire" in them. One lady teacher said in local shona language *izvi hazvichabatsira izvi, mari yacho haikwani, hauzivi kuti uchaiwana riini, kumba land-lord arikuvava kuda rent yake, magetsi hakuna, mvura hakuna, chokudya zero.* Literally, the lady teacher was complaining about the economic situation in the country, where salaries are low, salary dates are no longer known, rentals, electricity and water bills are due to be paid, meanwhile they are bankrupt. Building on this argument, the evidence suggests low motivation on the part of teachers. Lack of motivation of a teacher affects several classes which one teaches in a school. Teachers input to his/her work may is compromised. This will in turn leads to high failure rate and high illiteracy. High illiterate post secondary students signifies diminishing skilled workforce, the economy of the country suffers and less money will be spent on education, leading to high prevalence of illiteracy again, resulting in a vicious cycle.

V. Conclusions

Not all teachers fully understood DAP. The theory they got during training is not compatible in part, with the curriculum that is examination oriented. The teachers failed to provide developmentally appropriate learning experiences as a result of the constraints such as heavy teaching loads, low salaries, lack of resources, large classes, fragmented schemes that demand more clerical work and the AIDS epidemic. As long as the education system considers coverage of a prescribed "modern" curriculum, mastery of discrete skills and increasing achievement, teachers would not be able to provide developmentally appropriate learning experiences. Teachers actually struggle to meet the requirements of these two incompatible systems. The Zimbabwean education system has been greatly influenced by the cultural transmission ideology where teacher's job is to direct instruction of information and rule. With all these challenges, teachers are unable to provide developmentally appropriate learning experiences.

The need to reduce class size or teacher-pupil ratio to enable the teacher to give individual attention and less time to mark written assignments, was recommended. The teaching loads and number of schemes are to be reduced appropriately such that teachers are in a position to make teaching aids, and thoroughly prepare their lessons.

Teachers, through their teacher's forums like Zimbabwe Teachers' Association are supposed to have their voices heard by policy makers. The schools must encourage and provide opportunities for meaningful family involvement which play a critical role in bridging the gulf between the home and the school. Teachers are to be made effective and committed to their work through motivational remunerations and working

conditions. The government, through its Ministry of Education, has to provide realistic educational grants to procure sufficient teaching and learning resources.

The number of schools and sample of participants studied was small hence the findings lack external validity. However, no external validity was expected since the choice of participants was purposive. Further studies, perhaps using different designs, bigger sample from a wider environmental –cultural setting, could perhaps yield different and more reliable and valid findings.

References

[1]. Downs, J., Blagojevic, B., Labas, L., Kendrick, M., & Maeverde, J. (2005). Thoughtful Teaching: Developmentally Appropriate Practice. In Growing Ideas Toolkit (pp. 3- 4). Orono, ME: The University of Maine Center for Community Inclusion and Disability Studies. Retrieved from http://www.umaine.edu/cci/ec/growingideas/daptip.htm

[2]. Bredekamp, S. (Ed.) (1987). Developmentally appropriate practice in early childhood programs serving children from birth through age eight. Washington, DC: National Association for the Education of Young Children.

[3]. Bredekamp, S. & Rosegrant, T. (1992). Reaching Potentials: introduction. In S. Bredekamp & T.Rosegrant (Eds.), Reaching potentials: Appropriate curriculum and assessment for young children. Washington, DC: National Association for the Education of Young Children.

[4]. Marsh, C. J. & Willis, G. (2003). Curriculum: Alternative approaches, ongoing issues. (3rd ed.). Upper Saddle River, NJ: Merrill Prentice Hall.

[5]. Lawton, D. (1982). Social Change, Educational Theory and Curriculum Planning. London: Hodder and Stughton.

[6]. Bowman, B. T. (1994). The challenge of diversity. Phi Delta Kappan, November, 218-224.

[7]. Bowman, B. T. (1992). Reaching potentials of minority children through developmentally and culturally appropriate programs. In S. Bredekamp & T. Rosegrant (Eds.), Reaching potentials: Appropriate curriculum and assessment for young children. Washington, DC National Association for the Education of Young Children.

