

PERCEPTION OF THE USE OF WEBQUEST FOR ACADEMIC PURPOSES AMONG UNDERGRADUATE STUDENTS IN RIVERS STATE, NIGERIA

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ABSTRACT: *This study was carried out to ascertain the undergraduate students' perception on the use of WebQuest for academic purposes. It was conducted in three tertiary institutions in Rivers State. The sample comprised 300 respondents randomly selected from three tertiary institutions in Rivers State. Two research questions and two null hypotheses were used for the study. Mean scores, Standard deviation, ANOVA, and Regression Analysis were the statistical tools used in the study. It was found that WebQuest is used in fostering discussion outside classroom; bringing about collaborative research in the classroom, and facilitating social interactions among learners. In terms of attitude, respondents generally have favourable attitude towards use of WebQuest. The study revealed that significant differences exist in WebQuest usage across the three universities involved in the study and significant differences exist in the use of WebQuest between male and female respondents; and in attitude of students towards WebQuest. Based on these findings, the study recommend that the use of WebQuest should be incorporated into the university curriculum for enhanced university education system.*

KEYWORDS: WebQuest, Social Media, Academic Performance.

INTRODUCTION

In recent times, WebQuest emerge as innovation in educational sector which serves as a platform for effective learning. WebQuest as a tool in social media is seen to support a range of educational activities at university level such as communication, collaboration, interaction and participation (Ikpeze & Boyed, 2007). WebQuest as used in education permits students to gain ideas and exchange knowledge with colleagues with the support of internet as a base for different operations such as reading, shopping, advertising, etc. WebQuest usage in education is believed to have its own advantages and disadvantages.

Perkins and Mcknight (2005) explain that WebQuest is of great advantage in educational system since it provides opportunity for students to combine concepts and incorporate inquiry-based learning by integrating on-line resources with student-centred and activity based learning. WebQuest can be used in education to support students with recent learning pedagogy and practice that is obtainable outside their learning environment. Students can obtain current information on the outside world thereby getting updated on current issues within and outside the educational system. WebQuest supplies students with relevant and reliable information which can be of help to their research work, it employs cooperative learning (students are in pairs or teams), and lessons are designed to motivate students by capturing their interest.

Students scaffolding provided within the lessons can help lower learners catch up with others. Students can get more online material resources since internet sites are pre-selected. WebQuest is popular for content knowledge as they scaffold the process of learning and provide a foundation for new activities. It fosters the investigative process of teaching and learning which leads to expansion, and this in turn promotes critical and creative thinking which fosters higher-order-thinking for new knowledge creation among learners.

Concept of WebQuest

Dodge, (1995) defined WebQuest as an enquiry-based activities through which students communicate with resources on the internet aim at supporting students' task based on application of technology. It has modified the learning culture of students from passive to active with easy-created user generated content. This change has radically challenged the traditional system of teaching and learning. Leahy and Twoney, (2005), identified reasons why WebQuest is used in educational system to include the improvement of critical thinking skills, construction of collaborative activities, improvement of motivation, elaboration of social skills and opening of concrete hands-on experiences. WebQuest aids students access to solve problems and complete tasks given them by the instructors, it extracts higher-order thinking rather than simple searching of information thus promoting problem solving, synthesis and analysis of information. Lacina (2007) posits that WebQuest allows students to work in a cooperative manner and exchange ideas when using technology which supplies multiple types of facts needed to comprehend the new concept. In a related survey study conducted on participants in a state structural conference who were primarily K-12 students, teachers, higher education faculty, district-level administrators and technology vendors, Perkins & Mcknight (2005) obtained very positive comments about WebQuest. Though these educators had some reservations regarding WebQuest use, 62% of the respondents said they had used them in their classroom, and contend that when properly created and used, WebQuest provides an interesting way for students to attack real problems in a focused way. There are however no set standards as to what activities and resources actually represent the effective use of a WebQuest in learning. Nicola (2012) on WebQuest as an effective tool for teaching and learning, the study posits that students are highly motivated when they connect with new peers and potentials on social groups. Many find participatory new online programmes with relatively low stake issues of exploring the space that works for them, but the success of pioneering colleagues in engaging students in their work is gaining professional advantage through social media as an agent of change in leadership.

