Mainstreaming local people’s knowledge and implications for higher education in the South

O. D. Kolawole
Department of Agricultural Extension and Rural Sociology
Obafemi Awolowo University, Nigeria
toyin.kolawole@yahoo.com

Abstract

The essence of education is the enhancement of behavioural change through the acquisition of new knowledge, skills and attitudes by the learner, which invariably translates to individual and national progress. This article, therefore, sheds light on the development and utilisation of local people’s knowledge systems/technologies with possible adaptation for teaching in Colleges and Universities in the South for the realisation of sustainable development. It specifically addresses contextual issues and processes involved in knowledge production through indigenous experimentation and innovation; emphasizes both in situ and ex situ preservation of knowledge; identifies social actors in (indigenous) knowledge production; proposes a model for incorporating IKS in the formal education system; and suggests that the knowledge generated by grassroots people should be documented, preserved and made available in international centres for accessibility by all stakeholders for possible adaptation. The article poses a challenge to the twenty first century knowledge producers and policy makers on the importance of mainstreaming indigenous knowledge systems for the purpose of teaching in higher institutions to enhance sustainable human development.

INTRODUCTION

Indigenous/local knowledge (IK) and its strategic importance, which have been seen as ‘a powerful asset that many developing countries possess’ cannot in any way be underestimated, particularly now that development professionals have begun to appreciate its contributory roles in sustainable development. It has been acknowledged that ‘... development is no longer the exclusive domain of western (global) knowledge’ (Von Liebenstein 2001). The second half of the 1990s witnessed the beginning of the ushering in of IK into the mainstream of ‘activities and initiatives undertaken by developing countries and by the international donor community, UN agencies, and most recently the World Bank’. Von Liebenstein (2001) had commented thus:

IK was on the agenda of the first conference devoted to global knowledge for development (GK97), held in Toronto, Canada, and even more prominently on the agenda of the second conference (GKII), held in Kuala Lumpur, Malaysia, in 2000. The final action plan of the GKII Action Summit and Forum includes a strong
endorsement of the indigenous knowledge programme and specifically calls for the identification, development and dissemination of local knowledge in various forms, including local languages. It also calls for developing strategies for using indigenous knowledge in development.

We have also seen growing interest and appreciation among scientists. The body of scientific publications grew over the last decade and no doubt underlies the recommendation of the UNESCO-ICSU World Conference on Science (Budapest 1999) that traditional knowledge be integrated into science.

Bringing IK into the mainstream would, therefore, mean recognising the need to integrate it into the western-based knowledge systems. ‘An important way to incorporate indigenous knowledge into the mainstream society,’ as asserted by Liebenstein (2001), ‘is to integrate IK into the formal education system at all levels, but particularly in higher education’. This underscores the importance of careful observation, experimentation, validation, documentation and utilisation of endeavours, which are purely based on local thinking and efforts. The perceived efficacy of the indigenous wisdom in the development process is being buttressed by Roth (2001), who submitted that ‘. . . a number of participatory approaches to rural development have emerged, all of which place a strong emphasis on local knowledge systems’.

THE PROBLEMATIC

Whereas indigenous knowledge systems (IKS) have, for several decades, been generally seen as inferior and as such have been denied a role in development, Western knowledge systems (WKS) – which are generated in schools, universities, research institutes and industrial firms – have, for many years, dominated development thinking. This western knowledge, opined Liebenstein (2001), ‘gradually spread over the developing world as the dominant system shaping politics, values and careers – a system that places great emphasis on the exclusive contribution of western knowledge (i.e., science and technology) to development’. IKS have, thus, been classified as non-scientific and treated as contrasting with WKS. By and large, the diffusion of WKS into the traditional society through institutional influences and collaborators has impinged on the inner drive of older people to ‘transfer their knowledge and farming skills to the next generation . . .’ (Kolawole, 2004). It is worthy of note to state that giving recognition to and appreciating IKS would serve as ‘. . . a source of healing of therapeutic import in the context of unhealthy imbalances, distortion, trivialisation and neglect as inflicted by the Eurocentric education and governance’ (Emeagwali 2003). She (Emeagwali) opined: ‘The fact is that Africa in the twentieth century was afflicted by 2 major externally derived economic models of exploitation, namely, the colonial model of exploitation and neo-colonial models aimed at recolonisation’.
Von Liebenstein (2001), a westerner and an insider himself, was noble and blunt in his earlier claim about the selfish (ulterior) motives for which western education was introduced to the South:

