Comparative Study Of Students' Approaches And Strategies To Learning: Implications For Counselling

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Abstract
        The researchers compared students' approaches and strategies to learning in two African countries viz.; Nigeria and Uganda. Using a descriptive survey, fifty students, who were enrolled in the year 2012/2013 in guidance and counselling and computer science respectively, were sampled from the population. The students offered an ICT course separately in 200 level in the different institutions. The instrument used was the Approaches to study skills inventory (ASSIST) and the three hypotheses were postulated and tested. The results of the t-test analysis show that the null hypothesis was not statistically significant when using the strategic approach (t = 1.037, 1.056); $p > .05$ and the deep approach to learning of students in Nigeria and Uganda (t = -0.278, -0.279); $p > .05$. The second hypotheses revealed a no statistically significant difference in the Nigerian and Ugandan preferences for different types of courses in teaching and learning while the third hypothesis shows a significant correlation between a deep approach to learning and learning that supports understanding (r=.407; $p < .001$). It is recommended that lecturers need to accommodate their students' individual differences in the teaching and learning process

considering that most of the classes in higher institutions of learning are large for the prevalent part. Additionally, discussions on possible implications for counselling are discussed in the paper.

Keywords: Approaches, learning, preferences, course teaching, ASSIST

Introduction

The campaign towards the constructivist view of learning calls for a change in emphasis towards a focus on understanding the individual student. Coniderable emphasis is placed on the recognition of individual differences in learners, since students acquire data and relate them to existing knowledge, and construct meanings from experience to gain understanding. The manner in which students demonstrate the quality of what they have learnt, demands that lecturers in higher institutions of learning need to make use of the theory of learning styles as part of their professional development to understand the way their students learn. The study of learning styles began in the 20th century and is most influential in the United Kingdom, Unites States of America, Western Europe and Australia (Coffield, Moseley, Hall & Ecclestone, 2004).

The conventional method of teacher-centred education is the most widely used in tertiary institutions and it does not cater for each student's learning needs. The teachers deliver lectures to the students and students act as the repertoire of knowledge. This is, however, very difficult, because with the diverse population in society at large, there exists a variety of learners. The use of the conventional lecture method in delivering lessons by teacher-centred methods is gradually dominating the utilisation of other teaching techniques like discussions, discovery, projects and other teaching modes and strategies. This constant act of using teacher-centred lectures as teaching method has hampered the teaching and learning process as it has hindered the students from identifying their learning styles and applying them while learning. Recently, the National Commission for Colleges of Education (NCCE) in Nigeria advocated the use of active learning in the classroom. If students are to learn actively, there is a need to take into consideration the characteristics of the diverse learners in the classroom, since learners are unique and do not learn the same way. This is in support of (Shabani, Okebukola, & Oyewole, 2014) who underscore that for the value of higher education to be fully realised and appreciated by students their learning needs have to be met. Literature also shows that with the increasing number of students in Uganda's tertiary institutions, the teaching and learning process is increasingly moving away from being learner-centered (Nansubuga, 2015). Additionally, Uganda is among the Sub-Saharan countries experience an exponential increase in the number of students

joining the universities characterised by overcrowded classes, deteriorating physical facilities, limited and obsolete reading materials in the tertiary education institutions aspects which have limited teaching to mainly the lecture method (Liang, 2004; Otaala, Maani, & Bakaira, 2013). As such the teaching practices adopted by the lecturers do not optimally meet the students' learning needs, hence limiting the learners' construction of knowledge to what the facilitator delivers inadvertently driving students to finding ways of learning on their own (Nansubuga, 2015; Otaala et al., 2013). Nakalema and Ssenyonga (2014) posit that many students in Uganda's tertiary education experienced academic stress accruing from the demands of the academic programmes which they enrolled for as well as personal issues. Most of the problems cited like procrastination, last-minute preparation for examinations accrue from, but are not limited to their lecturers' poor instruction methods (Nansubuga, 2015; Otaala et al., 2013).

Hence, to be successful in educating all of our students, and be more effective teachers of this diverse population of learners, we need to be aware of their individual learning styles and approaches to studying in order to prescribe concise and efficient ways to learn.

