

EFFECT OF ONLINE MASTERY LEARNING ON SKILL OF ACQUIRING KNOWLEDGE IN RELATION TO SELF REGULATION AND SELF ESTEEM

Prof. Malvinder Ahuja *

Dr. Suman Lata **

Abstract

The present study was conducted to investigate into the effectiveness of Online Mastery Learning Strategy on skill of Acquiring Knowledge for IX grade English in relation to self regulation and self esteem. A school sample of 312 ninth grade students was drawn from the representative Secondary Schools of Chandigarh and Chandigarh Extension. The major findings of the study were: 1) The mean gains for Skill of Acquiring Knowledge through Online Mastery Learning were higher than the mean gains through Conventional Learning. 2) The mean gains for Skill of Acquiring Knowledge of High Self Regulation group was higher than the mean gains of Low Self Regulation Group. 3) The mean gains for Skill of Acquiring Knowledge of two Self Esteem groups were not found to be significantly different. 4) The mean gains for Skill of Acquiring Knowledge due to interaction between Instructional Strategies and Self Regulation were not different. 5) The mean gains for Skill of Acquiring Knowledge due to interaction between Instructional Strategies and Self Esteem were not different. 6) The two variables Self Regulation and Self Esteem do not interact with each other. 7) The three variables Viz. Instructional Strategies, Self Regulation and Self Esteem do not interact to yield different gain means.

Keywords: Online Mastery Learning; Skill of Acquiring knowledge; Self Regulation; Self Esteem.

*** Professor, Department of Education, Panjab University, Chandigarh**

**** Assistant Professor, University School of Education, Rayat & Bahra University, Sahauran, Mohali**

1. Introduction

Mastery learning strategy is an instructional technique which presumes that each and every learner can learn if they are equipped with the appropriate learning environment and conditions. Specifically, mastery learning strategy is a technique in which learners do not proceed to a next learning objective until they prove their proficiency with the current objective.

Life has become very fast. Online instructions have gathered lot of attention from various universities, colleges, corporations, and industries. With the emergence and development of information technologies (IT), innovative techniques of teaching and learning have emerged, which creates new opportunities in university and corporative training. Online learning has been used as a novel way of teaching and learning by many universities and corporations. Though information technology has improved teaching and learning up to great extent and it has become very popular, but if appropriate instructional strategies are integrated along with online instructional strategies than teaching and learning environments can become more appealing and effective. Furthermore, integrating information and communication technologies, e-learning or online instructions with appropriate instructional strategies can give better learning results and enhance outcomes through learning processes.

Mastery learning offers a teaching and learning process model in which each student has to pass an assessment before s/he moves on next instruction unit. Mastery learning is considered to be an appropriate instructional strategy for integration because mastery learning methodologies have been much more successful in the behavioral sciences of education. In addition, mastery learning offers several types of activities and assessments for learning process. Furthermore, the current trend in education and training emphasizes on personalization, and mastery learning is a kind of personalized method.

Skill of Acquiring Knowledge is the ability to gain knowledge and skills and apply them to new situations. The skill of Acquiring Knowledge deals with leadership skills and other skills that are offered to the students in the subject matter classes. The skills which are related to subject matter of classes can be measured from the skill of Acquiring Knowledge in academics and various co-curricular activities. In the present study the skill of Acquiring Knowledge of students in

academics is taken as their ability to acquire knowledge. Academic skill of Acquiring Knowledge refers to the scores obtained in the annual examination, or refers to the degree or level of success or proficiency attained in some specific areas concerning scholastic or academic work. The proficiency attained in a subject area is an index of skill of Acquiring Knowledge.