Many development professionals and academics in Asia, Africa and Latin America share this science and technology bias, which in itself is not surprising. Education patterns have tended to favour recruitment from urban areas and from wealthier rural families. Members of local elites were educated in the North or in a scientific tradition copied from the North. As a result, the scientific and technological research undertaken in developing countries is concerned mainly with phenomena and problems derived from western cultural concepts. *Colonial powers imported western science and technology in order to sustain economic systems that exploited resources primarily for the world market* (emphasis mine). The knowledge was thus beneficial only to the colonial powers. The colonial heritage persists to the present day in the form of scientific ideals, in the ways that research assistance is given, and in the imitations of western patterns of prestige.

Hountondji (1997), in his argument against the outward orientation of the Third World countries, which he referred to extroversion wrote ‘. . . to recover individual and collective initiative, to become ourselves again is one of the major tasks prescribed by history’. ‘That task,’ he continued, ‘within the specific field of knowledge, amounts to taking an informed enough view of current practices in order to work out other possible modalities of producing knowledge, other possible forms of technological and scientific production relationships, first between the South and the North, but also in the South itself and inside each and every country’. Emeagwali (2003), had, however, bore her mind on African Indigenous Knowledge (AIK), positing a change in attitudes to AIK from skepticism to confidence and pride, commitment to community based research and problem solving, Africa centered as opposed to eurocentric research capabilities and methodologies, respect for the intellectual property rights of practitioners and commitment to community empowerment and to the social and economic well being of the community. However, decision-makers in the South are beginning to see the relevance of IK and the important roles, which it could play in the development process. How this resource has been adequately mobilised for the development of indigenous technologies and enterprises is still, to a large extent, a problem yet unresolved. What are then the right strategies to adopt in entrenching these local ideas and ideals with a view to bringing about a radical approach to appropriate and sustainable development in the South countries? This and other questions would be addressed in the article.

**OBJECTIVE OF THE ARTICLE**

The general objective of this article is to shed light on the development and
utilisation of local people’s knowledge systems with possible adaptation for teaching in colleges and universities in the South for the realisation of sustainable development.

The specific objectives are to address contextual issues and processes involved in knowledge production through indigenous experimentation and innovation; emphasise both in situ and ex situ preservation of knowledge; suggest that the knowledge generated by grassroots people should be documented, preserved and made available in international centres for accessibility by all stakeholders for possible adaptation; and pose a challenge to the twenty first century knowledge producers and policy-makers on the importance of mainstreaming indigenous knowledge systems for the purpose of teaching in higher institutions to enhance sustainable development.

SOME CONCEPTUAL EXPLORATIONS

The Genesis of Indigenous Knowledge Systems (IKS)

Osunade (1996) acknowledged that IKS ‘is as old as the history of man’s search for ways and means of dealing with his environmental circumstances to satisfy his basic needs of food, shelter and clothing’. It was the belief of some authors that the first intensive fieldwork, a form of systematic investigation into the subject started in about 1900 by anthropologists.

Before 1965, few and sporadic studies had appeared in the literature for about 25 years. Studies later resumed in the seventies (Osunade 1994) when geographers, agriculturists and other natural scientists developed interest in the subject. Of the notable factors that span the interest in this subject are: the energy crises and the rapid growth in the interest in systems not dependent upon non-renewable fossil fuels for their survival; the incidence of largely man made ecological disaster such as the recent drought in the Sahel and Southern Africa (Osunade 1996); the accordant search for explanation and possible solutions; ‘the phenomenon of the ‘Green Revolution’ which in-spite of notable success has illustrated the problems inherent in strategies seeking to promote new technology from “top down”; and the political consciousness and academic emancipation of Western trained social scientists (Osunade 1996).


Nevertheless, in 1980, the team of David Brokensha, Oswald Werner and Michael Warren had struggled to find a term that could replace ‘traditional’ in the
designation ‘traditional knowledge’. Just as they were struggling with the idea that ‘traditional’ denoted the 19th century attitudes of simple, savage and static society, Robert Chambers and his group at Sussex were also struggling with the same idea (Osunade 1996).

