

Role of Time and Study Environment in Scaffolding Based Self-Regulated Learning System and Formal Learning System at Higher Education Level

Mrs. Uzma Syeda Gilani

Lecturer in IER,
University of Science and Technology, Bannu.

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ABSTRACT

This descriptive study aimed at investigating the role of time and study environment in both learning systems assessed by students at higher education level. Population of the study comprised 264 BCS & MCS/MS students from four selected Public Sector Universities and four selected Virtual University campuses of Khyber Pakhtunkhwa. 65 students from scaffolding based self-regulated learning system and 135 students from formal learning system. A part of Motivated Strategies for Learning Questionnaire (MSLQ) originally designed by Pintrich, Garcia & McKeachie (1993) related to peer learning was used for the study. Cross-tab, Chi-square test of Goodness of fit and paired sample t-test was applied to analyze the data. Digital library plays as enriched information environment for both type of learning system. It may be activated in all university campuses. Online learning environment can facilitate both teachers and students to study, take advice or technical support, etc.

KEYWORDS: Scaffolding-based Learning, Self-regulated Learning, Formal Learning, Time management, Study Environment, Learning.

INTRODUCTION

Time Management influencing Study

Good study environment maximize the learning efficiency while if it is integrated with effective time management, high motivation and systematic study habit accelerate as your efforts. It is individualized matter to create your own study environment. Time can be wisely managed by make proper schedule, list your priorities, understand the task, break down the task into chunks and evaluate your level of performance.

Homework Time!

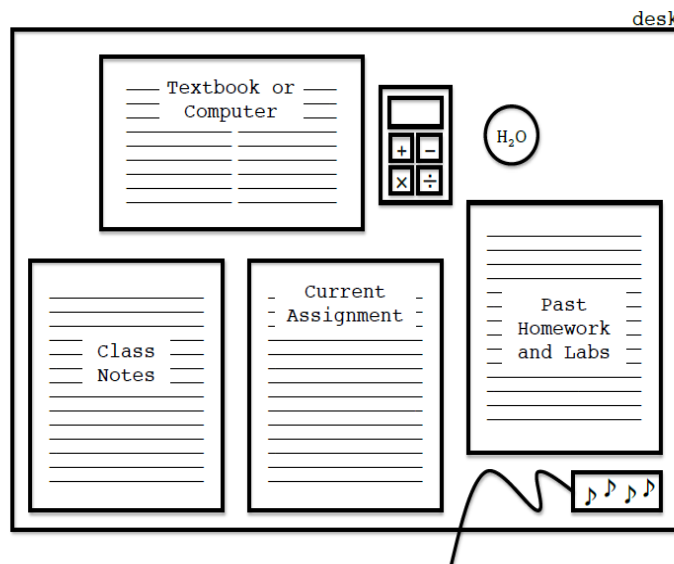


Figure 1: teachersh.scis-his.net

* **Corresponding Author:** Mrs. Uzma Syeda Gilani, Lecturer in IER, University of Science and Technology, Bannu.
uzmasyedagilani@yahoo.com

