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The Journal

The *International Journal of Educology* is a refereed journal (ISSN 0181-0563) which is published biannually (January and July) by Educology Research Associates. The *Journal* publishes works which examine the various features or aspects of the educational process (e.g. teaching, guided study, learning process, learning outcomes, learning environments, goal structures for learning, educational policies, curriculum, supervision, administration, counselling) from an educological perspective. The educological perspective requires one to think about education,

- not in terms of the sociology of education, but as the educology of society;
- not in terms of the psychology of education, but the educology of mental processes;
- not the economics of education, but the educology of economic arrangements, relationships and processes;
- not the politics of education, but the educology of political processes;
- not the anthropology of education, but the educology of cultural processes;
- not in terms of comparative education, but in terms of comparative educology.

The term *educology* means *the fund of knowledge about the educational process*, and it derives from the terms *education* and *logy*. The term has been in use since the seminal work in educology by the late Professor Lowery W. Harding at Ohio State University in the 1950's and Professors Emeritus Elizabeth Steiner [Maccia] and George Maccia at
Indiana University in the 1960's.

Educology consists of that discourse which is made up of warranted assertions, valid explanatory theories and sound justificatory arguments about education. Education is a process about which one can conduct inquiry and research. Educology is the fund of knowledge produced from well disciplined and successful inquiry and research about the process.

The set of disciplines requisite for producing educology includes that which is necessary for conducting

- analytic inquiry and research (i.e. requiring the use of the principle of necessity reasoning),
- normative inquiry and research (i.e. requiring the use of the principle of normative or evaluative reasoning) and
- empirical inquiry and research (i.e. requiring the use of the principle of observation, and including experimental and non-experimental research).

The process of inquiry is taken here to mean the process of asking questions, formulating answers to those questions and adducing necessary and sufficient evidence to warrant that the answers which are formulated are necessarily true (in the case of analytic educological facts) or very highly probably true (in the case of empirical educological facts) or are valid, sound and fruitful (in the case of educological theories).

The educological perspective is inclusive of the following perspectives in discourse about the educational process or about aspects of the educational process:

- scientific (i.e. characterizing what is),
- praxiological (i.e. characterizing what is effective),
historical (i.e. characterizing what has been),
jurisprudential (i.e. characterizing what is legally allowed, prohibited and required),
analytic philosophical (i.e. characterizing meanings of terms and sentences) and
normative philosophical (i.e. characterizing what is good, desirable and ethical).

Sound educological understanding provides the basis for rational, constructive action within the educational process and sound, well informed discourse about the educational process. Through studying educology, one can develop educological understanding towards several ends, e.g. towards
- heightened sensitivity for educational situations,
- effective participation within educational situations (as teacher, student, counsellor, coach, manager, etc.),
- articulation of sound theory about educational situations and
- resolution of problems connected with educational situations.

Advice to Contributors

The editors invite submission of manuscripts from contributors for publication. The Journal publishes works which focus upon the educational process (or aspects of the process, such as educational goals, educational policies, teaching processes, studying processes, learning processes, cognitive development, curriculum, counselling, educational management and leadership) and which use a variety of appropriate approaches to the conduct of research and inquiry, including the following:
- analytic, normative and empirical;
- experimental and non-experimental;
historical and philosophical;
jurisprudential;
interpretive, critical and evaluative;
scientific, praxiological and technological.

Manuscripts are reviewed anonymously, and those which are accepted are normally published in the next issue of the Journal. Contributors will be sent a complimentary copy of the issues in which their articles are published. Contributors seeking publication of manuscripts should submit an abstract (100-200 words) and one copy of the manuscript.

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Manuscripts will be viewed with favour if they
(1) examine the educational process (or some aspect of the process) from an educological perspective and
(2) use appropriate rules of evidence to advance sound arguments in support of warranted conclusions.

For authors seeking further guidance as to what constitutes educology and the educological perspective, two helpful introductions to educology are available:

(1) Perspectives on Education as Educology (edited by J.E. Christensen, Washington, D.C.: University Press of America, 1981);


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Harmful Traditional Practices in Nigeria and Measures for Eradication: An Educology of Home Education

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Abstract
Educology is the fund of knowledge about education, and the educology of home education is the fund of knowledge about the educational process as it functions within cultural and social setting of the family and the home. The educational process consists of intentionally teaching and studying under guidance something in some cultural, social, and physical setting. Within traditional Nigerian home education, many aspects of it are good, but some features are patently harmful to the individual and to the society at large. These practices are well intentioned, but misguided and misinformed. There exists a need to expose and eradicate these deleterious practices from traditional home education.

Introduction
Within traditional home education in many parts of Nigeria, there are some unquestionably harmful traditional practices. In this educological study, some of these practices are identified, and the underlying traditional rationale for the practice is explicated. The deleterious consequences of the practice are enumerated in terms of the undesirable effects on the individual, the family, the nation at large and the process of national development. Finally, some measures necessary for eradication of these practices
are outlined.

**Harmful Traditional Practices**

Nigeria is bedevilled with a number of harmful home education practices. They are harmful both to individuals and to the process of national development. Some of these include early marriages, female circumcision, male child preference, child labour and begging assistance.

What makes these traditional home education practices harmful? For the large part, the practices constitute physical and mental abuse of children. In the context of this study, children are taken to be individuals from birth to 14 years of age. Child abuse within the context of this study is taken to be any practice which is detrimental to the child’s well rounded development, including their physical, emotional, conative and intellectual development. Abuse encompasses both overt abuse and negligent treatment of children.

In the Workshop on “Child Labour in Africa” (1986) held at Enugu, a number of child abuse issues were identified. The issues included, not only the onerous conditions and consequences of child labour, but also deleterious practices used in childbirth and in rearing and caring for infants and young children.

It was acknowledged at the Workshop that most women, even those in urban settings, preferred home delivery to hospital delivery. It has been part of their home education that girls are taught that home delivery is the best, and it continues to be a tradition with which women feel comfortable. There is nothing inherently harmful in home deliveries, but in Nigerian home deliveries, it has been typical that local traditional implements are used in the process. Blades are typically unsterilized. Sometimes, not
knives, but blades of grass are used to cut the child’s umbilical cord. Such practices introduce easily avoidable infection and jeopardise the life of the newborn child with fatal diseases such as tetanus.

The pattern of child abuse has continued, the Workshop acknowledged, with the practice of handing care of the newborn child over to an inadequately trained and qualified house maid. The maid may never have had any previous experience in child care. The mental and physical condition of the maid is hardly known. Because it is a low paid and low status job, the maid typically originates from a disadvantaged situation with little formal schooling and may have suffered malnutrition and may carry a set of debilitating infectious diseases such as malaria and tuberculosis. The child is consequently abused by being negligently exposed to inadequate care and infectious diseases.

The pattern of abuse has continued with the widespread practice of female circumcision. Girls at the threshold of puberty have traditionally been circumcised as a mark of their maturity and traditional identity as mature women. Girls have traditionally been taught through home education within their families that it is right and proper to be circumcised. While many dread it, many girls also anticipate their circumcision with pride, for it marks their entry into womanhood and their acceptance as an adult woman. Practices vary, but the labia or clitorus or both may be surgically removed in a female circumcision. This is traditionally done without anaesthetics, antiseptics or antibiotics. Traditionally very elderly women, who have no appreciation of the dangers of infection from unsterilized instruments, perform the circumcision. The girls are held down, and the old women cut away. The complications can
be horrendous. They include fatal loss of blood, death from shock, fatal infections, extensive scarring, complications in child birth and extreme pain during sexual intercourse.

Another area of traditional abuse of children has been that of agricultural labour. Through home education, children are taught that they have an obligation to their parents to generate income for the family. Poverty stricken parents have hired out their children as farm hands to earn money for the family. It has been typical for the children to be terribly exploited. They have been overburdened, overworked and underfed or malnourished. In some cases, they have been indentured, i.e. sold into an extended period of work which closely resembles slavery.

A practice related to child labour has been that of using children for begging. The children have traditionally been used as assistants to help a blind beggar collect money. Some parents have made available their children, especially their girls, to beggars as assistants, and in return, they are compensated with a small fee from the beggar’s takings. The children involved have been deprived of schooling and exposed to numerous hazards and risks, including injury from traffic accidents, sexual assault and rape, exposure to weather and infections. Pneumonia is a not uncommon health hazard for begging assistants.

In addition to agricultural labour and begging assistants, children are used by parents in street trading. Again, children are taught in their home education that they have the duty to assist their parents in generating income, and the children are used in trading in the streets. Children either assist their parents, or they set up street stalls on their own or they simply roam the streets in the pursuit of trading goods to people passing by. This practice often deprives the children of their opportunity to attend school, and it exposes
them to a wide range of dangers and hazards including physical abuse, sexual assault and rape. There is, of course, no harm in a mother asking her daughter to assist in her street sales. The child abuse arises when the child is deprived of schooling, or the child is exposed to the dangers of sexual assault and physical abuse.

Early marriage is another harmful traditional practice. Through home education, girls are taught that marriage is a highly desirable, even essential achievement, and that marriage must be achieved as early as possible. This push for early marriage results in many girls entering into marriage as soon as they reach puberty.

At age 13 or 14, they are still far from physically and emotionally mature. As young wives, they are expected to bear children, and they themselves, through their home education, accept and even enthusiastically embrace this expectation. But they do not have the physical maturity to go through the trauma of childbirth. Many have prolonged and difficult labour, and many die in the process of giving birth.

Among those who survive, one of the most troublesome complications is vesico virginal festula (VVF). Because the girl does not have a fully developed pelvic region, it is not uncommon for a girl to suffer a ruptured bladder when giving birth. The pelvis is basically too small to accommodate the birthing process, and the pressure from the muscular contractions during child birth ruptures the bladder. This can be repaired surgically, and it usually is. But, the expectation placed upon a young wife is that she bear several children. Repeated childbirths and repeated rupturing of the bladder eventually results in the bladder becoming irreparable. The bladder then leaks urine constantly. This condition is VVF.
Women with VVF suffer the humiliation of constantly leaking urine and smelling of urine. Their husbands abandon them and go marry other women. Their parents reject them. They become social outcasts. One of the saddest sights in Nigerian hospitals is that of young girls with urine bags attached to them wandering the halls.

Another ugly feature of the emphasis in home education for children to earn income for their families is that of child prostitution. The pattern is typically that of an experienced prostitute recruiting girls from poverty stricken parents to engage in child prostitution. A variation of this scenario is the situation in which certain hotels give accommodation to homeless children in return for a percentage of the earnings from prostitution. This is child exploitation of the most vile kind. It virtually destroys the life chances of the child, and it perpetuates the cycle of sexually transmitted diseases, including the deadly acquired immune deficiency syndrome (AIDS), which is rampant in Nigerian society.

Nigeria is indisputably a male dominated society, and this male domination is manifested in home education and in many other ways. Parents prefer to have male children rather than females. They would rather send their sons to school than their daughters. When they are forced by financial circumstances to make a choice, they will even arrange for the early marriage of their young teenage girls in order to use the bride price or bride prize (or in western terms, the dowry) to finance the schooling of their sons.

When wives are widowed, they are often stripped of any claims to inheritance from their husband’s estate. There have been many cases of the husband’s family completely stripping the widow of all her assets and forcing her to leave the home she shared with her husband. Picture a situation in which a woman has had a considerable number of
children for her husband, the husband dies, the husband’s family forces the widow to leave and refuses to allow her to take any assets with her, not even the property which she acquired together with her husband. This is patently unfair, but the husband’s family believes vehemently that this right because they have been taught that it is right through their traditional home education.

On the other hand, in situations in which the woman has established an estate prior to her marriage, if she predeceases her husband, he claims all or her estate. This is traditional, and the belief that this is right is perpetuated through traditional home education, even though it is again patently unfair.

Through traditional home education, the disadvantaged status of women is perpetuated in the consequent attitudes of both males and females, and this cultural tradition of disadvantaged female status undermines the national process of economic and social development.

Realizing the economic risks and hazards of marriage, many Nigerian women enter into matrimony with mixed feelings. They feel ambivalent, both blessed and cursed. In their own self defense, many women establish secret accounts and acquire assets which they hide from their husband as an insurance against the possibility of his premature death. The quality of a marriage relationship is substantially diminished when there is so much fear, suspicion and mistrust.

Bride price, or bride prize, has already been mentioned. This is a form of dowry in which parents of a daughter negotiate with the prospective husband to pay an agreed sum of wealth in the form of cash and/or assets, such as livestock and property, in exchange for the hand of the daughter in marriage. Through home education, bride price
or bride prize is something which both males and females
learn to accept and expect. It is a way assuring that the
husband’s intentions are serious, that he has the wealth to
maintain a family and that the family which is handing over
the daughter receives sufficient compensation to replace the
earning power of the daughter.

The negative side of the bride price or bride prize is that
it turns the process of contracting to marry into a
commodities exchange. The daughter is reduced to goods
and chattel. It is a situation in which the woman is handed
over to the husband as if she were a cow or a goat, to be
bought and sold. Having paid a high price for his bride, the
husband sometimes thinks of his bride as a breeding cow,
and he expects her to become pregnant immediately and to
produce a male baby in the bargain, or else he will go
looking for another bride.

In addition to the onerous side of the bride price or
bride prize, through home education both males and females
learn to accept and expect that the wife’s proper role is to
remain locked in the home away from the outside world and
to remain preoccupied and contented with home duties,
child bearing, child rearing and farming. While women are
afforded the least opportunity for school and self
improvement, they are at the same time, with inadequate
preparation, assigned the task of providing the vast majority
of home education for their own children. In terms of
national development, it is a system of self perpetuation
which fails to break the inadequacies and the harm which
certain features of traditional home education engenders.