However, ‘Independent of each other, they both came up with the term “indigenous”’ which has, over time, supplanted various other terms highlighted above.

The concept of Indigenous Knowledge

Three interrelated concepts of ‘local’ knowledge

As Brouwer (1998) said, ‘In defining the concept of indigenous knowledge, one must keep in mind the practical needs as well as the research needs’. He, therefore, differentiated between the concepts of ‘Indigenous Knowledge’ (IK), ‘Indigenous Knowledge Systems’ (IKS) and ‘Indigenous Technological Knowledge’ (ITK). While Brouwer (1998) defined IK, as a general umbrella concept, to mean the participants’ knowledge of their temporal and social space, he wrote that IKS ‘delineates a cognitive structure in which theories and perceptions of nature and culture are conceptualized.

Brouwer (1998) also argued that ITK, which is practical-oriented, on the other hand, is ‘concerned with operationalised local thinking in such fields as agriculture, fisheries, health, horticulture, and forestry’.

Indigenous knowledge defined

Various authors (Chambers and Thrupp 1989; Warren 1990, 1991; Osunade 1996; Grenier 1998; Kolawole 2001, etc.) have, from different perspectives, defined Indigenous Knowledge (IK). Warren (1990) submitted that ‘The term “indigenous knowledge” (IK) is used synonymously with “traditional” and “local” knowledge to differentiate the knowledge developed by a given community from the international knowledge system sometimes also called “Western” system, generated through universities, government research centres and private industry. IK refers to the knowledge of indigenous people as well as any other defined community.’ Elsewhere, Warren (1991) had defined indigenous knowledge as local knowledge – knowledge that is unique to a given culture or society. Kolawole (2001), from another perspective, referred to IK as the ‘“technical” insight or wisdom gained and developed by people in a particular locality, through years of careful observation and experimentation with the natural phenomena around them’. Grenier (1998) defined indigenous knowledge as ‘The unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area’.

While IK is believed to be all encompassing, Warren (1991) wrote that ‘it is the basis for local-level decision making in agriculture, health care, food preparation,
education, natural resource management, and a host of other activities in rural communities’. Elsewhere, Warren (1990) had said indigenous knowledge existed in all forms and in all aspects of the lives of the people.

The development and utilisation of indigenous knowledge systems

The custodians of indigenous knowledge systems are the local people, including farmers, landless labourers, women, rural artisan, cattle rearers (Rajasekaran et al. 1991) and native philosophers and diviners (Osunade 1996). These, they have developed over the years through careful observation and experimentation. Hatch (1976) gave a vivid description of the development of IKS in agriculture viz.: ‘Through a lengthy apprenticeship which begins in childhood, small farmers are taught to use a very complex manual technology. They learn to read the soils, the weather, and heavens. They learn to study their crop for disease, insect and rodent damage and water requirement often on a plant-to-plant basis. They learn to follow specialized farm task calendar, meet sequential deadlines and keep careful count of passing days. They learn resourceful strategies of adjustment to consequences arising out of weather, labour and cash restraints’.

Kolawole (2001) also, in a way, concisely supported Rhoades’ and Bebington’s (1995) claim by outlining and expatiating on the stages of local knowledge development. These are observation (of the environment through cognitive mapping, leading to insight); experimentation (through trials and constant practice); and validation (through evidence-based result) (Kolawole 2001). Acknowledging that IKS is perpetuated through latency, Warren (1991) wrote that ‘Such knowledge is passed down from generation to generation, in many societies by word of mouth’. Osunade (1996) also affirmed that ‘Through oral communication passed down over the years by ancestors and through pragmatic contact with land and total environment, each community within each ecological zone has come to know the suitable uses to put their lands. The practices have been refined through trial and error and the best fit has emerged.’ Kolawole (2001), therefore, concluded: ‘Regardless of the degree to which they have embraced modernity, local people continue to prefer concrete knowledge, which belongs to them in time and space, and which they deem suitable for particular purposes’.

