Rethinking University Education in Kenya: The Case for ESD in Higher Education

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ABSTRACT

*Business Education and indeed, education generally is changing in terms of teaching, research and learning, thus moving from narrow to wider, more **holistic** education. Today a dynamic **international** academia allows a mixing of different knowledge cultures necessary to address business and sustainability questions in society.*

*This paper therefore explores the rise of cross-disciplinary higher education in Kenya and the implementation of education for sustainable development **(ESD)** under the UNEP's MESA programme. It asserts that learning for sustainable development is a joint search by universities, lecturers and their students for knowledge and competencies that enable them to deal with dilemmas in complex social settings. It submits that, that type of learning asks for authentic and open learning environments in which encounters with a diversity of disciplinary and stakeholder perspectives can take place. Thus, the paper suggests that cross-disciplinary theory with its cross-disciplinary "knowledge, research, or education as its main objects of study" (Nissani 2004:2) may contribute to a deeper understanding of pluralistic ESD. Accordingly, the paper discusses four cross-disciplinary educational strategies; mono-, multi-, inter-, and transdisciplinary education. The paper notes that at the moment, unfortunately, education policy in Kenya is not clearly defined and does not optimally support this **holistic** learning. The paper concludes that learning for sustainable development constitutes a trigger for innovations in education and should therefore be supported.*

Key Words:
Kenya, Education for Sustainable Development (ESD), Holistic, Cross disciplinary.

Introduction

The focus of this paper is on interdisciplinarity in education. We think that in Kenya, it is both timely and delayed. However, before we delve deeper into our topic let us say something about what we are all used to and are products of disciplinary knowledge, Specialization and professionalization. We come from different disciplinary, intellectual and of course employment backgrounds. We are not strangers to the territoriality that comes with specialization and 'expertise' (Beghtol 1995)

The sense and nonsense of academic specialization have recently been discussed (Oweyegha-Afunanduula, 2004). However, to understand how interdisciplinarity is conceived and received we need to have a good understanding of the nature of academic disciplines and their influence on faculty life in colleges and universities. We need to appreciate that despite their great influence on the way academics perceive the world and how they interact with it and in it, or do their things in it, what are called academic disciplines have not been around for a long time, (Lattuca, 2001; Oweyegha – Afunanduula, 2004). They actually emerged in the nineteenth and early twentieth centuries but have become so entrenched that one seeking to give the dark side of them must trend a difficult path. They have attained enormous influence over the organization and production of knowledge (Klein, 1993). However, as it is traditionally understood, the term discipline connotes "subdivision"; that is the separateness of various knowledge fields.

One thing is true about disciplines: they are complex. Lattuca (2001), asserts that they may be defined or seen as sets of problems, methods, research practices or bodies of knowledge that are unified by any of these. She suggests that another way to see discipline is as social networks of individuals interested in related problems or ideas.

We now know that the rigid walls or boundaries separating disciplines are not real. They are products of human imaginations. One can even say that they are myths that are nevertheless idolized by those who value them. As Lattuca (2001) notes, the boundaries between disciplines are very closely drawn in natural sciences where content areas are clearly defined and the images of fortified borders solidified.

One can hopefully divide the disciplines into those that produce knowledge and those that provide knowledge (Beghtol, 1995). Some, like information science are both information producing and information providing for themselves and for others.

The debate on whether or not the disciplines exist is intense and continues just as the debate on whether or not an individual exists does. For example, Philosopher Apostel (1972) has said thus: "A discipline does not exist. A science does not exist. There are personas and group practicing the same science or the same disciplines". Surprisingly, this was said nearly 33 years ago but today the managers and administrators of our education system and the designers of our curricula continue in their trade as if disciplines and separation of sciences (natural and social) are a fact of life. They still persist in the belief that science is value free and therefore, pure yet, as Back (1992), put it. Yet science is changing and has been changing to accommodate reality. He gives us seven indicators that it no longer, if ever did, make sense to separate science from dynamics of society (See also Oweyegha –Afunanduula, 2004)

For example, not only do decisions, on education, involve scientific arguments but also political, economic, industrial, policy and international lobbying, negotiations and diplomacy (Beck 1992). Therefore, the belief in superiority of science to its purity, which coincided with the separation of fact from value (Proctor, 1991) is mistaken and misplaced in the world of knowledge. It does not make sense to pursue education as if science is free from social constraints (Elzinga 1997). Doings so misdirects the education process and breeds confusion and inertia rather than the ultimate: wisdom, which is necessary for survival in our own environment.