[8]. National Association for the Education of Young Children. (1996). Developmentally appropriate practice in early childhood programs serving children from birth through age 8 (NAEYC position statement) Retrived from Http: //www. naeyc.org/resources/position statements/daptoc.htm

[9]. Kostelnik, M. (1992). Myths associated with developmentally appropriate programs. Young Children, 47(40) 17-23.

[10]. National Association for the Education of Young Children (2009). Developmentally Appropriate Learning Eperiences. Downloaded from www.naeyc.org/dap 22/08/2013

[11]. Bronfenbrenner, U. (1986). Ecology of the family as a context for human development:Research perspectives. Developmental Psychology, 22(6), 723-742.

[12]. Powell, D. (1994). Parents, pluralism, and the NAEYC statement on developmentally appropriate practice. In B. L. Mallory & R. S. New, (Eds.), Diversity and developmentally appropriate practices. New York: Teachers College Press.

[13]. Ornstein. A. C. and Hunkins, F. D. (2009. Curriculum Foundations, Principles and Theory. Boston: Allyn and. Bacon.

[14]. Fontana, D. (ed.), (1968). Educational Psychology: Plato, Piaget and Scientific Psychology. Oxford: Carfax Publishers.

[15]. Branford, & Vye. (1989). The "Case" Method in Modern Educational Psychology Texts. In K. K. Block (Ed.), Teaching and Teacher Education (Vol. 12, pp. 483-500). Oxford: Elsevier Science Ltd.

[16]. Claxton, G. (1989). Being a Teacher: A Positive Approach to Change and Stress. London: Cassel Educational Limited.

[17]. Taylor, P. C., & Medina, M. N. D. (2013). Educational research paradigms: From positivism to multiparadigmatic. Journal for Meaning-Centered Education. Retrieved from http://www.meaningcentered.org/educational-researchparadigms-from-positivism-to-multiparadigmatic/journal/volume-01/.

[18]. Fouche, C. B., & Schurink, W. (2011). Qualitative research designs. In A. S. De Vos, H.Strydom, C. B. Fouche & C. S. L. Delport (Eds.), Research at grassroots. Pretoria:VanSchaik.

[19]. Gudyanga, E. (2014). Anthropomorphic notion of atoms, the etiology of pedagogical and epistemological learning proactive interference among Chemistry learners: Implications. Science Journal of Education, 2(2), 65-70.

[20]. Gudyanga, E., & Madambi, T. (2014). Pedagogics of chemical bonding in Chemistry; perspectives and potential for progress: The case of Zimbabwe secondary education. International Journal of Secondary Education, 2(1), 11-19. doi: 10.11648/ijsedu.20140201.13

[21]. Gudyanga, E. (2015(b)). Transforming HIV and AIDS education curriculum: The voices of Zimbabwean secondary school Guidance and Counselling teachers as curriculum planners. PhD Thesis in Progress. Education. Nelson Mandela Metropolitan University.

[22]. Gudyanga, E., Moyo, S., & Gudyanga, A. (2015). Navigating Sexuality and HIV/AIDS: Insights and Foresights of Zimbabwean adolescents. British Journal of Education, Society & Behavioural Science, 7(1), 17-24.

[23]. Elkind, D. (1991). Developmentally appropriate practice: A case study of educational inertia. In S. L. Kagan (Ed.), The care and education of America's young children: obstacles and opportunities. Chicago, III: The University of Chicago Press.

[24]. Marsh, C. J . (1997). Perspectives, Key Concepts for Understanding Curriculum. London: The Palmer Press.

[25]. Mufuka, K. N., & Tauya, T. (2013). New Fallacies about HIV / AIDS in Zimbabwe. African Educational Research Journal, 1(1), 51-57.

[26]. Brady, L. (1997). Curriculum Development in Australia. Sydney: Prentice-Hall.

[27]. Fruchter, N., Galletta, A. & White, J. L. (1992). New directions in parent involvement. Washington. D.C. Academy for Educational Development.