Literature review
Understanding student approaches to learning

A learning approach is the process which an individual takes on in the pursuit of knowledge (Shankar, Balasubramaium & Dwivendi, 2014). Though the learning approach is an individual characteristic of a particular student, it is also a pliable way of relating with the learning environment. The individual qualities of students, their concept of themselves and their sense of self-worth, need to be acknowledged and encouraged. People are not the same through their observations and interactions with each other. They look, speak and act differently; even their preferences and choices in life are completely different. The study of student approaches to learning therefore represents more fundamental and generic dimensions of individual learning. When students are taught with the appropriate teaching methods that match their approach, they learn better and this helps to increase their academic achievements. It is therefore expected of higher institutions of learning to provide students with opportunities to experiment with and to equip them with different methods for approaching the learning material. Creating awareness about an apt learning approach could result in the use of innovative teaching and learning strategies in higher education. It could also assist in improving the quality of learning and teaching in higher education and therefore lessen the quandary of high failure and dropout rates. Students' awareness of their learning approach can empower them to be self-reliant

and effective in their learning so that they persevere and succeed in the institutions of higher education.

Vawda (2005) supports the above-mentioned statement by stressing that lecturers should have knowledge of the experiences and background of the students so that they can set up strategies for students to achieve the necessary skills that are useful for higher education. He stresses further that lecturers need to realise their responsibilities in teaching students from diverse educational backgrounds, which includes the recognition of their learning differences. The more the lecturers understand the different attitudes and responses of their students; the better the chances will be of meeting the students' diverse learning needs by presenting them with valuable information that could be used to promote effective teaching.

A body of research led by Noel Entwistle in 1970 explored a holistic, active view of approaches and strategies as opposed to styles that emphasised effects of previous experiences and contextual influences (Coffield, et al., 2004) The research draws on the work of Marton and Säljö (1976) and Pask (1976). Based on their findings they revealed that contextual factors influence learners' approaches and strategies which in return lead to a multi-faceted view of teaching. This emphasis encourages a broad approach to pedagogy that encompasses subject discipline, institutional culture, students' previous experience and the way the curriculum is organised and assessed. In Entwistle's model (1998), a strategy describes the way in which students choose to deal with a specific learning task by taking account of its perceived demands. It is therefore less fixed than a style, which is a broader characterisation of how students prefer to tackle learning tasks generally. Researchers within this family refer to underlying personality differences and relatively fixed cognitive characteristics. This leads them to differentiate between styles, strategies and approaches, with the latter being derived from perceptions of a task and cognitive strategies that learners might then adopt to tackle them. Coffield, et al. (2004) however note the implications of the work of Entwitle's model and inventories for improving pedagogy. It can be used as:

(i)   diagnostic tool for discussing lecturers and students approaches to learning and how they might be developed;

(ii)   diagnostic tool for course teams to debate the design and implementation of the curriculum and assessment, including forms of support such as study skills courses; and

(iii)   theoretical rationale, based on extensive empirical research, for discussion among lecturers (e.g. on teacher training and staff development courses) about students' learning and ways of improving their approaches.

Speth, Namuth and Lee (2007) explain his identified three approaches to learning namely deep, surface and strategic approaches to learning. He explained that a *deep approach* is encouraged by giving students autonomy in learning and by experiencing good teaching, with good pace, ground, real-life illustrations, tutors being enthusiastic and offering lively and striking explanations to students. *A surface approach* however is reinforced by the type of summative assessment required in the course, a heavy workload and lecturers who foster dependency by 'spoon-feeding'. A surface approach relies on identifying those elements within a task that are likely to be assessed and then memorising the details. Entwistle and Peterson (2004) argues that if students have a sophisticated conception of learning and a rich understanding of the nature of knowledge and evidence, they adopt a *deep* approach in order to reach their own understanding of material and ideas. If, on the other hand, they see learning as memorising or acquiring facts, and their intention is merely to meet course requirements or to respond to external injunctions, they are likely to adopt a *surface approach*. Summative assessment in higher education usually encourages a *strategic approach* where students combine deep and surface approaches in order to achieve the best possible marks. Students using this approach become adept at organising their study time and methods, attend carefully to cues given by teachers as to what type of work gains good grades or what questions will come up in examinations.

