Appropriate Teaching Methods for Teaching Indigenous Knowledge in Universities in Nigeria

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Abstract: *The study adopted a survey research design to determine Appropriate Teaching Methods for Teaching Indigenous Knowledge in Universities in Nigeria. The study covered five selected universities and ten Departments with a population of 3,000 ranging from Years 1 and 2. A random sampling technique was adopted. Krejcie and Morgan method was used to determine the sample size of 341. The instrument used was tagged: "Appropriate Teaching Methods for Teaching Indigenous Knowledge in Universities in Nigeria (ATMTIK)", with a four point scale. Mean was used to analyse the research question, and Standard Deviation used to find out the extent in which scores in the distribution clustered around the means. T-test was adopted to test the only hypothesis. It was discovered that there are more appropriate teaching methods of teaching indigenous knowledge. Among other things the study recommends the need for the use of multi-media technologies for teaching and learning as well as training and retraining of indigenous lecturers in universities in Nigeria.*

Keywords: Appropriate Teaching Methods, Teaching , Indigenous Knowledge, Universities, Nigeria

1. Introduction

Since the inception of formal classroom-based instruction, a fundamental aspect of teaching has been the way teachers arrange the classroom environment so that students can interact and learn, (Education state university.Com, 2016). Teaching methods, teaching techniques and instructional strategies mean the same thing. Teaching methods or instructional strategies "teachers" (lecturers) use them to shape learning environment and represent professional conceptions of teaching, learning and the learners. The impact of teaching strategies on teaching and learning cannot be overemphasized. Some teaching methods or strategies consider students empty vessels to be filled (teacher-centered or lecture method), under the firm direction of the teacher, other strategies regard them as active participants learning through inquiry and problem-solving skills (students-centered), and others said learners are social organisms, it should be learning through dialogue and in interaction with others (social learning method), (Ukata, Wechie & Nmehielle, 2017))

These methods include; lecture method, brain-storming method, demonstration method, problem–solving or discovery method, play-role or acting method, discussion method, project method, web quest method, industry visit method, collaboration method, and community service based method etc., with different skills used in teaching. Some of the skills are; explanation skill, questioning skill, note-taking skill, assignment skill, question construction skill, class control skill, question answering skill etc. The decision-making concerning teaching methods on Indigenous knowledge serves as vehicle of information that empowers learners with the desired skills, knowledge and values to become self-reliant required, while the teachers (lecturers) focus on the curriculum content, the primary experience, knowledge of the students, learners' interest, students learning style, and the developmental level of the learners. Such decision-making relies on the ongoing (continuing) student's assessment that linked to the learning objectives in the process of teaching and learning to achieve success (Ukata et al, 2017).

Indigenous knowledge is gradually gaining prominence in the educational curriculum of most tertiary institutions in Nigeria. It is now being incorporated as one of the courses in the Department of Library and Information science in most Nigerian Universities. The inclusion of indigenous knowledge into the educational process would not be complete without an appropriate teaching method for indigenous knowledge. And these can be achieved when the teachers, access the indigenous knowledge, understand it and then devise an appropriate and effective teaching method for it. This implies that teachers have to be native and creative (Mkosi, 2005). Reagan (2005) added that teachers must respect and view indigenous knowledge as distinctive intellectual knowledge and not just as myths and legends. Goulet (2001) also noted that teachers must understand that culture is dynamic and changing, so should acquire the skill of deeply understanding cultural norms other than their own. It will be absolutely impossible for effective classroom management to be achieved without adopting and applying appropriate teaching methods or instructional strategies in teaching Indigenous Knowledge in universities in Nigeria considering its place today.

Indigenous Knowledge is local knowledge that is unique to every culture or society. Indigenous knowledge deals with profound detailed and shared knowledge, beliefs and rules with regards to the physical resource, social norms, health, ecosystem, culture, livelihood of the people who interact with environment both in rural and urban settings (Singh , 2016). Indigenous Knowledge is the basis for local-level decision making in the areas of agriculture, health care, food preparation, education, natural-resource management, and a host of other activities in communities, therefore, requires adoption of appropriate teaching methods to pass on the specific objectives to the learners. IK provides problem solving approaches for communities. IK is commonly held by communities rather than individuals. IK is a tacit knowledge and therefore difficult to codify, it is embedded in community practices, institutions, relationships and rituals, often shunned by modern scientific knowledge (Singh, 2016). Indigenous knowledge is the local knowledge that is unique to a culture or society. Other names for it include: 'local knowledge', 'folk knowledge', 'people's

knowledge', 'traditional wisdom' or 'traditional science'. This knowledge is passed from generation to generation, usually by word of mouth and cultural rituals, and has been the basis for agriculture, food preparation, health care, education, conservation and the wide range of other activities that sustain societies in many parts of the world (UNESCO, 2010).