Concept of social media

Dictionary.com defined Social media as an electronic media that makes use of web applications such as Facebook, WhatsApp, Tumblr for the dissemination of information through which responses can be sent simultaneously. Google.com defined social media as a computer-mediated technologies that facilitate the creation and sharing of information. Sponcil and Gitimu's (2012) investigated the involvement of social media by college students' relationship in communicating self-concept using a sample of 96 students randomly selected from students of Youngstown State University, U.S.A. Data was obtained from sample using Pearson product moment coefficient by stratified sampling method, the findings show that almost all college students were using some form of social networking site including WebQuest site that they log into per day. Akbari, Eghtesad and Simons, (2012) carried out a study on students' attitude towards the use of social media for learning. Samples of 20 Ph.D students were randomly selected, and a structured questionnaire was used as instrument. The result indicated that all

participants considered social network including WebQuest to be very efficient and a possible educational tool especially for improving the academic performance in various activities. While Akbari et al, (2012) used Ph.D students for their research work; this present study will use undergraduate students. They also used a small sample size of 20 Ph.D students but the present study will use a larger sample of 200 undergraduate students for the study.

Academic performance

Academic performance refers to how well a learner accomplish assigned projects and studies given. Barry (2006) defined academic performance as an extent to which a particular learner complete different task assign to him by the instructor. Barry also observed that there are several factors that can affects students' academic performance in school such as learning environment, instructional delivery approach, socio-economic background etc. Nyamba (2013) in a study investigated factors influencing activity-based learning approach and students' academic performance in schools in Mbeya Municipality in Tanzania. The study adopted a descriptive survey research design using twenty-six (26) community built secondary schools as population while the sample was 430 students. the findings reveals that syllabus coverage and language barriers are strong factors that influences the use of activity-based learning approach which in turn affects students' academic performance in schools.

This study is anchored on two theories which are; theory of constructivism by Jean Piaget (1975) and theory of connectivism by George Siemens and Stephen Downes (2005). The constructivism theory always known as theory of knowledge by Piaget, (1975) views learning as an active process in which learners build an in-depth illustration of knowledge and personal interpretation of experiences in which representation is continually open to modification, and linkages forming the base to which other knowledge structures are attached. Constructivist views learning as a constructive process in which meaning is accomplished on the basis of level of experiences. Though this view does not reject the existence of the real world, and agrees that reality places constraints to the concept, but ascertain that the world is human interpretations of our experiences on earth. Bednar, Cunnigham, Duffy, Perry. (1995); posits that conceptual growth comes from sharing of various perspectives and the synchronous changing of our internal representations in response to those perspective as well as accumulation of experiences.

The underlying challenge of constructivism is the issue of changing the system of control over learning from instructor to the learner. Some instructional technologists and behavioural psychologists have tried to design programmes in such a way that learners will be lured to achieve pre-specified objectives. They suggest objectives be negotiated with students based on their personal needs, and also programme exercise should come from within the context of their real world experiences so as to help students work together with colleagues in the social construction of personal significant.

Bednar, Cunnigham, Duffy, and Perry (1995) were in support of the view that learning should be placed in a rich context, reflecting the real world context, and for this constructive process to take place and be transferred to environments beyond the school, certain factors are involved which are learning through cognitive apprenticeship, mirroring the collaboration of real world problem solving, and using the tools accessible in problem solving situations. Relating this theory to this work implies that humans generate knowledge and meaning from interactions between their experiences and ideas, therefore learners must be actively involved in the process

of learning by being engage in social networking sites like WebQuest in order to constructs their own knowledge and share with others within and outside their learning environment.

The theory of Connectivism (learning theory for digital age) by George Siemens and Stephen Downes (2005) is a learning theory which emphasizes the role of social and cultural context in learning. Connectivism is similar to Bandura's learning theory that emphasizes learning through contact. It's a digital age learning theory that focuses on technological effort on how people operate, communicate and learn. Connectivism centralizes on the symbol of network with node and connections with people around the globe. Within the symbol, a node is anything that can be connected to another node such as an information, feelings, organisations, data and pictures. Connectivism sees learning as the process of creating connections and enlarging network completely, as such learning and knowledge rests in diversity of choice.

Anderson (2005) reported that connectivism encourages high level of students' online social presence. Moreover, the perception of students on incorporation of this teaching strategy is that it offers new opportunity to enhance teaching instruction and learning experiences in a broader sense.

Similarly, Webquest as a social networking tool appear to be part of educational system. Using webquest as a tool requires a proactive effort on the part of the users. Bandura's social learning theory posits that people learn from one another via imitation, modelling and observation. Therefore, the type of socialization that occurs via social networking tools is certainly different from face-to-face social interaction, but it still offers opportunities for social learning. Applying this theory to this work implies that effective learning cannot be achieved without connecting to various sources of network nodes with the aim of creating and sharing of knowledge among learners.