Many research studies have been conducted to find out the effects of online instructions. Students' participation remains high in online learning environment. Students actively express their opinions and ideas and demonstrate increase in student generated questions. (Salemi, 2000). While looking at the importance of online learning environments in the present era various online strategies have been developed to get desirable outcomes viz. user cordial online retrieval model by Brown (1992), Network as an educational tool by Ngah (1994), online instructional conversations by Salemi, (2000), self directed and collaborative online learning by Fitzgerald and Thomas (2003), multimedia software programme by Narawan (2004), teacher monitored on-line instructional programme Grover (2006), online interactive visuals by Just (2010), online lectures by Treacher (2013), online learning modules by Wilkinson (2013), multimedia reading instruction by Morano (2014).

Mastery learning programme is an effective strategy in terms of skill of Acquiring Knowledge, self concept and attitude. (Mathur, 1990). The self paced mastery learning format fostered personal growth, individual responsibility, self awareness, self confidence and self discipline.(Hanna, 1997). Mastery learning strategy proved to improve skill of Acquiring Knowledge, critical thinking, decision making and to reduce stress as compared to conventional learning. (Sharma, 2006). The studies in which mastery learning content is implemented online are Kreiner (2006) and Charoen and Dryver (2014). In the studies conducted by Goel and Agbebi (1990) , Kumari (1991), Oughton (1997), Davis (2004), Meena (2006), Malhotra (2006), Malhan (2011), Bhandari (2011) and Singh (2014) it was found that skill of Acquiring Knowledge is increased with the effect of instructional strategies.

It was found by Furman, Wittenberg and Reis (1991) that students high in self-esteem were better on interpersonal skills. They were better at initiating relationship, better at disclosing things about themselves, better at providing emotional support to others and significantly better even at managing interpersonal conflicts. Schutte (2002) found out that higher emotional

intelligence was associated with more characteristically positive mood and higher self-esteem. Bonvillain and Honora (2004) in their study found out that students who exhibited high levels of self-esteem and racial identity performed better academically than students who showed low levels of self-esteem and racial identity. Singh (2013) concluded in her study that emotional maturity and self esteem are positively correlated.

Self regulation is positively related to academic performance, academic productivity and student progress. Tuckman (1990); Zimmerman (1990) concluded that Students who made large gains engaged in self regulation activities viz. planning and forethought activities and learning strategies such as summarizing and making inferences. Azevedo, Guthrie and Seibert (2014).

Mastery Learning is an instructional strategy based on the principle that all students can learn a set of reasonable objectives with appropriate instruction and given sufficient time to learn (Bloom, 1968). Instructors employ the techniques of tutoring and individualized instruction in a group learning situation and then utilize the learning strategies of successful students to positively impact all of the students of a given group.

Today there is a little doubt that internet has become the technology of choice in learning and teaching (Dabbagh and kitsantas, 2005). Much of this popularity stems from the fact that the Internet is an inherently flexible technology that can be applied in a variety of ways and in a plethora of educational contexts—from simple course administration and student management to teaching entire degree programs online. Furthermore, the recent expansion of widespread broadband access has brought the Internet into millions of homes, schools, and businesses, thereby providing students and teachers with the opportunity to exploit the Internet's innate flexibility as a learning and teaching tool. Almost without exception, institutions have recognized the Internet's value as an educational tool and are developing online learning programs.

Mastery learning has an extensive and long standing research base as an efficacious instructional methodology. Many studies have been conducted on the effect of Mastery Learning, the approach developed by Bloom (1968) based on quality feedback and a corrective procedure. The use of mastery learning with current technological advances however is a new endeavor. The use of mastery learning software in online classes is a relatively new phenomenon, and the role of

self regulation and self esteem in individuals lives and their effects on various life skills viz. skill of Acquiring, skill of Critical Thinking, skill of Decision Making, skill of Problem Solving, skill of Goal Setting, skill of Time Management and skill of Assertiveness; in online mastery learning environments has not been studied. Mastery learning was developed by Bloom and is being utilized in the relatively new field of online education (Guskey, 1997). While the use of Mastery Learning was proposed early in online education, it was not possible to implement due to limitations in the computer platform. Currently, online educators have the technological capabilities to implement mastery learning, which is started to be utilized in many disciplines, including math, accounting, science and nutrition.

