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Effects of Web based Tool on Academic Achievement in Reference to Social Intelligence amongst Grade XI Students

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Abstract-This study aimed to investigate the effects of the online course tool, specifically wikis the built-in facilities of editing and discussions as computer-mediated communication integrated in e-learning environments on improving integrated academic achievement and on the achievement motivation among school students towards in e-learning environments. The study is experimental in nature and construct implement of quantitative data to investigate the effects of wikis on academic achievement in reference to social intelligence. The investigator adopted treatment and conventional group method for investigate the effectiveness of treatment. The findings indicated that the students' academic achievement relation to social intelligence on wiki-space enabled learning is significantly related. The findings also showed that the e-course tools at issue facilitated students' interactions and social intelligence in a growing online discourse community.
Keywords: Wikis, Academic Achievement, Social intelligence and grade XI.

I. INTRODUCTION

In the last ten years, the communication environment around the world has changed significantly. The emergence of various forms of interpersonal communication has brought community's peoples closer, notably e-mail, instant messaging, social networking sites. India has about 230 million active internet users, which is world's third largest internet user base. In India more than 75% of internet users are in the age group 18-35 years.

Social media are those used to communicate with more than one person at a time. Social media include social networking sites like Facebook, and WikiSpace, micro-blogging sites like Twitter and Tumblr, media sharing sites like YouTube and Flickr, blogs and other communication within virtual worlds. The rapid uptake of social networking site practices by young students signifies an important shift in their applications of internet primarily for information and entertainment to one of communication and overall personality development.

A social network comprises of a set of individuals who are interconnected through certain relationships such as friendship, co-working or information exchange. In learning traditional form, members of a social network communicate through face-to-face conversations, telephone calls and letters. Online social-networking services have been a feature of the internet, in one form or another, since the inception of the World Wide Web. For example, electronic-mail (e-mail) messages were used by early Internet adopters to establish different patterns of online communication where users could interact with one another by sharing photos or discussing about several issues related to education. However, a new generation of social technology has recently emerged with the potential of delivering more effective support to users' social lives.This new generation of Web-based technology, known to Web developers as Web 2.0, has quickly gained widespread popularity by enabling millions of users worldwide to create content, tag photographs, share videos, write blogs, and make acquaintances through the Web on a daily basis.As a result of these technological advances in Web technology and the development of Web 2.0, the nature of online communication, socialization, and privacy has changed.

The space and way of imparting in teaching and learning to the learner has involved over a period of time. Various models of online education have been introduced from last eras the latest introduction is the use of Web 2.0 technologies to make learning more analytical, flexible, interactive, and collaborative for both the teacher and learners. Further, the relationship between usage of wikis and academic performance in reference to personality factors of students has been tested statistically.

II. REVIEW OF LITERATURE

The studies in respect to Science Academic Achievement related to Wiki-space/web based tools in reference to Social Intelligence carried out on School includedstudy bySantoshi, Halder (2014) who surveyed on adolescents on interactive learner control on-

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Screen approach for student with hearing impairment and found that students with hearing impairment who were instructed by computer based instructional method performed well than those instructed by traditional method of instruction.[1]Hossein, J. A. and Mazaher, Leili (2014) included experiment on 60 gifted male adolescents studying in the junior high schools on computer games the social intelligence and academic self-efficacy and study concluded that computer games enhance the experimental group's academic achievement.[2] M.S. et al. (2011) study surveyed on 180 senior secondary school students on quality of academic achievement affected by which factors and found that socio-economic status and parents' education positively expressing on overall academic achievement as well as in the subjects of Mathematics and English academic achievements. The high and average socio-economic level affects the performance more than the lower level.[3]Aris, S. Dzulkifli, Y. M. A. (2011) included experiment on 120 under graduate students on academic achievement found that social supporter useful in assisting educators, counsellors, psychologist, and researchers to develop strategies to enhance students' academic achievement.[4]Baker, L. R. and Oswald, D. L. (2010) study experimented on 50 college students on communication skills and effect of social media and computer-mediated communication and found that communication skills positively affected by social media and other computer-mediated communication .[5]

III. OBJECTIVE OF THE STUDY

To study the effectiveness of Self-Regulated Learning, Social Intelligence and their interaction on Academic Achievement of grade XI learners by considering pre scores as co-variate.