Purpose of the study

The aim of this study is to ascertain the perception of students on the use of WebQuest for academic purposes. Specifically, the study intends to:

1. Identify the perceived usage of WebQuest for improved academic purposes.
2. Ascertain the attitude of students towards the use of WebQuest sites.

Research Questions

1. What are students' perceived usages of WebQuest for improved academic purposes?
2. What are the students' attitude towards the use of WebQuest sites for learning?

Hypotheses

The following null hypotheses guided the study

1. No significant difference exist in students' usage of WebQuest for improved academic purposes considering institution.
2. There is no significant relationship between the usage of WebQuest and attitude of students.

METHODOLOGY

The population of this study comprises 300 level and 400 level undergraduate students from the Department of Curriculum Studies and Educational Technology University of Port Harcourt, Department of Science and Technical Education University of Science and Technology Nkpolu-Oroworukwo, Port Harcourt and Curriculum and Instructional Department Ignatius Ayuru University of Education Rivers State. The total population of the undergraduates from the selected departments in the three institutions is 1190 (Office of the Head of Department, 2015). The distribution of (students) population according to the three tertiary institutions randomly selected for the study, while the sample for the study was three hundred (300). The study adopted a descriptive survey research design. A structured questionnaire was used as instrument for data collection tagged Students perception on the use of WebQuest questionnaire. Validity of the instrument was done by experts in the field of educational technology, and the reliability was established using cronbach's Alpha Analysis and the reliability coefficient of 0.84 was obtained. The data obtained were analysed using mean, standard deviation, Analysis of variance (ANOVA) and Regression Analysis while the formulated hypotheses were tested at .05 level of significance.

FINDINGS

Research Question one

What are students' perceived usages of WebQuest for improved academic purposes?

Table 1.1: Perceived usage of Webquest.

| S/n | Perceived usage of Webquest | Mean score | Standard deviation | Remark |
|-----|------------------------------------------------------------------------------------|------------|--------------------|--------|
| 1 | I can exchange ideas. | 3.56 | 0.55 | Agree |
| 2 | Engagement with technology has upgrade. | 3.65 | 0.47 | Agree |
| 3 | WebQuest enhances my communication skills. | 3.64 | 0.48 | Agree |
| 4 | Communication in classroom has improved with webQuest. | 3.73 | 0.44 | Agree |
| 5 | WebQuest introduce new system of research. | 3.53 | 0.50 | Agree |
| 6 | WebQuest provides enough information to complete a task. | 3.74 | 0.43 | Agree |
| 7 | Involvement in WebQuest improves my level of motivation for the course. | 3.75 | 0.54 | Agree |
| 8 | WebQuest has help people connect with friends outside class. | 3.60 | 0.59 | Agree |
| 9 | Students can further explore topics of interest through use of WebQuest resources. | 3.53 | 0.54 | Agree |
| 10 | WebQuest provides creativity while learning. | 3.52 | 0.53 | Agree |

| | | | | |
|----|----------------------------------------------------------|------|------|-------|
| 11 | WebQuest create meaningful dialogue among learners. | 3.58 | 0.52 | Agree |
| 12 | WebQuest improves the level of understanding of courses. | 3.62 | 0.49 | Agree |
| 13 | WebQuest foster discussion outside classroom. | 3.59 | 0.43 | Agree |
| 14 | With webQuest social confident has improved. | 3.74 | 0.45 | Agree |
| 15 | WebQuest oriented me in research work. | 3.70 | 0.48 | Agree |
| | Over all mean | 3.63 | 0.49 | |

Midpoint = 2.50; any mean score < 2.50 suggest disagreement; any mean score > 2.50 suggest agreement.

Entries in Table 1.1 shows that respondents agreed that they can share and exchange ideas with WebQuest (mean=3.56; SD=0.55), Also involvement with technology has improved (mean=3.65; SD=0.47). Respondents agreed that WebQuest has improved communication skills (mean=3.64; 0.48), communication in classroom has improved with WebQuest (mean=3.73; SD=0.44). Respondents agreed that WebQuest has brought about new system of research (mean=3.53; SD=0.50), WebQuest provides enough information to complete a task (mean=3.74; SD=0.43). Respondents agreed that WebQuest increase motivation for a course (mean=3.74; SD=0.54), Also WebQuest help in connecting people outside the class (mean=3.60; SD=0.59). Respondents agreed that students can further explore topic of interest with WebQuest (mean=3.53; SD=0.54). WebQuest provide creativity while learning (mean=3.52; SD=0.53). Respondents Agreed that WebQuest create meaningful dialogue among learners (mean=3.58; SD=0.52). WebQuest support understanding of course related topics (mean=3.62; 0.49). Respondents Agreed that WebQuest foster discussion outside classroom (mean=3.59; SD=0.43). Social confidence among learners has greatly improved with WebQuest (mean=3.74; SD=0.45). Respondents Agreed that WebQuest orientate people on research (mean=3.70; SD=0.48). An overall mean of 3.63 and standard deviation of 0.49 suggest Agreement i.e. WebQuest benefits students. This implies that students can explore topics of interest through online social networking sites. Therefore this indicates a high level of WebQuest usage among respondents.