Statement of Problem

Indigenous knowledge today has been included in the universities curriculum, although recently but has gained global attention with UN declaration of the rights of indigenous people and their knowledge. However, what are the appropriate teaching methods to be adopted in teaching indigenous knowledge to aid in the specific objectives transfer from the teachers to the learners so as to acquire the necessary experiences expected from the course. This study seeks to find solutions to the above raised question.

Purpose of the Study

The purpose of this study is to find out Appropriate Teaching Methods for Teaching Indigenous Knowledge in Universities in Nigeria. The study specifically sought to:
1) Determine the types of teaching methods that are appropriate for teaching indigenous knowledge in universities in Nigeria

Research Question

The under stated research question was posed to guide this study
1) What are the types of teaching methods that are appropriate for teaching indigenous knowledge in universities in Nigeria?

Hypotheses

One null hypothesis was formulated and tested at 0.05 level of significance
1) There is no significant difference between types of teaching methods that are appropriate for teaching indigenous knowledge in universities in Nigeria

2. Review of Related Literature

Separation of Theory from Practice/Community Engagement Method

Kaya and Seleti (2013) argued that separation of theory from practice as emphasised in western education and scholarship. They were questioning the role of higher education in a developing country such as Tanzania, characterised by poverty and inequality. Their concern was whether such a country can afford pure academics who put emphasis on theoretical knowledge at the expense of community engagement method.

Use of Local Language/Building Local Communities Relationships Method

A study conducted by Mmola (2010) on Students' and Lecturers' Perceptions Towards the IKS Programme at the North-West University showed that more than 80% of the respondent students had the opinion that lecturers who incorporated indigenous African cultural elements, especially the use of the local language, that is, Setswana,

into their teaching practices were highly appreciated by students.

They also indicated that such lecturers made them experience a feeling of autonomy by getting the opportunity to learn university education using their own language. Interviews with both respondent students and lecturers (the majority of them being Setswana speaking) revealed that the lecturers who used Setswana in their teaching and interaction with students, incorporated local community practices into lessons, utilised culturally relevant material, were very much appreciated by students. The respondent academic leaders also indicated that the building of strong relationships between students, researchers, lecturers with student families and local communities created meaningful and positive learning outcomes for students. Respondent students felt that they had benefited from the IKS programme in many ways. The benefits included (in order of most commonly mentioned) gaining new multi- and trans-disciplinary knowledge and skills, especially cultural skills, which could assist them to fit into a wide range of career choices, developing networks for future employment opportunities, and helped them to increase self-esteem or self-worth. It also made them sensitive to the challenges of community livelihood and development. Interviews with parents and community elders showed that their involvement in the IKS programme and curriculum made them feel needed by the educational system as they were actively participating in the higher education of their children. This is due to the fact that the IKS Programme at North-West University often used Indigenous Knowledge Holders and Practitioners from the surrounding local communities and beyond, as resource persons in specific teaching and learning fields such as African traditional medicine and healing systems, African traditional governance and leadership systems, indigenous natural resource management, etcetera. This provided the students with an opportunity to learn across generations hence making them appreciate and respect the knowledge of these elders and community members.

Adoption of Multi-media Technology Method

A study by Raymond (2011) on the use of Multi-media Technology in teaching IKS found that IKS lecturers used this method to encourage students to integrate Indigenous knowledge into research and learning. Students used multi-media technology in understanding local knowledge and history through interviews with elders and other community knowledge holders and practitioners. For example, a project on Tswana Indigenous Pathways to Health was developed through collaborative efforts between the research students at North-West University and the North-West Provincial Department of Health. It enabled the students to use digital video to document a specific area of Indigenous Knowledge, for example, community health practices, from a community perspective. One IKS research student stated that the use of digital cameras to interview community knowledge holders contributed to a holistic understanding of science from the community perspective. A number of aspects related to the field could be captured and analysed. An important factor in the research project was to assist the students in developing research skills and values that enhanced respect for community knowledge of the community members. This

multi and trans-disciplinary character and strong cultural focus of the IKS Programme attracted an increasing number of students at both under-graduate and postgraduate levels, from different African countries including South Africa, Botswana, Zimbabwe, Zambia, Nigeria, Cameroon, who have graduated over the years.