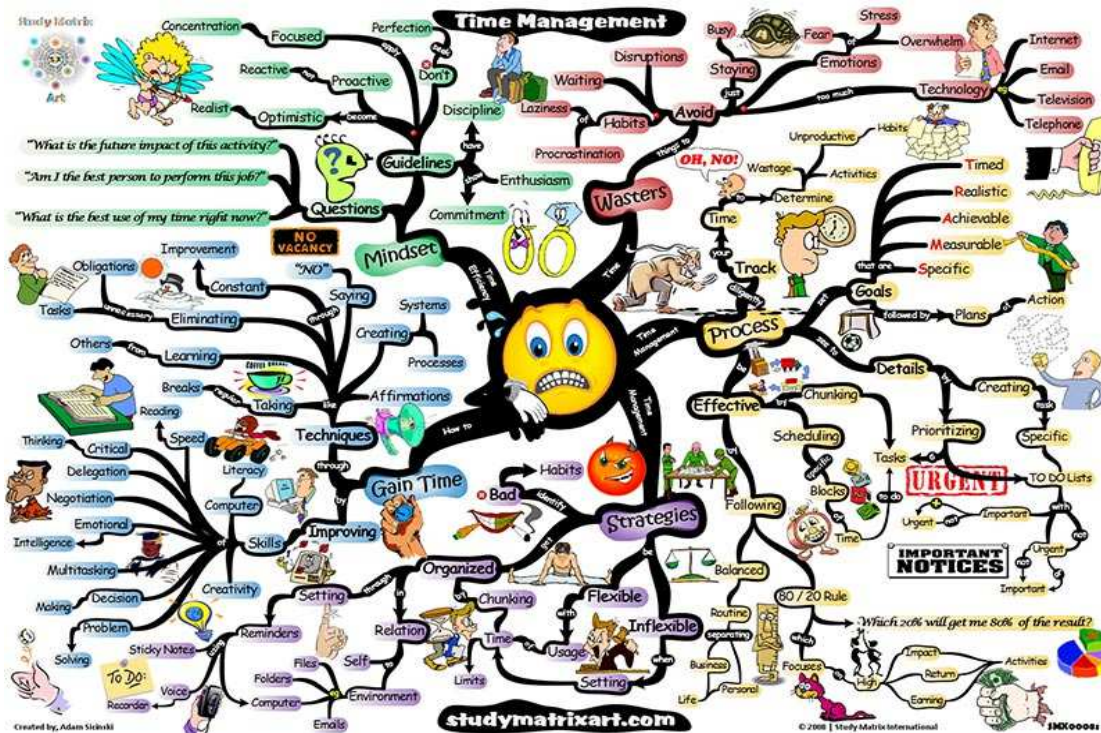


Figure2: Ptpower.net

Ideal Study Environment

According to Centre for Academic success, University of Alabama, for creating ideal study environment, you have to consider three points.

- Efficient and effective learning style.
- Learning task nature.
- Availability of learning resources.

For **learning style**, there should be focus on senses, which things interfere and distract your concentration may be eliminated. As we all know that there are five senses:

- Decide about the level of noise or complete silence is better.
- Adequate light, its direction and intensity are the important factors. Poor lighting can cause eyestrain and headache and also leads to fatigue. Studying near a major traffic path can lead to distractions.
- Environment must be comfortable with slight amount of muscular tension. Good sitting posture promotes better learning.
- Smell of food coming from kitchen or colognes can distract your concentration.

The **learning task** nature also helps you to choose the study environment. If memory work is required then you need to study alone for a while and then get together with someone else for recall practice. If problem solving task is given then study group should be of your choice. Open spaced work place is better to prepare presentation.

The necessary **learning resources** like texts, notebooks, pens, etc. must be placed nearby to begin study. Try fresh fruits and vegetables handy but it would be better to reward yourself with a nutritious snack for your hard work in a study break.

In an article "Managing your time and study environment" by Keeley, M. (1997), Bucks County Community College that time should be used wisely to meet our goals. Postponement or delay is the basic problem of many students.

There are the tips to deal or use time wisely:

- List the scheduled work and interruptions.
- Motivate yourself and commit to work to meet your goal.
- Prioritize and give worth to the task of your individual, education and career goals.
- First you must understand the task by asking questions or get help when you need it.
- Divide the task into do-able chunks and estimate the need to complete the task.

6. Understand the level of expectation of your instructor and do it without afraid to perform it perfectly.
7. Enjoy do working and rewarding yourself or study with a friend.

For study environment, the following aspects need to be considered:

- Day timing plays important role to schedule your work. Ask yourself that at which time you are more alert / productive i.e. during the morning, mid-day or evening and schedule the task accordingly.
- Decide whether you want to learn or study alone or in a group.
- Posture also plays important role in study and it depends on your own preference that some like to sit at a table or desk just to concentrate and learn effectively or sitting on sofa or lying on floor. While other need to move about in order to learn or walk or need breaks for mobility.
- It is not necessary that a perfectly quiet environment is needed by everyone. Baroque classical music has rhythm and composition seems to be suitable with study and learning.
- Some people prefer to learn and spend time in places having highly lit.
- Temperature also plays important role in study. Ideal temperature is 25°C and 1°C above and below can affect the learning.

An article “How to improve your study skills?” in WikiHow (2014) describes about creating ideal study space will require low noise, a lot of sunlight, an orderly surface and comfy furniture. Things needed like pencils, pens, notebooks; laptop, ruler, textbooks, etc. get near the place before you sit down to study.

If your family members are distracting you then say them politely to leave the room. Switch off the TV and radio. If you like background music then classical music will work.

Markman (2012) wrote in his article “Create a good environment for studying at home” that three things that can make study more effective.