A. Hypothesis of the Study

There is no significant effectiveness of Self-Regulated Learning, Social Intelligence and their interaction on Academic Achievement of grade XI learners by considering pre scores as co-variate.

B. Nature of Study

The study envisioned to examine the academic use of wikis applications in reference of social intelligence among grade XI students. The nature of study is experimental in nature

C. Sample of Study

The sample size of the study comprised of 78 grade XI students selected through random sampling technique. There is 39 students in experimental group and 39 students in conventional group.

D. Tools of Study

The investigator adopted the two main tools. The details of tool sare giving below.

1) Biology Academic Achievement: The Biology Academic Achievement consisted by Investigator own self. Inventory consisted of 60 items and total marks of inventory is 120 marks.

2) Social Intelligence Scale: To measures the social intelligence of grade XIth learners from science stream by Administrator, Social Intelligence Scale (SIS) developed by dr. N. K. Chadha and Usha Ganesan was chosen.

IV. PROCESS OF DATA COLLECTION

In data collection process, first of all investigator applied the Biology Academic Achievement Inventory on both experimental and conventional group for equal time duration. Investigator provided the treatment to among treatment group students for 30 days' time duration for selected biology concepts and other hand conventional method continue in their regular class activities. In last of treatment applied the post test of Biology Academic Achievement Inventory and social Intelligence scale.

V. DATA ANALYSIS

The investigator adopted the ANCOVA for data analysis in SPSS 20.0.

A. Effect of Treatment Social Intelligenceand their Intraction on Aceademic Achievement by taking Pre Academic Achievement as Co-Variate

The Sixth objective was to study the Effect of Treatment, Social Intelligence and their interaction on Academic Achievement when Pre Academic achievement is taken as covariate.

There were two levels of treatment namely, Wiki-space enabled Self-regulated Learning (WSRL) and Conventional method. On the basis of Social Intelligence, the participants were divided in to the two levels namely, Above average Social Intelligence and Below

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average Social Intelligence. Thus the data were analyzed with the help of 2×2 Factorial Design ANCOVA where pre Academic Achievement was taken as covariate. The results are given in Table 4.3.

Table 4.6. Summary of 2×2 Factorial Design ANCOVA for Academic Achievement by taking Pre Academic Achievement as covariate

N =78

SOURCE OF VARIANCE	df	SS y.x	MSS y.x	F y.x
Treatment (A)	1	1215.213	1215.213	8.550**
(B)Social Intelligence	1	.640	.640	.005
A *B	1	1018.184	1018.184	7.164**
Error	73	10375.644	142.132	
Total	78	290368.000		

**Sig at 0.01 level

B. Effect of Treatment on Academic Achievement by taken pre Academic Achievement as Covariate

From the Table 4.6 can be observed that the F value for treatment is 8.550 which is significant at 0.01 with df = 1/73, when pre academic achievement is taken as covariate. It reflects that mean scores of Academic Achievement of students trained through WSRL program was found to be significantly superior to their counterpart, the Conventional Method Group when Pre Academic Achievement is considered as covariate. Thus, there was significant effect of Treatment on Academic Achievement of grade XIth learners. In this context, the null hypothesis that there is not significant effect of WSRL Program on Academic Achievement of grade XIth learners when Pre Academic Achievement is considered as covariate, is rejected. Further the mean score of Academic Achievement of students treated through WSRL program was found to be 72.05 which is significantly higher than those of Conventional Method Group whose mean score of Academic achievement was 48.92. From here it may be said that the WSRL program was found to be significantly superior to the Conventional Method when pre academic achievement is taken as covariate.