People, reported Smith (1997), would naturally control their own lives when there is a reference value (an image of the desired state); a perceptual function (the ability to observe the existing state); a mechanism for making comparisons (the ability to compare the existing state and the desired state for differences); the ability to act to bring the existing state closer to the desired state. To get from the existing state to the desired state, a mental model, which is a construction in the mind, is used to provide order in the course of taking actions (Smith 1997). For the purpose of analysis and better understanding of the concept of IK, Kolawole (2001) has identified five stages of local knowledge utilisation as awareness (of a
particular phenomenon); perception (of the phenomenon as a problem); motivation (to seek for a solution); evidence (arising from a specific approach employed to bring about a solution); and utilisation (of the tried and tested approach).

Between indigenous knowledge and scientific knowledge

Major works on indigenous knowledge as those of Banuri and Apffel-Marglin (1993); Chambers (1980); Dei (1993); Howes and Chambers (1980); and Warren (1989 and 1991) claimed that there are dissimilarities between scientific knowledge and the former based on substantive grounds; methodological and epistemological grounds; and contextual grounds. However, for the intention of this article, more emphasis shall be placed on the contextual argument.

Substantive dissimilarities

It has been argued that history and distinctive characteristics engender the differences between Western/scientific knowledge and indigenous knowledge. While it is believed ‘that indigenous knowledge is concerned with immediate and concrete necessities of people’s daily livelihoods’, Western knowledge is seen as attempting ‘to construct general explanations and is one step removed from the daily lives of the people . . .’.

Methodological and epistemological dissimilarities

Banuri and Apffel-Marglin (1993) and Howes and Chambers (1980) posited that while science is open, systematic, objective, analytical and advances by building rigorously on prior achievements, Indigenous knowledge, however, is closed, non-systematic, holistic rather than analytical, without an overall conceptual framework, and advances on the basis of new experiences, not on the basis of a deductive logic.

Contextual dissimilarities

Banuri and Apffel-Marglin (1993) opined that while ‘Western knowledge . . . has been divorced from an epistemic framework in the search for universal validity’, indigenous knowledge is often perceived to exist in a local context, pinned down to a particular social group in a particular setting at a particular time. Agrawal (1995), however, put forward his critique that so long the ‘western technically oriented solutions failed because they did not recognize the imperatives entailed by different socio-political-cultural contexts’, as have been variously argued, ‘it is likely that the so-called technical solutions are as anchored in a specific milieu as any other system of knowledge’.

On the other hand, too, some authors have seen science as relative to culture, or as relative to interests (Pickering 1992). Agrawal (1995) took on the theorists who said ‘the prime strategy for conserving indigenous knowledge is ex situ
conservation, i.e. isolation, documentation and storage in international, regional and national archives’ (Brokensha et al. 1980; Ulluwishewa 1993; Warren 1989; Warren et al. 1993). As these theorists saw in situ preservation of knowledge to be more costly for outsiders who may wish to access such information, Agrawal (1995) rejoined: ‘ex situ preservation of indigenous knowledge is likely to fail – creating a mausoleum for knowledge; ex situ conservation, even if it is successful in unearthing useful information, is likely to benefit the richer, more powerful constituencies – those who have access to international centres of knowledge preservation – thus undermining the major stated objective of conserving such knowledge: to benefit the poor, the oppressed and the disadvantaged’.

Essentially, while Agrawal’s view could, to some extent be accommodated, his second rejoinder is subject to criticism, too: It is believed that in situations where national policy thrusts afford change agencies the opportunities to access information from international centres, through the Internet, ‘the poor, the oppressed and the disadvantaged’ could, in that way, be so reached (Kolawole 2001, 2002). Personally, what one thinks is most important is the ability of local communities to decide which knowledge infrastructure is suitable for either in situ or ex situ preservation, or both. The cultural contexts and peculiarities of each locality influence people’s decisions on which information to make available for outsiders. This is particularly so where issues bordering on fetishism are emphasised. As it were, their views must be respected as such.

Brokensha (1996) had affirmed that ‘just as a weak company stands to disappear when merged with a powerful institution, IK would be the loser, and would cease to exist if the distinction between it and Western knowledge were to be removed’.

