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PATTERN OF UNDERGRADUATES' PARTICIPATION IN THE ONLINE DISCUSSION FORUM AT THE UNIVERSITY OF ILORIN, NIGERIA

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ABSTRACT

The paper examined the pattern of undergraduates' participation in the online discussion forum at the University of Ilorin, Nigeria. A total of 745 undergraduate students selected from right faculties out of the ten faculties that made up University of Ilorin, Nigeria constituted the population of the study. Through a survey design, questionnaire was administered to gather data from the respondents. Four research questions were developed and answered by the study. The results indicated that respondents from faculty of Communication and information sciences are participating in the online forum and they are dully committed to it than respondents from other faculties. While respondents from Faculty of CIS have online discussion forum organised for the various courses offered in the faculty, respondents from other faculties depend largely on online forum of their disciplines' association. Four prominent pattern of participation were identified. These are Socratic questioning, sharing of personal opinion and experiences, brainstorming and reaction posting. Furthermore, the study revealed an in-depth participation in the online forum by respondents' from faculty of CIS with the majority making postings on a daily basis. Similarly, a lower percentage of respondents usually read and responds to posts received with the highest percentage recorded by respondents from Faculty of CIS. The results confirm encouragement of intellectual support in terms of sharing of knowledge and ideas between participants as part of the most common benefits. Incessant power outage and time factor based on tight schedule were identified as part of the problems participants encounter in the online forum.

The paper made a more conscious effort in institutionalizing online discussion forum, creation and formulation of policies guiding the participants, introduction of user education together with conscious training of lecturer on online discussion forum for university lecturers in Nigeria

Increase in students' participation in the online discussion forum will always increase learning outcomes and achievement. To improve students' participation in the online forum, the University authority should provide enough free Internet facilities/ outlets within the university community just as it is done in developed countries and some part of Africa especially South Africa. Moreover, universities around the world who have not being using online discussion forum to facilitate learning should consider doing so particularly those who have not put customised e-learning platform in place in their institution.

Keywords: Online discussion forum, electronic discussion, online learning, online participation, Content contribution, Undergraduate students, University of Ilorin.

INTRODUCTION

Many online instructors, in the hope of improving student participation, include discussion forums in their online courses. The practise of using online discussion forum for deepen students' knowledge of course is prominent in (e.g. Universities in Europe, America, Asia, and Southern Africa). It has been observed that increase in student participation in an online course results in increased learning [24]. Online discussion is defined as the process where learners and educators are actively engaged in on-line text-based communication with each other [14]. Effective participation occurs where such on-line communication facilitates, amongst learners: the development of a deep understanding of the material through sharing, and critically evaluating one's own and others' ideas.

Understanding how students participate in an online course is the first step to determine how best to engage students. According to [33], online participation and content contribution are pillars of the Internet revolution and are core activities for younger generations online. Similarly, [4] pointed out that online learning environments based on student-instructor and student-student interactions are widely used in higher education. Active online student interaction is a significant predictor of perceived learning [25], learning outcomes, and student satisfaction [6]. Interactivity is defined as "a process-related variable concerning responsiveness" [23:84]. Research has indicates that "with effective e-learning technologies we can create active, engaged, collaborative, and inquiry-based learning opportunities"[30].

Consequent on the above, the issue of students' participation in the online discussion forum is being taking very seriously in the Faculty of Communication and Information Sciences, University of Ilorin, Nigeria; and effort is currently being put in place to enforce it. Part of these efforts includes the regulation that: each student's participation in the forum attracts 5% of the overall score in the examination and that each student should have a laptop beginning from 2010/2011 session. The faculty wishes to know whether this effort is yielding a positive result in terms of facilitating learning, deepen students' knowledge in their courses and promoting information literacy skills of the students in the faculty.

Generally, studies on undergraduates' participation in the online discussion forum in the Nigeria university context are lacking. Specifically, studies on participation of students in the online discussion forum in the context of the University of Ilorin are also currently

lacking. In the light of this, this study is considered significant in view of the fact that its' outcomes will help bridge the already identified gaps thereby making literature available on the subject matter from the population of Nigeria undergraduate students. Additional justification for this study is based on [26] recommendation that there is still much more to learn about students' online discussion practices and that studies similar to his own will be beneficial to facilitators who are looking to improve student engagement in their online courses. It is hoped that the outcomes from the study will provide a framework for improving the faculty information literacy programme and specifically students' participation in the discussion forum as a way of improving the students' information literacy skills.

BACKGROUND ON UNIVERSITY OF ILORIN, NIGERIA

Ilorin is the capital of Kwara State in the North central Nigeria and the gateway to the Northern and the Southern parts of Nigeria. The University of Ilorin is located in Ilorin, Kwara State, and is one of the seven third generation Universities established by the Federal government of Nigeria in August 1975. The University of Ilorin has grown from three faculties in 1976 to eleven faculties with 60 academic departments today. The university is currently rated as the best university in Nigeria and 55th in Africa following the world university ranking released in January 2010. Ten faculties made up the University of Ilorin. These are faculties of Agriculture, Art, Basic Medical Sciences, Business and Social Sciences, Clinical Sciences, Communication and Information Sciences, Education, Engineering Technology, Law and Science.

LITERATURE REVIEW

According to [14], participation within on-line discussions is defined as the process where learners and educators are actively engaged in on-line text-based communication with each other. Effective participation occurs where such on-line communication facilitates, amongst learners, the development of a deep understanding of the material through sharing and critically evaluating one's own and others' ideas, and where connections are made within elements of the learning material or with independently sourced material (justified through research and analysis). Within the scope of this paper, on-line participation will be analysed

in the context of Internet based discussions within internet-based learning environments only.