1. Avoid the distractors or minimize the habit of using iPods, smart phones, text messages, Facebook etc. which break the concentration during study.
2. Create a consistent work space for study where you don't need to search things like pencils, erasers or calculators, having a desk set up each day.
3. Find an effective location and posture for study. Sitting on desk increases the level of concentration, lying down promotes passive reading but one can relax and sleep and typing and note-taking are difficult.

In an article “11 ways your study environment affects productivity (and how you can improve it)” (2012) uploaded on Night owl blog suggests the following points:

1. Background music can be a study aid.
2. Study in a silent place to avoid noise.
3. Move away from the place where food is going to cook or odor of cologne.
4. Proper lighting to study is needed because dim lighting can cause eyestrain and headache.
5. Study suffers with the very hot or cold place. Make environment and temperature comfortable to bear and study.
6. Make your study breaks interesting and have more fun by use of 10 minutes Facebook or checking e-mail or even yoyo or ball can work.
7. Find a spot that is comfortable to study and make it your go-to study location.
8. Use the clock to set your time related goals. Plan to finish the task in a set time frame.
9. Study in a group can be helpful as well as frustrating one.
10. Even the physical arrangement of furniture and the layout of a room can affect your ability to study. So create clean, organize and neat work space for studying.

Current Study

Basically it is descriptive study to get the students' view and compare the time and study environment in both learning systems i.e. Scaffolding based self-regulated learning system and formal learning system.

In scaffolding based self-regulated learning system, giftedness is identified earlier, individualized instruction is provided. Round about one hour video lecture can be watched on satellite TV channels on cable network or on computer using CDs. Videos can be repeated, if any point is missed. Moreover, hand-outs of university professors are also available on online bookshops and one hour internet session is available for students to participate in online discussion boards, doing online quizzes, receive and upload home assignments. It delivers efficiency, creates momentum, and motivates the learner to learn. There are some demerits of this system, it is a time consuming activity and requires trained personnel as well. As compare to scaffolding based self-regulated system, formal learning system is less time consuming activity. Teacher prepares his lecture and delivers it to the group of students. Students take notes and independent effort is required to grasp any problem. But in this system, no opportunity is

given to learn something practically, most often learner becomes passive, rote memory is encouraged, individualized instruction is not so common.

Keeping in view the above points, the researcher was attracted to judge the students' view regarding time and study environment by using only one part related to time and study environment of Motivated Strategies for Learning Questionnaire (MSLQ) originally designed by Pintrich, Garcia, and McClatchy (1993). BCS and MCS students studying in both Public Sector Universities of Khyber Pakhtunkhwa and Scaffolding based self-regulated learning system to determine the time and study environment as merits and demerits of both learning systems at higher education level and compare the effectiveness of time and study environment in both learning systems. At the end, suggestions are given to propose the better learning system to become independent learner to do self-study and pave the way to further conduct research in different situations and contexts to get different results.

OBJECTIVES OF THE STUDY

Following were the objectives of the study.

To determine the role of time and study environment as a resource management strategy in Scaffolding based self-regulated learning system and formal learning system at university level. Furthermore, to compare the effectiveness of time and study environment as resource management strategy in Scaffolding based self-regulated learning system and formal learning system at university level as assessed by the students.