Roles of indigenous knowledge in development

Nelson Mandela wrote of Mahatma Gandhi in The Comet newspaper of January 8, 2000 and commented that: ‘... he received Indian handicrafts and made these into an economic weapon against the coloniser in his call for swadeshi – the use of one’s own and the boycott of the oppressor’s products, which deprive the people of their skills and their capital’ (p. 5).

Warren (1996) reported that ‘there is now a growing awareness among development practitioners of the relevance of indigenous knowledge resources as critical factors and cultural capital in the development process’. Emphasizing the significance of IK, Warren (1991) said ‘Indigenous Knowledge is important for many kinds of development activities to be successful . . . .The success of a development project often depend on local participation. Familiarity with indigenous knowledge can help change agents understand and communicate with local people, enhancing the possibilities for participatory and sustainable approaches to development. This enables project staff and local people to work as partner in planning and implementing development activities’.
Developing nations and donor agencies are becoming more interested in the ‘role indigenous knowledge can play in making development projects more effective and efficient’. The governments of countries like Nigeria (Phillips 1989, 1989), Indonesia (Padmanagara 1985), and Zambia (Kean et al. 1990) are beginning to recognise that their indigenous knowledge systems are national resources that can facilitate development efforts within the country.

The recognition of the utility of indigenous knowledge in development efforts by donor agencies and national and international agricultural research institutes has been greatly enhanced by the addition of a growing number of social scientists to these agencies over the past two decades (Collinson 1985, Rajasekaran and Warren 1991, Rajasekaran et al. 1991, Thomasson 1991, Warren et. al. 1993).

**Roles of higher education in the twenty first century**

The World Conference on Higher Education, which took place in Paris in October 1998, revealed that the agenda for the international debate on the process of academic change contained a number of important items, which include: a concern with quality, prompting the organisation of assessment and accreditation processes; a concern with the relevance of the work of higher educational institutions; the urgency of substantially improving management and administration; the need to introduce the new information and communication technologies; the desirability of reviewing the very concept of international cooperation and reinforcing the international dimension of higher education; and the exercising of academic autonomy with social responsibility (Bernheim and de Souza Chaui 2004). UNESCO had suggested that higher education must assume a leading role in renewing the entire education system. Reflecting on the complexity and the tasks before the contemporary higher education, the World Declaration on Higher Education for the 21st Century identified the following areas in which the latter becomes relevant to the society:

(a) Relevance in higher education should be assessed in terms of the fit between what society expects of institutions and what they do. This requires ethical standards, political impartiality, critical capacities and, at the same time, a better articulation with the problems of society and the world of work, basing long-term orientations on societal aims and needs, including respect for cultures and environmental protection. The concern is to provide access to both broad general education and targeted, career specific education, often interdisciplinary, focusing on skills and aptitudes, both of which equip individuals to live in a variety of changing settings, and to be able to change occupations;

(b) Higher education should reinforce its role of service to society, especially its activities aimed at eliminating poverty, intolerance, violence, illiteracy, hunger, environmental degradation and disease, mainly through an interdisciplinary and trans-disciplinary approach in the analysis of problems and issues;
(c) Higher education should enhance its contribution to the development of the whole education system, notably through improved teacher education, curriculum development and educational research;

(d) Ultimately, higher education should aim at the creation of a new society – non-violent and non-exploitative – consisting of highly cultivated, motivated and integrated individuals, inspired by love for humanity and guided by wisdom.

The foregoing suggests that higher educational systems cannot but parley with the society to ensure participation and democratisation in knowledge production. In other word, ‘a university that looks on knowledge through the prism of the right of the citizen, does what it can to stem depersonalisation and places a premium on democratisation . . .’ (Bernheim and de Souza Chau 2004).