Learner participation has been discussed widely as a key part of online learning. It has been conceptualized differently in several studies. For example, [16] mentioned six different ways of conceptualization: accessing e-learning environments, writing, quality writing, writing and reading, actual and perceived writing and taking part and joining in a dialogue. After analyzing several related studies in the literature, [16:1761] proposed following definition of online learner participation: "Online learner participation is a process of learning by taking part and maintaining relations with others". It is a complex process comprising doing, communicating, thinking, feeling and belonging, which occurs both online and offline. Learner participation measuring interaction with peers and teachers in online environments can enhance learning outcomes. Researchers expressed that participation positively affect learning, quality assessment of assignments, achievement, and satisfaction and retention rates in the literature [16]. For example, [29] stated that both quality and quantity of interaction with the instructor and peers are much more crucial to the success of online courses and student satisfaction than to success and satisfaction in traditional courses. Davies and Graff [7] examined the relationship between the level of online participation and student grades (i.e. high, medium, low, fail). They concluded that students achieving high or medium passing grades engaged more actively than students achieving low passing grades and also students achieving low passing grades were more active than students who failed in the several modules of courses even though greater online interaction did not lead significantly to higher performance. Another study was conducted to analyze discussions in courses delivered completely online by [21] who found that students perceived greater quality and quantity of learning as a result of participating in the discussions.

The nature of online discussion forums offers students the time to reflect on the topic of discussion and thereby encourages a more in depth and constructive dialogue [8, 11]. While much of the online or blended delivery of courses in higher education is didactic in nature, the distinctive asynchronous platform can be used to promote peer learning [13, 17]. Incorporating on-line discussions into a curriculum should therefore not be a decision to be made lightly or simply the result of adding new technology to a course [18].

The importance of participation and interaction in online learning is extensive in the literature and this cannot be over emphasised. Caspi et al. [5] mentioned that computer mediated communication (CMC) media

such as synchronous or asynchronous tools provided new opportunities for students to participate in online courses, but, participation in the web-based instructional environment tends to be lower while comparing to participation in the face-to-face courses. There are several factors affecting learner participation that was mentioned in online environments. There have still not been enough findings to answer general questions about these factors, especially impact of student characteristics in online discussion due to continuous variations in CMC applications, methods of study, instructions, roles of teachers and students [22]. As a result, the relationship between participation and interaction and learning outcomes is a complex phenomenon and there is need for more studies related to this phenomenon [21]. This study is a response to more studies agitated for by the [22]; except that the study did not attempt to find relationship between participation and interaction and learning outcomes but rather the participation pattern and it benefits on participants.

Several previous related studies have been conducted. However, most of these studies were conducted especially in Europe, with very few in Africa and none in Nigeria specifically. Zukerman et al. (33) investigated participation patterns, users' contributions and gratification mechanisms, as well as the gender differences of Israeli learners in the Scratch online community. The findings showed that: Participation patterns reveal two distinct participation types - "project creators" and "social participators", suggesting different users' needs. Community members gratified "project creators" and "social participators" for their investment – using several forms of community feedback. Gratification at the user level was given both to "project creators" and "social participators" – community members added them as friends. The majority of the variance associated with community feedback was explained by seven predictors. However, gratification at the project level was different for the two participation types - active "project creators" received less feedback on their projects, while active "social participators" received more. Project feedback positively correlated with social participation investment, but negatively correlated with project creation investment. A possible explanation given by the researcher is that community members primarily left feedback to their friends.

Yukselturk [32] analyzed the factors that affect student participation in discussion forum under the two main purposes. The first purpose was to examine the relationship between the students' individual demographics and categories of students' participation level (inactive, moderate, and active) in discussion forum of an online course. The second purpose was to examine

the students' views about reasons for low level of interaction in discussion forum. A total of 196 students who attended computers systems and structures course of online certificate program were included in the study. The data was collected at the beginning and at the end of the course through online survey and semi structured interviews. The descriptive and inferential statistical techniques were used to analyze the quantitative data. The content analysis method was used to analyze the qualitative data. The results of the study indicated that three student characteristics (achievement, gender and weekly hours of Internet use) showed a significant relationship with students' participation level in discussion forum of the online course. Also, the findings emphasized some of the critical issues that should be taken into account in designing online discussions, such as, students' workload and responsibilities, progress of interaction over the Internet taking more time, planned and structured instructional activities in discussion forum.

Similar to [32] study, there are several studies that take interest in factors affecting the participation in online discussion. Cheung and Hew [6] discussed factors that are fallen into three different categories: attributes of the online discussion, role of the facilitator and design of discussion activities. Moreover, there are other important aspects that influence student's participation and one of them is related to the differences in students' demographics and abilities in online courses. For example, [10] mentioned that students taking online courses with a high level of interaction tended to be different from the students taking the courses with a low level of interaction in regard to age, gender and previous qualifications. Although the results were not statistically significant, high interactive students were generally younger, male and having had higher educational qualifications. Balaji [2] presented a study that contributes to the understanding of the effectiveness of online discussion forum in student learning. A conceptual model based on 'theory of online learning' and 'media richness theory' was proposed and empirically tested. The results show that the perceived richness of online discussion forum has significant positive effect on student participation and interaction, and learning, when used along with traditional classroom lecture. Implications of these findings are discussed as they provide important guidelines for management educators.

