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Full Length Research Paper

The relevance and appropriateness of positivist and interpretative approaches for exploring quality education in schools in St. Lucia, a small Caribbean state

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This paper examines the definition of research, purpose and influence of educational research on policy and its practitioners, the distinguishing features of positivist and interpretative approaches as complementary research paradigms, and to debate their relevance in exploring quality education in schools in St. Lucia, a small Caribbean Island. Although they are presented as different approaches with different philosophical foundations, employing different methods to investigate, discover or to provide information, this paper provides justification for combining the positivist and interpretative methodologies because of their relevance in the understanding of educational issues.

Key words: Caribbean, quality education, St Lucia, relevance of educational data, positivist and interpretive paradigms, research methodology.

INTRODUCTION

National context

St Lucia is a relatively small Caribbean Island of 238 square miles, with a population of approximately 160,000. After the emancipation of slavery in 1834, the educational system based on the British model began a slow evolution. All primary schools and 2 secondary schools were established and administered by the Catholic Church until early 1965, after which the first state owned secondary school was built. Now, the government educational system manages 78 primary schools, twenty four secondary schools and one tertiary institution, which provides post secondary education.

Universal primary education is a state priority and all students between five and fifteen years receive free compulsory education. In 2007, universal secondary education was made available to all students who met the academic requirements. The government also recognizes the fact that while access is absolutely necessary and desirable, quality must not be compromised as both are required to drive the economic, social and technological demands required in this era. St. Lucia embarked on a 5 year education sector development plan (2000-2005), in an effort to raise the level of achievement of learners, highlighting quality education as a major priority for improvement. This clarion call for quality education was also echoed by the Organization of Eastern Caribbean states (Education Reform Unit, 2000) of which St. Lucia is a member state. The future of education in the Caribbean (CARICOM Regional Education Policy, 1993) highlighted necessary education reform and delivery of quality education as major challenges, but nevertheless imperative for productivity and development.

The need for quality education was further highlighted at a meeting of Caribbean ministers and stakeholders in education. At that meeting an action plan, 'Education for All in the Caribbean by 2000-2015' (Organization of Eastern -Caribbean States, 2000), was developed to address key issues relevant to the pursuit of quality education. The realization of quality education has been a major concern in the Caribbean region. It has been articulated in several educational reports, and also in the Caribbean Education strategy report (World Bank, 2000). While access is good because every child has a right to education, access to education is just as important as the quality of education delivered because, "expanding

access to poor quality schooling is at best meaningless" (Kemmerer, 1992, cited in Bergmann, 1996).

The challenge to providing quality education in St. Lucia may be addressed through educational research that aims at providing knowledge and advice or perhaps challenge the beliefs and practices of both policymakers and practitioners in the region. Educational research that is focused and systematic may provide explanations, generalizations and predictions for teaching and learning processes. It may add or establish new knowledge and new ways of thinking about school-teachers and working situations, interactions between school and society, practical and policy issues that are relevant to the delivery of quality education. It may also provide knowledge required by policy makers and practitioners for implementing change. In its attempt at enquiry, it may expose issues or questions that require further investigations.

Generally, the two main approaches: positivist and interpretive are employed in conducting educational research. Both are meaningful within their domain. Although the positivist and interpretive approaches employ different methods of enquiry in conducting investigations, both methods are concerned with discovery and understanding of phenomena in the world around us (Cohen et al., 2000). The former seeks to understand phenomena through the application of the scientific method of enquiry, while the latter seeks to understand the complexities of social and human behaviour by studying participants and the interpretations of their world.

Both approaches are relevant in the conduction of research on quality education, because quality education is all encompassing. It is concerned with numerous issues which include the hard measurable variables as well as polices, ideals, concepts, human behaviour and interaction within the school. It includes learning and teaching processes, the school as a social institution, interaction between school and society, as well as good practices and standards among many others. An understanding of the two research paradigms equips the researcher with the understanding and knowledge required to choose the most suitable approach or combined approaches relevant to the specific topic of enquiry.

Hence this paper seeks to address the:

1) Definition of research and purpose of educational research.
2) Educational research for guiding education policy and practitioners for achieving quality education in St. Lucia schools.
3) Relevance and appropriateness of positivist and interpretive as complementary approaches for exploring quality education in schools in St. Lucia.