However, students do not only adopt deep and surface approaches; the structure of a curriculum and the demands of summative assessment exert a strong influence on approaches to learning. Earlier research on changing approaches to learning suggests that are easier to lead students to surface approaches that are designed through poor assements that can lead them to deeper approaches (Scouller, 1988; Thomas & Bain, 1984). Mccune and Entwistle (2011) suggest that teachers should design a supportive teaching and learning environment embracing elements coherent in supporting a deep approach. These above-mentioned critics offer guidelines for promoting a deep approach and the importance of constructive alignment in designing teaching and learning activities, aassessment and feeback that are based on constructivist aims in designing university courses.

Research into students' approaches to learning is copious. Some instruments measure students' approaches to studying and others measure students' learning styles. Coffield, et al. (2004) provide an extensive report on 13 learning style models which comprise components different from each other and related to the extent that they may change over time for learners. Some popular instruments were various extensions of Jung's (1970) psychological types and Gardener's (1993) multiple intelligences. Some of the widely used models are those proposed by Gregorc and Butler (1984)

which have four combinations including those by Felder and Silverman (1998), Fleming's (2001) VARK inventory, Kolb's (1985) learning style inventory, approaches to study skills inventory (ASSIST) by Noel Entwistle and Hermann's Brain Based Dominance Instrument (HBDI) and the ASSIST which is the one used in this study.

Brown, White, Wakeling and Naiker (2015) opt for study approaches embracing a study skills inventory for students in an introductory course in chemistry, and the ASSIST was also given to first year students. 103 students were sampled. The results showed that the dominant learning style adopted by the students was a surface approach. A higher score was revealed on strategic learning styles in males than for females. They concluded that a surface approach may not necessarily indicate a lack of interest in chemistry but rather chemistry may be perceived as being peripheral to the students' interests. Reid, Evans and Duvall (2012) also conducted research on medical students' approaches to learning as part of a full degree programme. They exposed the students to explicit written learning objectives constructed according to the SOLO taxonomy, problem-based learning and constructive alignment in course assignments and examinations. The results show that a deep approach was cultivated in first and second year students and the results also reveal that a surface approach rendered low results. They further reveal that relatively little change occurred during the degree programmes apart from a slight fall in the surface approach.

Balter, Cleverland-Innes, Pettersson, Scheja and Svedin (2013) investigated student course completion in two online preparatory university courses in mathematics and computer programming. The students participated in the two courses that are alike in age, gender and approaches to learning. 493 students were sampled and they completed the ASSIST. Results show that students demonstrating a deep approach to learning in both courses have the tendency to complete their studies. In the mathematics courses, a combination of deep and strategic approaches correlate positively with the course completion while in the programming course, students who demonstrate a surface approach are less likely to complete the course. Barack (2012) also studied the learning approaches of students in an auditing course of South African chartered accountants. Statistical analysis of the data revealed a preference for the strategic approach by candidates who passed the auditing of the chartered accountants' exam. Both gender groups and three of the four population groups favoured the strategic approach while more mature candidates tended to follow the deep learning approach. Hughes, and Peiris (2002) studied CS1 students' learning of an object-oriented programming course. They were introduced to JAVA programming in the 1st semester with five hour lectures and two laboratory practicals per week. Fifty six participants were sampled and students exhibited a strong,

positive correlation in the strategic approach and weak, positive deep approach.

Shankar, Balasubramaium and Dwivendi (2014) studied approaches to learning and preferences for different types of courses and teaching among Carribean medical students in Aruba. Seventy one students were sampled out of the population while using the ASSIST instrument during the last week of September, 2013. The median score of the respondents shows deep and strategic approaches to studying and there was a slight preference for a transmission information type of teaching. Jonas-Dwyer and Sudweeks (2007) aslo conducted an exploratory research on approaches to studying and preferences for different types of course teaching among histology and pathology students in Mudrock University, Australia. Students displayed a preference relating to a deep approach (supporting understanding) and more than two-thirds of the students (69%) showed a preference relating to a surface approach (transmitting information). At the end of the semester one-third of the students (32%) displayed a preference for a surface approach while the number of students displaying a preference for a deep approach remained the same (26%).

