

Original research article

# Practical Pedagogy as an Infinite Solution for All Generations' Developmental Challenges

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**Abstract:** Theory of education since pre-literate times to contemporary philosophies of education has always emphasized the relevance of practical teaching for sustainable citizenship, communal development and survival. Practical pedagogy is seen by Realists, Pragmatists, Naturalists and Progressivists not only as an essential aspect of schooling but life itself. Practical education is for all times, for, it connects people with reality, above all it is an interdisciplinary learning experience. It is widely accepted that practical pedagogy not only enables skills acquisitions but also leads to greater conceptual understanding. However, whilst there has been much research into relevance of, and factors that affect, practical teaching and learning, there has been limited research into whether teachers really implement practical pedagogy approaches. This study through qualitative theoretical data gathering and analysis provide the present position on practical pedagogy in the current Zimbabwe education system. Findings reveal a wide gap between practice and theory. This gap is attributed to resource constraints and lack of practical teaching knowledge. Other factors include negative teacher attitudes with prioritisation of theory and a limited interest. Zimbabwe curriculum seem not to place central emphasis on pragmatic world view. These factors lead to sustainable development challenges. Given the above findings, it can be recommended that, current Zimbabwe education system should undertake a broadly based audit of existing practice. Zimbabwe education system should be reviewed to explore reduction of theory inclination to allow learners more time on pragmatic knowledge exploration. The study concluded that there is a need to re-examine the aims of Zimbabwe education in order to reaffirm the relevance of practical intelligence for economic and social development. Such a re-examination could draw upon the traditions and practices that underpin many innovative initiatives, past, present and future.

**Keywords:** practical pedagogy, infinite solution, developmental challenges

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## 1. Introduction

Theory of education since pre-colonial African indigenous education times to contemporary philosophies of education has always emphasized the relevance of practical teaching and learning for sustainable citizenship, individual and communal development and for human survival (Ornstein et al., 2011; Ozmon & Craver, 1986; Okoro, 2010; Adeyemi & Adeyinka, 2003; Ocit, 1973). However, they seem to be limited orientation granted practical pedagogy in most examination and certificate focused contemporary education systems like the current Zimbabwe education system. Borrowing from African philosophy of education implications, contemporary philosophies of education like Realism, Pragmatism, Naturalism and Progressivism (Dewey, 1900; Dewey, 1938; Hansen, 2006; Phenix, 2010; Manicas, 2006) see practical teaching and learning not only as an essential aspect of schooling but "...life itself". Practical pedagogy is applicable across any level of education and generations, for it connects people with reality of their times-social and economic needs, above all it is an interdisciplinary learning experience. It is widely accepted (Riddell, 2004; Hu McMahan, 2010) that practical pedagogy and practical subjects not only enables diverse skills acquisition but also leads to greater conceptual understanding of knowledge by promoting in the recipient multiple-intelligences (Loughran et al, 2000; Martinez, 2000). However, whilst they has been much research in the Western world into the relevance of and factors that affect practical

pedagogy, there is limited research into whether teachers really implement practical pedagogy strategies in their daily lesson deliveries.

Although the axiological relevance of practical pedagogy is unquestionable and accepted in any effective teaching and learning, the researcher thinks there has been vast challenges in achieving practical skills oriented education systems in Zimbabwe, if not by most African education systems. In countries like Zimbabwe with a long history of colonial tradition of cherishing academic based curriculum orientation practical pedagogy was seen by many (Barker, 1990; Dekker & Schalkwyk, 1989; Atkinson, 1999; Peresuh & Nhundu, 1999) as promoting “master and servant” orbital and ontology. Given the current Zimbabwe social, economic and political challenges, criticism on the relevance of its pro-academic orientation education system, it is my personal assumption that there is a need for didactical dialogical discourse to deduce epistemological lessons from pre-colonial philosophies of education than just considering them as oppressive and serving ‘white supremacy’. I also argue that some of these education orientations like practical pedagogy cannot historically be credited as a creation of colonial education, they have existed in pre-colonial societies, served significant purposes beyond ‘master and servant’ ontology and promoted sustainable development with minimal reliance on employment seeking. Shifting Zimbabwe education system including teacher education which is the cornerstone to any curriculum change, from examination orientation to practical skills focus in Zimbabwe schools is a must give the shortfalls of the academic oriented approach.