LITERATURE REVIEW

Definition of research

Research as explained by Cohen et al. (2000) 'is concerned with understanding the world, and that this is informed by how we view our world, how we make understanding to be, and what we see as the purpose of understanding'. Best and Kahn (1998) provide a more elaborate definition. They posit that it is the systematic and objective analysis and recording of controlled observations that may lead to the development of generalizations, principles or theories, resulting in predictions and possible ultimate control of events. They further made clear this definition by providing a list of characteristics of which a few are itemized as follows:

i) It is more than retrieving or gathering information. It seeks to understand cause and effect relationships through problem solving.
ii) It is based on empirical evidence or observable experiences. It requires accurate observations and descriptions using quantitative or non-quantitative methods.
iii) It uses new data or existing data, which are rigorously analyzed for a new purpose or for new knowledge. It must add value.

The literature on research definition is extensive with varying emphasis. Some are presented from an abstract philosophical slant, while others stress the practical methodology for problem solving. Most of the definitions embrace knowledge expansion and explanation of phenomena, with an emphasis on directing or understanding events. What is noteworthy is that educational research has the same objective as other research in that it applies 'a focused and systematic enquiry that goes beyond generally available knowledge to acquire specialized and detailed information, providing a basis for analysis and elucidatory comment on the topic of enquiry' (Johnson, 1994). It is steadfast in 'the application of systematic method to the study of educational problems' (Verma and Mallick, 1999). Application of educational research can provide insightful information on quality issues, problems faced by practitioners as well as influence policymakers in St. Lucia.

The usefulness of the educational research is expanded further with greater clarity in Education Research and Development Trends (1995) thus:

> Education research is aimed at understanding certain fundamental relations such as structures, process and contexts involving human learning and development. Systematic and generalized insights into the type of activity bound up with learning relations and other formative human process are at the core of the knowledge base

> for education. The term formative process must be given a wider meaning including education itself as well as the production and transfer of knowledge.

The aforementioned statement justifies the use of educational research to inform practitioners, but the following definition presented supports usefulness to both practitioners and policymakers:

> Education research within the social science may include any disciplined enquiry which promotes theoretical understanding of educational processes and settings or which serves educational judgments and decisions about policy and practice. Such research may be conducted in formal educational settings, in industrial, commercial and professional situations or in informal contexts (such as parent-child interaction, self-help groups and local communities). The disciplined enquiry necessarily draws on the theoretical and methodological resources of philosophy, an of social science disciplines. However, it may also involve methods and techniques originating from the distinctive nature of educational knowledge. In addition, the generation of new knowledge may itself be a focus of educational research (Economic and Social Research Council, 1996, cited in Verma and Mallick, 1999).

Purpose of educational research

One main purpose of educational research is to provide insight, develop and transfer knowledge about learning in relation to social, cultural and political factors, so that the individual can participate in family, community, society and at the same time experience uniqueness and sense of self- fulfillment. It informs all the parameters that contribute to quality education. Education research may be useful to:

> Establish systematize and analyze knowledge about, for example, the schools as social or economic institution, the teachers working conditions, learning processes, and the wider relationship between school and society. But, the central purpose of educational research is to develop and transfer knowledge and insights about learning in relation to political, socio-cultural, and economic frame- factors, which call attention to the processes of enculturation and socialization (OECD, 1995).

Influence of educational research on policy and practitioners

Educational research may not be able to furnish independent authoritative knowledge to suit educational policy makers and practitioners except in situations when it is limited to narrow fact-finding exercises (OECD, 1995). On the other hand, Hammersley and Scarth (1993) voiced that the proper function of education research is wisely regarded as being to inform policy makers and practitioners and thereby to improve education. They further reiterated sometimes, 'policy makers and practitioners are blamed for not taking sufficient account of research findings'.

Reims and Mc Ginn (1997) are of the opinion that although much knowledge is generated through research, it is of little relevance to policy. This is because policy seeks to establish how things could be, whereas most research knowledge seeks to address why things are the way they are. On the other hand, Hammersley (2002) argues that currently there is an increasing demand for social and educational researchers to provide information that will have greater impact on policy makers and practitioners than ever before. He further argues, 'it is becoming clear that this has implications not just for the dissemination of research findings, but for the kind of research that is to be done'.

Verma and Mallick (1999) suggest that in the early part of the century, educational research was mainly concerned with descriptive information about educational phenomena and test instruments. Realizing the shortcomings and quality of education research data, steps are now taken to expand the research frontier to learning and teaching processes and theoretical explanations for learning. The heightened interest on seeking explanations and solutions for educational problems has created an increased emphasis on research methodology, which is relevant to educational research.

Relevance of interpretive and positivist approaches

Educational research embraces two different views of social science: the scientific and traditional and the other, the interpretative view. The former equates social science with natural science and the use of the scientific method which is primarily concerned with, 'deriving natural and universal laws' to explain social behavior. The latter, although accepts the systematic method of enquiry of natural science, and uses it to explain and describe human behavior, at the same time it emphasizes that human beings 'differ from inanimate things and natural phenomena' (Cohen et al., 2000).