**What Can be Done to Make Things Better**

The consequences of harmful traditional home
education can be viewed from many different perspectives.
There are individual consequences relating to the well being of the individual child’s health, values, attitudes and economic opportunities and chances for a well balanced, prosperous and happy life. There are group consequences relating to the general fairness, justice and stability which a society might reasonably expect to achieve.

The welfare of a nation depends upon the well being of its individuals. If a significant proportion of the individuals who constitute the nation have been abused, made to feel subhuman, made to be social outcasts, there are obviously grave consequences for the well being of the society.

For the sake of both the individuals concerned and the well being of the larger society, steps need to be taken to eliminate child abuse in Nigerian society and especially to improve the status of girls and women.

The situation can be improved by approaching it from several different directions. Obviously one approach is that of legislative reform, and this is the responsibility of the federal government. The federal government needs to undertake structural adjustments in its policies and programs, e.g. make school for girls both fee free and compulsory. With compulsory schooling, there is a legislative basis for removing children from the streets who, during school hours, are engaged in hawking, begging, trading and otherwise soliciting. The laws regulating inheritance can be reformed to include rights for wives and women, thus giving them a firm financial basis within their marriages and families.

In addition to legislative reforms, there needs to be the creation of an infrastructure of agencies which have the authority, power and resources to implement the reforms. Agencies such as social welfare and youth services, and organizations such as Girl Guides and Boys Brigade have
important roles to play in the education of children, youth and parents.

It is arguable that the Nigerian child is abused because the Nigerian family is abused. A mother sends her child out on the streets to hawk her wares because the family is impoverished. A family sends its male child as an indentured servant to work as a farm labourer because the family is desperate for money. Young girls are hired out by their families as house maids to earn the family much needed income. Poverty within the family makes parents desperate, and it leads them to abuse their children. One of the important elements required to break this cycle of abuse is economic development which provides new opportunities for the parents and adults of the family to generate income.

Legislative protection, effective enforcement agencies and policies to engender economic opportunities are but part of this complex picture of reform. The harmful elements of traditional home education must also be eradicated through appropriate educational programs, and this will require education at the community level of all members of the family, and especially of the women. The woman is the housewife, the mother and the child carer. Women have always contributed hugely to the economic, social and political life of their communities. Women are the ones who initiate infants into the culture of their society, and this is why so much of the matter lies in the hands of women.

References
Mastery of Science Process
Skills and Their Effective Use in the Teaching of Science:
An Educology of Science Education in the Nigerian Context

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Abstract

Educology is knowledge about education, and the educology of science education is knowledge about the process of teaching and studying science in some setting, e.g. in schools, colleges and universities.

Part of scientific expertise is having the process skills associated with scientific inquiry. Expertise in science process skills is a basic and integral part of having effective science teaching skills. Such expertise obviously is not innate. One is not born with it.

To become expert, one must receive guidance in the ways of scientific inquiry, and one must conduct extensive guided appropriate practice in the use of the skills of scientific inquiry.

The development of skills in scientific inquiry requires that students of science be provided with appropriate and adequate guidance in their study of science. This guidance is to be found in the instructional programs provided by schools, colleges and universities.

Competent, adequate and appropriate guidance must meet a number of conditions. These include guidance in practical work which enhances the quality of a teacher’s
learning. As Ausubel notes, practical work creates a “discovery-reception continuum” as opposed to a “meaningful rote learning” experience. In short, practical work enhances the quality and extent of scientific understanding achieved by students.

Experiences for school students in their guided study of science should include experiences which promote process skills, such as measuring, observing, classifying and predicting. These skills are critical for the development of a worthwhile and fruitful understanding by students of scientific concepts and propositions. These experiences are also critical for achieving expertise in the meaningful use of scientific procedures for problem solving and for applying scientific understanding to one’s own life.

The Nigerian context is one in which science teaching in primary and secondary schools all too often emphasizes rote learning without sufficient meanings and connections being made by students with their ordinary lives. Students often come away from science classes with a memorized set of definitions, but without a scientific attitude, without any appreciable expertise in scientific process skills and without any substantial ability to relate scientific concepts to their day-to-day lives.

This state of affairs needs rectifying, and an obvious place to start is with the education of the teachers themselves (1) in science and (2) in the educology of science education.

Introduction

Ango and Gyuse (1987) have argued that, within the context of Nigerian culture and schools, practical work under the guidance of competent teachers with scientific equipment and procedures are vital aspects of scientific
training. They further have argued that all school science instruction should include practical work as a substantial proportion of the instructional program. The benefits of practical work are many. Practical work turns abstract concepts into concrete experiences. It engenders not only skills which are appropriate for scientific inquiry, but it also inculcates attitudes and conceptual perspectives which are necessary for skilled scientific inquiry. Practical work is especially important for Nigerian children because so many come from backgrounds in which a scientific viewpoint and empirical experimentation are simply not part of their cultural heritage.

Ausubel (1968) supports this view that practical work is extremely valuable in promoting the development of meaning and understanding. He maintains that practical work enhances the quality of a student’s learning. In his words, practical work creates a “discovery-reception continuum,” as opposed to a “meaningful rote learning” experience. He argues that process skills, such as measuring, observing, classifying and predicting, are crucial for the development of a fruitful understanding of scientific concepts and propositions and for a meaningful use of scientific procedures for problem solving and for applying scientific understanding to one’s own life.

It is appropriate to conceive of teaching as not only giving guidance and providing counselling, but also as skillfully constructing situations in which students may engage in guided study with a view to achieving intended learning outcomes. To this end, Ango and Gyuse (1987) have suggested that teachers should “not do all the telling, discussing and doing” in science classrooms. They advocate that school teachers not only initiate action and demonstrate skills, but also provide appropriate practical
work and experiences for their students. In doing so, teachers need to exercise their creativity and utilize what is available in their environment through improvisations. Within the context of Nigerian schools, this is a necessity because of the scarce instructional materials, equipment and resources available to schools. Addressing the issue of teacher improvisation, Balogun (1982) advocates that Nigerian school teachers look in their environment and local setting for look alike and substitute materials. Others concur, e.g. Olademeji (1978), Ango (1982) and Oludotun (1986).

**Process Skills Which Are Important in the Process of Teaching and Studying Science**

There are many process skills encompassed in the conduct of scientific inquiry. It is a complicated business, and it is not appropriate to teach all process skills at once or to teach all of them at all age levels of students.

The concept of the spiral curriculum provides an appropriate guide for the teaching and studying of process skills in science. Appropriate selections of science process skills can be taught and studied in the early years of primary school. The young students can be given the opportunity to observe, handle things and explore the environment. The basic learning which pupils achieve from these initial experiences can be used as a basis for building a more extensive understanding of science process skills in the later years of primary school and on into secondary school.

Within Nigerian schools, one of the major deficiencies which sadly arises out of the teaching and studying of science is that students develop very limited understanding of scientific concepts. For example, they can write a definition for osmosis, but not associate any meaning with
the definition. They can say and write the words, “An acid is a proton donor,” but they attach no meaning to the words.

For the teaching and studying of science to be of substantial value, the students must be able to apply scientific concepts, procedures and attitudes to their wider life. The value of learning science is greatly enhanced when the students are lead into an extensive understanding and a practical conception of how scientific concepts and principles apply to themselves personally, to their families, their communities and their nation. A restricted and narrow understanding of science without expertise in the associated scientific skills is an understanding with very limited value.

Lamentably, in Nigerian schools, sometimes the teacher is the major impediment to the process of developing scientific skills. Teachers sometimes simply lack expertise in the science process skills themselves because of inadequate and inappropriate training. In their preparation to become professional school teachers, their guided studies of science have been deficient. Also, their guided studies of the educology of science education, i.e. knowledge about the teaching and studying of science, have been inadequate.

Among the science process skills which should be engendered in the teaching and studying of science are those of measuring, observing, classifying, inferring, predicting, communicating, interpreting data, making operational definitions, posing questions, hypothesizing, experimenting and formulating models. School teachers need to be expert in these processes, and they also need to be expert in the teaching of these processes.

From range of process skills associated with scientific inquiry, some of the skills can be rated as being the very basic ones. Students should be introduced to these skills early in their school experience because so much of their
success in subsequent guided studies requires a sound understanding and appropriate use of these skills. This basic set includes the skills of observing, measuring, classifying, inferring and communicating.

Reports of Educological Research Findings on Nigerian Teachers’ Mastery and Effective Use of Science Process Skills

For some years, Ango and a number of post graduate students at the University of Jos in Plateau State have been conducting educological research aimed at determining the degree to which school teachers in Nigeria have mastered and can use scientific process skills. This research has been conducted on the assumption that mastery of scientific process skills by science teachers is a prerequisite for science teachers to be able to foster those same skills in their students. A second assumption is that this expertise alone is not enough to do the job adequately. Teachers must also have expertise in the educology of science education. That is, they must also be able to make appropriate instructional provisions for their students to engage in effective guided studies of scientific concepts, propositions and procedures.

The Nigerian National Policy on Education (1981:5) properly places a significant emphasis on the importance of students acquiring skills. The objective is stated as follows:

The acquisition of appropriate skills, abilities and competencies both mental and physical as equipment for the individual to live in and contribute to the development of his [sic] society.

The importance of the role of process skills in the teaching and studying of science is widely acknowledged by experts in the field. Brown and Jegede (1982), for example, argue for the value of learning process skills in order to develop expertise in problem solving. Of necessity,
school teachers necessarily play a crucial role in assisting students to acquire scientific process skills. There is a prima facie case that teachers need to acquire the skills of science in order for them to be in a position to foster the same understanding of those skills in their students. This is but one condition for success. The other is that teachers must acquire expertise in the effective teaching of science. They must know both science and the educology of science education.

In order to make it clear what is meant by basic process skills of science, a selection of these skills is explicated as follows.

1. **Process Skill: Communicating**

   Communication is a critical aspect of scientific investigation. Without it, scientific investigation would be pointless. No one, other than the original investigator would be able to know the results or findings of the investigator. Thus, the skill of communication must be included in the early stages of teaching and studying of science. Thoughts, ideas, research findings and all sorts of vital information need to be communicated for awareness, learning, instruction and other purposes. There are many means of doing so, for example, speech, writing, pictures, diagrams, graphs, mathematical formulae, tables and figures. The importance of communication is widely acknowledged by experts in the field, for example,

   Observation and communication ... are two process skills which are absolutely essential if an individual is to relate to the physical world. [AAAS Report, 1965:17]

2. **Process Skill: Observation**

   Observation is another one of the most basic and first used process skills of science. Almost every activity of
science begins with observation. From nature to the test tube and to experiments in the laboratory, observation must be used.

A useful characterization of scientific observation is given by Harlen (1987:183):

- taking information about all things around, using the senses as appropriate and safe; identifying similarities and differences;
- noticing details and sequence; ordering observations.

Observation alone is not necessarily an accurate and reliable activity for gathering data. Observers often “miss seemingly obvious things” and “invent quite false observations.” Nevertheless, the skill is valuable for and crucial to both the process of conducting scientific inquiry and to the process of teaching and studying the ways of science.

Dang (1991: vi), in investigating Nigerian teachers’ mastery and use of observation processes in biology teaching, discovered that teachers scored reasonably well on mastery and effective use of the skill (64.6% and 60% respectively). Contrary to expectations, the less qualified teachers showed higher mastery and effective use of the skill. National Certificate of Education (NCE) holders showed the least effectiveness in the use of the skill. The teacher’s mastery and effective use of observation were linked with age, qualification (i.e. level of school, college or university attained) and teaching experience. It was found that there was a significant relationship between these three variables and the level which students attained in mastery and use of the skill.

3. Process Skill: Classification

A clear statement of what constitutes the process skill of classification is that of Ndu (1988:7): Classification is the “process of sorting, grouping and arranging on the basis of
similarities and differences.”

Classification as a science process skill is important because it contributes to the extent to which students understand, conceptualize and attach meaning to scientific ideas. Classificational keys are important for conceptual organization. They facilitate students’ understanding and promote sound conceptual structure by allocating items within a conceptual scheme. Classificational keys also facilitate students’ ability to retrieve information from a conceptual scheme (Kahl, Bulletin No. 161, Wisconsin).

To attain competency in the use of classification means that students are able to conceive of order and add meaning to their experience of the world around them (Tokara, 1991:47). Tokara (1991: xi), in addressing the issue of mastery of classifying in Nigerian schools, found a positively significant relationship between student mastery of the skill and mastery by the teacher of the skill. Tokara also found a significant relationship between the teacher’s ability to classify and the teacher’s academic qualification, but not the gender of the teacher.

4. Process Skill: Manipulating

Conceptions of contemporary best practice of teaching and studying emphasize that students should be involved in the study process through manipulation of equipment and objects and through participation in any scientific activities pertinent to a given situation in effective guided study.

The “child’s education” must be based upon “the strategies of inquiry that facilitate the adaptation of knowledge to new demand” (Hurd, 1964). To almost all experts and proponents of best practice

Good science teaching must be based on observation and experiment. There can be no substitute for these. [UNESCO, 1962: 9]
Pam (1991: vi-vii) conducted an investigation in Nigerian schools of the mastery and effective use of providing opportunities for students to manipulate materials. Pam found a significant positive relationship between teachers’ mastery of manipulative skills and academic qualifications. However, no significant relationship was found between the teachers’ expertise and gender. Also, no significant relationship was found between teachers’ mastery and students’ attainment of the skill. Pam concluded that the teachers’ effective use of the skill is nonetheless critical to the effective teaching and studying of science.

Ango (1986: 35) notes the importance of practical experiences in science teaching and learning in this way:

A learner acquires more in a science learning situation when he/she is given the chance to perform certain activities which include, manipulating apparatus, classifying data, designing experiments, ... [forming hypotheses] to making inferences and verifying results.

