EFFECT OF WEB-BASED INFORMATION ON LEARNING STRATEGIES OF POST GRADUATE STUDENTS

RESHMA. P. T
Junior Research Fellow
Department of Education
University of Calicut

Dr. P.K. SUDHEESH KUMAR
Reader in Education
Department of Education
University of Calicut

ABSTRACT

The present study was conducted to find out the effect of web-based information on learning strategies of Post graduate students. Gender difference of the sample in their access to web based information and the use of learning strategies was also considered in the study. Data were collected from the sample by using two tools, namely, Web-based Information Access Questionnaire (WIAQ) and Learning Strategy Scale (LSS). The collected data was analysed through differential analysis. From the differential analysis it was found that Male as well as Female Students have equal access to web-based information but female students were found superior in the use of learning strategies. Analysis conducted to find out the effect, made it clear that web-based information does not have any effect on learning strategies of students.

Technology and internet empower individuals and facilitate a more active role in the educational process. The internet is rapidly becoming a new source of information in the classroom and provides an unparallel opportunity to a vast amount of informational resources. It is being used to enhance the educational experience of the students as well as to stimulate interaction activities using e-mail. The web is being used effectively to provide a resource base for support, discussion and illustration of Web-based teaching and learning techniques as well as the methodologies for their successful creation, application and use.

Today the students and teachers have moved out from the four-walled classroom and can interact through cyber world. The source of knowledge for students and researchers have also broken out of all geographical boundaries. Keeping in view the growth of IT on one hand and the development in teaching, learning and research on the other, all concerned with higher education today are attempting to grasp how IT could help in modernizing teaching, learning and research.

Here lies the importance of Learning Strategies. Learning Strategies are student's general approach to a variety of learning tasks or it is the action taken by the learner to assist in learning more effectively. For learning, students adopt different types of strategies and they are (1) Meta-cognitive Strategies, (ii) Cognitive Strategies and (iii) Socio-affective strategies. It was proved through early studies that traditional mode of learning is facilitated by Learning Strategies. So today's student must also be equipped with a knowledge of Learning Strategies which will enable him to deal with the vast amount of information available through web.

Different subjects or courses of specialization is found to have considerable effect on accessing different kinds of information. Therefore students of different subjects and courses will use different types of Learning Strategies.

It has been revealed from extensive review that Web-based learning does have influence in the learning of students. Patnaik (1999) reported that Web-based instruction permitted meaningful learning which allowed students to choose self-examination exercises after the guided practice. Web-boards not only facilitate learning, but they can redefine roles for the students and instructor, allowing students to be designers of their own teaching (Vazquez & Zhu, 2000). According to Woods and Keeler (2001) the systematic use of instructor – initiated audio e-mails, as a supplement to regular textual forms of communication would increase student's participation in group discussion. Hence the study was designed to explore the **Effect of Web-based Information on Learning Strategies of Post Graduate Students**.

Statement of the Problem

The present study was conducted to find out whether the information availed through web has any effect on the learning strategies of the students.

VARIABLES OF THE STUDY

Web- based Information, specifically on Education, General Information and Entertainment, is treated as the Independent variable and Learning Strategies is treated as the Dependent variable.

Objectives

The following are the objectives of the present study,

1. To study whether significant gender difference exists in the Web-based Information and Learning Strategies.

2. To study the effect of Web-based Information on Learning Strategies of Ph.D., M.Phil. and PG Humanities and PG Science Students.

Hypotheses

The following null hypotheses were formulated,

1. There will be no significant gender difference in the We-based Information and Learning Strategies.

2. There will be no significant effect of Web-based Information on Learning Strategies of Ph.D., M.Phil. and PG Humanities and PG Science Students.

METHODOLOGY

The methodology of the study involves the sample selected, tools used and statistical techniques used.

Sample Selected

Ph.D, M.Phil, P.G Humanities and PG Science students of the Calicut University campus form the target population of the study from which adequate number of sample was drawn. Stratified sampling technique was used for this purpose. Sample was drawn giving due importance to different strata like course, subject and gender. Different subject or courses of specialization is found to have considerable effect on accessing different kinds of information and using different strategies for learning Hence the students from various courses such as Ph.D., M.Phil., PG Humanities and P.G Science were given consideration. Gender of the students are found to have much influence in learning patterns. Therefore gender difference was also considered in the study.