Research Question Two

What are the students' attitude to using WebQuest sites for learning?

Table 1.2: Attitudes of students on the use of WebQuest.

| S/N | Attitude of students on the use of WebQuest. | Mean score | Standard deviation | Remark |
|-----|----------------------------------------------------------------------------------------------|------------|--------------------|--------|
| 1 | WebQuest site is interesting. | 4.09 | 3.03 | Agree |
| 2 | There is rapid development in educational system through the use of WebQuest. | 3.84 | 0.39 | Agree |
| 3 | WebQuest has steadily increased and in turn influence the change in attitude towards (ICTs). | 3.71 | 0.49 | Agree |

| | | | | |
|----|-----------------------------------------------------------------------------------------|------|------|-------|
| 4 | Am well prepared to experiment, and share ideas online. | 3.71 | 0.45 | Agree |
| 5 | Getting research materials is a welcome development with the use of WebQuest. | 3.92 | 0.27 | Agree |
| 6 | WebQuest offers new educational experience for both teachers and students. | 3.72 | 0.58 | Agree |
| 7 | Friends are reunited through WebQuest. | 3.79 | 0.40 | Agree |
| 8 | Students are highly motivated by the need to find and bound with new peers' potentials. | 3.86 | 0.34 | Agree |
| 9 | A computer skill is beneficial with WebQuest. | 4.24 | 3.91 | Agree |
| 10 | I don't have ICTs skills. | 3.69 | 0.46 | Agree |
| 11 | WebQuest scaffold learning. | 3.49 | 0.61 | Agree |
| 12 | Orientation on the use of WebQuest is required. | 3.83 | 0.37 | Agree |
| 13 | Communication is made easy. | 3.84 | 0.36 | Agree |
| 14 | I have ICTs skills but can't use it on WebQuest. | 3.80 | 0.40 | Agree |
| 15 | Site navigation is rampant. | 3.81 | 0.50 | Agree |
| 16 | WebQuest is an innovation. | 3.64 | 0.48 | Agree |
| 17 | WebQuest is use for learning in higher education. | 3.71 | 0.51 | Agree |
| 18 | WebQuest can only be used for educational purposes. | 3.94 | 3.00 | Agree |
| 19 | WebQuest is for students alone. | 3.38 | 0.81 | Agree |
| 20 | WebQuest is an innovation in education. | 3.41 | 0.83 | Agree |
| | Overall mean | 3.77 | 0.90 | |

Midpoint= 2.50; any mean score < 2.50 suggest disagreement; any mean score > 2.50 suggest agreement.

Entries in table 1.2 reveals that WebQuest sites are interesting (mean=4.09; SD=3.03), Also, there is rapid development in educational system through Information Communication Technology (ICTs) (mean=3.84; SD=0.39). Information Communication Technology has steadily increased and inturn influence the change in attitude towards it (mean= 3.71; SD=0.49), students are well prepared to experiment, socialize and share ideas online (mean=3.92; SD=0.27). Getting research materials is a welcome development with the use of WebQuest (mean=3.72; SD=0.58), WebQuest offers new educational experiences for both teachers and students (mean=3.79; SD=0.40). Friends are reunited through WebQuest (mean=3.86; SD=0.34), students are highly motivated by the need to find and bound with new peers potentials (mean=4.24; SD=3.91). Computer skills is beneficial with WebQuest (mean=3.69; SD=0.46), computer skills is needed (3.49; SD=0.61), WebQuest scaffold

learning (mean=3.83; SD=0.37). Orientation on the use of WebQuest is required (mean=3.84; SD=0.36), communication is made easy (mean=3.80; SD=0.40), Information Communication Technology skills is use on WebQuest (mean=3.81; SD=0.50). Site navigator is easy on WebQuest (mean=3.64; SD=0.84), WebQuest has help drive change (mean=3.71; SD=0.51), WebQuest is use for teaching in higher education (mean=3.94; SD=3.0), WebQuest can only be used for educational purposes (mean=3.38; SD=0.81), WebQuest is an innovation in education (mean=3.41; SD=0.83).An overall mean of 3.77 and standard deviation of 0.90 suggests favourable attitude of students using WebQuest for academic purposes.