Maya and Zuhairi [19] presented findings of a research on participation in four online learning courses offered by UT Faculty of Economics. The purpose of the study was to have an understanding of how distance students participate and which factors influence participation in online tutorials. Online tutorial has been used by Universitas Terbuka (UT) to provide two-way

communication channel for distance students, facilitate learning process, and assist them in preparing for examination. The findings of the research indicate that there was low participation of students in online tutorials, in terms of students' contribution to online discussion forum and to work on assignments. Findings of the questionnaire survey indicate that most respondents perceive that tutors have addressed students' questions on topics appropriately and given motivation to students to learn. One constraint in online tutorials relates to slow feedback from tutors to students, while access, costs, and computer skills do not hamper students' participation in online tutorials. Some recommendations are presented. First, tutors are advised to give feedback immediately to respond to students' queries on email.

Harris and Sandor [12] presented a framework of the online discussion forum as a student centred peer learning environment. In particular, the paper presents research findings relating to student views on participation and interaction in these online discussion forums. Data was gathered through semi-structured interviews with students. The findings support the discussed framework because it allows students to take an active role in their learning and enriches their learning experience. In summary, the framework provides a viable means of implementing peer learning in an online learning environment. Yang, Li, Tan and Teo [31] stated that anecdotal evidence indicates an online discussion forum may not be utilized to its full potential in enhancing the effectiveness and efficiency of teaching due to a lower than expected student participation rate. The researchers identify the motivational behavioural factors influencing students' intention to participate in an online discussion forum (ODF). Drawing on the literature on social psychology and applying the theory of reasoned action, they develop a conceptual model of intention to participate in an online discussion forum and empirically tested the hypotheses in a cross-sectional quantitative survey. The findings indicate that expectancy on hedonic outcome and utilitarian outcome and peer pressure positively influence the participation intention of students. Also, the perceived importance of learning positively moderates the relationship between utilitarian outcome expectancy and participation intention.

Peachly et al. [21] presented an empirical study involving initiatives that encouraged students to log onto online courses in entrepreneurship delivered by the University of Glamorgan. The aim was to explore items of interest to the online students that may increase participation in the forums and hence potentially enhance engagement with the course module. The initiative was also thought to assist in the formation of an online learning community. The study involved experimentation

by the online tutor with subsequent observation of the behavioural patterns of the students. This data was augmented by statistical data made available via the VLE software. The dedicated social and games forums attracted 54% of the total postings for the module. The findings suggest including online quizzes and games that are relevant to the taught subject can increase the participation levels of the students and possibly enhance the learning process. The findings of this study may inform the design, development and delivery of online learning programmes. The findings also inform strategies of good practice in online moderation and may help to reduce withdrawal rates, which are typically high in the field of e-learning.

Coming to Africa, [9] described the experiences gathered in a Masters of Adult Education course at University of Botswana (UB), where 26 students of the University of Botswana and the University of Georgia (UGA) engaged in discussions within the University of Botswana Learning Management System WebCT. Individual participation patterns in the discussions varied widely in this course. Based on variables found in the literature, student participation patterns were analysed – both in terms of quantity (messages read and written) and quality (status of conversational moves and level of critical thinking). Results show that culture or membership of a specific group did not seem to influence participation patterns. Gender was the major influencing variable for participation patterns in terms of both quantity and quality. Other influencing variables were course design, assessment of discussions and the presence of a learning community.

Hodgkinson-Williams and Mostert [15] proposed an underlying epistemological perspective on and an informing learning theory of online debating and its potential as a pedagogic strategy to encourage participation in online learning environments. The paper reports on student and staff perceptions of an online debate used during a BEd (Hons) course at a South African university. The findings underline the importance of providing explicit procedures to pave the way for student participation and highlight the potential value of an online debate as a pedagogic strategy to support the development of argumentation and to encourage reflexivity.

In Ghana, [1] adopted a qualitative case-study approach to examine the attitudes, experiences, and perceptions of undergraduate students who were enrolled in an online, collaborative learning course at a Ghanaian private university. Data sources included surveys, student and instructor journal entries, email records, individual interviews, and Web-server logs. The study found that the students did not respond favourably to online

constructivist teaching approaches such as asynchronous discussions and ill-structured project-based learning activities, and perceived collaborative online learning within their context as a complex, more demanding and time-consuming experience.

As said earlier and as evident from the above previous reviewed studies, studies on the participation of students' in online discussion forum is lacking in the Nigeria universities context. In the light of this, the current study will:

1. Examine the pattern of University of Ilorin undergraduate students' participation in online discussion forum. The specific objectives of the study are:
2. Find out the extent of students' participation in online discussion forum.
3. Determine the benefits of online forum to the students.
4. Identify the problems or hindrances to students' participation in online forum.

METHODOLOGY

Design and Method

This study adopts a pure quantitative method in line with positivist paradigm. A survey design was chosen in the conduct of the study. This design allows the researcher to draw on large sample which is representative of the total population [3]. This is to be able to cover a substantial percentage of students at the Faculty of Communication and Information Sciences, University of Ilorin. Moreover, survey approach was chosen because it is the most prominent approach used in previous related studies e.g. [26, 31].

Population and Sample

The population of the study comprised the entire students of the Faculty of Communication and Information Sciences at the University of Ilorin, Nigeria. There are five departments in this faculty. These are Computer Science, Library and Information Science, Information Communication Science, Telecommunication Science and Mass Communication. A purposive sampling technique was embarked upon to select 50 students each from the department that have students more than 50 while census of students was taken in departments with lesser number of students. Only Telecommunication with 10 students and Information Communication Science (ICS) departments with 38 students fall into this category and all their students were censured to take part in the study. Eventually, 198

students took part in the study. The demographic information of the respondents revealed 85 (43%) were female while 113 (57%) were male. Furthermore, the age of the respondents ranged between 19 – 35 years with an average age of 27 years.