Information and Communication Technologies (ICT) offer sound support for a modern distance teaching practices bringing up many well known advantages. In a context where teaching, tutoring, mentoring and monitoring, are carried on with new technologies, students are generally free to decide where, when and how to study, self-evaluate, collaborate and exchange material. Such facilities however often force the student to face sound organizational problems. Specialized time-management programs are sometimes proposed as appropriate way to deal with such issues (Campbell, 1996). One's personal capacities to organize oneself, to make decisions, solve problems effectively, to think critically, to manage one's time, to set goals, and to control stress and anxiety generally appear as crucial determinants for the success or the failure of such an enterprise (Moore and Kearsley, 1996). Another relevant issue in online learning is the regulation of all the learning process. Because in this kind of set up teacher/instructor can hardly find out how students are progressing and the kind of difficulties they are encountering.

This current scenario of implementation of mastery learning in online learning environments motivated the researcher to investigate whether online mastery will be influential in the subject of English language and also research still need to be done to determine if mastery learning can improve the quality of online courses and student's life skills (i.e. skill of Acquiring Knowledge). The researcher is keen to know how self regulation and self esteem determine learners' success or failure in online mastery learning environments.

OBJECTIVES OF THE STUDY;The present study was designed to attain the following objectives:

1. To develop Online Mastery learning packages in subject of English for 9th class students.
2. To study the effect of instructional strategy in English in terms of skill of Acquiring Knowledge.
3. To study the effect of low and high Self Regulation of students in the acquisition of skill of Acquiring Knowledge.
4. To study the effect of low and high Self Esteem of students in the acquisition of skill of Acquiring Knowledge.
5. To study the interaction effect between instructional strategy and Self Regulation in the acquisition of skill of Acquiring Knowledge.
6. To study the interaction effect between instructional strategy and Self Esteem in the skill of Acquiring Knowledge.
7. To study the interaction effect between Self Regulation and Self Esteem in the acquisition of skill of Acquiring Knowledge.
8. To study the interaction effect among instructional strategy, Self Regulation Self Esteem in the acquisition of skill of Acquiring Knowledge.

HYPOTHESES; The following hypotheses were tested in the present investigation:

Ho. 1. There is no significant difference in gain means of students for skill of Acquiring Knowledge studying through online mastery learning strategy or conventional learning.

Ho. 2. There is no significant difference in gain means for skill of Acquiring Knowledge of students with low and high self regulation.

Ho. 3 There is no significant difference in gain means for skill of Acquiring Knowledge of students with low and high self esteem.

Ho. 4. There is no interaction effect of instructional strategy (online mastery learning or conventional learning) and self regulation (high or low) to yield significant differences in gain means for skill of Acquiring Knowledge.

Ho.5. There is no interaction effect of instructional strategy (online mastery learning or conventional learning) and self esteem (high or low) to yield significant differences in gain means for skill of Acquiring Knowledge.

Ho.6. There is no interaction effect of self esteem (high or low) and self regulation (high or low) to yield significant differences in gain means for skill of Acquiring Knowledge.

Ho.7. There is no interaction effect among instructional strategy (online mastery learning or conventional learning) , self esteem (high or low) and self regulation (high or low) to yield significant differences in gain means for skill of Acquiring Knowledge).

2. Research Method

It was an experimental research employing a 2x2x2 factorial design. The instructional strategy being a treatment variable was studied at two levels: Online Mastery Learning and Conventional Learning. Self Regulation and Self Esteem were independent variables, which were used to classify the students into High and Low Self Regulation and High and Low Self Esteem. Gain scores on skill of Acquiring Knowledge were the dependable variable.