From the foregoing, many research studies have been conducted on students' approaches to studying in different countries, but evidence of a comparison of the learning approach among students in African countries is scarce and this paper has sought to fill that gap. It is hoped that the findings of this study will educate students on how they learn, and assist them to become effective and independent learners and in addition also inform teachers about their student's approaches to learning and how they can offer counselling assistance and suggest device strategies which will support them in their studies.

Research questions
   1. What are the Nigerian and Ugandan students' prevailing approaches to learning and studying?
   2. What are the Nigerian and Ugandan students' prevailing preferences to different types of courses in teaching and learning?

Hypotheses
   1. There is no significant difference in Nigerian and Ugandan student's strategic, deep and surface approaches to studying.
   2. There is no significant difference in Nigerian and Ugandan student's preferences for different types of courses in teaching and learning.
   3. There is no significant correlation in Nigerian and Ugandan students' approaches to learning and preferences for different courses and teaching.

Research design

This paper follows a descriptive survey. The survey method was selected because of its strength in describing trends and attitudes or opinions of a population and drawing inferences on the population and to centre exact characteristics under consideration (Creswell, 2014).

Population and sample

Computer science students of Ekiti State University (an affiliate of Michael Otedola College of Primary Education, Lagos, Nigeria) and Guidance Counseling students of Kyambogo University, Uganda who were enrolled in 2012/2013 constituting one hundred and ninety fifty (195) students form the population for the study. In determining the sample for the study, a simple random sampling was used and a total of fifty (50) respondents comprising twenty four EKSU and twenty Kyambogo University students were therefore sampled from the population.

Instrumentation

The instrument used for this study was a questionnaire incorporating a skills inventory (ASSIST) which was developed in 1997 by Noel Entwistle. It is a 72-item instrument divided into four sections: background information, conceptions of learning, approaches to studying and preferences for different types of course organisation. Approaches to studying are further divided into three sections and coded in this paper as: Deep approach (DA) which comprises 15 items, Strategic approach (SA) which comprises 20 items and Surface apathetic approach (SAA) which comprises 16 items. It uses a five point Likert scale ranging from 5 to 1 (agree, agree somewhat, unsure, disagree somewhat and disagree). The section for conceptions of learning is not used in this study.

Procedure for data collection

The students offered an ICT course in second year and they were exposed to two hours class per week in conjunction with a minimum of one hour weekly practical based on explicit written objectives based on the revised BLOOMS taxonomy, problem-based learning and constructive alignment in course assignments. Students were also given autonomy with lively and striking explanations to learning while formative and summative assessments were given to measure their level of performance in the course. At the end of the semester tests and prior to the exam, students were given the ASSIST to complete.

The instrument was administered by three researchers (two from Nigeria and one from Uganda). During the administration, the consent of the students were obtained before they filled the instrument and they were well

guided. A group administration of the instruments was done saperately in the two universities. Two other researchers conducted an SPSS analysis with corresponding interpretation of the analysed results. The other researcher proofread, edited and made suggestions where needed.

Validity and reliability

The validity of the instrument and the reliability coefficient were established by earlier studies. Coffield, Moseley, Hall and Ecclestone (2003) identify a reliability coefficient (Cronbach's α) for the three scales: 0.65 for the deep, 0.70 for the strategic, and 0.75 for the surface scale. Tait and Entwistle (1996) also identify scale reliability coefficients from 0.77 to 0.83. These coefficients are within the range (from $\alpha = 0.59$ to $\alpha=0.83$) found by research studies in other countries using earlier and longer versions of the approaches to the study inventory.

Data analysis

All the student's sampled filled and returned the instrument given to them on the spot. The data collected for the study were coded and analysed using statistical package for social scientists (SPSS) version 20. The mean analysis of the data was obtained and further tested using the t-test technique at 0.05 level of significance and the Pearson moment product correlation coefficient.

Results and discussion

Research question: What are the Nigerian and Ugandan students' prevailing approaches to learning and studying?