Instrument

A self-designed questionnaire was used for the collection of data on the study. The use of questionnaire for data collection is in line with the quantitative approach used in this study. The design of the questionnaire was informed by the objective and research questions focused in the study. Items in the questionnaire were adapted from various previous related studies [e.g. 26, 31]. The questionnaire was divided into two sections. Section A requires the respondents' demographic information including gender, department, and age. Section B contained the items. This is sub-divided into parts based on the objectives and research questions. The description of the parts goes thus:

Part 1: Pattern of Participation – This part featured 2 items where the respondents indicate yes and no and pick from the available options.

Part 2: Extent – Here respondents were expected to chose from the option provided e.g. daily, every two days, weekly and fortnightly, and to indicate percentages of posts. Items in this part were adapted from [26].

Part 3: Benefits – Here respondents were given opportunity to list the benefits they derive from participating in the online discussion forum.

Part 4: Problems/Hindrances – Similarly, respondents were to indicate the problems they encounter during participation in online forum or what hinder them from participating.

Validity and Reliability

The instrument after its development was given to two experts who have interest in online discussion research. The suggestions and comments by the experts assisted in the moderation and modification of the items in the instrument. Moreover, the fact that most items in the instrument were adapted from previous related studies in part justifies the validity of the instrument. To ensure the reliability of the questionnaire, it was administered on 20 students from Faculty of Agric which did not eventually take part in the study. A test-re-test reliability method of two weeks interval was employed and responses collected were subjected to Cronbach alpha. The overall reliability of the questionnaire returned an $r = 0.85$ which exceed the minimum standard of 0.80 suggested for basic research [29].

Procedure of Administration

The researcher personally administered the questionnaire to the respondents. The fact that the researchers were lecturer in the faculty where the study was conducted enables the easy administration of the questionnaire. The questionnaire was administered in 5 batches with each department constituting a batch. The exercise took three days. Out of 198 copies of questionnaires administered, 195 copies were returned completely filled representing 98.5% return rate. These were used for data analysis on the study. The study commenced in March and was completed in May 2010.

DATA ANALYSIS AND RESULTS

Descriptive statistics including percentages and frequency count together with Friedman Test were used for the analysis of data. The results obtained are presented as follows.

The demographic information of respondents who took part in the study in table 1 reveals that 495 (66.4%) were male while 350 (33.6%) were female. This indicates that more male than female took part in the study. Moreover, the demographic information on the respondents' Faculty reveals that 50 respondents each representing (7.6%) were from the Faculties of Art, Basic Medical Science, Business and Social Sciences, and Clinical Sciences. The results also reveal that respondents from faculty of Communication and Information Sciences were, 195 (26.2%), Faculty of Education and Law were 100 each (13.4%) while respondents from Faculty of Science were 150 (20.1%). This suggests that there were more respondents from Faculty of Communication and Information Sciences than any other faculties that took part in the study. On the age distribution of respondents, the results indicate that majority of the respondents (40.3%) fall between the ages of 21 – 25 years. This is followed by respondents between the ages of 16 – 20 years with (29.8%). Next to this are respondents between 26 – 30 years with (21%) while respondents in the age group 31 – 35 years and above amounted to (8.9%).

Table 1: Demographic Information

Demographics	Frequency	Percentage %
Gender		
Male	495	66.4
Female	250	33.6
Total	745	100
Faculties		
Art	50	6.7
Business and Social Sciences	50	6.7
Basic Medical Sciences	50	6.7
Clinical Sciences	50	6.7
Communication and Information Sciences	195	26.2
Education	100	13.4
Law	100	13.4
Science	150	20.1
Total	745	100.0
Age		
16 – 20 years	222	29.8
21 - 25 years	300	40.3
26-- 30 years	157	21.0
31—35 years	66	8.9
Total	745	100.0

Table 2 reveal results on the organisation of discussion forum for courses in the respondents various faculties and to confirm whether or not respondents have ever at any point in time participated in the online discussion forum. Surprisingly, all the respondents from Faculty of CIS (26.2%) confirm the fact that there are online forum organised for their various courses while respondents from other faculties indicated no. Similarly, its only Faculty of CIS where more respondents (26.2%) indicated ever participated in discussion forum compare to faculty of Science (6.0%), faculty of BMS (4.3%), and Education (3.4%). Other faculties recorded very low percentage response less than (2.6%).

The results in table 3 clearly show the types of online discussion forum respondents have been participated. Only respondents from Faculty of Communication and Information Sciences indicated forum organised for various course offered in their faculty and other online forum. On the other hand, other respondents indicated online of their discipline's association. This suggests that respondents from Communication and Information Sciences are the ones that are really into online discussion forum. This is because they also take part in the online forum outside their faculty.

Table 2: Participation in the Online Forum

Items		Art	BMS	BSS	CLS	CIS	Edu	Law	Sci.
Is there any online discussion forum organised for courses offered in your faculty?	YES	- (0%)	- (0%)	- (0%)	- (0%)	195 (26.2%)	- (0%)	- (0%)	- (0%)
	NO	50 (6.7%)	50 (6.7%)	50 (6.7%)	50 (6.7%)	0 (0%)	100 (13.4%)	100 (13.4%)	150 (20.1%)
Have you ever participate in any online discussion forum before?	YES	10 (1.3%)	32 (4.3%)	10 (1.3%)	20 (2.6%)	195 (26.2%)	25 (3.4%)	20 (2.6%)	45 (6.0%)
	NO	40 (5.2%)	18 (2.4%)	40 (5.2%)	30 (3.9%)	- (0%)	75 (10.6 %)	80 (10.8%)	105 (14.1%)

Table 3: Types of Online Discussion Forum

Faculties	1	2
Art	Association of Art students	
Business & Social Science	Association of Social Science Students	
Basic Medical Science	Medical Students Forum	
Clinical Science	Medical Students Forum	
Comm. & Info. Science	Forum organised for various courses offered in the faculty	Other personal social discussion forum
Education	Education Students Forum	
Law	Law Students Forum	
Science	Online Forum for Science Students.	