SAMPLE; The research investigation was carried out on the students of IX grade. The students ranged between 13 – 15 years of age. The sample was selected from the representative coeducational English medium senior secondary schools located in Chandigarh and Chandigarh extension. The initial student sample comprised of 312 students chosen from two randomly selected schools. Intact sections of Grade – IX were taken for experimental treatments. 152 students were selected for Online Mastery Learning Strategy (With Computers), 160 students were chosen for Conventional Learning. The experimental treatment was given to all the 152 students in three sections. The whole experiment took four months approximately. During the process of experimentation, some students dropped out at one stage or the other. So these students therefore were not taken into consideration at the time of analysis. The classification of students was done on the basis of Self Regulation (high and low) and Self Esteem (high and low) at the time of analysis. The final sample for analysis thus comprised of N=127.

TOOLS USED; The following tools were used for collecting data:

- **Mastery learning package which runs into XI units specially designed and developed for subject of English** (Developed by Vibha 2001, and converted into online instructional mode by the investigator). The package is based on Bloom's Mastery learning Strategy.

- **Tests for Entry Behaviour, Formative and Summative evaluation for the subject of English** (Developed and Validated by Vibha, 2001)
- **Test for skill of Acquiring Knowledge:** The Summative Test was used to evaluate skill of Acquiring Knowledge (Developed and Validated by Vibha, 2001)
- **Self regulation scale** (Developed and Validated by the investigators).
- **Self Esteem inventory** (Developed and standardized by Coopersmith, 1981).

DATA COLLECTION; Procedure of the investigation comprised of two main stages:

STAGE I: SELECTING THE SAMPLE; The sample was selected at two levels; School Level and Student Level. Two schools with N= 312 students were selected for conducting the Experiment.

STAGE II: CONDUCTING THE EXPERIMENT; the experiment was conducted in five phases as;

Phase 1 matching the groups by administration of Entry Behaviour Test

Phase 2 Administration of pre-test

Phase 3 Implementation of Instructional programme

Phase 4 Administration of post-test

Phase 5 Scoring and analysis of data.

STASTICAL TECHNIQUES USED

Descriptive Statistics– like Mean, SD were used to describe the nature of data pertaining to Entry Behaviour Test, Pre-test scores, Post-test scores and mean gain scores.

2x2x2 Analysis of Variance on gain scores was employed to study the impact of instructional treatment on skill of Acquiring Knowledge. Significant F-ratios were followed by t-tests.

3. Results and Analysis

ANALYSES ON SCORES OF PRE TEST FOR SKILL OF ACQUIRING KNOWLEDGE;

Pre- tests were conducted for dependant variable i.e. skill of Acquiring Knowledge. The means and SD's for pre test scores for skill of Acquiring Knowledge have been given separately for Experimental and Control group across Self Regulation and Self Esteem in the table 5.2.

Table 1: Table of Means and SD's for Pre Test scores on Skill of Acquiring Knowledge for Experimental and Control groups.

	OML (Experimental Group)		CL (Control Group)	
	HSR	LSR	HSR	LSR
HSE	M= 50.95 N= 20 SD= 5.73	M= 51.36 N= 11 SD= 3.07	M= 46.8 N= 21 SD= 4.58	M= 51.69 N=13 SD= 1.88
LSE	M= 49.46 N= 13 SD= 5.05	M= 51.55 N= 20 SD= 4.33	M= 51.25 N= 12 SD= 1.48	M= 51.29 N= 17 SD= 3.38
Total	M= 50.90 N= 64 SD= 4.75		M= 49.87 N= 63 SD= 3.95	
	t-ratio= 1.33			

The table values show a spectrum of variation in means and SD's. The overall means of Experimental and Control Group have been given at the bottom of the table. The t-ratio for the difference between means of two groups was found to be 1.33. As evident from the table 1 that the calculated value of t-ratio does not exceed the table value even at the .05 level of confidence, it suggests that **two means cannot be considered as different. The observed difference between two means may be ascribed to chance factor alone.** It establishes the equivalence of Experimental and Control groups on pre test scores for Skill of Acquiring Knowledge.