Fortunately an expanding school of thought centered on education for sustainable development is convinced that even though discipline exists, the inputs to all the members of the same discipline have been similar; the work they do has been the same; the conceptual models or instruments they have produced have been identical; their inter-language has been the same for all interlocutors.

Still, rationalizations of disciplinary purity continue, with all their negative influences on the academia. Yet the need to view disciplines with caution is critical. Klein (1993) said that if there is an undisputed truth about disciplinarity it is that disciplines change. Becher (1989) who introduced the idea of academic tribes, cultures and territories said that monodisciplinarity remain a troublesome unit of analysis. Luttaca (2001) was of the view that disciplines, with all their influence, are merely epistemological corrals of concepts, theories and methods linked by specialized languages and no more than social groupings that make as much as they break down rules of disciplinary scholarship.

In monodisciplinarity, it is as if rules are made to be broken and nothing is wrong so long as the breaker of the rules is the owner and practitioner of that discipline and as long as the myth of purity of science or a discipline is adhered to and perpetuated as such. It is therefore, not surprising that despite the truth about disciplinarity, Kenyan scholars, education bureaucrats, and curriculum designers have been continuing as if nothing is wrong. After all the vast majority of them are products of the disciplinary curriculum and are inherently agents of it.

The recent decision by the Ministry of Education and, for that matter, the Kenyan Government, to pursue a clearly discriminatory, improperly originated rigid education preferring rigid natural science-social science divide is a re-entrenchment of orthodox disciplinary education. It takes Kenya decades back into the 19th Century and far from first principles in education. It confirms the old adage that habits of knowing die hard once entrenched over a long period of time. It ignores or is not aware of where education is going- marriage and mixing of the disciplines and linking of the sciences towards integration of education. Strictly the complexity of the 21st century demands that we all work towards integration of education. People who are not products of an integrated curriculum are unlikely to fit and survive in an increasingly integrated world under the influence of globalization. It is important that the Kenyan education policy responds to this reality by accepting and adopting the principles of education for sustainable development.

ESD recognizes interdisciplinarity as a strategy for integration. Kenya should not miss out on the opportunities it offers in terms of preparing our citizens for a more complex,

interconnected, and interdependent, world. We are suggesting that we must begin rather than turn our heads away from education for sustainable development and develop curricular to produce the citizens we really need.

The Paradigm of Education for Sustainable development

When we allow ESD to come in, it implies that we are inviting a paradigm shift (Kuhn 1970), meaning that we have to break away from a rigid disciplinary tradition. The old way of academic professionalism or shaping of the professions must give way to a new one or at least tolerate it. Such shift means that we are inviting rethinking of the way we perceive the world or even interpret it.

By allowing the shift we are making a strong statement that the paradigms of education for sustainable development supersede and should be seen to supersede disciplinarity, at least in the long term. However since interdisciplinarity implies togetherness of the disciplines, the paradigms does not necessarily imply leaving the disciplines behind. It simply means a marching from disconnected to connected teaching, learning and research, of course guided by the knowledge that "everything is connected to every other thing". Therefore, we need to be ready to accept and recognize that life involves interconnecting and interconnections. ESD is at hand to assist in ensuring that interconnections between disciplines take place all the time. It is growing and we need to be ready to address the issues, problems and challenges involved.