Hypothesis one

No significant difference exist in students' usage of WebQuest for improved academic purposes considering institution.

Table 1.3: ANOVA of differences in WebQuest usage and institutions

| Perceived usage | | | | | |
|-----------------|----------------|-----|-------------|--------|------|
| | Sum of Squares | Df | Mean Square | F | Sig. |
| Between Groups | 14.596 | 2 | 7.298 | 27.296 | .000 |
| Within Groups | 79.407 | 297 | .267 | | |
| Total | 94.003 | 299 | | | |

Table 1.4: Post Hoc, Multiple comparison Test using Scheffe model.

Multiple Comparisons

Dependent Variable: Perceived usage

| | (I) Institution | (J) Institution | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---------|-----------------|-----------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Scheffe | Uniport | UST | .20280* | .07313 | .022 | .0229 | .3827 |
| | | UOE | .53510* | .07313 | .000 | .3552 | .7150 |
| | UST | Uniport | -.20280* | .07313 | .022 | -.3827 | -.0229 |
| | | UOE | .33230* | .07313 | .000 | .1524 | .5122 |
| | UOE | Uniport | -.53510* | .07313 | .000 | -.7150 | -.3552 |
| | | UST | -.33230* | .07313 | .000 | -.5122 | -.1524 |

*. The mean difference is significant at the 0.05 level

Table 1.4 disclose a significant difference between the perceived usages of WebQuest for improved academic purposes among students considering institutions, which implies that university of Port Harcourt undergraduate's uses WebQuest than the other two institutions.

This is as the result of F1, 297 calculated value of 27.296 is greater than F1, 297 critical value of 2.99.

However, the Post Hoc analysis of table 4.1 reveals that university of Port Harcourt contributed most to the significant difference between the institutions. This implies that university of Port Harcourt uses WebQuest more than students of the other two institutions.

Hypothesis Two

There is no significant relationship between the usage of WebQuest and attitude of students.

Table 1.5: REGRESSION

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .052 ^a | .003 | .000 | .56090 |

a. Predictors: (Constant), Attitude

Table 1.5 reveals a coefficient of relationship of 0.052 between attitude and usage of WebQuest by undergraduates of the three institutions.

This implies a very weak positive relationship between attitude of students and their usage of WebQuest for academic purposes. Thus students' relationship on the use of WebQuest has no effect on their academic purposes.

DISCUSSION OF FINDINGS

From the above analysis, it is clear that WebQuest can be used by students for academic purpose since they have a positive perception on the use of WebQuest for learning. The result suggests that significant difference exist in WebQuest usage across the three institutions used for the study. The positive differences exist in WebQuest usage between University of Port Harcourt respondents, University of Science and Technology. Also significant difference exist between Ignatius Ajuru University of Education and University of Port Harcourt students. The result of this study is in agreement with those of Tasir et al (2012) and Lim (2010) opined that students' are familiar with the concept of social media thereby prompting them to show positive satisfaction with the use of social media tools for learning. Santovec (2006) found that social media outlets, has been shown to be useful interactive tools amongst college students by creating a space to communicate campus activities and events, thereby keeping students informed.

Moreover, the result reveals no significant difference in attitude on use of WebQuest for learning among undergraduates in the three institutions. The table of regression reveals a coefficient of relationship of 0.052 between attitude and usage of WebQuest by undergraduates

of University of Port Harcourt, University of Science and Technology and Ignatius Ajuru University of Education. However, this implies a very weak positive relationship between attitude of students and their usage of WebQuest for academic purposes. The result of the present study is in agreement with those of Akbari et al (2012) who found out social media tool like Facebook can be useful in learning since communicate and sharing knowledge can be achieved.

CONCLUSION

WebQuest have greatly enhance teaching and learning among undergraduate students of various institutions. The researchers noticed that undergraduate students have a positive perception on WebQuest sites for academic purposes, also a positive attitude on the use towards the use of WebQuest for academic purposes.

RECOMMENDATIONS

Based on the results of this study, the following recommendations are put forward.

1. It is clear that WebQuest tools have the ability to be the preferable tool for university undergraduates' interaction and communication.
2. It is important for Universities to be aware of students' current needs and interest related to their learning environment for better knowledge acquisition and academic achievements in the course of their study.

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