ANALYSES ON POST TEST SCORES FOR SKILL OF ACQUIRING KNOWLEDGE

This section deals with the analyses of post test scores for skill of Acquiring Knowledge. The means and SD's for post test scores for skill of Acquiring Knowledge have been given separately for Experimental and Control group across Self Regulation and Self Esteem in the table 2

Table 2: Table of Means and SD's for Post Test scores on Skill of Acquiring Knowledge for

Experimental and Control group

	OML Experimental Group		CL Control Group		Total
	HSR	LSR	HSR	LSR	
HSE	M=80.5 N= 20 SD= 7.80	M=74.27 N= 11 SD=6.11	M=61.52 N= 21 SD=4.91	M=60.07 N= 13 SD=2.25	M=70.92 N= 65 SD= 9.86
LSE	M=80.61 N= 13 SD= 6.10	M=74.9 N= 20 SD= 3.78	M=63 N= 12 SD=4.15	M=59.52 N= 17 SD=4.45	M=67.32 N= 62 SD=9.09
Total (Sub groups)	M=80.54 N= 33 SD=7.08	M=74.67 N= 31 SD=4.65	M=62.06 N= 33 SD=4.64	M=59.76 N= 30 SD=3.62	M=69.40 N= 127 SD=10.09
Total (OML & CL)	M=77.70 N= 64 SD=6.70		M=60.96 N= 63 SD= 4.31		
	t-ratio=16.76				

The values in Table-2 show a spectrum of variation in means and SD's of Experimental and Control groups for skill of Acquiring Knowledge. The performance of Experimental group seems to be higher than that of the control group. The overall means of post test scores for Control group is approximately 60 and that of Experimental group is approximately 77. To substantiate this observation, t-ratio was computed which reveals that the t-ratio for the difference in means of post test scores on skill of Acquiring Knowledge for Experimental and Control Group was 16.76 which exceeds the table value at the .01 level of confidence, it suggested that **two means can be considered as different beyond chance factor**. The variation of total post test score is a composite of many factors out of which pre test scores is the most important contributory covariate. In order to eliminate the effect of this covariate, gain scores were computed and a 2x2x2 ANOVA was employed on means gain scores.

ANALYSES ON GAIN SCORES FOR SKILL OF ACQUIRING KNOWLEDGE

In this part the analyses on gain scores is reported for skill of Acquiring Knowledge. The gain scores have been analyzed for its variance. The means, SD's of Experimental and Control groups across Self Regulation and Self Esteem have been reported in table 3.

Table 3: Table of Means and SD's of gain scores on Skill of Acquiring Knowledge for Experimental and Control Groups.

	OML Experimental Group		CL Control Group		Total
	HSR	LSR	HSR	LSR	
HSE	M= 30.05 N= 20 SD= 8.73	M= 22.91 N= 11 SD= 5.59	M= 14.71 N= 21 SD= 4.58	M= 8.38 N= 13 SD= 2.43	M= 19.55 N= 65 SD= 10.22
LSE	M= 31.15 N= 13 SD= 8.0	M= 23.35 N= 20 SD= 4.67	M= 11.75 N= 12 SD=4.0	M= 8.35 N= 17 SD= 2.55	M= 18.63 N= 62 SD= 10.17
Total (Sub groups)	M= 30.48 N= 33 SD= 8.34	M= 23.19 N= 31 SD= 4.92	M= 13.64 N= 33 SD= 4.55	M= 8.37 N= 30 SD= 2.45	M= 19.10 N= 127 SD= 10.17
Total (OML & CL)	M= 26.95 N= 64 SD= 7.77		M= 11.13 N= 63 SD= 4.54		

The data as depicted in table 3 showed variation in means on gain scores on skill of Acquiring Knowledge. To study whether the difference in gain means was significant or not, 2x2x2 Analysis of Variance was applied on Gain Scores for Skill of Acquiring Knowledge

2x2x2 ANALYSIS OF VARIANCE ON GAIN SCORES FOR SKILL OF ACQUIRING KNOWLEDGE IN RELATION TO INSTRUCTIONAL STRATEGIES, SELF REGULATION AND SELF ESTEEM

This analysis was done to test following Hypotheses:

Ho. 1. There is no significant difference in gain means of students on skill of Acquiring Knowledge studying through online mastery learning strategy or conventional learning.