Tools used

Two tools were used in the present study for the collection of information from the sample. They are Web-based Information Access Questionnaire (WIAQ) and Learning Strategy Scale (LSS). Both tools were prepared by Kumar & Reshma (2003).

Web-based Information Access Questionnaire - WIAQ (Kumar & Reshma, 2003)

The questionnaire is in the form of a checklist and is intended to know the various Web-based Information being accessed by students studying in the Calicut University Campus Departments. The questionnaire consists of different types of information under three main components, namely, Education, General Information and Entertainment. Details of the components included in the questionnaire are given below :

	1. Education	**2. General Information**	**3. Entertainment**
i	Language study	News	Chat
ii	Reference Materials	Job Searches	Music
iii	Research oriented abstracts	Magazines	Greetings
iv	Ph.D Thesis	Advertisement	Video games
v	Dictionaries	Travel and Tourism	Movies
vi	Encyclopedias	Location Findings	Jokes and Humour
vii	Journal Articles	Online shopping and services	

Each information in the Education Component were scored as 5, that of General information were scored as 3, and Entertainment component as 2, respectively. Such a scoring pattern was followed because the access to the subcomponents of Education leads to more learning by way of information processing in students as compared to the other components in the checklist, namely General Information and Entertainment.

 Reliability of the questionnaire was found out by test-retest method on representative sample of 30 students. Reliability was found to be 0.925. Content validity of the questionnaire was established by selecting the sub-components only after the judgment of the experts. The tool was distributed to some subject experts and internet users and they expressed satisfaction about the tool. Thus the tool was found to possess face validity.

Learning Strategy Scale –LSS (Kumar & Reshma, 2003)

This scale was meant for identifying the Learning Strategies adopted by students. The scale was based on a model prepared by Oxford (1990). The scale included three major strategy areas namely, Meta-cognitive, Cognitive and Socio-affective. There were 30 items in the tool, 15 positive and 15 negative. Each items is in the form of brief statements which described pupil's learning behaviours. Pupils should make their decision in any one of the five responses like Always correct, Correct, Undecided, Incorrect and Always incorrect. For the positive statements, scores were 5,4,3,2,1 and for negative statements, scores were 1,2,3,4,5 respectively. Reliability of the scale was found out by split-half method and was found to be 0.7574. Validity was estimated by criterion-related technique and was found as 0.74.

Statistical Techniques Used

Two statistical techniques were used for the analysis and they are Mean Difference Analysis and One-Way ANOVA. Mean Difference Analysis was done for the investigation of gender difference in independent variable and dependent variable. In One-Way Analysis of Variance, the relationship between one independent and one dependent variable is examined. In the present study, the association of Web-based Information with Learning Strategies is examined.

ANALYSIS AND INTERPRETATION

Mean Difference Analysis was done to investigate the gender difference in Web-based Information and Learning Strategies for total sample.

1. **Investigation of Gender Difference in Web-based Information and Learning Strategies**

For this purpose, the mean of Web-based Information and Learning Strategies of Males and Females were subjected to the two-tailed test of significance of differences. Data and results are presented in Table 1.

TABLE I

Data and Result of Test of Significance of Difference Between Means of Web-based Information and Learning Strategies (Component wise and total Score) for Male and Female Samples

Variables		Males			Females			t-value	Level of Significance
		M_1	N_1	σ_1	M_1	N_1	σ_1		
Web-based information	Educational	30.2874	87	13.171	24.4805	77	13.514	2.78	0.01
	General . Information	11.8621	87	6.468	8.5584	77	5.739	3.47	0.01
	Entertainment	5.5402	87	3.420	6.0519	77	3.524	0.94	NS
	Total	47.2874	87	19.169	39.0649	77	19.195	2.74	0.01
Learning Strategies	Meta cognitive	34.3448	87	51.91	36.7662	77	5.236	2.97	0.01
	Cognitive	51.6782	87	7.492	55.1688	77	7.726	2.93	0.01
	Socio-affective	21.1149	87	23.5456	3.916	77	3.046	4.46	0.01
	Total	107.5402	87	11.682	115.7532	77	11.001	4.63	0.01

From the analysis it was found that only one 't' value (Entertainment) was non significant. All the other 't' values were found significant at 0.01 level. There exists significant gender difference in Education, General Information and Web-based Information total. Males are superior to females in their access to Web-based Information such as Education, General Information and Web-based Information total. Significant gender difference does not exist in Entertainment which reveals that there is no difference between males and females in the access of Entertainment.