Establishment of Community Projects Method

University has facilitated the establishment of various IKS community projects such as indigenous knowledge - based gardens in schools and local communities in the North-West Province. These AIKS projects generated income, and contributed to food security and nutrition for learners and community members. It has also helped the institution to build networks and partnerships for IKS development with various institutions, schools, communities, civic organisations and policy makers. The author suggests that the holistic and community-based nature of AIKS could help to mitigate this contradiction due to its emphasis on the merger between theory and practice including the importance of using local languages in social practice, teaching, and learning. This puts knowledge production and sharing at both community and global level in its cultural context by involving the community knowledge holders as producers and users in the core business of higher education. Korff (2017) suggested the following methods of teaching indigenous knowledge:

Liaise with Elders/Practitioners

Run your curriculum ideas by Elders and Practitioners first. They can also introduce you to contacts in the community and people who can speak to the class.

Invite community members

Get community members into the classroom to share their stories and have a yarning circle.

Let Students Teach

Have students run a lesson, which is often something they have never experienced before and fosters their self-esteem.

Use Local Resources

To support community context, use local resources that align with the curriculum. This could be found in form of written resources relevant like books and DVD about the topic of lesson.

Collaborating or Partnering with Academic and Community

According to (Bannister & Smith, 2010), "We are very interested in collaborating and/or partnering with academic and community based organizations and agencies across Canada. For instance, our recent digitization projects collaborated with: 1. archival organizations in Saskatoon and in Northern Saskatchewan, 2. Brandon University and the digitization of nine volumes (from 1997-2005) of the Canadian Journal of Native Studies, and 3. an out-of-print book by Purich Publishing in Saskatoon, "Continuing Poundmaker and Riel's Quest"

Alaska Native Knowledge Network

Hosted and managed by the University of Alaska at Fairbanks, a partner in the Alaska Rural System Initiative (AKRSI), the Network was established in 1994 through the Alaska Federation of Natives with National Science Foundation funding to document Indigenous knowledge systems in Alaska and promote their incorporation into school curriculum. The Network's website covers cultural resources, publications, curriculum resources, native educator associations and cultural atlases. The site does have a search engine, but most sections are a simple listing of resources. The Indigenous Knowledge Systems section includes a section on Traditional Ecological Knowledge.

Public Domain Databases, with an emphasis on Indigenous Subjects

At the suggestion of workshop participants, a number of non-university hosted databases, collections and websites were examined for their features and for their potential to house and maintain an ITK resource database, including: Sustainable Forest Management Network (SFM Network), BC First Nations Portal, under development by the First Nations Technology Council (FNTC) and New Relationship Trust (NRT), Indigenous Portal of the International Telecommunications Union (ITU), Indigenous Portal of the International Indigenous ICT Task Force, and WiserEarth.

The Indigenous Portal of the International Indigenous ICT Task Force (IITF)

(IITF) is an outcome of the Indigenous Caucus at the 2005 World Summit on the Information Society (WSIS), sponsored by the United Nations. It is a broad global information portal that includes articles, audio and videos, news and links, all organized by both region and topic. The goal of the portal is to strengthen the global Indigenous community by bridging the digital divide between Indigenous peoples. The portal includes a search function based on title and content only, and is more of a news archive than resource database. There are other international Indigenous portals as well, and their proliferation is an indicator of the importance of Indigenous involvement in the ICT field. Any of these portals are useful locations for the distribution of information, but not suitable for long-term housing of an ITK database.