5. Process Skill: Measuring

Learning by students is facilitated by the process in which they are informed with feedback about their solutions to problems. With feedback, they can rework problems, formulate new problems and solve them. One of the main ways in which students receive feedback from their scientific inquiry is through measurement. It is a science process skill which gives students an opportunity to appraise themselves realistically. Adetula (1981:15) states clearly the important role of measuring:--

Nearly every aspect of contemporary civilization depends on the concept of measurement and its application, ranging from the relatively simple measurements needed for the manufacture of clothing to the highly complex measurements required to send a space craft into orbit.

Measuring involves evaluation, which entails value
judgements. James (1963: 249) defined measurement as a process which involves comparison of an entity with a standard unit of measurement which has been arbitrarily determined.

Timothy (1992: v-vi), conducted an investigation of Nigerian teachers’ mastery and effective use of the process skill of measuring in the teaching of integrated science in junior secondary schools. The findings showed an increase of mastery of the skill with the age of the students. It also showed no significant relationship between the teachers’ mastery and the students’ mastery. Finally, experienced and professionally qualified teachers showed mastery of the skill more than the inexperienced teachers.

6. Process Skills: Questioning

Posing questions is one of the most commonly used process skills of scientific inquiry. It is also part and parcel of everyday classroom teaching and guided study activities. That is, questioning is an important scientific process skill. It is also well established in educology as an important effective teaching skill and an important effective guided study skill.

Whether initiated by teacher, student, or both, posing questions establishes a critical basis for classroom communication. Even if a science classroom is completely devoid (as some Nigerian classrooms sadly are) of apparatus and chemicals for demonstration and experimentation, teachers and students can still ask questions of each other. And the questions constitute an important avenue for teachers and students to make science lessons lively and involving.

A number of educologists have identified the value of teachers posing questions for their students. For example,
Kwatishe (1992: 15), notes that “questions have distinct characteristics, serve various functions and stimulate different kinds of thinking” in students. Rothkopf (1972: 87) maintains that posing questions to students has the effective of improving their learning performance. Andre (1979: 281) argues that when teachers pose questions to students, they give direction to students “to examine instructional material or ... [their] memory of it and to produce some [meaningful] response.” Akinmade and Mang (1991: 2) view questions as “a useful stimulus to plan and execute investigations ....” Campbell (1987:15) sees questions as guides which give direction to decision making and action. Martland (1975: 74) argues that one of the important values of teachers posing questions to students is that the questions help students to focus and clarify their thoughts and conceptions.

Jacobsen et al. (1984: 144) provide an appropriate summary of the value of teachers asking questions of students:--

A cornerstone of any effective teaching technique is classroom questioning. It is a critical skill that can be used with any subject matter area, any grade level, and with any given teacher personality. It promotes involvement, enhances learning, requires little effort, and motivates the students. It promotes a shift from teacher-centred to a student-centred environment.

Kwatishe (1992: xi-xii) investigated teachers’ mastery and effective use of the skill of questioning in Nigerian classrooms. A significant relationship was found between teachers’ mastery of the skill and their professional academic qualification. This finding implies that for teachers to exhibit the art of questioning they must be trained in the art. That is, it must be included as part of their study of educology, as well as of their study of science. Kwatsihe also found that teachers’ competence with the
skill of posing questions had no significant relationship with their years of teaching experience or with their gender. On the other hand, it was found that there was an indication of a general influence of the teacher’s skill upon the students’ performance, i.e. attainment of intended learning outcomes.

Not all types of questions are always useful in every instance of teaching and guided study. Types of questions should match the level of understanding and reasoning ability of the students. In addition, some questions only promote recall of information and rote learning with very limited comprehension of meaning on the part of the students. Other questions, when framed properly, promote higher levels of reasoning, thinking and analysis. Within the teaching and guided study of science in schools, teachers need to achieve a balance of questions which call for both simple recall and higher orders of reasoning and problem solving. To be effective in the task of promoting extensive and useful scientific understanding, attitudes and skills, school science teachers necessarily must develop a range of skills in relation to posing appropriate questions to students. As Farrant has stated, the appropriate use of questions by teachers within the classroom setting is

A highly complex skill requiring an understanding of people and group psychology as well as a thorough knowledge of what is being taught. [Farrant, 1980:191]

7. Process Skill: Organization

Science is characterized as being systematic because of its organized, special approach to investigation and problem solving. Guruge (1977:5) defines organization as a social process which is designed “to ensure cooperation, participation and intervention of others in the effective achievement of a given determined objective.”

The skill of organization as a teaching process which
uses school laboratory experiences for science students is summarized by Soar and Soar (1979: 97-120). They identify three phases of organization, or perhaps they are more properly conceived as three dimensions of classroom organization, i.e.

... getting students involved, controlling disruptive behaviour and regulating students movement

Organizing student thinking tasks. ... Organizing methods by which learning tasks are selected and implemented.

Organizing students thinking process. ... Cognitive level thinking encouraged in laboratory and the kind of freedom students have to explore ideas.

Soar and Soar are addressing the issue of organization as part of the educology of science education, i.e. as knowledge about a set of teaching skills which are effective in the teaching of science.

Al-Kamu, (1992: vi-vii) conducted an investigation in Nigerian schools of teachers’ mastery and their effective use of the skill of organization in the teaching and guided study of biology. It was found that most teachers acknowledged the importance of organization. In the sample, 87.7% of the teachers indicated an awareness of the skill as important and useful in the teaching of biology. No significant relationship was found between the organizational competence of the biology teachers and their levels of qualification, teaching experience and gender. Al-Kamu compared the frequency of use of the skill by biology teachers with the learning achievement of biology students. It was found that those students who experienced frequent use of organizational skills by their teachers achieved higher levels of achievement in their biology practical test.

8. Process Skill: Experimentation

For Gagne (1963:145), expertise in scientific inquiry is
the ultimate objective of science education. His conception of teaching and conducting guided study of science and his conception of scientific inquiry and the nature of science are rooted deeply in the activities and experiments which students under guidance undertake. Scientific inquiry is constituted by

A set of activities characterized by a problem solving approach in which a newly encountered phenomenon becomes a challenge for thinking. Such thinking begins with a careful set of systematic observations, proceeds to design the measurements required, clearly distinguished between what is observed and what is under ideal circumstances, brilliant leaps, but always testable and draws reasonable conclusions.

Extending on Gagne’s conception of appropriate circumstances for the effective teaching and guided study of science, Ausubel (1968) argued that such teaching and studying should lead to the students achieving meaningful learning vs. rote learning. With meaningful learning, students have extensive mastery of a range of useful scientific skills. With rote learning, they are able only to write definitions and lists, but they are not able to solve problems. Obviously the business of teaching and conducting guided study of science should be aimed at achieving meaningful learning.

Choji (1992: vi-vii) conducted an investigation of teachers’ mastery and effective use of the skill of experimentation in Nigerian classrooms. It was found that students’ experience with apparatus and experiments had a highly significant relationship with their understanding of science and of experimentation as a process of science.

The challenge within Nigeria is that of conducting effective teaching and guided study of science with inadequate or nonexistent resources, such as apparatus, illustrative materials and chemicals.

Scientific inquiry is empirical in nature. Through observation and experiments, data are gathered. Once collected, the data need interpretation so that meaning and sense can be related to the data. Interpreting and inferring are critically determinant activities of science. Information gathered from scientific investigation usually is not readily useful and meaningful to other scientists and the wider community. Data have to be analyzed and interpreted, and inferences have to be made to produce and extend knowledge which is to have usefulness and meaningful applications for life.

Fom (1991) undertook research on teachers’ mastery and effective use of the skill of interpreting data in the teaching and guided study of integrated science in Nigerian schools. It was found that inspite of teachers being aware of the importance of the skill and having a high degree of mastery of the skill themselves, their students indicated that they rarely used the skill. No significant relationship was established between teachers’ experience and their expertise in the use of the skill.

The value and the necessity of the skill of interpreting data needs to be given greater prominence. It needs to be given more prominence in the process of teaching and conducting guided study of science in Nigerian schools. It also needs to be given more prominence (1) in the teaching of science in teacher preparation institutions and (2) in the teaching of the educology of science education in teacher preparation institutions.

Conclusion

Process skills of science are basic and critical
components of the process of conducting study of science under the guidance of a teacher. For many years, now, Bloom’s taxonomy of educational objectives has received wide recognition, and it has been used in many curriculum design and development projects. Bloom identified three major realms or domains of intended learning outcomes: the cognitive domain of knowledge, the affective domain or attitudes and the psychomotor domain of manipulative skills. These categories have stood the test of time and acceptance by experts, and they provide an excellent conceptual framework for revision of curriculum so that it incorporates the basic scientific process skills.

The sure route to the attainment by school students of mastery of the basic skills of science is through having adequate teachers. The teachers must be experts in two areas. They must be masters of science process skills. They also must be masters of effective teaching practices which optimize the chances of students effectively studying and learning the skills. The process therefore begins in the institutions which prepare candidates for professional school teaching. The expertise of the professional teachers flows on to the school science classrooms. The other part of this process is much needed inservice courses for teachers who are already employed in the schools. It is obvious from recent educological research that teachers already in practice should be given inservice training and retraining in the art of proess skills use and teaching. Brown (1977: 83) appropriately states that

If inservice teachers are to be held accountable for identifying and teaching a process component of science, then they should be provided with the skills necessary to execute this task.

The obvious avenue of enabling school students to achieve expertise in science process skills is through appropriate preservice preparation and continuous inservice retraining
of science teachers. This requires guided study by teachers of science and of educology of science education.

References


Ensuring and Maintaining Quality in Schools through Central Regulation: Some Lessons from England and Wales (An Educology of Quality in School Education)

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Abstract

Education is the process of teaching and studying something in some cultural, social and physical setting. Educology is knowledge about that process. The authors of this article focus their efforts on extending the educology of school quality. They report on recent efforts within England and Wales to improve education within schools through a process of evaluation provided by experts external to the schools. They find that the evaluation process has beneficial effects, and they recommend that the evaluation process be supplemented with a follow-up process which plans and implements measures for school improvement.

Introduction

The problem of ensuring quality in mass education systems is as old as the systems themselves. Responses to this problem reflect the political and cultural organisation of different nation states. In the USA the problem has to be dealt with at a local level. The federal government is very restricted in powers in the field of education and social policy. These are matters reserved in the first instance to the individual states, and they are then devolved to even more local levels (counties, municipalities and school districts.
within municipalities). The situation in Europe is different. Although in Germany the role of control and regulation is devolved to a regional level, the land, central government reserves to itself significant power over education. In the United Kingdom, although there is some administrative devolution to local authorities, and in recent years to schools themselves, the central state (i.e. the national government) has reserved the right to regulate and control most aspects of education.

There has been increasing concern since the middle 1970’s over the quality of education offered in schools in many of the developed countries of the west. International comparisons, latterly with the “tiger economies” of the East, have led to an increasing concern for the outputs of schools and to using assessment and testing to establish public accountability. What has been, and continues to be, challenged by some politicians, policy makers and academics is the efficaciousness of schools as organisations. A powerful consequence of this has been the use of a model for measuring school performance entirely as matter of outcomes. It is a model, which at best minimises the effects of context and ignores processes. This focus on outcomes only is more a feature of USA policy. In Europe the use of national school inspection has offered some focus on the processes of schooling down to the level of the classroom. The most recently developed system of inspection is that used in England and Wales, and it is with this system as a model which we are concerned. We argue that this is not merely a parochial interest of England and Wales. On the contrary, there has been considerable interest in the English and Welsh system among other school inspectorates in Europe and to some extent in parts of the USA.

The John F Kennedy School is a bit further afield than the schools inspected by the Office for Standards in Education.... The three
person inspection team made its three day visit at the invitation of education officials pushing for periodic British style external reviews of US schools now generally accountable only to local schools boards…. Some American educators want regular inspections on the British model. In Boston, school officials have approved an “accountability plan,” although it uses outside teams of educators rather than professional inspectors to review schools. [Marcus, 1998]

The Inspection System in England and Wales

From early in the nineteenth century, inspection by the state had been a feature of both English and Welsh schools. It has also been a feature in schools within Britain's then colonies, for instance Western Canada, Australia, and Ireland. This system deployed professional inspectors largely drawn from the clerical and new professional classes. Bruce Curtis' (1992) study of inspection in Western Canada documents the nineteenth century concerns for the kind of person an inspector should be. In Ireland, the appropriate people for the position of school inspector were characterised as "the Right Kind of Persons … people capable of social intercourse with the gentry," what Curtis in the Canadian situation calls "choice men." In England and Wales, from the 1830's until the 1992 Education Act, a relatively small, never more than 500, elite group of national inspectors (Her Majesty’s Inspectors of Schools, HMI), were responsible for inspecting schools and reporting on the system. The 1992 Act replaced the old system with a new office of state; The Office of Her Majesty’s Chief Inspector (OHMCI). The change was breathtakingly radical. The role of Office of Her Majesty’s Chief Inspector was to give contracts to private teams, operate quality control and assurance, collect, analyse and comment on data arising from the inspection process and report on the health of the system. It was argued in the lead up to this change that
regular, rigorous and open inspection would lead to school improvement. The publication of school reports was deemed to be an important aspect of the enterprise. It was conceived as being vital to ensuring not merely improvement, but also to driving out of the system of “bad schools.” It was a deliberate policy of “naming and shaming,” which, it was anticipated, would result in parental rejection and boycott of the “bad schools.”