**ANTECEDENT RESEARCH**

The author conducted a study entitled *Introducing indigenous education to University undergraduate students: Feelers from Obafemi Awolowo University (OAU), Nigeria* between January and May 2004. The results of the research were presented at the Joint Conference of the South African Association for Research and Development in Higher Education and Productive Learning Cultures Project (University of Bergen, Norway) on *African indigenous knowledge systems in higher education* held in Durban, South Africa from 10–12 June, 2004. The article investigated the perception of OAU undergraduate students of Agriculture offering a special elective course (SEE 001/002), entitled *Indigenous education in Nigeria*, in relation to its appropriateness and curriculum relevance to higher education. Some of the specific objectives were to identify the course contents and their relevance to the development of indigenous knowledge theory and practice in higher education; and determine the acceptability of indigenous approach to education among students. A purposive sampling (of 100 out of about 200 Part II agriculture undergraduate students offering the course) was carried out with the use of structured and unstructured questionnaires. Data were analysed with descriptive statistics (such as percentages, measures of central dispersion) and inferential statistics (such as correlation and chi square analyses). The result showed that a positive and significant relationship existed between a student’s cultural background ($r = 0.225$), parent’s occupation ($r = 0.175$) and his favourable perception of the adaptation of indigenous knowledge in higher education. Also, students’ and their parents’ religions had significant association with their favourable perception of the adaptation of indigenous knowledge in higher education in Nigeria. Well over 80.0 percent of the students had a positive and strong opinion about the appropriateness of incorporating indigenous education into the national school curriculum (Kolawole 2004). In line with the findings of the study, it was suggested in the presentation that ‘National governments in the South countries, therefore, have the onus of developing and integrating local
knowledge into school curriculum systems in order to enhance sustainable development’. It is instructive to note that South Africa is currently playing a leading role in this regard. In one of my interactions with Queeneth Mkabela (a South African) on the Internet, she affirmed that ‘Here in South Africa, it is compulsory to add 20.0 percent of IKS in each subject’. In essence, the foregoing informed the propositions, which form the thrust of this article.

**MAINSTREAMING LOCAL KNOWLEDGE IN HIGHER EDUCATION**

It is a mere platitude to reiterate that modernisation has long overtaken the present day society particularly in the South. If IK is not to be lost perpetually, a radical approach is needed to re-establish the mental and physical wealth of indigenous peoples. This knowledge base needs elite’s approval, recognition, renaissance and fortification in order to encourage folks to refine and improve on their skills in perpetuating local wisdom. It would become easier to incorporate IK into the school curricula if the four distinct aspects of local knowledge oriented development interventions as outlined by Shroff-Mehta (2003) are seen as highly crucial. These are *Documentation* (which has to do with knowledge preservation in written forms); *ownership* (local ownership of specific knowledge practices); *reward system* (rewarding local knowledge innovations through documentation and dissemination, cross-region recognition, global application and value addition); and *access to knowledge and institutions* (through the creation of linkages between local and modern institutions, access of folks to information and finances, etc.) are the essential frameworks for success in this respect. Liebenstein (2001) was, however, of the opinion that: ‘An important way to incorporate indigenous knowledge into mainstream society is to integrate IK into the formal education system at all levels, but particularly in higher education. Integration into higher education and research will result in the validation of indigenous knowledge and will thus help it more quickly to assume its proper place within the overall knowledge infrastructure.’

There are initiatives, which are now being put in place by some African countries with a view to integrating IK into national development and of course, the education sector. South Africa seems to be a trailblazer in this wise. For instance, the University of North-West has launched new accredited undergraduate and postgraduate degree programmes in IKS. The Universities of Natal and Cape Town, also in South Africa are not in any way left behind, too. In Nigeria, there is now what is known as the village chemist in the Faculty of Pharmacy of the Obafemi Awolowo University, Ile-Ife, where traditional medicine approaches are now being given some attention. The Ugandan National Council for Science and Technology (UNCST) had initiated the idea of putting in place a coordinating unit that would ensure the integration of IK into school curricula at all levels for jump-starting national development.

Where national education policies prioritise the incorporation of IK into the
school curricula, there is the likelihood of cultural renaissance amongst youths who would eventually form the bulk of future leaders. This is of utmost importance particularly in African, Caribbean and Pacific (ACP) countries, where traditional ideals and values are constantly being lost to the western influence. Exposing students to new knowledge systems based on the originally existing order is most likely to engineer the speedy enhancement of functional education relevant to local contexts and useful for application in the global frontiers. This, in a way, would undermine the culture of poverty, which is now apparent in most African societies.