Table 4 shows the result on the frequency of respondents' participation in the online discussion forum. The results reveal that respondents from faculty of CIS (24.8%) participate daily. Other faculty daily participation is incomparable to CIS because they have limited daily percentage of participation. The results also show that on every two days, faculty of Science has highest percentage participation (3.8%), followed by Basic Medical Science (3.4%), and Clinical Science (2.0%). Other faculties have a very low percentage. On a weekly basis, faculty of Science has higher percentage participation with (3.8%). Similarly, the same faculty of Science has highest percentage participation on a fortnight basis with (4.3%) followed by Education (2.6%). Faculty of Science again has the highest percentage participation on the monthly

basis with (14.5%), followed by Education (5.6%) percentage and Business and Social Sciences (3.0%). The results imply that Faculty of CIS is the only Faculty where respondents participate in the online discussion forum on a daily basis. This is an indication that the faculty is deeply involved in the use of online discussion forum than any other faculties. This may be attributed to the fact that this group have high proficiency in using computers and consequently find online discussion forum easier to handle compare to those from other faculties. On the other hand, the low percentage participation of other faculties may be attributed to their tight schedule or probably because they are not ICT literate or perhaps have limited access to the Internet.

Table 4: Frequency of Participation in the Online Forum

Faculties	Art	BMS	BSS	CLS	CIS	Edu	Law	Science
Daily	2 (0.3%)	17(2.3%)	4(0.7%)	18(2.4%)	185(24.8%)	10(1.3%)	4(0.6%)	20(2.6%)
Every 2 days	10 (1.3%)	25(3.4%)	6(0.8%)	15(2.0%)	7 (0.93%)	12(1.6%)	6(0.8%)	28(3.8%)
Weekly	4 (0.6%)	8(1.1%)	8(1.1%)	10(0.3%)	1 (0.13%)	16(2.2%)	8(1.1%)	28(3.8%)
Fortnightly	10 (1.3%)	- (0%)	10(1.3%)	7(0.9%)	2 (0.3%)	20(2.6%)	8(1.1%)	32(4.3%)
Monthly	24 (0.3%)	- (0%)	22(3.0%)	- (0%)	- (0%)	42(5.6%)	24(0.3%)	108(14.5%)

The responses by the respondents on the pattern of participation were summarised into four broad categories as shown in Table 5. These are Socratic questioning, reaction posting sharing of personal opinion and experiences and brainstorming. The results based on frequency count and Friedman Test conducted revealed clearly that Socratic questioning is the pattern that respondents mostly engaged with 57.1% and Mean Rank of 9.54. This is followed by reaction postings (28.5%, with Mean Rank of 8.66) and sharing of personal opinion and experiences (9.4% with Mean Rank of 7.45) while brainstorming is the least pattern with (5.1%, with Mean Rank of 4.12). The results also revealed that a significant

difference exist between the main and the lowest pattern of online participation by the respondents with (Chi. Square 13.41 at .001 level). Cost of access could be the limiting factor for respondents' engagement in brainstorming pattern while reluctance could be the reason why respondents don't share their opinion and experiences with other course participants. *Socratic questioning* seeks to get the other person to answer their own questions by making them think and drawing out the answer from them. Reaction posting simply mean to react to a member's posting. This may take the form of answering a question or commenting on an issue posted by someone. Sharing personal opinions and experiences is

intimating the class or the group members about one's own experiences of the course or an issue while brainstorming is seeking ideas and suggestions of others

on a particular issue in addition to one's own understanding of the issue so as to come up with a fact.

Table 5: Pattern of Online Participation

S/N	Pattern of Online Forum participation	Frequency	Mean Rank	Chi. Square	Sign. F.
1	Socratic Questioning (asking questions about something not clear)	425	9.54	13.41	.001
2	Reaction Posting (responding to issues or questions raised by other colleagues)	212	8.66		
3	Sharing personal Opinion/Experiences	70	7.45		
4	Brainstorming (reasoning together on an issue to come up with a solution)	38	4.12		
	Total	745			

(Chi. Square = 13.41, Df = 21; N = 745; Significant at .001).

To further examine depth of respondents' participation in the online forum, they were asked to indicate the percentage of posts they read but do not respond to. The answer is presented in Table 6.

Table 6 shows the percentage of post read but not responded to by the respondents. The result reveals that limited percentage of respondents (5.1%) read as little as 20% of the posts without response in Faculty of Communication and Information Sciences (CIS). Limited percentage of respondents (20%) and (40%) also read as little as 40% of the posts without response in Faculty of Basic Medical Science and (44%) in Clinical Sciences.

On the other hand, percentage of read and no response postings was higher among Faculty of Art where (70%) of respondents read as much as 60% without any response; Faculty Business and Social Sciences where (76%) of the respondents read as much as (60%) of the postings without response while (40%) each from Faculties of Education, and Science also read as much as (60%) of the postings without response. From Faculty of (70%) read as much as (60%) of the post without response. This indicates that percentage of read and no response posting was minimal in CIS Faculty and higher in other faculties.