The creation of the organisation and its ethos was the responsibility of the first Chief Inspector, Professor Stewart Sutherland. He made it a matter of urgency that the new organisation should be independent, and be seen to be independent, of the DES, later named the DFEE, and now named the DFES. He recognised the power of the very special statutory and constitutional position of OHMCI in that it was a non-ministerial department of state. This gave the Chief Inspector an almost unique position in that although reporting to parliament through the Secretary of State for Education he was not a member of the Secretary of State’s department. This independence enabled the Chief Inspector to comment critically on the condition of education in England in any way that he thought fit. To this end he instituted the annual lecture and continued the publication of an annual report, an innovation of the last Chief Inspector of Schools, Eric Bolton. He also secured undertakings that inspection reports would be published to a timetable determined by the Chief Inspector and without editorial review by ministers or other officials. Sutherland further asserted the independence of his department from the DES/DFEE by relocating from Sanctuary Building back to Elizabeth House, the river Thames providing a real geographic barrier between the two departments and operating as a powerful symbol of their separation. “I
marched them out of Sanctuary Building and across the river to Elizabeth House to show our independence.” (Interview with Stewart Sutherland)

The origins of inspection in England, to a large extent, lie in seeking compliance to regulations, to ensuring accountability and in maintaining control. The memoirs of inspectors confirm this. The role of HMI during the nineteenth and earlier part of the twentieth century was to ensure or enforce compliance of elementary schools to central regulations. Sneyd-Kynnersley’s (1910) account of his work up to his retirement in 1907 provides evidence of this. Clark’s (1976) memoirs of his work as an assistant inspector before WW2 show him behaving as an inspector in a strikingly similar way to his earlier colleague. Like Sneyd-Kynnersley he tests the pupils reading, writing and numerical skills and checks that the school is following central regulations. It was to this central idea of regulation that Sutherland returned inspection.

The new system was to be different from that operated recently by HMI, in that its focus was to be the inspection of all schools on a four year cycle. It seems that Sutherland did not see his organisation as replicating HMI, but as akin to the other regulatory bodies set up around the same time, to oversee newly privatised industries such as gas and water. In fact Sutherland created the acronym OfSTED, Office for Standards in Education by analogy with OFGAS and OFWAT. However if OfSTED was to meet its mission of inspection for improvement, neither the sort of crude regulatory system of the nineteenth and early twentieth century nor the post complaint method used by OFGAS nor OFWAT would be sufficient. Effectively Sutherland created an inspectorate that could operate as a “policy police force.” The new OfSTED is a powerful regulatory body
dedicated to regulation within the state and in possession of what Hood et al. (1999) called "nuclear weapons," the power to name and shame. OfSTED then was developed into a complex organisation incorporating a range of functions. A major one was the production of inspection documents directing and guiding the private inspectors’ behaviour and controlling and assuring the quality of inspection. We will return to the nature and significance of this documentation later.

Professor Sutherland established an independent and unique method of inspection with a unique and explicit mission to bring about school improvement. If this system was to work, the role of the Registered Inspector had to be rapidly established, and it is to this group we now turn. In doing this, we will draw on a variety of sources including data collected during an ESRC funded project investigating the relationship between inspection in primary schools and national policy making.

**Registered Inspectors**

Registered Inspectors have a linchpin role in making the system work and a critical role in the production of inspection knowledge. The Registered Inspectors in our sample come from similar professional backgrounds. They have been LEA advisors/inspectors with a background as primary school headteachers; others have a background in higher education, teacher training, having previously been teachers, and a final group are former HMI.

Interviews with large contractors and with senior officials from OfSTED indicate that this is typical of Registered Inspectors nationally. Our sample and the evidence of other studies show that Registered Inspectors and their team member inspectors have appropriate
experience and qualifications. In the opinion of a Senior HMI, Registered Inspectors have done more inspections than an HMI ever did and as a consequence may now be seen as the repositories of inspection experience.

Registered Inspectors make the system work. The stress that schools suffer before, during and after inspection has been the subject of much research and comment. (Duffy undated, Jefferey and Wood, 1996, Brimblecombe et al., 1996, Woods, Jefferey, Troman and Boyle, 1997). There has been little comment or research on the workload and stress that Registered Inspectors are subject to before, during and after the inspection. Our informants make the point that the total responsibility, legal and professional, rests on the shoulders of the Registered Inspectors. “I’ve no intention of going on, I’ve 18 months left, and I shall not do any more, it’s too much.” (Registered Inspector)

The tasks that face a Registered Inspector are daunting. They must manage a team skilfully such that no complaints of professional discourtesy or of idiosyncratic behaviour arise. They must form working relationships with headteachers, governors, school staff and parents. And they must report orally to the headteachers and chair of governors at least on the results of inspection at the end of the inspection process and produce a report conforming to OFSTED’s stringent requirements within six weeks!

when you are inspecting you are really under pressure all the time and you've got to get it right. You can't guess things, you've got to get the evidence. It's eight in the morning until eight at night, then writing up, and it's a very intensive period, and I think they were probably right to put us under that similar pressure you know, and if you couldn't hack it well you know. [Registered Inspector]

In considering the problem of inspecting and the complex relationships that are involved, Registered Inspectors point particularly to the value of experience in
ensuring that inspection is properly conducted. One of our informants with lengthy experience as a primary school headteacher and then as a senior LEA advisor was insistent that relevant experience was essential.

My perspective is that I don’t think it’s right that people who have mainly taught in secondary schools or the reverse, who have mainly taught in primary, should go into the other phase of education with the right to criticise along the lines that they do. Now I’m not naive enough to believe that you’ve got to do something in order to be able to criticise, I’m not saying that. But the sort of activity that inspection of a primary or secondary school involves is so fine-tuned and it’s so, the judgements that you have to make are, I don’t want to use the word severe, it’s not severe, are so important - I can’t think of a better word than that at the moment although there is a better word - that you really do need some sort of background in order to be able to make them. So I’ve got a very strong view on that. [Registered Inspector]

The general opinion of this group of Registered Inspectors was that “doing” the inspection professionally and sympathetically and making proper judgements are predicated not just on previous experience but the amount and quality of it. “A life time’s experience” and a range of work in schools, advisory services and higher education were deemed to be what was required. One informant made this very explicit.

I spent all my life in primary schools, all my professional life, how much more difficult must it be for those people who after one-day training have to come in to inspect primary schools? If you want somebody who is doing it properly, they can’t be that ... it’s experience that counts. [Registered Inspector]

It [relevant experience] is essential for your credibility to primary schools. They want to know you’ve been a head, know what it’s like. [Registered Inspector, previous primary head and LEA officer]

Having relevant experience makes Registered Inspectors not simply more acceptable to schools and sympathetic to
them, but enables them to exercise professional judgement. One confident informant had been the headteacher of two primary schools and had then spent some 15 years as a local authority advisor/inspector.  

I feel I’ve got a lot of professional independence and my line has always been to do it…. I do inspections in the way I think they should be done which is on a consultative basis which of course as you know what comes out from OfSTED is sometimes contradictory, I just say to myself I must do it the way I think best. [Registered Inspector]  

A Registered Inspector who works with a large local authority team, often with members known to each other, aimed always to apply the “Framework” consistently, rigorously and fairly. His concern was to use the “Framework” as a way of making sure we are actually answering those questions so that, come to the end of the inspection, I’m confident we have answered all the bits we have to … and in terms of interpretation, I think we have a corporate view of how to interpret it because of the way we’ve worked together. [Registered Inspector]  

This is not to say that Registered Inspectors operate in a maverick manner, interpreting OfSTED documentation in an idiosyncratic way. Rather, they feel their experience enables them to use it in a productive and professional manner. For instance, discussing the revision of the Framework and Handbook, one informant stated:  

I think the new Framework is better than the old, there’s no doubt about that, I’ll start by saying that. More manageable … but the old was a really good book. It picked up all the important things about schools. [Registered Inspector]  

The following comment makes the point that the Framework and Handbook must be followed as precisely as possible but that does not preclude interpretation.  

You’ve got to put into your report all the things that are clearly outlined in the framework. I mean you won’t get away with not doing that, so in the one sense, that’s quite a proper structure
because you’ve got to treat schools the same as far as you can. But I think there is an interpretation. [Registered Inspector]

Rather like the mode of inspection described by Sneyd-Kynnersley and by Clark, Registered Inspectors have to follow a strict regime set out in regulatory documentation. OfSTED produces the documentation and insists that it is used under stringent guidelines. Even so, Registered Inspectors have a limited capacity to interpret the documentation and do so, as did many HMI inspecting under the Revised Code.

The way I read what OfSTED are saying to me is that is to make it developmental; they did say that right at the beginning, it’ll waste so much time and effort if it is only, say, as a way to tell political masters what schools are like. Looking at a school after the Head’s been there 2 years, I seem to have got quite a lot of schools where the Head’s been there 18 months or so. And one of the things I feel I’ve been able to do is really get to grips with what the Head feels about the school, to say what we feel about it, and I am sure that is helpful to the Head, but its not always in OfSTED. [Registered Inspector]

Registered Inspectors are prepared both to do the hard work and to interpret the documents to “get the best deal for the school” because they are convinced that inspection can and should lead to improvement. Although many of the sample had been a little sceptical of inspection generating improvement when they first began to inspect, they all felt that an objective and rigorous report on a school would be useful.

I do think it improves practice. I think what it does, it helps schools to focus on things that are really important. I think the framework is helpful before the inspection begins in helping those schools to focus on it. [Registered Inspector]

Having completed a large number of inspections, they are convinced of OFSTED’s mission. It is interesting here to note that Roy James, recently retired HMCI Wales, argued against the new system at first, but now declares that
there is something in it. Inspection, in his view, will lead to school improvement.

Although Registered Inspectors perceive the possibility of inspection leading to improvement, they point to a lacuna in the system. There is a requirement for the progress of schools post inspection to be monitored. In the case of schools deemed to be satisfactory, this seems not to be made a priority. More significantly, in the view of our informants, schools in special measures receive support, help and guidance in meeting their needs, but schools which are “said to be OK don’t get much if any.” “I try to avoid serious weaknesses, there are ways round it, either put them in special measures or make them satisfactory ... they only get help, extra funds for measures.” [Registered Inspector]

They point to two different things. First there are only minimal extra resources to support school development and improvement after inspection, unless the school is deemed to be failing. Secondly they understand the difficulties that LEA’s have in meeting the advice needs of schools because of the way in which they have been stripped of power and resources since 1979. It is difficult, they believe, to identify who can fill the gap, but that without support and monitoring, how will schools use inspection to improve?

There has been anecdotal evidence of Registered Inspectors seeking to offer schools follow-up advice, but our informants accept that the distancing of inspection from advice is the best thing to do. “There should be [advice], but it’s got to be somebody who wasn’t involved in the inspection.” [Registered Inspector]

The same Registered Inspector spoke of a headteacher who had sought follow up advice from him. He had refused, but explained why the head had made the request.

He [the Head] thought the people who’d made the identification were best placed, and, I mean, perhaps that’s right too. But on the
other hand you can’t put the two together, but somebody else could probably do it, and that would be good. If we could do an extension of inspection into the advice mould, but done by other inspectors, that would be good. [Registered Inspector]

Registered Inspectors are convinced that inspection can lead to improvement but feel that, by itself, it is not enough.

The Responsibility of Inspectors

We now turn to a conceptual model of inspection in current use. (Fitz and Lee 1996) We draw here on the work of Basil Bernstein (1995, 1996), which posits fields with their own rules of access, regulation, privilege and specialised interests. The definition of what counts as “good” and “poor” education and educational practice is generated in what Bernstein calls the Official Recontextualizing Field. We locate OfSTED and DFEE/DEFS in this field. From here the definitions and accompanying regulations, the “official educology,” emanate. In the case with which we are dealing, this discourse is transmitted via the Framework documents. This documentation, “Handbooks for the Inspection of Secondary, Primary and Special Schools” (HMSO, 1995) is claimed by OfSTED to be “consensual” and “the criteria for school evaluation it contains are widely accepted as valid and reliable.” (OfSTED, 1998) It is through this documentation that OfSTED direct guidance and advice at the Registered Inspector. But, it is in the field of inspection, the field of educological recontextualization that the “official educology” is activated. The responsibility of Registered Inspectors to ensure compliance to regulation is recognised in the recent document setting out policy and practice for the “Literacy Hour” (DFEE, 1997), for instance. Registered Inspectors occupy this field. In operating in it, they have the responsibility not merely to transmit the
educology by the stringent application of regulations, but at its edges to re-interpret it such that its goals can be met. As we noted above, the improvement model proposed by the centre is a top down model, and the chances for the success of such a model is deeply problematic. Also, given the fact that OfSTED “knows” what to evaluate and inspect gives the implication that OfSTED has in mind a set of goals towards which schools should be working. Registered Inspectors can be seen as actors attempting to ameliorate the dictates of the OfSTED so that schools embrace the goals, accept the model and use it to reach the goals.

The problem for Registered Inspectors is that they have responsibility, but they are officially excluded from the field in which educological prescriptions and regulations are defined. Our data show that Registered Inspectors are dissatisfied with this circumstance. They are wedded to the ideas of improvement, but they are also acutely aware that achievement of improvement is deeply problematic. They therefore have recourse to interpreting the documentation so that it becomes more usable and meaningful for schools. This involves, as we noted above, “getting the best deal for the school.” Each revision of documentation by OfSTED has led to increasing regulation and control. OfSTED is aiming to do two things: (1) first, to guard against idiosyncratic judgements and thus produce fairness between schools and (2) second, to reduce the capacity of Registered Inspectors to interpret the documentation in order to prescribe educology and maintain control. In the case of the latter aim, it is worth noting that the control of inspectors has always been a problem for the system.

There came a new Code, that was to put elementary education on a really satisfactory basis. This was so common a phenomenon that we hardly turned our head to look at it. [Sneyd-Kynnersley, 1910]
The lacunae which Registered Inspectors point to are (1) the support and guidance for meeting the Key Issues in their reports, (2) the personnel who are to have the responsibility to monitor school action, and (3) the procedures to be followed in the monitoring and improvement process, i.e. the how of the process. Registered Inspectors are acutely aware of the “problem” that action planning after inspection causes for schools who have had a “reasonable or good” rating from OfSTED.