#### *Research Objectives*

This study critic the current Zimbabwe education system orientation and ideology and seek to provide a theoretical analysis of possible beneficial conceptual interventions for applying practical pedagogy across all disciplines. This study also supports the diversification of practical subjects and suggest them in their possible diversification to be offered to all learners from early learning to tertiary level.

#### *Research Questions*

- What are infinite benefits of practical pedagogy?
- What role can practical pedagogy play in sustainable development?

## **2. Conceptual Framework**

Practical pedagogy is knowledge of teaching and learning related to the scientific study of the principles and methods of gaining experience through movement in or exposure to it. Sometimes terms such as “empirical knowledge, a posteriori knowledge, hands-on-teaching and learning, learning by doing, and experimenting, active learning, adventure education, applied learning, project approach, life skills training, service learning, authentic learning or action orientation” (Bertrand, 1994; Bickman, 2003; Katz & Chards, 1989; Anthony, 2006; Bunin & Yu, 2004) are used to refer to knowledge based on experience or gained in virtual reality learning. The concept of practical pedagogy is based on experience learning. Experience generally refers to know-how or procedural knowledge, rather than propositional knowledge or on-the-job training rather than ‘book-academic-learning’ or ‘class-teacher-chalk-talk-learning’, what can also be called the ‘pouring of knowledge’ concept where the teacher is seen as the ‘fountain of knowledge’. The use of practical pedagogy or exposure to experience interrogation has a long tradition in African philosophy and also in continental philosophy (Audi, 1999; Wiredu, 2004). But of much relevance to this study is that, skilful teaching should be in cognisance of different experiences for example physical, mental, emotional, spiritual, vicarious and virtual experiences of the learner (Kong et al., 2011; Shulman, 1987). In this study practical pedagogy will be treated as discussed above and also will be seen to include teaching and learning encompassing the deliberate process of instilling life oriented skills in learners based on both reasoning and active engagement of hands-on approaches for learners to see inter-connectedness of theory and practice, nature and wisdom as the essence of living.

One can also argue that practical pedagogy is primarily a way to make learners appreciate that there are essential life skills-for example reasoning, thinking, inventing, producing and growing food, designing, planning, management, reading and writing, that are needed by any human being for sustainable living or as a citizen, worker, adult, parent. Practical education also has broader social and economic consequences for individuals, families and society at large (Abrahams, 2011; Abrahams & Miller, 2008; Grossman, 2006; Rindermann, 2014), because they argue that people equipped with practical skills are productive for both themselves and others. Even though the immediate and long-term benefits of practical oriented

education cannot be debated, the debate maybe on how to achieve effective practical oriented education and cultivate an effective practical educational ideology and provide effective practical education for all and to all.

### 3. Theoretical Framework

Practical pedagogy could be argued to originate from ancient African education philosophies, and furthered by a number of Western philosophers like Aristotle, Plato, Dewey and Rousseau classified under philosophies of education today known as Realism, Empiricism, Pragmatism, Postmodernism, Naturalism and Progressivism (Dewey, 1900; Ociti, 1973; Scanlon, 1964, Manicas, 2006). Philosophies of education (Phenix, 2010; McCarthy & Sears, 2000; Hansen, 2006) that believe in practical pedagogy describe education as not just only involving the student's academic reading and writing literacy or excelling well in examinations and getting 'A' symbols but involves cultivating the full range of the student's life experiences. Proponents of practical pedagogy (Adeyemi & Adenyinka, 2003; Okoro, 2010; Katz & Chard, 1989) believe that, education has always been and should be seen deeply, perhaps inextricably intermingled with social phenomenon that serves to reinforce the aims and methods of society as a whole. A foundational principle of practical pedagogy is that, to effectively participate in education, a student must be able to experience education in the context of what life is and understand the definition of virtuous being or existence. Therefore, for practical pedagogy advocates the teacher's role or responsibility is to make the process of learning both meaningful and ultimately more life oriented and applicable to daily living (Wurdinger & Hugg, 2007). The student should see the reason for going to school in order to utilize knowledge gained in the classroom in real life challenges.