Table 6: Percentage of Read but no Response Posts

Read but no response posts	Art	BMS	BSS	CLS	CIS	Edu	Law	Science
20%	-	-	-	-	10 (5.1%)	-	-	-
40%	-	20 (40%)	-	22 (16%)	-	-	-	-
60%	35 (70%)	-	38 (76%)	-	-	40 (40%)	70 (70%)	90 (60%)
80%	-	-	-	-	-	-	-	-
90%	-	-	-	-	-	-	-	-
Total	50	50	50	50	195	100	100	150

Moreover, table consider the percentage of read and response/no response posts. The result is presented in table 7.

Table 7 reveals the percentage of posts read and no response posts by the respondents. The result shows that (70%) read and does not respond to postings while (30%) read and respond to postings in Faculty of Art. In Faculty of Basic Medical Science, (40%) read and do not respond to postings while (60%) read and response to all

posting on the forum. In Faculty of Business and Social Sciences, (76%) read usually read and not respond to posting while (24%) indicate reading and respond to all posts received. In Faculty of Clinical Science, (44%) read and not respond to posting while (56%) usually does. In Faculty of CIS, limited percentage of respondents (5.1%) read without any response to postings from colleagues while (94.9%) read and response to all postings. The results reveal further that (70%) of the respondents from

Faculty of Law and (90%) from Science read posting without any response while (30%) and (40%) from the two Faculties do read and respond to all posts received. The results indicate that considerable percentage of read

and response posting (94.9%) were from Faculty of CIS. This is an indication that respondents from CIS faculty are participating in online discussion forum than all other faculties.

Table 7: Comparison of Percentage of Read no Response and Response Posts

Faculties	Art	BMS	BSS	CLS	CIS	Edu	Law	Science
Read but no response posts	35(70%)	20 (40%)	38 (76%)	22 (44%)	10 (5.1%)	60 (60%)	70 (70%)	90 (60%)
Read and response posts	15 (30%)	30 (60%)	12(24%)	28 (56%)	185(94.9%)	40(40%)	30(30%)	60 (40%)
Total	50	50	50	50	195	100	100	150

Benefits of online Forum

On the benefits of participating in the online forum, the result based on frequency count and Friedman Test conducted reveals seven most prominent benefits in the following order. Encouraging intellectual support in terms of sharing of ideas (98.7%, Mean Rank of 9.87), introvert free expression of opinion (95.8%, Mean Rank of 9.32), students participate more than in a face to face class (94.0%, Mean Rank of 9.25), promotion of social interaction 92.8%, Mean Rank of 8.56), opportunity of asking colleagues what is not clear (91.0%, Mean Rank of 8.33), provide motivation to be involved with the course content (85.9%, Mean Rank of 7.80). Asides of

the items provided for the respondents to respond to, other benefits identified by the respondents are: Interactions with other students in the online discussion forums challenge me to critically reflect on the discussion topics, interactions with other students in the online discussion forums encourage me to continue participating in the discussion forums and interactions with other students in the online discussion forums encourage me to be more active in the discussion forums in terms of writing more and/or longer postings. To show the level of significant of each of the benefit identified, Chi-Square analysis was performed. The results further indicate that all the benefits identified by the respondents are significant with (Chi-Square 20.66, Df. 21 and at .001 level).

Table 8: Benefits of Participation in Online Forum N =745

S/N	Benefits	Freq.	Mean Rank	Chi. Square	Sign. F
1.	Encourages intellectual support (sharing of knowledge and ideas) between participants.	735	9.87	18.15	.001
2.	Enables introvert to freely air and express their own opinion.	714	9.32		
3.	In a class situation, it increased students' participation in teaching and learning than what obtain in a face-to-face instructional setting.	700	9.25		
4.	Promote social interaction between group members and course participants	691	8.56		
5.	Provide opportunity to freely ask colleagues what is not clear	678	8.33		
7.	Motivation to become more involved with the course content/topic of discussion.	640	7.80		

Table 9 reveals results on the perceived impact of participating in the discussion forum on the respondents learning and performance. Using percentages and frequency count, the results indicate that (91.2%) strongly agree and agree that participating in the

forum would help their learning. On the other hand, (6.7%) disagree and strongly disagreed while (2.0%) were neutral. Furthermore, the results indicate that (92.1%) strongly and agree that participating in the forum has improved their learning performance. On the other hand,

(5.3%) disagree and strongly disagreed while (2.6%) were neutral. Additionally, the result reveals that (91.1%) indicate responding to other peoples' posting is increasing their reasoning and retention ability while (5.4%) disagree and strongly disagreed. So also, (92.6%) submit that contributing to the brainstorming and other activities on the forum is deepening their knowledge of the courses; (4.1%) disagree and strongly disagreed while (3.4%) were

neutral. Finally, (94.1%) submit that overall, discussion forum has contributed immensely to the improvement of their GPA and general performance in all the courses. These results summarily indicate that majority of the respondents on this study perceived that participating in the online discussion has really contributed to their learning performance and this has eventually increased their GPA.