This is recognised by Peter Matthews of OfSTED, as noted above.

I think, yes, it would be a good idea if we went back in after 6 months to review it. You could have the sort of framework I suppose you could confirm changes. I mean HMI aren’t able to do it. [Registered Inspector]

All of our informants felt that monitoring was not done and the action planning was unlikely to lead to the improvement that the system of inspection promised. It was also the view of some of our headteacher informants. They felt that having prepared for inspection and been through it, some improvement had come about, but they wanted to know how they could be helped through the next stage.

They ought to have a system, didn’t they, for doing it, a sort of framework for them to work for.... I always have this question, you know, what happens after an inspection, and I’m always never quite sure what I’m saying, but I’ve taken to saying, well, it’s the responsibility of the LEA, because the question is from big people in the business, they don’t ask it this way, but what happens if we don’t do anything, if nothing’s done about it? [Headteacher]

What is interesting here is that Registered Inspectors are not trying to shirk responsibility, but rather, to take more responsibility on the principle that it will improve the school system.

I guess that we’re in the best position really to be consultants to schools…but It’s not allowed. [Registered Inspector/Small Contractor]
This view that monitoring and follow up is a problem is shared by many headteachers and by the bigger contractors. Contractors point to the same “gap” and feel that at least some of the Registered Inspector force could fill it. It is a puzzle as to why this obvious “hole” has not been filled. A move to allow or encourage Registered Inspectors to monitor school action plans and/or offer support and advice would give them access to the field occupied by OfSTED. They would be in a position to engage in the Official Recontextualization of Inspection policy, rather than as now being in a position of being consulted as and when it is felt necessary.

The Question of Improvement

The inspection process and the report are clearly intended to provide a rigorous evaluation of the school, and in doing this provide significant markers of quality. In this sense it meets the requirements for school improvement that come out of recent research on effectiveness and improvement. There is a real problem though in that the relevant educological literature indicates that it is self-evaluation rather than external evaluation that motivates change in teachers and school organisation. However, the value of OfSTED inspection in promoting change and improvement has been vigorously argued.

It has never been claimed that inspections in themselves would be sufficient to improve schools, that must be true of other forms of school evaluation. Inspection falls into the intriguing category of things which are necessary but not in themselves sufficient to achieve school improvement. [Rose, 1995]

OfSTED has answered this criticism, made by one of its most senior inspectors, in the most recent guidance offered to schools by OfSTED. The guidance focuses on the role of
schools self evaluation. It is worth noting that the guidance booklet is entitled, “School Evaluation Matters.”

If schools are to maintain high standards or secure improvement, they need a strategy for appraising their own performance which compliments the thorough but occasional health check provided by inspection. [OfSTED, 1998]

The guidance then goes on to argue that schools should use the Framework and Handbook for inspection as a practical template for self evaluation.

The Framework helps to evaluate why standards are as they are and to identify strengths and weaknesses. This diagnosis allows priorities for action to be decided. [OfSTED, 1998]

The reason that the Framework is so valuable is carefully spelt out with reference to the criteria for judgement and argues that they are accepted as valid and reliable.

The criteria are:
- based on those developed over a long period by HMI
- supported by research evidence on the factors associated with effective schools
- the result of progressive development, reflecting their use in the inspection of 20,000 schools over four years
- subject to wide consultation whenever they are revised, as they were when first published

The criteria, moreover,
- do not presume any particular methodology in teaching or style of leadership; judgements are made in terms of the effectiveness of the process concerned;
- are limited in number, allowing schools to add others if they wish;
- are openly published, and are therefore readily available to the staff of schools, governors and parents as well as inspectors;
- are shown by research to form the basis of reliable and valid judgements by inspectors. [OfSTED, 1998]

The inspection report is the critical document in directing schools towards improvement by spelling out their strengths and weaknesses. However the quality of reports has been called into question. A large contractor takes the
view that some reports are bland, are without a critical edge or are simply badly written.

It seems that for some Registered Inspectors the report just comes off the word processor. [Contractor]

The consequence is that the report does not clearly indicate to schools what aspects of their practice need improvement and what strengths they can build on. This criticism of the nature of the report, from an organisation convinced of the value of OfSTED inspection, is surprisingly similar to that presented by OFSTIN, an organisation convinced that OfSTED inspection procedures are harmful to many schools.

The report language was simplistic and infantile…. Our report was bland, repetitive to a point of incoherence and demoralising to read for the whole team. [Duffy ed., undated]

Peter Matthews, OFSTED’s head of inspection quality emphasised the importance of the report in a recent interview.

But, in our terms, a successful inspection is one which gives clear feedback to the school and a clear well written report. [Hoare, 1997]

OfSTED has issued further directives and advice to Registered Inspectors since the new “Framework” was introduced in 1995. Registered Inspectors are enjoined to write reports in a clear and accessible language, give greater attention to the school’s own self evaluation, include illustrations of significant judgements, emphasise strengths and weaknesses and include clear key issues.

While OfSTED, the DFEE/DEFS, government advisory bodies and politicians remain convinced that inspection can lead to improvement, this has not been universally accepted by education professionals. Even the most sceptical of OFSTED’s critics have accepted the idea that external inspection is useful and a proper instrument for judging school performance. But the general response is that
external evaluation is not enough, that schools must own the evaluation, become self-evaluating institutions. “School Evaluation Matters” by urging schools to replicate the external evaluation conducted by OFSTED’s inspection teams may be seen as meeting this criticism. Also the internal process of identifying strengths and weaknesses internally and diagnosing what works will clarify the key issues and identify targets for improvement.

Further, what critics point to is the problem that the mode and process of inspection brings and the way in which, in their view it hampers rather than encourages improvement. We take here Wragg and Brighouse’s (1995) criticisms and proposals as representative of considered criticism combined with argued proposals for a better system. Their criticisms may be summarised as follows:

- the separation of inspection from advice leaves schools in a quandary as to how to plan to meet key issues;
- reports are formulaic and too concerned with structures and management to offer a critical analysis of the school;
- the current framework documents are too detailed and thus inspection cannot really take account of the school context.

They propose a mixture of local and national inspection involving, HMI, local authority inspectors and seconded headteachers. They envisage a revised framework for inspection with core features, but written in such a way as to enable the school context to be recognised. There should be a process of ongoing rigorous school evaluation, and this should be supported through guidance drawn from the inspectorial body. There are aspects of both these proposals and the criticisms above that resonate with the data we have from Registered Inspectors.
The literature on effectiveness and improvement accepts the need for a rigorous external evaluation of school performance. However the focus of school improvement is whole school development, ideally the creation of school as a self developing learning organisation. This movement sees external evaluation and feedback as “elementary mechanisms” (Scheerens and Bosker, 1997). It stresses the problem that top down models have had. It identifies the relative lack of success of such models in engendering improvement. This leaves the current OfSTED with a dilemma in that, along with DFEE/DEFS, it has adopted the ideas of school improvement, but its mode and process of inspection can be seen as not in tune with the idea of the self developing learning organisation. Registered Inspectors share many of these criticisms of the current system of inspection in terms of it meeting the goal of school improvement as we have shown. How can schools use inspection to improve and who should have a role in the evaluation and improvement processes?

**Discussion**

The highly developed system of inspection that operates in England and Wales provides a mechanism of regulation, accountability and quality control and assurance. Since its inception in 1992, it has been the subject of change. OfSTED argues that this change has come about as a result of the experience of inspecting and the desire to provide schools with good modes of improvement. The recent move towards school evaluation but using criteria specified by OfSTED is an attempt to meet those in the school improvement movement who argue that change must arise from within the institution rather than be externally imposed. Alongside the “School Evaluation Matters”
OfSTED have published since 1998 school Performance and Assessment reports (PANDA), which enable schools to compare their performance with schools in similar social settings and with a similar resource base. The inspection system in England and Wales has seized the moral high ground. The reiteration that inspection leads to improvement and the torrent of advice, guidance and prescription that has come from OfSTED has made criticism very difficult. In the current official political and policy discourse, criticism of OfSTED seems at time akin to taking the part of Lucifer against Michael.

It is to the relationship of inspection to the development of state education policy that we now turn.

The position of Her Majesty’s Chief Inspector is unique, as we noted above. His capacity for action because of his independence and his statutory position is very great, and the present Chief Inspector, Chris Woodhead, has used that capacity. Inspection in its regulatory form is a system of surveillance, but a form of surveillance in which via the central power of the state schools and teachers become implicit in “controlling” themselves. Moreover the Chief Inspector and OFSTED’s location in the Official Recontextualizing Field means that they are defining and controlling educological discourse. Foucault’s (Rabinow, 1986) coupling of knowledge-power, we argue, is evident in that OfSTED defines what is to be inspected and how, therefore what counts as quality in school is centrally determined. In its direction of how inspections are to be conducted and its demands on schools for access and documentation, it ensures that schools as institutions and teachers as individuals police themselves using centrally proscribed criteria. The role of Registered Inspectors in this process is significant in that they directly interface with
schools and ensure compliance with the state’s regulatory framework. From the perspective of the Chief Inspector school improvement will come about by ever more prescribing the nature of educology, by an increasing central control and definition of an official educology. Compliance is assured both by the work of Registered Inspectors and institutional self-surveillance.

The recent publications of the Chief Inspector in his annual reports and lectures and his regular press statements show his propensity to operate in the policy making arena. It is noteworthy that before “QCA,” the organisation responsible for the National Curriculum, made any statement, Chris Woodhead declared that primary schools should now attend to a core curriculum of English, maths and science and, in doing so, “drop” other subjects. In doing this, he is also prescribing the educology of English and maths by declaring that in future primary schools will be inspected against their compliance with the so called “Literacy and Numeracy Hours”. These educological prescriptions define what is to be taught, when it is to be taught and the sequencing of activities during in each hour.

The change of government in 1997 in the UK has not brought about the expected, in some quarters, down playing of inspection and centralisation. Rather, the reverse, has occurred. The then new Labour government has moved along a much more prescriptive line with respect to educology than the previous Conservative one. It also seems to have identified in OfSTED and its Chief Inspector an important actor and ally in the policy field. The power of the Chief Inspector and his propensity to make public policy statements and to criticise government policy overtly led him, Chris Woodhead, to resign in 2000. He now writes on
education for *The Daily Telegraph*, the most important broad sheet supporter of the Conservative Party.

**Footnote**

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**References**


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Self-Enhancing and Self-Defeating Ego Goals in Mathematics Lessons: Relationships Among Task and Avoidance Goals, Achievement, Self-Perceptions, Anxiety, and Motivation
(A Scientific Educology)

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Abstract
Educology is the fund of knowledge about the educational process, which obviously occurs within and outside of schools. Educology includes, at the least, the fund of knowledge about past education (historical educology), about current states of affairs in education (scientific educology), about effective practices within education (praxiological educology), about meanings of terms and sentences in education (analytic philosophical educology) and about good education (normative philosophical educology).

This article is a work in scientific educology. It reports on an exploration of extant relationships among four dimensions of goal orientation in mathematics lessons (self-defeating ego orientation, self-enhancing ego orientation, task orientation, and avoidance orientation) and mathematics achievement, self-concept, self-efficacy, anxiety, and intrinsic motivation.

Participants in the study were 295 Norwegian elementary school students. Data were collected at two
points of time: (1) March and April of 1999, when the students attended their fifth year in school (Time 1) and (2) October and November of the same year, when the students attended their sixth year (Time 2).

Within-time regression analyses revealed that goal orientations were systematically related to achievement, self-conceptions, anxiety and motivation and that self-defeating and self-enhancing ego orientation related differently to all these variables.

Across-time analyses failed to show that goal orientation affected subsequent anxiety, motivation, and achievement, but it had some predictive value for subsequent self-concept and self-efficacy. In addition, across-time analyses indicated that achievement, self-conceptions, motivation and anxiety have predictive value for subsequent goal orientation.

**Introduction**

Recent educological research on motivation has focused on the importance of students’ achievement goals in relation to their success in their school studies.

An achievement goal is distinguished in relation to the purposes of the individual (Ames, 1992). According to achievement goal theory, individuals approach achievement tasks with qualitatively different types of goals (Jagacinski, Hofmann & Strickland, 1996). Moreover, students’ goal orientations are assumed to influence their classroom behaviour (Ames & Archer, 1988; Meece, Blumenfeld & Hoyle, 1988; Middleton & Midgley, 1997).

In this study, an examination and an analysis were undertaken of the relationships among achievement goals, academic achievement, academic self-perceptions, intrinsic motivation, and anxiety in school.
Dimensions of Goal Orientation

Two goal perspectives in particular have been given special attention in educological research literature. These perspectives have been given various names: (1) task orientation versus ego orientation (Duda, 1993; Nicholls, 1989), (2) learning versus performance goals (Elliott & Dweck, 1988), and (3) mastery versus performance orientation (Ames & Archer, 1988). These orientations will be referred to as task orientation and ego orientation in this article.

Task orientation means that the focus of the students’ attention is on the task (Nicholls, 1983) and that, in the mind’s eye of the students, the tasks of learning, understanding, and developing new skills are ends in themselves (Ames & Archer, 1988; Duda & Nicholls, 1992; Lens, 1994; Nicholls, 1992). Task oriented students tend to see mastery as dependent on their effort, and their perceptions of ability are self-referenced (Duda, 1993).

Ego-oriented students are concerned with being judged able, and their perceptions of their ability tend to be normatively referenced. Ability is judged by comparison with others (Ames & Archer, 1988; Duda, 1993; Nicholls, 1983, 1989), and high ability is evidenced by doing better than others (Ames, 1992). The goal of ego-oriented students is typically described as that of establishing the superiority of their ability relative to that of others, to do better than others, or to outperform others (Ames & Archer, 1988; Duda, 1993; Duda & Nicholls, 1992; Nicholls, Cheung, Lauer & Patashnick, 1989).