One problem is how to evaluate interdisciplinary work. Another is how to make it excellent in concept and design. Yet another is how to ensure that it is judged by rigorous standards. As we shall see later the great task to overcome is the dominating attitude that interdisciplinarity will erode disciplinary boundaries (e.g Ketzer, et, al., 1986). However, some scholars have seen this as no problem at all and have instead talked of "creative marginality" of interdisciplinarity (e.g., Dogan and Pahre, 1990) in the creation and dissemination of knowledge. But what exactly is interdisciplinarity?

Defining Interdisciplinarity

It is a human practice to define things in order to make them look simpler and more understandable to create order where there was chaos. However, it is not always easy to define anything. For a long time it has not been easy to define interdisciplinarity. This is because interdisciplinarity takes so many guises and because it is a moving target that responds to the explosions and contradictions in the disciplines themselves (Lattuca 2001). In fact a wide range of definitions in different settings have been innovated. Unfortunately, sometimes interdisciplinarity has been confused with integration.

Pring (1973) defined interdisciplinary as "the use of more than one discipline to pursue an inquiry". He saw integration as interconnection of knowledge. However, with the

passage of time the distinction is between interdisciplinary and integration has become blurred to the extent that many who attempt a definition will see no difference between the two. Despite this problem the distinction between disciplinary education and integrative education has persisted in education. We can today talk of interdisciplinary scholarship as much as we can of integrative scholarship.

Relations of Interdisciplinarity to General System Theory

Whatever the case might be we now know that interdisciplinarity is a way of knowing grounded in general systems theory (GST). GST tells us that all things are interdependent, interconnected, intertwined and coexists and interacts dynamically. As Williams (2001) puts it, interdisciplinarity has a "why not" rather than the traditional "so what" research imperative. Broido (1979) regards interdisciplinarity as a journey, not a destination; as a seeking rather than an arriving. He goes on to tell us that it is concerned more with how and whether to ask rather than what to ask. He thinks that these are its flaws as a methodological exercise. As such the value of interdisciplinarity is the process itself.

Otherwise the object of interdisciplinarity is "to know what we do not know" or as one wise man put it, "to know the interval between the books". Its subject is not information but it behaves in an information-seeking manner. In other words it is preoccupation is the preoccupation of everyone who wants to know what he or she does not know. This is the very reason why we should not take interdisciplinary to be what Williams 2001) has called "hyper" rated patchwork of disciplines." Neither should we see it as just a means of combining disciplinary attributes for specific application. We should see it as just the opposite (Williams, 2001).

Therefore, from information processing viewpoint interdisciplinarity may be seen as an information-seeking behavior; a way of becoming widely informed yet a mindset as much as a toolset. In its widest sense, however, interdisciplinarity is a way of coming to know without constraint; a way of multiple, simultaneous processing and connection making; of seeing the whole from without the parts. It is a way of arriving at the boundaries (of the disciplines)-an approach, an intellectual activity, which takes place outside the restraints of disciplinary methods. Accordingly, it is informating in the space between the books" (William 2001). As a way of knowing, therefore, it is powered by information, the content, the channel and the context to which we are exposed as learners and by our own process of informating.

Typology of Interdisciplinary

Lattuca (2001) has proposed a typology of interdisciplinarity, which is not only useful for categorization of interdisciplinary scholarship but also for understanding the different forms of interdisciplinary integration. According to her there are four types of interdiscplinarity.

Table 1: Types of Interdisciplinary Scholarship (After Lisa R. Luttuca, 2001)

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Type of Scholarship	Integration Teaching	Research
Informed Disciplinarily	Disciplinary Courses informed by other Disciplines	Disciplinary questions requiring outreach to other disciplines
Synthetic Interdisciplinary	Courses that link Disciplines	questions that link Disciplines
Transdisciplinarity	Courses that cross Disciplines	Questions that link Disciplines
Conceptual Interdisciplinary	Courses that cross compelling disciplinary basis	Questions that cross Disciplines

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Interdisciplinary scholarship: informed disciplinarity, synthetic interdisciplinarity transdisciplinarity and conceptual interdisciplinarity (Table 1)