Table 1a: Mean analysis of Nigerian and Ugandan students' approaches to learning and studying

	INSTITUTION	N	Mean	Std. Deviation	Std. Error Mean
Strategic Approach	KYAMBOGO	26	85.77	12.763	2.503
	EKSU	24	82.63	7.890	1.610
Deep Approach	KYAMBOGO	26	61.92	6.572	1.289
	EKSU	24	62.42	5.919	1.208
Surface Approach	KYAMBOGO	26	45.81	7.217	1.415
	EKSU	24	56.71	6.669	1.361

Hypothesis 1: There is no significant difference in Nigerian and Ugandan students' strategic, deep and surface apathetic approaches to studying.

Table 1b: Independent Samples Test on students approaches to studying

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference

Strategic Approach	Equal variances assumed	3.578	.065	1.037	48	.305	3.144	3.031
	Equal variances not assumed			1.056	42.133	.297	3.144	2.976
Deep Approach	Equal variances assumed	.126	.724	-.278	48	.782	-.494	1.774
	Equal variances not assumed			-.279	47.975	.781	-.494	1.767
Surface Apathetic Approach	Equal variances assumed	.213	.647	-5.533	48	.000	-10.901	1.970
	Equal variances not assumed			-5.551	48.000	.000	-10.901	1.964

The table 1a above shows the mean analysis of the Nigerian and Ugandan students' approaches to learning and studying. The results show that Kyambogo University and EKSU students had a mean of 85.77 and 82.63 with a standard deviation of 12.763 and 7.890 respectively in the strategic approach. In the deep approach, a mean of 61.92 and 62.42 with a standard deviation of 6.572 and 5.919 respectively occurred while a mean of 45.81 and 56.71 with a standard deviation of 7.217 and 6.669 were revealed in the surface approach respectively. An analysis of independent samples of the t-test on student's strategic, deep and surface approach to learning shows that the null hypothesis was not statistically significant with the strategic approach to learning of students in Nigeria and Uganda (t = 1.037, 1.056); p > .05 respectively. Also, the deep approach to learning of students in Nigeria and Uganda (t = -0.278, -0.279); p > .05 respectively. This means the Nigerian and Ugandan strategic approach to learning does not differ. The surface apathetic approach to learning of students in Nigeria and Uganda (t = -5.533, -5.551); p > .05 respectively. This means Nigerian and Ugandan students do not differ in the strategic, deep and surface apathetic approaches to learning.

Table 3: Mean analysis of Nigerian and Ugandan students preferences for different types of course teaching and learning.

	INSTITUTION	N	Mean	Std. Deviation	Std. Error Mean
Supporting understanding	KYAMBOGO	25	17.32	2.854	.571
	EKSU	24	16.67	2.697	.551
Transmitting information	KYAMBOGO	25	15.40	3.851	.770
	EKSU	24	16.17	2.371	.484

Hypothesis 2: There is no significant difference in Nigerian and Ugandan students' preferences to different types of course and teaching.

Table 3b: Independent Samples Test for different types of course teaching and learning.

	Levene's Test for Equality of Variances	t-test for Equality of Means

		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Supporting Understanding	Equal variances assumed	.055	.815	.823	47	.415	.653	.794
	Equal variances not assumed			.824	46.990	.414	.653	.793
Transmitting Information	Equal variances assumed	7.732	.008	-.835	47	.408	-.767	.918
	Equal variances not assumed			-.843	40.162	.404	-.767	.910

The Table 3a above shows the mean analysis of the Nigerian and Ugandan students' preferences to different types of courses in teaching and learning. The results show that Kyambogo and EKSU students had a mean of 17.32 and 16.67 with standard deviations of 2.854 and 2.697 respectively on learning which supports understanding, while a mean analysis of 15.40 and 16.67 with a standard deviation of 3.851 and 2.371 were revealed on learning that supports transmitting information. The independent samples t-test on ??? revealed that the null hypothesis was not statistically significant (t = .823, .824); p> .05 and (t=-.835,-.843) > .05 for learning that supports undesrstanding and transmission of information respectively. This means Nigerian and Ugandan students do not differ in their preferences for different types of courses and teaching.

Hypothesis 3: There is no significant correlation between Nigerian and Ugandan approaches to studying and preferences for different types of course and teaching.

Table 4: Coefficient of correlation between approaches to studying and different types of course and teaching.