Ho. 2. There is no significant difference in gain means on skill of Acquiring Knowledge of students with low and high self regulation.

Ho. 3. There is no significant difference in gain means on skill of Acquiring Knowledge of students with low and high self esteem.

Ho. 4. There is no interaction effect of instructional strategy (online mastery learning or conventional learning) and self regulation (high or low) to yield significant differences in gain means on skill of Acquiring Knowledge.

Ho.5. There is no interaction effect of instructional strategy (online mastery learning or conventional learning) and self esteem (high or low) to yield significant differences in gain means on skill of Acquiring Knowledge.

Ho.6. There is no interaction effect of self esteem (high or low) and self regulation (high or low) to yield significant differences in gain means on skill of Acquiring Knowledge.

Ho.7. There is no interaction effect among instructional strategy (online mastery learning or conventional learning) , self esteem (high or low) and self regulation (high or low) to yield significant differences in gain means on skill of Acquiring Knowledge.

To study significance of difference in gain means, the sum of squares, mean sum of squares and F-ratios for main effects, interaction effect of instructional strategies, Self Regulation and Self Esteem were computed and have been recorded in the table no. 4

Table 4: Summary of 2x2x2 Analysis of Variance on the gain scores for Skill of Acquiring Knowledge

Sources of Variation	SS	Df	MSS	F-ratio
Main Effects:	7725.84	1	7725.84	247.29**
A: Instructional Strategies : OML vs CL				
B: Self Regulation: High and Low	1138.72	1	1138.72	36.45**
C: Self Esteem : High and Low	3.94	1	3.94	0.12
Two order interactions	50.93	1	50.93	1.63
A x B: Instructional strategies x Self Regulation				

A x C: Instructional strategies x Self Esteem	38.57	1	38.57	1.23
B x C: Self Regulation x Self Esteem	9.63	1	9.63	0.30
Three order interaction: A x B x C	24.18	1	24.18	0.77
Within Group (Error)	3717.59	119	31.24	
Total	59376.0	126		

**** Significant at the 0.01 Level**

*** Significant at the 0.05 Level**

It may be observed from the table no. 4 that the F-ratio for difference in gain means due to the main effect of instructional strategies (OML and CL) was 247.29 which has been found to be significant at the 0.01 level of confidence. It indicates that null hypothesis for the equality of means **Ho. 1**, was rejected at the .01 level of confidence. The mean gains through two strategies were found different. The observation of their respective means (Table 3) indicates that **the mean gain for Skill of Acquiring Knowledge through Online Mastery Learning (M= 26.95) was higher than the mean gain through Conventional Learning (M=11.13).**

It may be observed from the table no. 4 that the F-ratio for the difference in gain means of students at two levels of Self Regulation was 36.45 which has been found significant at the 0.01 level of confidence. It indicates that null hypothesis for the equality **Ho. 2** was rejected at the .01 level of confidence. The mean gains of two Self Regulation groups were found different beyond chance factors. The observation of their respective means indicates that **the mean gain for Skill of Acquiring Knowledge of High Self Regulation Group (M= 22.05) was higher than the mean gain of Low Self Regulation Group (M=15.90).**

It may be observed from the table no. 4 that the F-ratio for the difference in gain means of students at two levels of Self Esteem was 0.12 which is less than the table value of F at the 0.05 level of confidence. Hence null hypothesis **Ho. 3:** could not be rejected even at the .05 level of confidence. It suggests that **gain means of two Self Esteem groups (high and low) on skill of Acquiring Knowledge cannot be treated different beyond the contribution of chance factor and the observed differences in gain means may be ascribed to the chance factor alone.**