From the Table we learn that in informed disciplinarity (ID) disciplines are called upon to illuminate a disciplinary question. In synthetic interdisciplinarity (SI) theories, concepts and or methods are combined from different disciplines. In transdisciplinarity (T) the sources of theories and methods are muted and applied across the disciplines so that they are no longer associated with a single discipline or field of study. In essence the discipline becomes a research setting and thus of secondary importance while in transdisciplinarity the transdisciplinarity questions become the focus of attention (Lattuca, 2001) In conceptual interdisciplinarity (CI), contribution to interdisciplinary questions comes from many disciplines. Interdisciplinarity becomes merely a strategy for approaching complex questions that no single discipline can handle. This is the case in conceptual interdisciplinary modes such as post modernism, post- structuralism and feminism. Making interdisciplinarity a strategy and the only strategy (Lattuca, 2001) but is also a critique of disciplines.

Fundamentals change needed

What we have stated so far, therefore, implies that interdisciplinarity requires a fundamental change in attitudes and behavior towards new knowledge cultures, in this case interdisciplinarity: It demands that we change our approach to knowing and organizing what we want to know or should know. Williams (2001) has stressed that the fundamental change must occur at the level of information processing. When this happens, countering disciplinary constraints is possible towards the unity of knowledge and new ways of knowing the unknown – beyond the disciplinary boundaries.

Therefore, interdisciplinary is fuelled by the imperative that there is so much to know in the uncharted space between the disciplines as Wisdom (Williams 2001) put it. This is the value of education for sustainable development. It demands that we rethink our education system, curricula, education policies and education practice so that we can begin to educate for wisdom rather than just knowledge (e.g. Maxwell 1984). Our education system has produced for us too many people of knowledge but very few of wisdom. As we have repeatedly indicated, ESD evokes more integrated curricula for integrated teaching, Learning, research, and community engagement. With this fundamental change there will be no room for disaggregating the sciences. Nor will there be room for re-entrenchment of the disciplinary way of knowing and academic shaping of the professions.

The goal of ESD is integration of curriculum to illuminate more clearly the concept under consideration in relation to significant theme, issue, or problem through the application of higher level thought process as students analyse, sythesise and generalize from information to knowledge (Traci Caves, 1998). One important value of curriculum integration is that it provides a format to avoid the fragmented and irrelevant acquisition of isolated “facts”, which has characterized our education system. This way knowledge is transformed into personally useful tools for learning new information (Hayes – Jacobs, 1989, Caves, 1998)

Erickson (1995) has documented different forms of integration available for us to adopt. He believes that in order for integrated curriculum to be well- designed it must be interdisciplinary. At a lower level of integration, one can relate facts and subjects areas to a common topic. In this case what the curriculum does is to cultivate a depth of understanding and to allow students to link knowledge and ideas across contexts (Collier and Nolan, 1996). At a higher level of curriculum integration content is organized under a common, abstract concept such as coexistence, conflict or interconnectivity. In this case interdisciplinarity means that several disciplines focus around a common concept. This then helps to develop a deeper level of understanding by the learners (e.g. Hayes- Jacobs 1997)

This is what the University and colleges in Kenya should aim at if they accept interdisciplinary integration of the curriculum as a strategy in education planning and management. There is no alternative way forward if our aim is to respond to the needs of society and the individual. As Erickson (1995) has pointed out this requires that the

learners are able to construct knowledge, attitudes, values and skills through a complex interplay of mind, materials and social interactions within the academia.

Emerson (1982) observed that the mind naturally makes connection. This natural phenomenon is a big opportunity for transformation of education and producing the people we need. We who have tried to link knowledge know that in fact students learn better when knowledge is organized around relevant topics into meaningful wholes rather than in isolated bits (see also Beane 1995, Cain and Cain, 1997; Caves 1998)

We are suggesting in this paper that Kenya should seize the opportunity. The challenge, however, is to facilitate the creation of meaningful interdisciplinarily – integrated units by academics in higher education who have the knowledge of required curriculum and the practical experience necessary for classroom implementation. This of course means heavy investment in staff planning and development for integration. There is no alternative. We cannot, afford to postpone open, diversity-loving, democratic curriculum and the freeing of academic and the products of the current education system, which appears to be too examinations- loving, silencing, domesticating and promontory of caging of students and teachers and undemocratic practices, particularly as far as policy and administration are concerned, and easily breeds and encourages the corruption and political burdening of education.