However, being preoccupied with one’s self and concerned about how one is perceived by others may lead to different goals for different students (Skaalvik, 1997; Skaalvik, Valås, & Sletta, 1994). Skaalvik (1997),
discriminated between self-enhancing and self-defeating ego orientation. Self-enhancing ego orientation means that one’s goal is to be best or to demonstrate superior ability, which is the typical understanding of ego orientation. Self-defeating ego orientation, on the other hand, may result in trying not to be poorest and to avoid looking stupid. Similar distinctions have been made by Elliot & Harackiewicz (1996), Middleton & Midgley (1997) and Skaalvik et al. (1994).

Elliot & Harackiewicz and Middleton & Midgley distinguished between performance-approach and performance-avoidance goals, whereas Skaalvik et al. named the two dimensions of ego orientation offensive and defensive ego orientation. However, neither Skaalvik et al. (1994) nor Elliot & Harackievich (1996) measured both dimensions of ego orientation. Measuring both dimensions, Skaalvik (1997) found that self-enhancing and self-defeating ego orientation was factorially distinct and that they could be differentiated from task orientation and avoidance orientation (see also Middleton & Midgley, 1997; Middleton, Kaplan, & Midgley, 1998).

Harackiewicz, Barron, and Elliot (1998) point out that although some educological theorists have discussed task and ego orientation (mastery and performance goals) as if they were mutually exclusive, striving to outperform others is not necessarily inconsistent with trying to attain mastery.

In support of this view, a number of correlational studies has found task orientation and (self-enhancing) ego orientation to be essentially uncorrelated. Some studies even show that they are positively correlated (e.g., Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997; for an overview, see Harackiewicz, Barron, & Elliot, 1998).
Measuring both self-enhancing and self-defeating ego-orientation, Skaalvik (1997) found task orientation to correlate close to zero with self-defeating ego orientation, but to be positively correlated with self-enhancing ego orientation. Moreover, in the Skaalvik (1997) study, the two dimensions of ego orientation were positively, but weakly correlated, whereas Middleton and Midgley (1997) found a correlation of 0.56.

**Relationships Among Achievement, Self-Perceived Abilities, Anxiety, and Motivation**

Although students’ goal orientations are assumed to influence patterns of cognition, affect, and behaviour in achievement settings (e.g., Dweck and Leggett, 1988), studies of relationships between goal orientations and achievement, self-perceived abilities, anxiety, and intrinsic motivation are few and inconclusive. Achievement and academic self-perceptions have often been presented as outcomes of goals (Middleton, Kaplan, & Midgley, 1998). Still, longitudinal studies are generally lacking, and the educological research evidence provides little information about causal relationships.

The few available educological studies show that both task and ego orientation are either not significantly correlated with achievement in school and with self-perceived abilities or that the associations are weak (Ames & Archer, 1988; Harackiewicz, et al., 1997; Nicholls, 1989; Skaalvik, 1997).

When significant correlations are found between task orientation and academic self-concept or self-efficacy, they tend to be positive (Middleton & Midgley, 1997; Meece, Blumenfeld & Hoyle, 1988; Nicholls, 1989; Nicholls, Patashnick & Nolen, 1985; Seifert, 1995; Skaalvik, 1997).
Inconsistent relationships have been found between ego orientation and students' academic self-concept (Ames and Archer, 1988; Middleton & Midgley, 1997; Nicholls, 1989; Schunk & Swartz, 1993; Seifert, 1995).

A possible explanation for the inconsistent results is that different educologists measure both goal orientations and self-perceptions in different ways. Moreover, ego orientation has been measured with instruments which resemble the definition of self-enhancing ego orientation in this article. Skaalvik reports small negative correlations between self-defeating ego orientation and both academic self-concept and self-efficacy and small positive correlations between self-enhancing ego orientation and academic self-concept and self-efficacy (Skaalvik, 1997; Skaalvik et al., 1994).

Educological studies of relationships between goal orientation and anxiety or intrinsic motivation are very few. There is some evidence that intrinsic motivation and anxiety in school may be related to students’ goal orientation (Duda & Nicholls, 1992; Elliot and Harackiewicz, 1996; Middleton & Midgley, 1997; Kaplan & Patrick, 1996; Skaalvik, 1997).

**Purpose of the Study**

This study replicates a cross sectional study by Skaalvik (1997) in which the nominated dimensions of ego orientation were tested. Moreover, the predictive value of goal orientations for achievement, self-perceived abilities, anxiety, and intrinsic motivation are analyzed in a cross sectional context and compared with previous data. Additionally, the same predictions are analyzed in a longitudinal perspective.
Method

Participants and Procedure
The participants in this study were 295 Norwegian elementary school students. Data were collected at two points of time: (1) first, in March and April 1999, when the students attended fifth grade (Time 1) and (2) in October and November 1999, when the students attended sixth grade (Time 2). Intact school classes were drawn from four school districts in a large region in Norway.

Instruments
Students’ goal orientations in mathematics were measured by four scales consisting of four items each. The items are displayed elsewhere (see Skaalvik, 1997). Examples of statements which constituted the items are:

- In math classes it is important for me to learn something new (task orientation);
- In math classes I try to get away with doing as little as possible (avoidance orientation);
- When I am in math classes it is important for me to avoid looking stupid (self-defeating ego orientation); and
- I always try to do better than other students in mathematics (self-enhancing ego orientation).

Response categories were (1) false, (2) mostly false, (3) sometimes false/sometimes true, (4) mostly true, and (5) true. Cronbach's alpha for self-defeating ego orientation, self-enhancing ego orientation, task orientation, and avoidance orientation in fifth grade were 0.75, 0.63, 0.63, and 0.74, respectively. Corresponding values in sixth grade were 0.81, 0.76, 0.67, and 0.83.

Mathematics achievement was measured by a 49 item mathematics test. The test had a Cronbach's alpha of 0.90 in fifth grade and 0.92 in sixth grade.
Mathematics self-concept was defined as the general feeling of doing well or poorly in mathematics. It was measured by an 11 item modified "Self Description Questionnaire" (Marsh 1990). Motivational and emotional items in the original scale (e.g., "I hate math") were replaced with items measuring perceptions of doing well or poorly. Examples of items are:
I always do well in math
I am hopeless in math
The scale displayed a Cronbach's alpha of 0.91 in both fifth and sixth grade.

Mathematics self-efficacy was defined as expectations of being able to solve particular types of mathematics problems. It was measured by presenting 24 sets of mathematics problems to the students. For each set, the students were asked: "How certain are you that you can do (solve) these kind of mathematics problems?" The items were answered according to a seven-point scale ranging from "not certain at all" (1) to "very certain" (7). Cronbach's alpha for the scale was 0.94 and 0.95 in fifth and sixth grade, respectively.

Mathematics anxiety was measured by a short (5 item) version of an eight item anxiety scale focusing on the emotionality dimension of anxiety (see Skaalvik & Rankin, 1995). Examples of items are:
I feel calm in math lessons, and
I am nervous in lessons in mathematics
Cronbach's alpha was 0.80 and 0.82 in fifth and 6th grade, respectively. Mathematics intrinsic motivation was defined as interest in working with or liking to work with math. It was measured with a short (nine item) version of a 15 item intrinsic motivation scale developed by Skaalvik & Rankin (1995). Examples of items are as follows:
Working with mathematics is fun, and
I like mathematics.

The scale had a Cronbach’s alpha of 0.92 in both fifth and sixth grade.

Data Analysis

Firstly, separate analyses of Time 1 and Time 2 data were conducted by means of regression analysis, letting goal orientation predict achievement, self-perceptions, intrinsic motivation, and anxiety. This was done to control that the pattern of results was similar to previous results found in a cross sectional study by Skaalvik (1997). Analyses of Time 1 and Time 2 data revealed the same pattern of results. Therefore, in order to save space, only the results based on data from Time 2 are reported. Secondly, regression analyses were conducted letting goal orientation measured at Time 1 predict achievement, self-perceptions, intrinsic motivation, and anxiety at Time 2. Lastly, regression analysis was conducted with achievement, self-perceptions, intrinsic motivation, and anxiety measured at Time 1 as predictor variables and goal orientation at Time 2 as criterion variables.

Results

Correlations among the observed variables at Time 2 as well as statistical means and standard deviations are shown in Table 1. The relationships among the four dimensions of goal orientation found by Skaalvik (1997) were supported. Self-enhancing and self-defeating ego orientation showed a low, but positive, correlation (0.30). Task orientation was positively correlated with self-enhancing ego orientation (0.20), whereas it was not significantly correlated with self-defeating ego orientation (0.04). Avoidance orientation was positively correlated with self-defeating ego orientation...
Table 1
Correlations among the Variables, Statistical Means, and Standard Deviations (All Measures at Time 2)

<table>
<thead>
<tr>
<th></th>
<th>EGODEF</th>
<th>EGOOFF</th>
<th>TASK</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGODEF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGOOFF</td>
<td>0.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK</td>
<td>0.04</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVOID</td>
<td>0.13</td>
<td>0.06</td>
<td>-0.35</td>
<td></td>
</tr>
<tr>
<td>ASC</td>
<td>-0.24</td>
<td>0.24</td>
<td>0.23</td>
<td>-0.30</td>
</tr>
<tr>
<td>EFF</td>
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<td>0.18</td>
<td>0.33</td>
<td>-0.26</td>
</tr>
<tr>
<td>ANX</td>
<td>0.48</td>
<td>0.11</td>
<td>-0.14</td>
<td>0.27</td>
</tr>
<tr>
<td>MOTIV</td>
<td>-0.08</td>
<td>0.16</td>
<td>0.45</td>
<td>-0.60</td>
</tr>
<tr>
<td>ACH</td>
<td>-0.13</td>
<td>0.09</td>
<td>0.08</td>
<td>-0.11</td>
</tr>
<tr>
<td>Mean</td>
<td>16.99</td>
<td>10.98</td>
<td>19.05</td>
<td>11.06</td>
</tr>
<tr>
<td>SD</td>
<td>5.63</td>
<td>3.74</td>
<td>3.60</td>
<td>3.36</td>
</tr>
</tbody>
</table>

Note. EGODEF = defensive ego-orientation, EGOOFF = offensive ego-orientation, AVOID = avoidance orientation, TASK = task orientation, ASC = academic self-concept, EFF = self-efficacy for schoolwork, EST = self-esteem, MANX = anxiety in mathematics classes, VANX = anxiety in verbal arts classes. All correlations above .11 are statistically significant (p < 0.05).
Table 1 (Continued)

Correlations among the Variables, Statistical Means, and Standard Deviations (All Measures at Time 2)

<table>
<thead>
<tr>
<th>ASC</th>
<th>EFF</th>
<th>ANX</th>
<th>MOTIV</th>
<th>ACH</th>
</tr>
</thead>
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<tr>
<td></td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>-0.43</td>
<td>-0.42</td>
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</tr>
<tr>
<td></td>
<td>0.45</td>
<td>0.38</td>
<td>-0.32</td>
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<tr>
<td></td>
<td>0.30</td>
<td>0.30</td>
<td>-0.27</td>
<td>0.16</td>
</tr>
</tbody>
</table>

(0.13), but was not significantly correlated with self-enhancing ego orientation (0.06). Task orientation was negatively correlated with avoidance orientation (-0.35).

Zero order correlations between goal orientation and other variables in the study were also in accordance with previous findings. Both mathematics self-concept and self-efficacy were positively associated with self-enhancing ego.
orientation (0.24 and 0.18, respectively), whereas these constructs were negatively related to self-defeating ego orientation (-0.24 and -0.22, respectively). Self-concept and self-efficacy were also positively related to task orientation (0.23 and 0.33, respectively) and negatively related to avoidance orientation (-0.30 and -0.26, respectively).

Moreover, anxiety was positively related to both self-defeating and self-enhancing ego orientation (0.48 and 0.11, respectively) and to avoidance orientation (0.27), whereas it was negatively related to task orientation (-0.14). The association between anxiety and self-defeating ego orientation was relatively strong.

Intrinsic motivation was not significantly related to self-defeating ego orientation (0.08) and weakly related to self-enhancing ego orientation. However, intrinsic motivation was relatively strongly related to task orientation (0.45) and to avoidance orientation (-0.60). Mathematics achievement did not relate strongly to goal orientation. Achievement was not significantly related to task orientation or to self-enhancing ego orientation, and was negatively, but weakly related to self-defeating ego orientation (-0.13) and to avoidance orientation (-0.11).

Regression analyses of cross sectional data were conducted in order to compare the data with previous cross sectional data. In these analyses, goal orientation was defined as a predictor variable, predicting achievement, self-perceptions, intrinsic motivation, and anxiety. The analyses based on data from Time 2 are shown in Table 2. These analyses revealed that self-defeating and self-enhancing ego orientation were differently associated with the dependent variables. Mathematics achievement, self-concept, and self-efficacy were negatively predicted by self-defeating ego orientation (beta values were -0.15, -0.31, and -0.28,
respectively) and positively predicted by self-enhancing ego orientation (0.13, 0.33, and 0.22, respectively).

Furthermore, anxiety was positively predicted by self-defeating ego orientation (0.47), but not significantly predicted by self-enhancing ego orientation (-0.02), whereas intrinsic motivation was significantly and positively predicted by self-enhancing ego orientation, but it was not significantly predicted by self-defeating ego orientation (0.16 and -0.08, respectively). Both self-efficacy and intrinsic motivation were positively predicted by task orientation (0.24) and negatively predicted by avoidance orientation (-0.16, -0.52, respectively). Avoidance orientation also predicted self-concept negatively (-0.25). These results replicate results previously reported by Skaalvik (1997), they and demonstrate that self-defeating and self-enhancing ego orientation are differently associated with a series of variables.