C. Effect of Social Intelligence on Academic Achievement by taking Pre Academic Achievement as Covariate

The F - value for is .005 (vide Table 4.6) which is not significant. It indicates that the mean scores of Academic Achievement of learners belonging to Above Average Social intelligence as well as Below Average Social intelligence did not differ significantly. So there was no significant effect of Social intelligence on Academic Achievement of grade XI learners when pre academic achievement is taken as covariate. In this light, the null hypothesis that there is no significant effect of Social intelligence on Academic Achievement of learners when pre academic achievement is taken as covariate, is not rejected. It may therefore, be concluded that Academic Achievement was found to be independent of Social intelligence, when pre academic achievement is taken as covariate.

D. Effect of Interaction between Treatment and Social intelligence on Academic Achievement by taking Pre Academic Achievement as Covariate

The F value for interaction between Treatment and Social intelligence is 7.164 which is significant. It indicates that there was significant effect of the resultant of interaction between Treatment and Social intelligence on Academic Achievement of grade XIth learners when pre academic achievement is taken as covariate. In light of this, the null hypothesis that there is no significant effect of interaction between Treatment and Social intelligence on Academic Achievement grade XIth learners when pre academic achievement is taken as covariate, is rejected. It may therefore be concluded that Academic Achievement was found to be dependent of the interaction between treatment and Social intelligence when pre academic achievement is taken as covariate.

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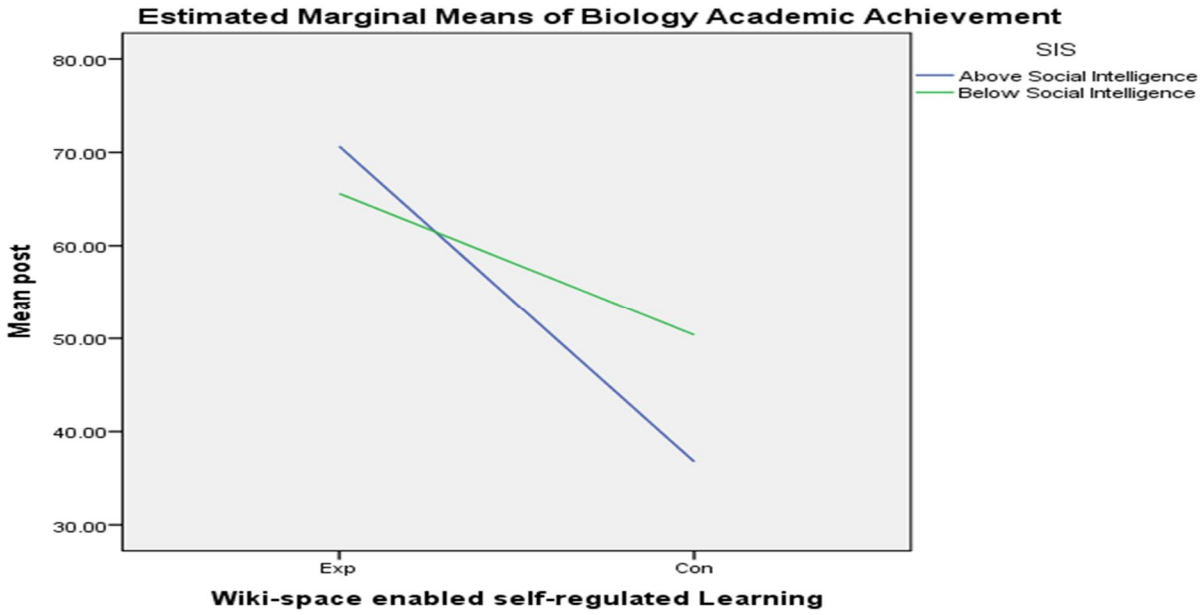

From graph 4.6 it can be seen that above average socially intelligent learners as well as below average socially intelligent learners treated through WSRL Program were found to be possessing Academic Achievement to almost the same level. Consequently the WSRL Program promoted the Academic Achievement amongst above average socially intelligent learners and below average socially intelligent learners to the same extent. Where as in conventional group the academic achievement amongst above average socially intelligent learners and below average socially intelligent learners were found to be exhibit Academic Achievement differentially. In this group above average socially intelligent learners were found to possess Academic Achievement higher than the below average socially intelligent learners.