The positivist approach

Social scientists and educational researchers have had

reservations about the positivist approach and the natural/physical science model from which it is drawn. Positivist approach upholds a definite view of social scientists as analysts or interpreters of their subject matter, and positivist accepts that natural science laws lay the foundation for understanding human knowledge and that the same procedures of scientific method in natural science can be applied to social science. In addition, the positivist seems to believe that analysis must be expressed in laws and law-like generalizations of the same kind that have been established in relation to natural phenomena (Cohen et al., 2000).

Positivist paradigm upholds the following premise:

i) Assumption that the world is rational
ii) Development of research question/s
iii) Formulation of research hypothesis
iv) Selection of population
v) Designs data collection instrument and collects quantifiable data
vi) Analyses data
vii) Draws conclusion from statistical analysis of data
viii) Development of laws or generalizations to support or reject hypothesis

The positivist equates the social world to the natural world and accepts it as if it were hard, external and objective reality. Positivist employs quantitative data collecting methods such as surveys and experiments to explain relationships between variables (Cohen et al., 2000).

The positivist paradigm accepts the scientific method as the most reliable for generation of knowledge. It follows a systematic sequence of steps that guide the research process from hypotheses to formation of generalizations and new theories. These steps, while suitable for the scientific method, another school of thought anti-positivist has launched an attack on its mechanistic approach, and has proposed an alternative approach for social inquiry. Anti-positivist believes that the positivist approach has little relevance and provides limited understanding of complex social issues and human behavior, unlike the qualitative/interpretive approach, although it too has some weaknesses (Verma and Mallick, 1999). The limitations of the positivist approach are more apparent when applied to the study of complex interactions within schools and classroom situations, intricacy of human actions and intangible education issues, which are some of the components of quality education.

The interpretive approach

The interpretive approach accepts that human behavior and action cannot be fully explained, analyzed/understood through the same method applied to the physical and natural sciences. According to Cohen et al. (2000), 'the social world can only be understood from the stand-point of the individuals who are part of the ongoing action being investigated, and that the 'individuals' behavior can only be understood by the researcher sharing their frame of reference'.

The interpretative approach attempts to understand the subjective world created by human experiences, by studying participants and their interpretations of their world. It attempts to understand the meanings behind actions through various methods such as observation of the participants, accounts and personal constructs and then formulates theory based on understanding.

It upholds the following premise:

i) Interpretations come through the understanding of group actions and interactions.
ii) Interpretations of meanings are provided both by the social actors and researcher.
iii) This approach does not lead to covering laws but to practical understanding of meanings and actions.
iv) Researchers are not detached from their object of study, and it may be difficult to separate external information from their own beliefs and convictions when deciphering information (Miles and Huberman, 1994).

Researchers should always seek to explain why things have happened from the participants' point of view particularly when engaging in participatory enquiry where deductions are made from data obtained. Albeit researchers rely on their experience of particular settings to be able to interpret the information provided by the subjects involved in the study (Verma and Mallick, 1999), they should be mindful not to present their own views because their understanding may not be a true representation of the situation. The researcher must practice and ensure that validity and reliability permeates throughout the research (Cohen et al., 2000).

The interpretative approach is underpinned by the assumption that people create their own reality while operating in a fluid changing environment, and that the social world should be studied in its natural setting that people interpret actions, situations based on their experiences and understanding. There is multiple interaction and perceptions to an event or situation, and that situations should be interpreted through the lens of the participant and not necessarily through the researcher's perspectives (Cohen et al., 2000).

The interpretative paradigm is pertinent to education practitioners/teachers who operate daily in complex social surroundings and human interactions that govern the education business and the quality of education delivered in schools. Perhaps the value of research can be enhanced and may be more convincing when multiple source and approaches are used to obtain data (Finch, 1986) for understanding and interpreting situations that influence the delivery of quality education.

Purpose and relevance of educational research for guiding policy and practitioners in St. Lucia

The literature indicated that skillful comparative education research on quality education may provide knowledge on education benchmarks, best practice and policy. The education policy, a principle formulated to support the direction and development of education in the island, provides the momentum and framework that guides the action and behaviour of and within schools in the education system. It gives impetus to how schools organize their vision, mission objectives and practices. While there is concern about the delivery of quality education in the region, from the perusal of documents on education in St. Lucia, there seems to be no evidence of a formal government policy on quality education, or research on the status of education in the island. However, Pring (2000) and Reimers and Mc Ginn (1997) cautioned that in most cases educational research fails to fulfill the role because either policy makers pay insufficient attention to the findings, or it has not reached the audience intended for, or the research may not be relevant. To avoid irrelevant research it might be useful to define the purpose of the research and choose the appropriate approach or approaches to research quality education.