WiserEarth

This is an online community space (directory and networking forum) that connects organizations and individuals addressing environmental and social issues. Full access to tools and content requires a membership (at no cost). The site uses open access software and has a paid staff of software designers and content developers who support the continuously evolving needs of the users (e.g., creating new tools, resolving technical problems). Most of the content is contributed and edited by users, similar to how Wikipedia functions. WiserEarth has created portals on certain topics (e.g., Biocultural Diversity) for concentrated networking, discussion and information exchange. It is feasible that WiserEarth would collaborate to create a portal on ITK and sustainable forest management to address the interests and needs for networking and discussion that were expressed by workshop participants. A lot of teaching techniques are not static and can be used in teaching different learning goals (Eberly Center, 2016). Below are some instructional strategies and suited objectives

Instructional Strategy/ Methods	Suitable Objectives
Lecture	Transmit information that will enhance reading, promote understanding through explanations. Responds to students' misconceptions or conflicts, difficulties, engage them in new areas and motivate them with related assignments.
Discussions	Practice good thinking and communication skills in the subject. Evaluate their arguments, identify problems, inconsistencies, conflicts, difficulties, defend positions and get feedback from and about the students' expertise.
Case studies	Apply analysis method of learning, discipline, problem-solving, high level of cognitive skills e.g application, analysis, synthesis, evaluation etc. critical thinking, blending of cognitive and affective in case of ethical controversy. Advance collective abilities by giving information to actual domain in putting together of opinions.
Inscription	Advance orderly relationship midst concepts, submission, inquiry, combination and appraisal in writing with conventional practice e.g APA style, paragraph style and heading styles.
Lab/Studios	Develop disciplinary measure and process skills required among students. Create awareness about the affective and psychomotor in equipment handling with immediate evaluation of the works, products and compares to real life situation.
Group Projects	It is showing things that are same and difference, practicing high level of thinking by learners e.g. applying the thing, analysing with thinking, synthesizing with thinking, evaluation,, skills in leadership, thinking seriously during communication, conflict resolution and how to tackle complex problems
Recitations	Practicing how to solve problem, expressing their views on materials, check hoe students understanding issues, find out and correct misconceptions, make instructions to suit individual learners with questions and answer sessions of their level.
Service Learning	Call for community-based instruction, service learning places with experience and outcome.
Independent/ Student Project	Find out areas that are of interest to students with in-depth, coercive plan; carry out research with creative project work. Give room for independent work and opinion and seek mentorship from experts.

Figure 1: Appropriate Instructional Strategies/Methods and Suitable Objectives

Source: Eberly Center (2016)

3. Methodology

The study adopted a survey research design to determine Appropriate Teaching Methods for Teaching Indigenous Knowledge in Universities in Nigeria. The study covered University of Uyo (UNIUYO) with Department of Business Education and Mass Communication, University of Calabar (UNICAL) with Department of Sociology and English and Literary Studies, Rivers State University (RSU) with Departments of (Business Education and Mass Communication), Ignatius Ajuru University of Education (IAUE) with Departments of (Political Science and Biology), University of Port Harcourt with Departments of (Computer Science and Sociology) , National Open University with the Department of Law and Mathematics. Ten Departments from the five universities were carefully selected to form the population of 3,000 ranging from Years 1 and 2. A random sampling technique was adopted and Krejcie and Morgan (1970) method was used to determine the sample size of 341. The instrument used was tagged: "Appropriate Teaching Methods for Teaching Indigenous Knowledge in Universities in Nigeria (ATMTIK)", with a four point scale of Most Appropriate Teaching Methods (4 points), More Appropriate Teaching Methods (3 points),

Appropriate Teaching Methods (2 points) and Not Appropriate Teaching Methods (1 point). The instrument was validated by five experts and a field trial of test retest was done to know the internal consistency which yielded 0.83 co-efficient. 341 copies of questionnaire items were face-to-face administered to the respondents and 320 successfully retrieved.

Mean was used to analyse the research question, and Standard Deviation used to find out the extent in which scores in the distribution clustered around the means. T-test was adopted to test the lone hypothesis. Also, any calculated value of T-test that is greater than > the critical table value of 1.96 at 0.05 significant levels such null hypothesis (H_O) will be rejected, but if the critical table value is greater than > the computed value such null hypothesis will be accepted.

4. Results

Research Question 1: What are the types of teaching methods that are appropriate for teaching indigenous knowledge in universities in Nigeria?