**Table 2**

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Dependent Variables</th>
<th>SC</th>
<th>EFF</th>
<th>ANX</th>
<th>MOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGODEF</td>
<td></td>
<td>0.31***</td>
<td>-0.28</td>
<td>0.47***</td>
<td>-0.08</td>
</tr>
<tr>
<td>EGOENH</td>
<td></td>
<td>0.33***</td>
<td>0.22***</td>
<td>-0.02</td>
<td>0.16***</td>
</tr>
<tr>
<td>TASK</td>
<td></td>
<td>0.09</td>
<td>0.24***</td>
<td>-0.10</td>
<td>0.24***</td>
</tr>
<tr>
<td>AVOID</td>
<td></td>
<td>-0.25***</td>
<td>-0.16</td>
<td>0.18**</td>
<td>-0.52***</td>
</tr>
<tr>
<td>R2</td>
<td></td>
<td>0.25</td>
<td>0.22</td>
<td>0.29</td>
<td>0.45</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>24.01</td>
<td>20.77</td>
<td>29.17</td>
<td>60.13</td>
</tr>
<tr>
<td>df</td>
<td></td>
<td>4/290</td>
<td>4/290</td>
<td>4/290</td>
<td>4/290</td>
</tr>
</tbody>
</table>
The next step in the data analysis was to conduct regression analysis in a longitudinal perspective. As could be expected, letting goal orientation at Time 1 (instead of goal orientation measured at Time 2) predict achievement, self-perceptions, anxiety, and motivation measured at Time 2, did not change the general picture shown in Table 2.

Table 3, however, shows the results of a series of regression analyses defining achievement, self-perceptions, intrinsic motivation, and anxiety at Time 2 as criterion variables and both goal orientation at Time 1 and a measure of the relevant criterion variable at Time 1 as predictor variables. Thus, the ability of goal orientation to predict subsequent measures of each criterion variable was measured over and above the stability of the criterion variable.

About 50% of the variance in the criterion variables could be explained by the predictor variables. However, goal orientation added little to the predictions made by previous measures of the criterion variables, and only two of these predictions were statistically significant. Self-defeating ego orientation at Time 1 made a weak negative prediction of self-efficacy at Time 2 (-0.14), whereas self-enhancing ego orientation at Time 1 made a weak positive prediction of self-concept at Time 2 (0.12). The main conclusion, therefore, is that in a longitudinal perspective and controlled for previous measures of mathematics achievement, self-concept, self-efficacy, anxiety, and
intrinsic motivation, goal orientation had practically no predictive value for these variables.

Lastly, regression analyses were conducted with goal orientation measured at Time 2 as criterion variables. Predictor variables were mathematics achievement, self-

Table 3
Set of Beta Weights and Multiple Regression Coefficients - Predictor Variables Measured at Time 1 and Dependent Variables Measured at Time 2

<table>
<thead>
<tr>
<th>Predictor Variables at Time 1</th>
<th>Dependent Variables at Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGODEF</td>
<td>SC -0.03  EFF -0.14*  ANX 0.09  MOT 0.06  ACH -0.01</td>
</tr>
<tr>
<td>EGOENH</td>
<td>EGODEF 0.12*  EFF 0.08  ANX -0.06  MOT -0.04  ACH 0.07</td>
</tr>
<tr>
<td>TASK</td>
<td>TASK 0.01  EFF -0.02  ANX 0.06  MOT -0.05  ACH -0.01</td>
</tr>
<tr>
<td>AVOID</td>
<td>AVOID -0.08  EFF -0.03  ANX 0.06  MOT -0.09  ACH -0.09</td>
</tr>
<tr>
<td>SC</td>
<td>SC 0.60***</td>
</tr>
<tr>
<td>EFF</td>
<td>EFF 0.64***</td>
</tr>
<tr>
<td>ANX</td>
<td>ANX 0.55***</td>
</tr>
<tr>
<td>MOT</td>
<td>MOT 0.69***</td>
</tr>
<tr>
<td>ACH</td>
<td>ACH 0.72***</td>
</tr>
</tbody>
</table>

R² 0.46  0.49  0.38  0.52  0.57
F 48.37  54.99  36.16  62.38  68.99

Note. * = p < 0.05, ** = p < 0.01, *** = p < 0.001. EGODEF = self-defeating ego orientation, EGOENH = self-enhancing ego orientation, TASK = task orientation, AVOID = avoidance orientation, SC = self-concept in mathematics, EFF = self-efficacy for mathematics, ANX = anxiety in mathematics classes, MOT = intrinsic motivation in mathematics, ACH = mathematics achievement.
concept, self-efficacy, anxiety, and intrinsic motivation measured at Time 1. In each analysis, a measure of the relevant goal orientation at Time 1 was also included as a predictor variable (Table 4). The stability coefficients were somewhat lower for goal orientation than comparable stability coefficients for self-perception, motivation.

Table 4
Set of Beta Weights and Multiple Regression Coefficients with Goal Orientation at Time 2 as Dependent Variables

<table>
<thead>
<tr>
<th>Predictor Variables at Time 1</th>
<th>Dependent Variables at Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACH</td>
<td>EGODEF</td>
</tr>
<tr>
<td>SC</td>
<td>0.10</td>
</tr>
<tr>
<td>EFF</td>
<td>-0.01</td>
</tr>
<tr>
<td>MOT</td>
<td>-0.03</td>
</tr>
<tr>
<td>ANX</td>
<td>0.20</td>
</tr>
<tr>
<td>EGODEF</td>
<td>0.44**</td>
</tr>
<tr>
<td>EGOENH</td>
<td>0.47***</td>
</tr>
<tr>
<td>TASK</td>
<td>0.42***</td>
</tr>
<tr>
<td>AVOID</td>
<td>0.50***</td>
</tr>
<tr>
<td>R2</td>
<td>0.30</td>
</tr>
<tr>
<td>F</td>
<td>18.74</td>
</tr>
</tbody>
</table>

Note. * = p < 0.05, ** = p < 0.01, *** = p < 0.001. EGODEF = self-defeating ego orientation, EGOENH = self-enhancing ego orientation, TASK = task orientation, AVOID = avoidance orientation, SC = self-concept in mathematics, EFF = self-efficacy for mathematics, ANX = anxiety in mathematics classes, MOT = intrinsic motivation in mathematics, ACH = mathematics achievement.
achievement, and anxiety (see Table 3). Controlled for corresponding ego orientation at Time 1, both self-enhancing and self-defeating ego orientation at Time 2 were positively predicted by anxiety at Time 1 (0.22 and 0.20, respectively). In comparison, goal orientation at Time 1 did not predict anxiety at Time 2 controlled for previous measure of anxiety (Table 3). Both task orientation and self-enhancing ego orientation at Time 2 were positively, but weakly predicted by self-efficacy at Time 2 (0.14). Motivation at time one also predicted avoidance orientation at Time 2 negatively (-0.15).

Discussion

This study confirms previous findings. As in previous studies, it shows that in a mathematics context one may discriminate between two relatively independent dimensions of ego orientation. These dimensions are self-enhancing and self-defeating ego-orientation. A common feature in the two dimensions of ego orientation is that ego oriented students are preoccupied with themselves. They compare their abilities to other students, and they preoccupy themselves with how they are perceived by other students. Self-enhancing ego orientation is defined by the goal of demonstrating superior abilities, whereas self-defeating ego orientation is defined by the goal of avoiding looking stupid or being negatively judged by others.

In accordance with previous educological research, the two dimensions of ego orientation were weakly, but positively correlated. Thus, there was a weak tendency that students who were oriented towards demonstrating superior abilities also were preoccupied with avoiding showing their weaknesses. Moreover, both self-defeating and self-enhancing ego orientation were weakly related to task orientation and avoidance orientation, although task orientation and
avoidance orientation were moderately and negatively related. As previously demonstrated, task orientation correlated close to zero with self-defeating ego orientation, whereas it correlated positively, but weakly with self-enhancing ego orientation. Thus, it is important to note that neither of the two dimensions of ego orientation predicted task orientation negatively.

This study demonstrates that the two dimensions of ego orientation are differently related to other variables. In fact, they related differently to all other variables in the study. The (cross sectional) regression analyses displayed in Table 2 show that self-enhancing ego-orientation relates positively to self-concept, self-efficacy, and achievement, whereas self-defeating ego-orientation relates negatively to these constructs. Moreover, self-defeating ego orientation relates positively and relatively strongly to anxiety, whereas self-enhancing ego orientation does not relate significantly to anxiety. Similarly, self-enhancing ego orientation relates positively to intrinsic motivation, whereas self-defeating ego orientation is not significantly related to this construct.

Goal theorists traditionally assume that ego goals have a number of negative effects, for instance increasing anxiety and decreasing intrinsic motivation, effort, and achievement (see for instance Harackiewicz et al., 1997, 1998). This assumption is not always supported in empirical studies. For instance, Harackiewicz et al.(1997) found no negative effects of ego goals on interest. Also, Covington (2000) in a review of research, concludes that no clear pattern has emerged from those studies exploring the association between performance (ego) goals and either task persistence or the degree of effort extended. The failure to confirm negative relations with ego goals has likely occurred because, initially, researchers did not distinguish between
self-enhancing and self-defeating ego goals, and most studies have used measures of self-enhancing ego goals. The present result showing that self-defeating and self-enhancing ego orientation are differently related to a number of constructs is therefore highly significant. It shows that self-defeating ego orientation negatively predicts self-concept, self-efficacy, anxiety, and achievement. However, it does not show detrimental effects of self-enhancing ego orientation, and it even indicates positive relationships among the dimensions of ego orientation and self-perceptions, intrinsic motivation, and achievement.

Table 2 also shows that task orientation is positively related to self-efficacy and intrinsic motivation. Nonetheless, in accordance with previous research (e.g., Harackiewicz et al., 1997), there was no evidence that task orientation predicted achievement. Task orientation may still have small indirect effects on achievement through, for instance, self-efficacy and intrinsic motivation. Avoidance orientation is negatively related to academic self-perceptions and intrinsic motivation.

Although cross sectional analyses reveal systematic relations among dimensions of goal orientation and academic self-perception, intrinsic motivation, anxiety, and achievement, the longitudinal analyses provide little evidence that these variables are affected by achievement goals. When controlled for previous measures of the criterion variables, for example, achievement and intrinsic motivation, measures of goal orientation at Time 1 had little predictive value for subsequent measures of the criterion variables. That is, goal orientation has little predictive value for self-concept, self-efficacy, anxiety, intrinsic motivation, and achievement over and above the stability of these constructs. Significant beta values were found only for self-
concept and self-efficacy. Self-defeating ego orientation predicted self-efficacy negatively, whereas self-enhancing ego orientation predicted self-concept positively. Hence, these results provide limited support for a model in which goals affect self-perceptions, anxiety, intrinsic motivation and achievement, which are commonly accepted beliefs about the effects of achievement goals.

The regression analyses shown in Table 4 are therefore based on an alternative model where achievement, self-perceptions, anxiety, and intrinsic motivation predict goal orientation. The results give some support to such a general model. When controlled for previous measures of the relevant dimensions of goal orientation, anxiety predicted subsequent measures of both self-defeating and self-enhancing ego orientation, intrinsic motivation predicted subsequent avoidance orientation, achievement predicted subsequent task orientation, and self-efficacy predicted subsequent measures of self-enhancing ego orientation and task orientation. Taken together, these results indicate that goal orientation primarily may be a consequence of achievement, academic self-conceptions, intrinsic motivation, and anxiety. The results provide some evidence that goal orientation may affect academic self-conceptions.

In conclusion, this study confirms that achievement goals are systematically related to achievement, academic self-perceptions, intrinsic motivation, and anxiety. However, the results do not provide much evidence that these constructs are affected by achievement goals. The questions often raised by researchers is how to increase task goals and decrease ego goals in order to reduce anxiety and increase self-concept, intrinsic motivation and achievement. An equally important educological question seems to be how to increase academic self-concept and intrinsic
motivation and reduce anxiety in order to foster task goals and reduce self-defeating ego goals.

The findings in this study however, need to be confirmed in subsequent research. In future research, it will be important to explore systematically relationships among goal orientation and relevant constructs at different grade levels. Furthermore, an important task for future research will be to examine possible third variables through which achievement goals may be related to anxiety, intrinsic motivation, self-conceptions, and achievement. Also, future research ought to include social goals, both because our understanding of social goals lags behind in general (Covington, 2000) and because we have too little understanding of the interplay between social goals and other academic goals.

The results of this study imply that the distinction between self-enhancing and self-defeating ego goals is an important one. They further imply that both educators and educologists should pay particular attention to self-defeating ego orientation. Detrimental effects of self-enhancing ego orientation, which is often claimed in the literature, are less evident.

References


An Educology of Peace Education: Formulating a Strategy for the Promotion of Non-Violent Conflict Resolution in a Democracy

Jane O. Mallum, University of Jos, Nigeria

Abstract

The world today is fraught with violence and conflicts. This state of affairs is made all the more dangerous by the development of nuclear technology and the possibility of dissemination of military applications of this technology to unstable countries and militant terrorists.

At the same time, there has been a rapid diffusion of democratization since the conclusion of the cold-world war, and this a most promising development. Conflicts indeed are inevitable where interpersonal relationships exist. But conflicts do not inevitably have to lead to violence, or loss of property or of life. Conflicts can be resolved peacefully, and the democratic process is especially well suited for peaceful resolution of conflict.

What is needed within the democratic context is knowledge, skill and commitment to the process of peaceful means of resolving conflict. An important component of the process of promoting peaceful conflict resolution is an effective program of peace education. To make the process effective, there needs to be a sound educology of peace education, i.e. there needs to be sound knowledge about how to make the peace education process work and take widespread effect.
Introduction

The search for peace has been a perennial undertaking in human history. O’Connel (1991) properly and cogently argued that peace provides conditions within which persons and groups develop most fully and without which life is disrupted and resources wasted. However, human history has been steeped in blood from recurring war.