There exists significant gender difference in Learning Strategies. Females are superior to males in the areas of Meta-cognitive, Cognitive and Learning Strategies total and males are superior to females in Socio-affective strategies.

2. One way Analysis of Variance

As the major analysis, one-way ANOVA was employed for subjects to study the effect of Web-based Information on Learning Strategies of Ph.D., M.Phil., Post Graduate. Humanities, and Post Graduate Science students of Calicut University Campus. Summary of F-values of ANOVA of Learning Strategies for Post-graduate students are given in Table II.

TABLE II

Summary of F-values of ANOVA of Learning Strategies (Component wise and total score) for Post Graduate students

Sample	Learning Strategies	F-ratio	Level of Significance
Ph.D	**Meta-Cognitive**	0.2278	NS
	Cognitive	2.1488	NS
	Socio-affective	1.0022	NS
	Learning Strategies Total	0.6895	NS
M.Phil	**Meta-Cognitive**	0.4149	NS
	Cognitive	1.0384	NS
	Socio-affective	0.0528	NS
	Learning Strategies Total	0.3230	NS
P.G. Humanities	**Meta-Cognitive**	0.5396	NS
	Cognitive	1.4756	NS
	Socio-affective	3.4904	0.05
	Learning Strategies Total	2.0347	NS
P.G. Science	**Meta-Cognitive**	0.1647	NS
	Cognitive	0.9613	NS
	Socio-affective	0.1611	NS
	Learning Strategies Total	0.5341	NS

a. Effect of Web-based Information on Learning Strategies of Ph.D Students

From the table, it was fond that none of the F-values were significant. So it was clear that Web-based Information does not have any significant effect on Metacogntiive, Cognitive, Socio-affective and Learning Strategies Total of Ph.D Students.

b. Effect of Web-based Information on Learning Strategies of M.Phil Students

All the F-values of ANOVA for M.Phil sample were found non significant. Therefore significant effect was not found for Web-based Information on Metacognitive, Cognitive, Socio-affective and Learning Strategies Total of M.Phil students.

c. Effect of Web-based Information on Learning Strategies of P.G. Humanities Students

It was clear from the table that the F-values for Metacognitive, Cognitive, and Learning Strategies Total were non significant but F-value for Socio-affective strategy was found significant. Hence Web-based Information does not have any significant effect on Metacognitive, Cognitive and Learning Strategies Total of PG Humanities Students. But there was significant effect of Web-based Information on Socio-affective strategy.

d. Effect of Web-based Information on Learning Strategies of P.G. Science Students

None of the F-values of ANOVA were found significant for Learning Strategies for P.G Science students, and it was noted that Web-based Information does not have any significant effect on Metacognitive, Cognitive, Socio-affective and Learning Strategies Total of P.G Science students.

CONCLUSION

From the mean difference analysis conducted, it was clear that Males are superior to Females in their access of Web-based Information such as Education, General Information and Web-based Information Total. But both Males and Females equally accessed web for Entertainment. It was clear from the one-way ANOVA conducted, that there was no significant effect of Web-based Information on the Learning Strategies of Ph.D, M.Phil, P.G. Humanities and P.G. Science students. Significant effect of Web-based Information on Socio-affective Strategy was noted for P.G Humanities students.

It was found from the study that Web-based Information does not have any effect on the Learning Strategies of students, or Learning Strategies remain the same though the mode of information collection is changed. It was clear from earlier studies that, Learning Strategies facilitate traditional mode of learning. This will be true in the case of

Web-based Information also, if suitable strategies are adopted. So, in view with the findings of the study, new strategies of learning are to be evolved which will help students in the acquisition, manipulation, integration, retention and recollection of the knowledge recovered through web. Researches may be conducted for developing innovative strategies which help in the assimilation of information gained through web and also to check the effectiveness of such strategies.

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