Appropriateness of positivist approach

It appears that the positivist approach is appropriate for answering practical questions that seek to address the quantifiable components required for the delivery of quality education. These include the input (material and human resources, structure/buildings, professional competencies and pedagogical skills, space allocation, textbooks, time) and output (drop-out rate, student-achievement, performance in standardize tests). Enquiry on specific inputs and outputs of quality education may expose issues and provide knowledge to both practitioners and policy-makers. Although, OECD (1995) cautioned that educational research may not be able to deliver 'independent and authoritative knowledge that directly suits the needs of educational policy-makers and practitioners', except when it focuses on narrow fact finding exercise, however it may provide "tentative knowledge, that may be informative, advisory …….in terms of the issues faced by policy-makers and practitioners'. This point is relevant for the choice and definition of research questions related to quality education in St. Lucia.

Appropriateness of interpretative approach

Educational research which utilizes the interpretive approach, is also relevant as it provides insight on social issues, increase understanding, change attitude and sufficiently increase knowledge base on policy makers' to enable them to better define the issues and hence make better decisions (OECD, 1995).

Pring (2000) advised that the researcher must be clear about what is to be researched since the nature of the subject will influence the choice of approach for researching the topic. A key quality component is the process by which quality education is achieved. This process includes curriculum implementation, teaching and learning issues, human relations, working conditions, quality definition and indicators of quality within schools in St. Lucia. These quality variables are appropriate topics for the interpretative approach which uses either ethnographic case studies or hermeneutics methods. According to Stringer and Angello (1997) 'in the educational context such, enquiry provides a means for making research responsive to the realities of schools' particularly for understanding the education problems within our social context in an effort to make relevant changes for school improvement.

Use of triangulation in the data collecting methodology as well as integration of the two approaches may enhance credibility of evidence, and perhaps greater acceptance of research findings by policy makers and practitioners. Independently, both approaches exhibit limitations since each one addresses specific issues in quality education, but combination of the approach has some relevance for researching most of the components of quality education within the St. Lucia context. The interpretative approach mainly seeks to understand, interpret and find motives whereas positivist seeks general explanation or laws derived from the scientific or experimental approach. De Londsheere (1982), in favour of linking the two approaches in the search for greater understanding, claims that making them mutually exclusive could only have a weakening effect.

Rationale for combination of the two research paradigms

Campbell, a prestigious colleague of the American Psychological Association, the stronghold for quantitative approach, further reinforces the complementary nature. At the 1974 assembly, he explained the dependency between quantitative and qualitative, stressing the former is more encompassing. For process description (process in education research included), anthropologists have acquired much knowledge from studying the culture and life of those under investigation, reiterating that ethnographic cannot alone provide evidence of program effectiveness or replace a well-designed quantitative research. At the same assembly, Campbell alluded that the separation between quantitative and qualitative was a

Table 1. Comparison of the two paradigms as provided by Gummesson (1999).

Positivist paradigm	Hermeneutic (interpretative) paradigm
Research concentrates on descriptions and explanation.	Research concentrates on understanding and interpretation.
Well defined narrow studies	Narrow as well as total (holistic) view
The vantage is primarily deductive, thought is governed by explicitly stated theories and hypotheses	The vantage is primarily inductive, researchers attention is less focus and is allowed to float more widely
Research concentrate on generalization and abstraction	Research concentrates on specific and concrete (local theory) but also attempts generalizations
Researches seek to maintain a clear distinction between facts and value judgments; search for objectivity	Distinction between facts and value judgments is clear; recognition of subjectivity
Researchers strive to use a consistently rational, verbal, and logical approach to their object of research	Pre-understanding that often cannot be articulated in words or is not entirely conscious-tact knowledge-takes on important role
Statistical and mathematical techniques for quantitative processing of data are central	Data are primarily non-quantitative
Researchers are detached that is, they maintain a distance between themselves and the object of research; take on the role of external observer.	Both distance and involvement: researchers are actors who also want to experience what they are studying from the inside.
Distinction between science and personal experience	Researchers accept influence from both science and personal experience; they use their personality a as an instrument.
Researchers try to be emotionally neutral and make a clear distinction between reason and feeling.	Researchers allow both feelings and reason to govern their actions.
Researchers discover an object or research external to themselves rather than creating the actual object of study	Research partially create what they study, example the meaning of a process or a document.

mistake (De Londsheere, 1982). Comparison of the two paradigms as provided by Gummesson (1999) is shown as follows in Table 1.