Table 9: Perceived Impact of Discussion Forum on Student Learning and Performance N =195

S/N	Items	SA	A	N	D	SD
1	I believe that participating in the forum would help my learning	425 (57.1%)	255 (34.2%)	15 (2.0%)	30 (4.0%)	20 (2.7%)
2	Participating in discussion forum has improved my learning performance.	390 (52.4%)	296 (39.7%)	19 (2.6%)	29 (3.8%)	11 (1.5%)
3.	Receiving and responding to other peoples' posting is increasing my reasoning, retention and intellectual ability	402 (54.0%)	276 (37.1%)	27 (3.6%)	20 (2.7%)	20 (2.7%)
4.	Contributing to the brainstorming and other activities on the forum is deepening my knowledge of the courses.	384 (51.5%)	306 (41.1%)	25 (3.4%)	17 (2.3%)	13 (1.8%)
5.	Overall, discussion forum has contributed a lot to the improvement of my GPA and general performance in all the courses.	435 (58.4%)	266 (35.7%)	14 (1.9%)	15 (2.0%)	15 (2.0%)

Problems of Online Forum

Table 10 reveals the problems and hindrances to the respondents' participation in the online forum. The result shows the issue of incessant power outage as the most prominent problem. This was indicated by (98.7%, with a Mean Rank of 9.72) of the respondents. Following this immediately is the problem of time factor indicated by (96.6%, with a Mean Rank of 9.16). The respondents (94.2%, with a Mean Rank of 8.95) indicated limited access to computers and Internet. Furthermore, cost of access to computers and the Internet was indicated by

(93.2% with a Mean Rank of 7.67). Findings also indicated that some respondents usually become unruly in terms of posting excessive joking and flaming with (90.6% and with a Mean Rank of 7.67), and slow connectivity (73.8% with a Mean Rank of 6.68) while inadequate knowledge and skills to use the Internet (60.4 % and Mean Rank of 4.12). Aside of the problems included in the table, other problems identified by the respondents were: difficulty in enhancing social interaction based on the fact that most people are participating in the discussion forums because of the assessment requirements.

Table 10: Problems of Participation in Online Forum N =745

S/N	Problems	Freq.	Mean Rank	Chi-Square	Sign. F
1	Incessant Power outage	735	9.72	17.24	.001
2	Time factor based on tight schedule	720	9.16		
3	Limited access to computers and Internet	702	8.95		
4	Cost of Access	694	7.67		
5	Participants become "unruly" if anonymous (e.g. excessive joking)	675	7.22		
6	Slow connectivity	550	6.68		
7	Inadequate knowledge and skills to use the Internet.	450	4.12		

DISCUSSION OF FINDINGS

This study has established the pattern of undergraduate participation in the online discussion forum and through data collection and analysis; the four research questions developed have been answered. The finding that Socratic questioning, sharing of personal opinion, reaction posting and brainstorming are the major pattern of participation demonstrated by the respondents in this study is not a co-incidence. This is because the finding correspond with the earlier findings [e.g. 33] who investigated participation patterns, users' contributions and gratification mechanisms with the reported that: (1) Participation patterns reveal two distinct participation types - "project creators" and "social participators". Though the pattern established by these two studies differs considerably. However, one thing that is pertinent is that there are types or patterns of participation in the online discussion forum and this has been confirmed in this study.

The finding that revealed a great extent of participation in the online forum with the majority making postings on a daily basis is also in consonant with the report by [20] that participant in their study on dedicated social and games discussion forums attracted 54% of the total postings for the module. This great extent of participation revealed in this study may be due to the factors identified such as expectancy on hedonic outcome and utilitarian outcome and peer pressure identified by [31]. Similarly, the perceived importance of learning and utilitarian outcome expectancy and participation intention may also be other responsible factors. In addition, the major reasons summed up as "generally getting used to something new, encouragement from instructor and understanding how important discussions were for learning" identified by [18] also lend credence to this current finding. Still on the extent of participation, the report by [26] that majority of the students read somewhere between 70 to 80 percent of the posts; while the range of posts that were read but not responded to was wider, 40 to 90 percent also support or confirm the present finding. Reasons stated for not responding to the posts was not having time to respond. This also corroborates the current findings relating to number of post read but not responded revealed in this study. Conversely, [19] findings that there was low participation of students in online tutorials, in terms of students' contribution to online discussion forum contradict the present finding of this study. This variation may be due to the platform used for the discussion forum. The University of Ilorin, Nigeria where the present study was conducted does not have a particular platform in place at

the moment except the Internet. This may also be another responsible factor.

This study identified some of the benefits derived by the participant in their participation in the forum as encouragement of intellectual support in terms of sharing of knowledge and ideas between participants, introvert free expression of opinion, students participate more than in a face to face class, promotion of social interaction, opportunity of asking colleagues what is not clear and others as the most common benefits. The result is in agreement with the finding by [20] who indicated that online discussion that are relevant to the taught subject can increase the participation levels of the students and possibly enhance the learning process. Similarly, [2] report online discussion forum has significant positive effect on students' participation and interaction, and learning, when used along with traditional classroom lecture; together with the report by [21] who found that students perceived greater quality and quantity of learning as a result of participating in the discussions forum confirm the benefits of online discussion forum identified in this study.

Just like the previous related studies, the current study also revealed some identifiable problems encountered by the participants in the online forum. These are incessant power outage and time factor based on tight schedule, limited access to computers and Internet, cost of access to computers and the Internet, participants becoming unruly in terms of posting excessive joking and flaming, inadequate knowledge and skills to use the Internet and others. This result correspond with [19] who indicated the constraint in online tutorials relates to slow feedback from tutors to students, access, costs, and computer skills. Contrarily, [27] revealed technology and interface characteristics, content area experience, student roles and instructional tasks, and information overload while [28] who examined the nature of interaction in an online course from both teacher and student perspectives; concluded that the structure of course, class size, feedback, and prior knowledge of computer mediated communication all affected the interaction in the online forum. This confirms the fact that there are problems associated with online discussion forum irrespective of who, where, when, what and the nature of the contribution.

RECOMMENDATIONS

There is need for more success story in the online discussion forum at the Faculty of Communication and Information Science, University of Ilorin. This is to say that increase participation in terms of creating online forum for all courses in the faculty with the lecturer

playing their effectively as facilitators. For this to happen there is need for the students to be effective communicator. The use and practice of chat, email, feedback on assignments, sharing examples and instant messaging as put forward by [2] can help in this direction.