Table 1: Computation of Means and Standard Deviations for Types of Teaching Methods that are Appropriate for Teaching Indigenous Knowledge in Universities in Nigeria

SN	Item statement	MATM 4	MATM 3	ATM 2	NATM 1	TRN	X	SD	Remark
	N = 320, TNR = Total Number of Responses								
1	Separation of Theory from Practice/Community Engagement Method	270(1080)	50(150)	0(0)	0(0)	1230	3.84	0.96	MATM
2	Use of Local Language/Building Local Communities Relationships Method	280(1120)	40(120)	0(0)	0(0)	1240	3.88	0.96	MATM
3	Indigenous Knowledge Holders and Practitioners from the surrounding local communities	240(960)	40(120)	40(80)	0(0)	1160	3.63	0.90	MATM
4	Adoption of Multi-media Technology Method	250(1000)	30(90)	40(80)	0(0)	1170	3.66	0.91	MATM
5	Establishment of Community Projects Method	280(1120)	40(120)	0(0)	0(0)	1240	3.88	0.96	MATM
6	Use Local Resources	260(1040)	50(150)	10(20)	0(0)	1210	3.78	0.94	MATM
7	Collaborating or Partnering with Academic and	285(1140)	35(105)	0(0)	0(0)	1245	3.89	0.97	MATM

	Community								
8	Public Domain Databases, with an emphasis on Indigenous Subjects	275(1100)	45(135)	0(0)	0(0)	1235	3.86	0.96	MATM
9	Collaboration with indigenous industry	260(1040)	40(120)	20(40)	0(0)	1200	3.75	0.93	MATM
	GRAND MEAN/GRAND SD						3.80	0.94	MATM

Field Survey, (2019)

Table 1 with a grand mean of 3.80 representing More Appropriate Teaching Methods and grand of SD showed 0.94, representing closeness in the views of the respondents. This means that those stated teaching methods are the more appropriate methods for teaching indigenous knowledge in universities in Nigeria

Hypothesis 1: There is no significant difference between types of teaching methods that are appropriate and teaching indigenous knowledge in universities in Nigeria

Table 2: Summary Table of Calculated T-test of the Appropriate Methods of Teaching Indigenous Knowledge in Universities in Nigeria

SN	Variables	Mean	SD	N	DF	SE	T-CAL.	T-TAB	DECISION
1	Appropriate Teaching Methods	3. 80	0.94	320		0.08			
					318		1.29	1.96	Accepted
2	Teaching of Indigenous Knowledge	3.76	0.95	320		0.08			

Field Survey, (2019)

The calculated t-test 1.29 is less than (<) the critical table value of 1.96 at 0.05 significant levels. Since the calculated value of t-test 1.29 is less than (<) the critical table value of 1.96, the null hypothesis which stated that there is no significant difference between types of teaching methods that are appropriate and teaching indigenous knowledge in universities in Nigeria is upheld. This means that there is no significant difference between types of teaching methods that are appropriate and teaching indigenous knowledge in universities in Nigeria

5. Discussion of Findings

From the analysis of research question one and table one, the grand mean showed 3.80, representing more appropriate methods of teaching indigenous knowledge in universities in Nigeria. The views of the respondents are in agreement with Kaya and Seleti (2013), Mmola (2010), Raymond (2011) and Korff (2017) who saw Separation of Theory from Practice/Community Engagement Method, Use of Local Language/Building Local Communities Relationships Method, Indigenous Knowledge Holders and Practitioners from the surrounding local communities, Adoption of Multi-media Technology Method, Establishment of Community Projects Method, Use of Local Resources, Collaborating or Partnering with Academic and Community, Public Domain Databases, with an emphasis on Indigenous Subjects, and Collaboration with indigenous industry as the more appropriate teaching methods of teaching indigenous knowledge in universities in Nigeria.

6. Conclusion

From the findings of the study it is concluded that there are more appropriate teaching methods of teaching indigenous knowledge. These methods as listed in table 1 among which are Separation of Theory from Practice/Community Engagement Method, Use of Local Language/Building Local Communities Relationships Method.

7. Recommendations

1) Teachers and lecturers should be trained and retrained on the various more appropriate teaching methods of teaching indigenous knowledge in universities in Nigeria by government and concerned institutions
2) Government and concerned agencies should make available in good quality and quantity the needed multi-media technologies to teaching and learning indigenous knowledge in universities in Nigeria

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