Unfortunately, African philosophy and its emphasis on practical pedagogy appears to have been largely ignored in today's Zimbabwe formal education settings because there is a clarion call throughout Zimbabwe general discourse that education is in crisis as far as producing relevant graduates for social and economic development is concerned. The researcher argues that education is in crisis because Zimbabwe has diverse social, economic and political instabilities and it is the thinking of the researcher's opinion that education is directly connected to what transpires and perhaps what should transpire in society. The researcher also assumes that Zimbabwe schooling could be made relevant today and to the future's social and economic stability if it borrows from African philosophy underpinned by hands-on-teaching and learning. Virtual reality application of epistemology is needed more than lecture and theory currently haunting Zimbabwe teaching and learning and most African education systems. Being book smart is relevant but not enough for sustainable development, students need practical skills in addition to reading and writing for both living and working (Riddell, 2004; Martinez, 2000, Hu & McMahan, 2010). Understanding theory, reading and writing is important, but lacking experience in a rapidly shifting global economy does not bode well when trying to get a career after schooling. For Zimbabwe to achieve sustainable development there is need for schooling to produce practically skilled graduates who not only have technical skills but host of practical and life skills (Bickman, 2003; Katz & Chards, 1989; Manicas, 2006) such as experience with teamwork, innovative solutions, technological skills, projects skills, organizational skills, communication skills, time management, critical thinking skills and the ability to invent things. Which I could argue many Zimbabwe graduates lack today due to limited exposure during their schooling process. One can add that most Zimbabwe graduates learning more important life skills when working way after completing formal schooling or out of school experience yet, formal schooling is meant to be a replica and mimic real life.

#### *3.1 Practical pedagogy and teacher quality*

Even though the relevance of practical pedagogy and its attributes to societal stability are unquestionable its achievement in the classroom is questionable because they are several factors interrelated to achieving practical teaching and learning quality. Issues such as teacher competence (Baumert et al., 2010; Konig et al., 2011) have an impact on the quality of practical pedagogy driven education and the teaching workforce tasked with that endeavour. Teacher quality is an important factor in determining gains in student achievement even after accounting for poor student learning, family background, and other teaching and learning characteristics (Alter and Coggshall, 2009; Baumert et al., 2010). Predicators (Blomeke and Delaney, 2012; Calderhead, 1991; Darling-Hammond, 2000; Hill et al., 2005) of teacher quality have typically included factors such as class size, streaming, certification of the teacher, type of qualification or degrees earned by the teacher or years of teaching experience as a

some factors that affect teacher quality that can affect the application or not of practical pedagogy. Another less studied indicator of teacher quality but however, the researcher thinks does contribute to practical pedagogy usage is pedagogical knowledge of the teacher and remuneration motivation. Teachers in some cases may not possess the knowledge and understand the relevance of practical pedagogy to create effective practical teaching and learning for all learners. In some cases the teacher may have the knowledge and understands the importance of practical pedagogy but may lack the motivation and be affected by an attitude challenge of thinking practical pedagogical approaches are time consuming and require lots of dedication and planning given little remuneration.