It should be noted that online discussion forum is very porous as anyone can post X number of times, but this doesn't ensure that students are learning anything. Twenty irrelevant interactions are not nearly as effective for promoting student learning as one or two insightful, relevant comments or questions that stimulate critical thinking and active exploration of course material. In the light of this, students are called upon to contribute meaningfully to the forum as this can go a long way to enhance their performance.

The study has revealed the pattern of students' participation in the online forum in term of the frequency of use and the rest. In the light of this, there is need for more students' motivation on the part of the lecturers. This will enables students who have not been fully involved in it to do so. This they can do by making sure that they are providing immediate feedback on students' postings and clarifications. Moreover, they can also make use of token reinforcement such as 'good posting' 'brilliant idea' 'fantastic contribution', etc. These can motivate them to increase their participation.

Moreover, the results have indicated that only respondents from the Faculty of Communication and Information Sciences are deeply involved in the online discussion forum. This is connected with the various online discussion forum organised for the various courses offered in the faculty. In the light of this, other faculties in the university should consider borrowing leave from faculty of CIS by organising online discussion forum for their courses. This will better facilitate interaction between course tutors and the students thereby contributing to and deepens students' knowledge of the courses.

In order to improve students' participation in the online forum, the University authority should provide enough free internet facilities outlets within the university community just as it is done in developed countries.

This study might serve to be the first of its kind in Nigeria as far as the use of online discussion forum is concern to facilitate and deepened students' knowledge courses offered. In the light of this, other universities in Nigeria, Africa and outside Africa should consider the use of online forum in the teaching of their courses considering the benefits indicated associated with it in this study.

SUGGESTIONS FOR FURTHER STUDIES

Future researchers may consider looking into the area of factors promoting students participation in the online forum in the Nigeria context.

The role played by lecturers and their impact in terms of facilitating and promoting effective participation on the part of the learners could also be look into.

CONCLUSION

So far the study has examined the pattern of undergraduate participation in the online discussion forum and the results have indicated that majority of the respondents are participating in the online forum and they dully committed to it. Four prominent pattern of participation were identified by the respondents. These are Socratic questioning, sharing of personal opinion and experiences, reaction posting and brainstorming. Furthermore, the study revealed a great extent of participation in the online forum with the majority making postings on a daily basis. Similarly, considerable number of respondents usually read and responds to all posts received. The results confirm encouragement of intellectual support in terms of sharing of knowledge and ideas between participants and others as the most common benefits. Incessant power outage and time factor based on tight schedule and others were identified as the problems participants encounter in the online forum.

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APPENDIX

Online Discussion Forum Questionnaire

Instructions:

Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers.

SECTION A: BIO-DATA INFORMATION

Your Faculty.....
 Expected Degree.....
 Year of Study.....
 Age.....
 Gender.....

Now respond to the following items by ticking from the options provided.

SECTION B

Is there any online forum organised for courses offered in your faculty?

YES NO

Have you ever participate in any online discussion forum before?

YES NO

Do you regularly participate in the online forum organised for your various courses?

YES NO

Pattern of Participation

Which of the under listed best describe the nature of your posting? Please tick one

Socratic Questioning (asking questions about something that is not clear)	<input type="checkbox"/>
Reaction Posting (responding to issues or questions raised by other colleagues).	<input type="checkbox"/>
Sharing personal Opinion/Experiences	<input type="checkbox"/>
Brainstorming (reasoning together on an issue to come up with a solution).	<input type="checkbox"/>

How often do you participate in the forum? Please tick as applicable.

Daily	
Every Two Days	
Weekly	
Fortnightly	
Monthly	

Please indicate the Percentage of posts you received and read but do not response to

Read but no Response Posts in %	Percentage %
20 %	
40%	
60%	
80%	
90%	

Please indicate the Percentage of posts you received, read and response to

Read but no Response Posts in %	Percentage %
20 %	
40%	
60%	
80%	
90%	

Which of the statements in the box do you consider as benefits of participating in the online forum? Please tick as applicable.

Benefits of Participation in Online Forum

S/N	Benefits	YES	NO
1.	Encourages intellectual support (sharing of knowledge and ideas) between participants.		
2.	Enables introvert to freely air and express their own opinion.		
3.	Increased students' participation in teaching and learning than what obtain in a face-to-face instructional setting.		
4.	Promote social interaction between course participants		
5.	Provide opportunity to freely ask colleagues what is not clear		
7.	Motivation to become more involved with the course content.		

Respond to the items in the table below by picking from the options Strongly Agree to Strongly Disagree

Perceived Impact of Discussion Forum on Student Learning and Performance

S/N	Items	SA	A	N	D	SD
1	I believe that participating in the forum would help my learning					
2	Participating in discussion forum has improved my learning performance.					
3.	Receiving and responding to other peoples' posting is increasing my reasoning, retention and intellectual ability					
4.	Contributing to the brainstorming and other activities on the forum is deepening my knowledge of the courses.					
5.	Overall, discussion forum has contributed a lot to the improvement of my GPA and general performance in all the courses.					

Which of the statements in the box do you considered as problem of participating in the online forum?
Tick as applicable.

Problems of Participation in Online Forum

S/N	Problems	YES	NO
1	Incessant Power outage		
2	Time factor based on tight schedule		
3	Limited access to computers and Internet		
4	Cost of Access		
5	Participants become "unruly" if anonymous (e.g. excessive joking)		
6	Slow connectivity		
7	Inadequate knowledge and skills to use the Internet.		

Others, please specify.....