VI. CONCLUSION

The effectiveness of Self-regulated Learning, Social Intelligence and their interaction on Academic Achievement of grade XI learners is significantly related. The academic achievement of learners during wikis enabled environment in reference to social intelligence is positively related, so the academic achievement was found to be dependent on social intelligence.

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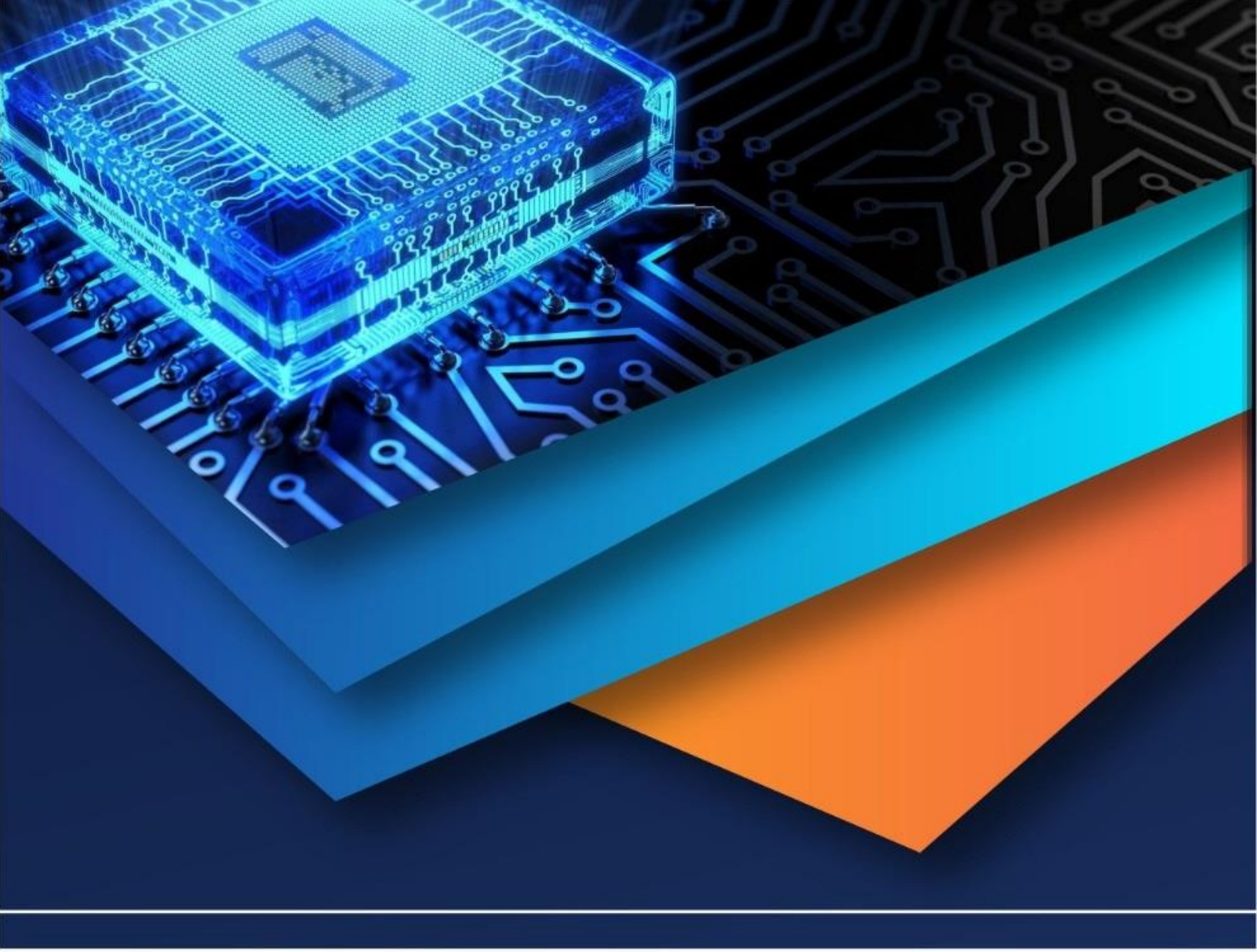

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