The table no. 4 reveals that the F-ratio for the difference in gain means due to interaction effect between two instructional strategies (OML and CL) and two level of Self Regulation (High and Low) was 1.63 which is less than the table value of F even at the 0.05 level of confidence. Hence null hypothesis ***Ho. 4:*** could not be rejected even at the .05 level of confidence. It suggests that **gain means on skill of Acquiring Knowledge of the groups due to interaction between instructional strategies and Self Regulation (High and Low) were not different. The two variables may be treated as independent of each other.**

As indicated in the table no. 4 that the F-ratio for the difference in gain means due to interaction effect between two instructional strategies (OML and CL) and two level of Self Esteem (High and Low) was 1.23 which is less than the table value of F even at the 0.05 level of confidence. Hence null hypothesis ***Ho. 5:*** could not be rejected even at the .05 level of confidence. It suggests that **gain means on skill of Acquiring Knowledge of the groups due to interaction between instructional strategies and Self Esteem (High and Low) were not different. The four groups were almost equal on their gain means for skill of Acquiring Knowledge. The two variables, instructional strategies and Self Esteem may be treated to operate independent of each other.**

The table no.4 shows that the F-ratio for the difference in gain means due to interaction effect between Self Regulation and Self Esteem was 0.30 which is less than the table value of F even at the 0.05 level of confidence. Hence null hypothesis ***Ho.6:*** could not be rejected even at the .05 level of confidence. It suggests that **two variables Self Regulation (High and Low) and Self Esteem (High and Low) do not interact to yield different gain means and must be operating independent of each other.**

It may be observed from the table no. 4 that the F-ratio for the difference in gain means due to interaction effect among two instructional strategies, Self Regulation and Self Esteem was found to be 0.77 which is less than the table value of F even at the 0.05 level of confidence. Hence null hypothesis ***Ho. 7:*** could not be rejected even at the .05 level of confidence. It suggests that **three variables viz. Instructional Strategies (OML and CL), Self Regulation (High and Low) and**

Self Esteem (High and Low) do not interact to yield different gain means on Skill of Acquiring Knowledge. The three variables operate independent of each other.

4. Conclusion

➤ CONCLUSIONS BASED ON 2X2X2 ANOVA ON GAIN MEAN SCORES FOR SKILL OF ACQUIRING KNOWLEDGE

- The mean gains for Skill of Acquiring Knowledge through Online Mastery Learning were higher than the mean gains through Conventional Learning
- The mean gains for Skill of Acquiring Knowledge of High Self Regulation group was higher than the mean gains of Low Self Regulation Group.
- The mean gains for Skill of Acquiring Knowledge of two Self Esteem groups (High and Low) were not found to be significantly different.
- The mean gains for Skill of Acquiring Knowledge of the groups of IX graders due to interaction between Instructional Strategies and Self Regulation (High and Low) were not different. The two variables may be treated as independent of each other.
- The mean gains for Skill of Acquiring Knowledge of the groups of IX graders due to interaction between Instructional Strategies and Self Esteem (High and Low) were not different. The two variables may be treated as independent of each other.
- The two variables Self Regulation (High and Low) and Self Esteem (High and Low) do not interact to yield different gain means for Skill of Acquiring Knowledge and operate independent of each other.
- The three variables Viz. Instructional Strategies (OML and CL), Self Regulation (High and Low) and Self Esteem (High and Low) do not interact to yield different gain means for Skill of Acquiring Knowledge. The three variables may be operating independent of each other.

The results of the present investigation indicate that teaching students through Online Mastery Learning Strategy is more effective than traditional models. If Instructions are used according to the need of the situation and the learners, with flexibility, among other advantages offered to learner, lead us to propose that online mastery learning as an instructional strategy is more effective than conventional learning. Online Mastery Learning Strategy with the use of computers offers a great new possibility to improve skill of Acquiring Knowledge as well as

enhance Life skills which are very important part of students life. Mastery Learning Strategy with computers can provide highly favourable instructional component needed to promote equality in educational outcomes and to encourage individuality in student learning. Quality instruction and equality of results can add to provide best and healthy experiences to children.

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