Some years prior to O’Connel, Jaspers (1968) noted that peace has become an even more central issue in our times than previously in history because the possibility of nuclear destruction is going to hang over the world for the foreseeable future. Jaspers stated:

In the past, the worst disasters could not kill mankind. Multitudes whole nations ... perished; others survived and forgot. But now our intellect fells us with inescapable logic that soon there will be no more oblivious survivors .... There could be confidence, in the past, because in every disaster some were spared. Now however, man can no longer afford disaster without consequences of universal doom .... [p. 315]

The world, since 1945, has continued to be ravaged by violence, conflicts and wars, as evident in Yugoslavia, Somalia, Uganda, Burundi, Liberia, Zaire, and the Middle East, among others. Nigeria also has witnessed its unfortunate share of grievous ethnic, civil and religious conflicts in the course of its history. Recent sharp ethnic and religious divisions have posed a serious threat to the current democratization process in Nigeria.

In Nigeria, it is a typical situation that children come to school from widely different cultural, social and religious backgrounds. Each ethnic and religious group brings with it habits of behaviour, attitudes and expectations which widely diverge from other groups. Some groups are very aggressive, others docile. Some are weak, others are very strong. Some are very dull, while others are very intelligent.
Some are poor, while others are rich. Some are stingy, others are altruistic and so on.

The differences among the children sometimes lead to episodes of destructive competition, power struggles, attention and favour seeking, self-projection and egocentrism, and pride and arrogance. The competition among groups in schools at times erupts into ugly, even violent conflicts. The conflicts manifested among social and cultural groups within schools mirror those which occur in adult society within Nigeria.

Much research has shown that wars (or even military conflicts short of war) are nonexistent, or very rare, among democracies (Gledish 1992; Ray. 1995; Russett 1993, 1995). According to Hermann and Kegley, Jr. (1996) this fact has not been lost on policy makers in search of a guideposts for their post cold war foreign policies.

For example, the Group of Seven (G-7) has made the promotion of democracy a principle around which to focus its blue prints for a twenty-first century peace. However, the theory of civic culture (Almond and Verba, 1963; Inglehart, 1988, 1990) postulates that the viability of democratic institutions is affected powerfully by attitudes, positive feelings towards the political system, and belief in the trustworthiness of other citizens. Thus, since peace education is viewed as a life affirming approach to human interaction. Its proper major focus is to teach children and citizens non-violent resolution skills. There is no gainsaying its indispensability in inculcating appropriate civic culture and attitudes among children to uphold our nascent democracy.

The argument being advanced in this discourse is that there is a prima facie case for the proposition that the process of peace education is an appropriate strategy for
forestalling violence and for constructively managing and resolving conflict in a democracy. The acceptance of peace education as an appropriate process further implies that the development of an educology of peace education (i.e., knowledge about the process of peace is education) is necessary. It is required because there needs to be knowledge which can make the process of peace education effective and efficacious in achieving the desired outcome of constructive conflict resolution.

**Historical Perspectives of Wars and Conflicts**

Humankind has been classified zoologically as a primate. According to Travers (1973), most primates live in groups and spend substantial amounts of time each day in social interaction.

Travers indicated that these interactions involve playful behaviour and behaviours that are collectively called grooming behaviours. According to him, humankind belongs to a group of species which have high innate social needs, and when these needs are not satisfied, trouble results.

According to Clemente and Lindsley (1967) warfare and other antisocial tendencies did not appear until sometime after primitive technologies emerged. However, Dowse and Hughers (1972) argued that aggression and violence have been part of human history since its beginning, and probably because of this, the idea that such behaviour is inherent in human beings has considerable plausibility. While some contend that aggression is instinctive in man, others believe that it is a learned behaviour.

A third orientation towards the origins of aggression in humankind, which is the most widely explored in social sciences, is the frustration–aggression theory. The basic
postulate of the theory is that interference with goal-directed behaviour creates frustration, which, in turn, leads to aggressive responses usually directed against the reputed frustrating agent (Dollard et al 1939). This assumes that in social life, humankind comes to value many things: wealth, status, power, security, equality, freedom, and so on. When human beings cannot achieve these values, or when achieving one value means losing another, dissatisfaction, anger and often aggression occur.

The Search for Benign and Non-Coercive Forms of Intervention: Soft Power and Conflict Resolution

There has been a number of traditions of thought which go back almost to the origins of self-conscious reflection about humankind and its social relationships. The problem of conflict resolution has been polarized between two views. One perspective is of those who have contended that effective conflict resolution is correlated with a capability to exercise some form of power over conflict parties to encourage or coerce them to arrive at a settlement. A second perspective is of those who argue in favour of non-coercive resolution based on trust-including dialogue and the formulation of integrative or “win-win” outcomes.

According to Woodhouse (1996), what makes the linkage of the two approaches possible is the emergence of a more sophisticated concept of power. With this conception, the more radical assumptions of conflict resolution theory are beginning to come into alignment with long term changes in the environment of international politics which have been identified by interdependence theorists. Nye in Woodhouse (1996:45), for example, contended:
Although force remains the ultimate form of power in a self help system it has become more costly for modern powers to use than in previous centuries. Other instruments such as communications, organizational and institutional skills and manipulation of interdependence have become important instruments of power.

Nye referred to these other instruments of power as “soft power,” which negates “hard power” (the power to command, order, enforce). Bounding, in Woodhouse (1996), also underscored that integrative power (co-optive and cooperative relationships built on intangible qualities such as mutuality, respect, legitimacy, and trust), a non-material or intangible quality, is the \textit{sine qua non} of democratic community in which there is a respect for human rights.

Democracy and Peace

Hornby (1989) has usefully defined the term \textit{democracy} as a country with a system of government which encourages and allows right of citizenship such as freedom of speech, religion, opinion and association, the assertion of the rule of law, majority rule, accompanied by respect for the rights of minorities. This system of government allows for universal suffrage, and it precludes ethnic or class cleavages.

According to Dowse and Hughes (1972), the prime idea in democracy is that the government must have room to maneuver. It must have the power to implement its decisions. But at the same time its decisions must, at the very best, be taken in the light of the known wishes and aspirations of the citizens.

Inspired in part by rapid diffusion of democratization since the late 1980’s, the major industrialized democracies have anchored their security policies on the belief that a world of democratic states would be a peaceful world.
According to Hallenberg (1994:149), the propensity of democracies to cooperate generally with one another is a critical component of democratic peace theory that challenges realism and especially, neo-realism. Herman and Kegley, Jr. (1996:437) have emphasized that democratic peace theory derives its popularity primarily from its core proposition -- that when conflicts arise, the parties will resolve them through compromised bargaining rather than resorting to force.

In addition to the foregoing peace theory, the theory of civil culture (Almond and Verba, 1963; Inglehart, 1990) postulates that the viability of democratic institutions is affected powerfully by attitudes. These attitudes include factors such as belief in one’s ability to influence political decisions, feelings of positive effect on the political system, and the belief that other citizens are basically trustworthy.

Therefore countries with high levels of these civil culture attitudes are expected to be more likely to adopt and sustain democracy over time than countries with low levels. Another alternative possibility is that the civil culture attitudes are an effect rather than a cause of democracy. According to this line of argument (Muller and Seligson, 1994), the successful persistence of democracy over time is likely to cause increases in levels of appropriate civil culture attitudes because high levels of subjective political competence, pride in the political system, and interpersonal trust are a rational, learned response to the experience of living in a country that has a stable democratic regime.

From our foregoing understanding of the idea of democracy, and the two prime theories of democratic peace and civic culture, we can readily deduce that peace is both
Peace Education and Conflict
Management in a Democracy

In order to have a good grasp of the concept of peace education, it is beneficial to have a proper comprehension of the concept of peace. According to O’Connel (1991), in St Augustine’s great definition — “the tranquility of order,” O’Connel (1991:6) stated:

involved in … understanding of peace is a set of attitudes among persons and groups … that seek to uphold the values of justice, freedom and peace inherent in stabilizing order.

According to Rogers (1991), the process of peace education is concerned primarily with positive approach to peace-making. This approach entails the development of people who internalize a positive vision of peace and have a real sense of justice (personal and social). Also, they are people who sensitized themselves and who have helped to cope with the various social manifestations of violence and conflict in their own lives and the wider world. Peace education is also viewed as a life affirming approach to human interaction (Sehmidt and Friedman, 1989). The general goal of peace education can therefore be summarized as equipping children with conflict resolution skills which will enable them to maintain cooperation in resolving conflicts.
Literature searches in this area reveal a global awareness and realization that appropriate solutions to eradicating societal violence and resolving conflicts peacefully lie in the process of developing within children, right from home through school, skills for resolving conflict by non-violent means. Children are the adults and leaders of tomorrow. We have an obligation to guide and assist them to acquire non-violent conflict resolution skills. We have a responsibility to help them develop the knowledge and attitudes which enable them to cooperate and engage successfully in the process of managing and resolving conflicts peacefully and constructively. In fulfilling these obligations, we are contributing to the development and maintenance of a stable democracy and a peaceful world.

From studies conducted in the U.S.A., American parents who were surveyed reported that teaching children non-violent skills was important to them as parents. They said that they would pay more for such programs. And they did not think that pre-schoolers were too young to participate in learning non-violent living skills (Peterson, 1993).

In contrast with the American studies, a global survey revealed that peace education programs have not taken root in the majority of countries, Nigeria included. This is a great challenge. This challenge goes out to teachers, academics, early childhood educators and educologists and to Nigerian government organizations involved in early childhood education. The challenge calls for all stakeholders to summon the will and assemble the resources necessary for planning and implementing effective and efficacious peace education programs in the schools.

Peace education is based on a number of principles. They include (1) an attitude of give and take cooperation,
(2) respect for others and their opinions, (3) leadership skills, (4) benevolence in civic and cultural attitudes which lay emphasis on otherness. These are some of the essentials of a functional peace education curriculum which is crucial to the sustenance of democracy.

From a survey of educological literature about peace education, it is apparent that a number of different peace programs have been developed. Examples include those of the Montessori classroom, peer-mediation, and creative conflict solving programs.

With the many existing curricula of peace education programs, it is apparent that not all of the curricula include all of the possible elements of peace education. But what is apparent is that there is a wide range of concepts, propositions, skills, attitudes and values from which one may choose in developing a curriculum of peace education.

Thus a curriculum of peace education may include features such as skills in peaceful solution to conflicts, problem solving approach, learning of non-violent skills for daily living and social skills, peer-counselling, attitudes and skills of cooperation, understanding of human rights and children’s rights, role-playing in constructive conflict resolution, non-violent classroom environment and a range of aspects which promote and facilitate peace in conflict resolution, such as understanding of cultural variations, linguistic differences, citizenship education and national, state, or ethnic loyalties.

There are many integrative features available to a curriculum of peace education. For example, biblical instructions such as “the Gentiles are heirs together with Israel … and sharers together in the promise in Christ Jesus” (Eph.3:6), and “But our citizenship is in heaven” (Philipian 3:200) are examples of instruction in peace education.
These scriptures may be used to develop the concepts and attitudes of otherness and fairness to all, and being free of all forms of racism, ethnicity, political and class divisions, and all forms of segregation that could threaten any attempt to institutionalize a stable democracy.

Children at all levels of their school life need to be exposed to peace education programs, not only for a holistic personal development, but as an instrument for a sustainable peaceful, democratic and egalitarian society. For this purpose, teachers, academics and educologists have vital roles to play in the development and implementation of an adequate curriculum of peace education.

The challenges which call for personnel development through pre-service and in-service teacher training, workshops, seminars and conferences. Indeed teachers have a great challenge in developing, maintaining and protecting democracy through peace education.

One cannot doubt that curriculum in all schools in Nigeria, for example, have bits and pieces of topics which are intended to promote cultural, ethnic and racial understanding and peaceful or benevolent civic culture and attitudes.

But what currently exists is not enough. It is too piecemeal and haphazard. What is needed is a more extensive, articulated, coherent approach to promoting peace education in a more practical and purposeful manner. This is needed for the larger purpose of promoting a sustainable democratic and peaceful society.

**Conclusion**

In conclusion, it has been argued that there is an ongoing danger of the use of war to resolve national and global conflicts. Modern warfare is made even more dangerous by
the existence of nuclear war capabilities and the possible spread of nuclear warfare capabilities to other nations.

It has been argued that an important, if not essential, element for a sustainable democratic and peaceful society is a program of peace education for its citizenry. Children are the adults of tomorrow. They need to be equipped with skills for constructive conflict resolution, and they need to be given guidance in their development of appropriate attitudes towards civic culture. Peace education needs to begin with the first days of school experience and extend through the children’s entire school life. For as the Holy Bible recommends, “Train a child, in the way he should go, and when he is old he will not turn from it” (Prov. 22:6).

In an effective peace education program, both the family and the school must cooperate to embrace the concept of peace education. They need to appreciate the power and effectiveness of skills of non-violent conflict resolution in a democratic state like Nigeria. They need to work together with government, and non-governmental organizations to formulate and implement a peace education curriculum in the Nigerian school system.

To facilitate this, conferences and workshops by and for early childhood specialists, educologists and teachers are necessary to work out the modalities, relationships, structures and logistics involved in appropriate peace education programs for schools. They are the people with the expertise to develop the requisite educology of peace education. It is the educology of peace education which forms the knowledge base for making rational, well informed decisions about what to incorporate into a curriculum of peace education. In their deliberations, they of course must not operate in a cultural, economic and political vacuum. They must not lose sight of all the
personal, societal, political, cultural and economic forces which militate against the formulation and implementation of any new change in society. They must inform themselves of what has already been achieved in peace education programs. They must also remain cognizant of the fact that the children of a nation are its future and that an investment in children is an investment in the future of the nation and its democratic character.

References