Examination of the two paradigms furnishes differences but there are also several similarities. Some of the elements differ by degree or intensity or method of analysis required. However, quantitative data collected from the interpretative approach may be subjected to the same mathematical treatment as in positivist approach.

Structure is important for duplication and reliability in both methods. Also, operating within well-defined boundaries, a feature of positivist is equally important to the interpretative paradigm as reinforced by Guba and Lincoln (1981), stating that there is a need to set boundaries and to find a focus to ensure the process is credible, appropriate, consistent, confirmable and neutral. Very often, there may be no apparent differences in the questions asked by positivist or interpretive at the starting point, but the main differences may arise in deciding what kind of data is required to answer those questions and how those data are to be collected and analyzed to provide the answers (Tuckman, 1994). In support of the complementary nature of positivist and interpretative paradigms, Verma and Mallick (1999) state:

> A review of the literature points to a dichotomy between positivist or objectivity and anti-positivist or subjectivity. Researchers tend to align themselves with one or the other of the two research paradigms, and chose to use either quantitative or qualitative research methods accordingly. However, there is now an increasing recognition that combining the two main research traditions within an Educational framework has considerable benefits, rather than making exclusive use of one or the other.

The two paradigms should not be considered as exclusively opposite as they are often presented, but rather as complementary and that there is 'nothing to stop a researcher from adopting a positivistic paradigm in a certain research situation and a hermeneutic (interpret-

tative) in another even in the same project' (Gummesson, 1999).

With regards to the focus of this paper on researching quality education, the positivist approach may be applicable to research the quantifiable indicators of quality, whereas the interpretative approach can provide insight to educational processes; such as teaching and learning interactions, teacher behaviour and attitude, leadership and administrative roles, learning and parental involvement.

Verma and Mallick (1999) claim that several education research programs appear to use a combination of methods known as 'triangulation of methods' or a 'multi-method approach', knowing that all research methods have both weaknesses and strengths. In support for using the approaches jointly, Bryan (1998) cautioned against the tendency to view the two research traditions as reflecting different epistemological positions, and hence divergent views, which has led to an exaggeration of the differences between them. Instead according to Silverman (1985) there are distinct advantages to be gained from the juxtaposition and integration of the two styles of research.

Combining the two research approaches might be useful in the quest for obtaining meaningful information on educational issues to inform policy and practitioners, which can be translated into practical applications for enhancement of learning in St. Lucia. More so the interpretative approach may "establish, systematize knowledge about, for example, the school as a social or economic institution, the teachers' working situations, learning processes and the wider relationship between school and society' (OECD, 1995).

Conclusion

Two approaches, positivist and interpretive are relevant to educational research. The two are often viewed as separate and contrasting paradigms whereby some researchers choose to separate and apply one methodology while others may choose to mix or combine the methodologies.

The choice of research methodology for enquiry of quality education and quality components should be judged by its applicability to the research questions, relevance and the application of the findings to the specific context, in this case St Lucia. Educational issues, particularly quality issues are generally complex in nature and for this reason this paper recommends the use of mixed methodologies by drawing on the strengths of both positivist and interpretive approaches to investigate the delivery of quality education.

Very often the visible signs of education such as availability of school places, enrolment, examination results, and buildings are used as indicators of education quality. While these are perquisites for the delivery of quality education, they do not define quality education nor do their presences ensure that quality education is delivered in the schools. Considering the numerous and also the complexities of all the variables that constitute quality education, and while quantifiable data from positivist approach may provide some degree of understanding, it may not provide the comprehensive knowledge and the in-depth understanding required for this research.

Hence, an in-depth understanding and analysis of quality education may be better facilitated by a combination of the two methodologies discussed earlier. This combination can provide a more comprehensive picture and improve understanding of the numerous variables that constitute quality education.

While the positivist approach is capable of providing explanations and meaningful information to practitioners, on quality education indicators, and factual data to guide the decision of policymakers, the interpretative approach can provide descriptive details to understand complex situations involving human interactions and education processes. The former provides information that is based primarily on statistical analysis of data but the latter provides the deeper meaning and explanation surrounding the data, for increased understanding, for decision-making and for implementing changes required in the pursuit of quality education in St. Lucia.

The commitment to improving quality education has been articulated, however if students are to benefit from free education provided by the state, then practitioners, policy makers, and other stakeholders should be exposed to the myriad of issues surrounding the delivery of quality education by employing the appropriate and relevant approaches to the conduct of educational research.

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