### *3.2 The relevance of practical pedagogy*

Practical pedagogy and practical subjects constitute vital aspects of life oriented learning (Riddell, 2004, Rindermann, 2014; McMahan, 2000; Aspy, Aspy, & Quimby, 1993). Practical pedagogy is an important approach that cuts across all disciplines. All careers in all fields are based on the skills developed from practical pedagogy and knowledge (Barrows, 1999; Motlhabane, 2013; Nivalainen et al., 2010; Grossman, 2006). The goal of providing learners with useful life-skills can be successfully achieved if the conceptual knowledge of schooling is supported by the inclusion of practical pedagogy (Abrahams, 2011; Abrahams & Miller, 2008; Abrahams & Saglem, 2010). One can argue that, all deeper and multi-dimensional understanding and appreciation of nature and life processes can be effectively understood, and achieved through experimentation and hands-on practical pedagogical orientation. Hands-on approaches encouraging active participation does indeed develop learner's experiences and multi-intelligences of how things function, behave and serve to develop critical thinking and scientific literacy. Practical pedagogy is inquiry oriented, where by learners become actively involved in knowledge creation, acquisition of several intellectual benefits such as observing, classifying, interpreting, designing, organizing, reporting, presenting and accurately generalizing (Abrahams, 2011; Abrahams & Miller, 2008; Abrahams & Saglem, 2010). Practical pedagogy does not only promote functional literacy and ways of inventing things, it also ages learners to think of living as a science depending on evidence and pragmatic experience. For these several reasons, African education systems should prioritize practical pedagogy for inquiry based sustainable development teaching and learning.

Practical pedagogy and practical subjects matter to society. Not only do they matter they are the fundamental foundation of all virtuous living. Practical experience contribute immensely in revolutionizing human sustainable living, industrial and economic activities (Voss, Kunter, & Baumert, 2011; Barrows, 1999). Practical orientation underpins technological invention, development and advancement across the world and is a pivotal asset to the ongoing African wish to be technological and economic self-reliant and efficient. Because of the relevant role of practical pedagogy in technological advancement, any education system to be conscious should impart practical knowledge to its learners. Practical literate students are not only scientifically literate, they are also the backbone of any sustainable development and economy (Motlhabane, 2013; Nivalainen et al., 2010; Grossman, 2006). One can argue that, technological advancement of a country is more accurately gauged by the quality of its practical curriculum and pedagogy.

## **4. Results**

Even though practical pedagogy is in theory indicated very important, the findings from theoretical analysis of gathered literature (Abrahams, 2011; Abrahams & Miller, 2008; Abrahams & Saglem, 2010; Atuahene & Ansah, 2013; Motlhabane, 2013; Nivalainen et al., 2010; Grossman in Hanushek & Welch, 2006) complimented by teaching practice and general observations by the researcher indicate otherwise as far as real daily teaching practice is concerned. There is lack of practical pedagogy approaches in most Zimbabwe classrooms from primary to tertiary level, and other African education systems that have vast qualitative and quantitative challenges like infrastructural and teaching material inadequacies and in technology disadvantaged, underdeveloped and developing countries. In relation to lack of practical pedagogy there is a wide gap between theory and practical pedagogy due to several reasons, such as: lack of motivation by teachers to carry out effective and daily practical teaching and learning exercises and activities. In the case of Zimbabwe from the researcher's general experience in practical teaching observations there is an additional challenge of limited practical subjects offered from primary to tertiary level furthering the mentality of seeing practical pedagogy less important than academic orientation, poor and in some-cases no practical teaching and learning supportive infrastructure and lack of teacher expertise on practical



pedagogy, perhaps furthered by lack of practical pedagogy courses in teacher education pre-service.

Even though practical pedagogy challenges are vast, of much concern to this study were classroom based barriers that can be mitigated by a competent teacher. These barriers include teacher's attitudes, knowledge skills and behaviour towards practical pedagogy were found to be factors that mostly affect the effective attainment of practical pedagogy aims and objectives. Practical pedagogy requires a high level of motivation, innovation, and technical knowledge on the part of the teacher as well as specific personal attitudes and readiness for planning and preparation. Taken for granted by most teachers in Zimbabwe. Although there are many factors that influence practical teaching and learning, the teacher is regarded as being the single factor that makes the greatest impact. Most teachers do not use practical pedagogy approaches due to the examination and certificate oriented curriculum. Teachers end up using transmissivity pedagogy so as to have time for preparing learners for passing summative assessment. Some teachers think it is a waste of time to focus on unexaminable skills. Yet, practical pedagogy has vast social and economic benefits for individuals and national development (Hu and McMahon, 2010; Martinez, 2000; Husen & Tuijnman, 1991; Riddell, 2004). Practical pedagogy encourages accurate observation and description of phenomenon, arouse learning curiosity, promote logical learning, make phenomena more real through experience exposure, develop manipulative skills, practice seeing problems and seeking ways to solve them, develop critical attitude and self-reliance, indicate industrial aspects of schooling and encourage scientific enquiry probing and asking questions. Above all prepares students for practical living and work.