Correlations

		Supporting understanding	Transmitting information	Deep Approach	Surface Approach
Supporting understanding	Pearson Correlation	1	-.060	.407[**]	-.103
	Sig. (2-tailed)		.685	.004	.480
	N	49	48	49	49
Transmitting information	Pearson Correlation	-.060	1	.009	.019
	Sig. (2-tailed)	.685		.948	.899
	N	48	49	49	49
Deep Approach	Pearson Correlation	.407[**]	.009	1	-.150
	Sig. (2-tailed)	.004	.948		.298
	N	49	49	50	50
Surface Approach	Pearson Correlation	-.103	.019	-.150	1
	Sig. (2-tailed)	.480	.899	.298	
	N	49	49	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

The Table 4 above shows thate there is a low positive relationship between the deep approach and learning that supports understanding (r=.407) and the 2-tailed p-value = .004.

Discussion

The results of hypothesis one reveal that Nigerian and Ugandan students' approach to learning on the deep, strategic and surface level does not differ. The mean analysis reveal that the students have a high strategic and deep approach to learning while they both have a low surface approach to learning and studying. The findings are in support of Reid, Evans, and Duvall (2012) and Balter, Cleverland-Innes, Petterson, Scheja and Svedin (2013). This means that Nigerian and Ugandan students have a rich understanding of the ICT course learnt, and they are adept at organising their study time and methods. A low mean on the surface level could mean they only adopt the surface level for formative and summative assessments.

In hypothesis two, the results show a no significant difference in Nigerian and Ugandan students' preferences for different types of course teaching and learning. This means they both have the same preferences for course teaching and learning which supports understanding and at same time transmitts information. This is in support of the findings of Jonas-Dwyes and Sudweeks (2007) and Shankar, Balasubramaun and Dwivendi (2014) who claim that students show a slight preference for transmitting information and supporting understanding. The second hypothesis was tested further in order to find a correlation of the students' preferences for course teaching and learning and a significant correlation was found between the students' deep approach to learning and learning that supports understanding. The implication of this is that the lecturers in two universities developed a learning environment that supports students' understanding and not just a prima-facie.

The findings of this study clearly indicate that students have unique learning approaches, and so it is important that through college or university counsellors as consultants, lecturers can be helped to identify their students' preferred learning approaches. They should adopt counselling and learning strategies that meet the individual learners' areas of strength. As such, the lecturers are expected to accommodate their students' individual differences in the teaching and learning process considering that most of the classes in higher institutions of learning are large for the most part. Additionally, in case the lecturers need to remediate their learners this could be easily done based on the learners' strengths and not weaknesses as a way of cultivating positive attitudes and learning behaviour (Nielsen, 2013; Yousef, 2016). On the side of the students it is believed that if students become aware of their own as well as their fellow students' learning approaches they then can

decide to be flexible and expand their learning preferences considering that the lecturers will be trying to accommodate all the learners in the teaching learning process (Cano, 1999). In addition, the home environment also plays a critical role towards the identification and enhancement of the students' learning approach and should be given attention when counselling students (Duque, 2014). Moreover, the counsellors must recognise that it is vital to involve the significant others of the individual students at the family level so as to enable them to understand and support all the students at home as well as at tertiary institutions involving strategies geared towards the meaningful education of their children.

Conclusion

The main aim of the study was to compare students' learning approaches in Nigeria and Uganda. Furthermore, the researchers also sought to establish the students' prevailing preferences to different types of course teaching and learning. The findings of this study show that students in the two African countries mostly opted for the strategic approach to learning, followed by the deep approach and the least employed is the surface approach. In addition, it was concluded that the sampled students in Nigeria and Uganda mostly opted for the strategic approach which is anchored in the lecturers' ability to promote student autonomy in learning. The strategic approach is deduced by students from these two countries as being analogous to good and productive teaching and learning that supports understanding. In order for the students to maximally benefit from tertiary education in Nigeria and Uganda the stake holders in tertiary education should be cognisant of the importance of the lecturers giving timely and clear course activity guidelines and instructions as one of the ways of facilitating the students' ability to construct knowledge in the teaching and learning process of a given course.

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