Both teachers and students will then be able to benefits from academic migration across the curriculum, seeking and imparting knowledge without fear or favor or expecting to be told that they are abandoning their disciplines (Oweyegha-Afunaduula, 2004). We shall in the end have integrated and integrative universities, colleges, schools and other institution of learning (e.g. Awbry and Scott, 1997). With Ministry of Education working to ensure and expand interconnections. The preoccupation of the whole education system will be creating a culture of learning about and understanding. The Ministry of Education, the Universities and the colleges will move more and more towards more interdisciplinary programming of education and change their selection, acceptance sponsorship and career development criteria.

Mukama and Murindwa-Rutanga (2004) recorded the analyses and rededications by national and international scholars towards confronting 21st century challenges. One of the great challenges for social sciences and the humanities, therefore is how quickly to seize the opportunity of less disciplinary rigidity to integrate the curriculum now rather than later. This is not to say that the natural sciences should be left behind. They too must begin to integrate their curricula to enhance interdisciplinary interactions. Concurrently linkages between the hard and natural sciences must also be sought through curriculum integration. Therefore, curriculum integration is a challenge for all the sciences-hard and soft- and for the whole academy. By extension the whole education system must be helped to prepare itself to accommodate and respond to the challenges of interdisciplinary and integrative education. If viewed this way then every citizen has a very good chance of participating and benefiting from interdisciplinary-integrated curriculum. The way forward is to allow and facilitate this to happen.

The 21st century demands that kenya has a Ministry of education that is integrated and integrative, and is therefore committed to facilitating the production of wholesome

graduates via a wholesome (integrated) education system. Policy commitment to interdisciplinarily-integrated education is the way forward for 21st centaury education management in Kenya. It targets all learners in an integrated manner and without discrimination and, therefore, enhances public accountability of government for education to the improvement of its human rights record.

Conclusion

The need to know is naturally demanding. Education for sustainable development has emerged as a "new" way to know, a sort of broad, inclusive, holistic understanding. Many now believe that it is a logical way of knowing that is proper to the domains of information, teaching, research and community engagement. Therefore, it is of general and common interest to the disciplines.

The age of ESD shaping academic professions is here, but it has really been around for a long time only that it has not been allowed by a strong disciplinary culture to set down to work. It can play an important role in reforming and even transforming educational curricula and policies as well as the training of trainers. However, the age of disciplinarity is not yet over. Disciplines will be needed to produce interdisciplinarity. What all this means is that with disciplinarity and interdisciplinarity integration we can have a new scholarship and a new type of scholar. It means that we can be freed from the fears, egos, despotism, undemocratic practices, secrecy, exclusionism and injustices that have characterized our disciplinary cocoons, which roughly have been dominating our departments and faculties more than creativity, initiative innovation and imagination.

With ESD we do not only have a way to diversify scholarship but we also have a way to update and professionalize interdisciplinarity itself as well as scholarship. We have a away to shift from scientific specialization to dialogue between the disciplines (Kump, 1986). We have a way to achieve consensus and difference, even in collaborative learning (Trimbur, 1989). We also have a way to integrate education and the education experiences (Henry, 1968). Indeed we can now have interdisciplinarily-integrating and integrated Universities and Colleges for sustainable development and citizenship (Wraga, 1993) and wisdom (Maxwell, 1984) for the 21st century. If we have interdisciplinary education then we cannot miss having integrative and integrated education as well.

This will allow promotion of the natural sciences, the humanities and the social sciences as interlinked, interdependent and coexistent and one science towards a holistic education for sustainable development (e.g., Miller, 1994). This does not only require proper balancing of knowledge, wisdom, controversy and decision-making but demands that the interplay between science (both soft and hard) and public decision-making in the area of education is cautiously pursued

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