## 5. Discussion

Despite the fact that practical pedagogy should be the core part of any education system including the current Zimbabwe education system, there is little evidence of effective practical pedagogy application in the daily teaching and learning process (Atuahene & Ansah, 2013; Loughran, Berry & Mullhall, 2006; Konig et al., 2011). From teaching practice supervision observations by the researcher one can add that, most Zimbabwe learners acquire limited practical skills from formal learning, yet practical skills should be seen as the core business of any learning and at the centre of required skills in preparation for real life and could contribute immensely to sustainable development and living. The lack of practical skills focus at all formal learning levels in Zimbabwe should be a concern since it is counterproductive to sustainable development and self-reliance much needed by most, if not all underdeveloped countries like Zimbabwe.

Many challenges hinder effective usage of practical pedagogy. Even though some challenges could be a matter of educational policy and politics, one can broaden lack of practical pedagogy application beyond lack of adequate funding and appropriate infrastructural development and provision. Teacher's subject matter knowledge, pedagogy understanding and above all how Zimbabwe teachers are trained does indeed contribute to the effects of practical teaching. Teachers in this study were argued to be key components to bring about change in educational practice and outcome, however, yet severely demotivated by diverse working conditions challenges. Although challenges are vast, teacher attitude can provide a transformative input to effective practical teaching and learning.

Practical pedagogy is a worthy investment for African development, with immense social and economic benefits. Research (Bickman, 2003; Busse, 1992; Coplin, 2003) shows that individuals who graduate and have access to practical pedagogy throughout primary and secondary schooling are more likely to create employment, have stable income, and become active and productive citizens. They are also less likely to be a burden to their families, communities, society and less likely to demand for welfare assistance programmes. Practical education provides substantial benefits to individuals and as individuals benefit, they become aggregated throughout communities and broad social and economic benefits are likely to be created (Aspy, Aspy, & Quimby, 1993; Hugg & Wurdinger, 2007). Investing in practical pedagogy and subjects is thus far more cost effective for Zimbabwe than a well-funded academic oriented education and paying for the social and economic consequences brought by unemployed and unemploying citizens. However, the current challenge in Zimbabwe is double edged: to provide diverse practical subjects and practical education for all to meet millennium target goals.

Most, if not all African countries have to rethink what their education systems ought to achieve. The now and future education must be visionary, problem-solving-oriented, advocate for scientific and technological innovations and changes, address unprecedented socio-economic challenges, create opportunities for reforms and reawaken cultural eternal values. Educational innovations are necessary (Shulman, 1987) and would no doubt be effective if they are research-based and imbued with technology of education (systematic approach to the teaching and learning process). However, even though to promote practical skills is vital, one cannot propose that African education systems should ignore and turn a blind eye to the relevance of other skills such as interpersonal and self-confidence skills which are potentially as important as cognitive skills for social, political and economic coherence and many other aspects of life

## 6. Conclusions

It is arguable that every discipline is a science and practical, it has systematized approaches to study and understand it. At the same time all subjects may be divided into two major scientific approaches-practice and theory. Theory and practice enable holistic understanding, conceptual appreciation of the depth of any knowledge and skill. Neglect of either makes any subject difficult to learn. However, in most cases in the current Zimbabwe education system many teachers spend more time on theory of matters as compared to practice. They ought to a paradigm shift in the current Zimbabwe education system children should spend much of their formal schooling time outside the classroom solving real life problems in communities if Zimbabwe is to reach sustainable development soon. This study criticized the academic driven focus and ideology for failing to produce real-life-skilled graduates, while one can argue that practical pedagogy is relevant at all times and for all generations given the commonalities of sustainable living skills it promotes and requirement by all generations. Hence, the argument in this study was that, examinations oriented African education systems have failed to contribute to effective development for technological independence, employment creation and sustainable development for Africans and yet practical teaching and learning can be used as a foundation toward technological and economic independence and self-reliance.

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