Model for mainstreaming local knowledge in higher education

Based on the various submissions of scholars in IKS studies on the need to give recognition to local knowledge through institutional strengthening and capacity building (Rajasekaran and Warren 1991; Rajasekaran et al. 1991; Warren et. al. 1993; Liebenstein 2001; Shroff-Mehta 2004), procedures and strategies necessary for mainstreaming indigenous knowledge in higher education would be suggested here through a model construction and presentation. It will, thus, form a framework or building block on which policies that centre on education in different contexts could be built. Research institutes, Universities, Ministry of Education, other relevant government agencies, policy-makers, indigenous/local institutions, local artisans and custodians of local knowledge are seen as major stakeholders in this process (See Figure 1). Students and school pupils are also to be involved. Their interests must be solicited by making them to see the importance of imbibing local ideals for the sake of posterity and sustainable development. It is the onus of research organisations and Universities to identify innovative local technologists and technologies through the assistance of community leadership structures. Identifying and involving these local custodians of native intelligence in the conduct of research tailored towards meeting people’s needs is an imperative. Relevant public agencies and policy-makers need also be carried along by the researchers based in Universities and research stations to allow them see the relevance of outputs derived from the improvement made on available and relevant local knowledge and technologies. Getting the approval of policy-makers would enhance the integration of IKS into the conventional education curriculum in the developing countries. It also important that University dons show the commitment and willingness necessary to teach research outputs generated from endeavours built on local knowledge. For instance, tie and dye technology in the local textile industry is being taught as one of the modules in Home Economics Unit of the Department of Agricultural Extension and Rural Sociology in Obafemi Awolowo University, Ile-Ife, Nigeria. Harmonising school curricula at the national level with an emphasis on the inclusion of certain percentage of IKS in each subject (as in the case of South Africa), therefore, seems appropriate. By so doing, mainstreaming
the knowledge of indigenous peoples in Schools, Colleges and Universities in the developing countries would, in no time, become a veritable enterprise, which all and sundry would come to identify with.

![Diagram](image.png)

**Figure 1:** Model developed by the author showing linkages between institutions and other stakeholders in the mainstreaming of indigenous knowledge in higher education

**CONCLUSION AND RECOMMENDATION**

It has been acknowledged that development is about people (Kolawole 2000). It is,
therefore, the onus of national governments to seek ways of improving on human
capital if the Millennium Development Goal (MDG) is to be achieved. There is,
however, no other way to this than for every national government to look inward
and identify areas of strength and consolidate on these. Institutionalising
appropriate indigenous wisdom and technologies via the formal education sector
is a sure way out of the present doldrums in the South. If the ACP countries would
not learn how to be self-reliant and bold enough to hold the bull by the horn, it may
become extremely difficult for them to get out of the perpetual deprivations for
which they have come to be identified with. It is noteworthy to inform participants
that the Institute of African Arts of the Obafemi Awolowo University in Nigeria is
novel in its approach of bringing versed custodians of traditions, who originally
were not lettered, into the mainstream of the ivory tower to deliver papers and
teach certain, in-depth aspects of the Yoruba tradition.

It is this author’s strong belief that in situations where local custodians of
knowledge are given recognition and are encouraged to improve on what they
have, through institutionalised reward systems and by way of protecting their
intellectual property rights (IPR), IK would, in time, become highly esteemed even
over and above the respect now accorded imported technologies. Indians, under
Mahatma Gandhi did this, and they came out stronger for it. Where students are
exposed to cultural rudiments using a formal approach and where they are allowed
to learn, based on their local contexts, greater results are most likely to be
achieved. Herein come the crucial roles of knowledge producers (the academia and
research institutes) and policy-makers in developing on contextually available and
appropriate knowledge systems and that with a view to integrating them into the
national school curricula particularly at the tertiary education level, respectively.
As earlier canvassed by Emeagwali (2003), in her position on African Indigenous
Knowledge (AIK), a change in attitudes to AIK from skepticism to confidence and
pride, commitment to community based research and problem solving, Africa
centered as opposed to eurocentric research capabilities and methodologies,
respect for the intellectual property rights of practitioners and commitment to
community empowerment and to the social and economic well being of the
community are all sine qua non.

To come away from the straight jacketed tradition, leading people to nowhere,
it is suggested, therefore, that borrowing a leaf from the South African example
would not be out of place in jump-starting sustainable growth and development in
ACP countries in the twenty first century.

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Mainstreaming local people’s knowledge and implications . . .