HYPOTHESES OF THE STUDY

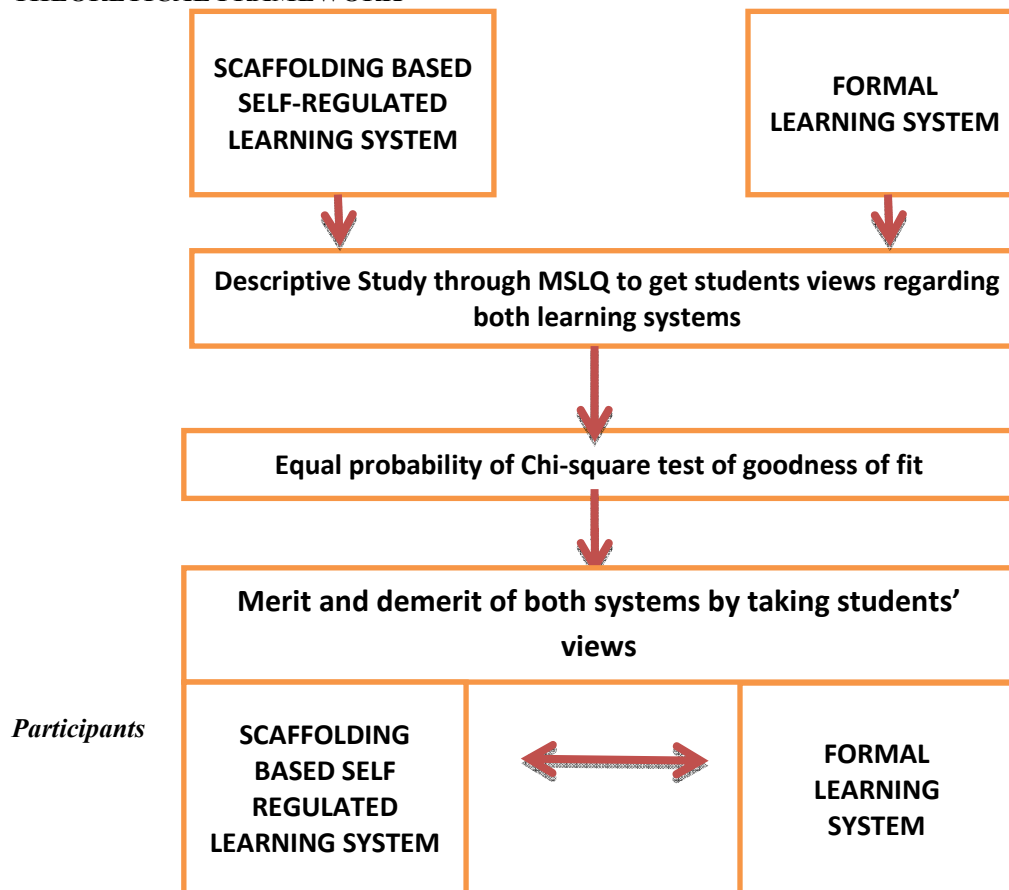
Following were the null hypotheses of this study.

- Ho1.** There is no significant difference among the views of students about role of time and study environment studying in scaffolding based self-regulated learning system at higher education level.
- Ho2.** There is no significant difference among the views of students about role of time and study environment studying in formal learning system at higher education level.
- Ho3.** There is no significant difference among the views of students about role of time and study environment studying in both scaffolding based self-regulated learning and formal learning system at higher education level.

METHOD

The nature of this research was descriptive and survey type.

THEORETICAL FRAMEWORK



Participants

For survey, all BCS and MCS students studying the subject of Database System in four selected Public Sector Universities of Khyber Pakhtunkhawa, Pakistan.

1. University of Peshawar, Peshawar.
2. Kohat University of Science and Technology, Kohat.
3. University of Science and Technology, Bannu.
4. Gomal University, D.I. Khan.

and four selected campuses of Virtual University,

1. Virtual University Campus, Peshawar.
2. Faran Educational Complex, Kohat.
3. Virtual University Campus, Karak.
4. Virtual University Campus, Bannu, Pakistan constituted the population of this study.

Procedure

For survey, the sampling frame for the study was IT students enrolled to study Database subject in which 135 out of 185 students in selected Public Sector Universities of Khyber Pakhtunkhawa and 65 students out of 79 students studying in four selected Virtual University campuses were randomly sampled.

Motivated Strategies for Learning Questionnaire (MSLQ) originally designed by Pintrich, Garcia & McKeachie (1993) was adapted and permission was sought from the developers.

Questionnaire in its original form is already standardized, having high validity. However, suggestions and expert opinion were also taken from experts working in different Universities of Khyber Pakhtunkhawa and were incorporated.

Moreover, for reliability and validity, considering the issue of culture laden questionnaire, it was personally administrated to 10 subjects as a pilot run. The reliability coefficient through SPSS-16 at Cronbach's alpha was .78.

Data was collected personally from the above mentioned universities and Virtual University Campuses of Khyber Pakhtunkhwa, Pakistan.

RESULTS AND DISCUSSION

On the basis of the objectives of the study, the collected data were entered in SPSS-16 and Equal probability Chi-square test of Goodness of fit was used to measure the Scaffolding based self-regulated system and formal learning system. Paired sample t-test was used to compare the students' time and study environment strategies of both learning systems at university level.

Table 1: Students' views about Resource Management Strategies: Time and Study Environment in scaffolding based self-regulated learning system. (N = 65)

S. N	Statement	f	SDA	DA	UD	A	SA	X ²	P
1.	I usually study in a place where I can concentrate on my course work.	O	3	9	13	22	18	17.07	.00
		E	13	13	13	13	13		
2.	I make good use of my study time for this course.	O	4	9	5	28	19	32.46	.00
		E	13	13	13	13	13		
3.	I find it hard to stick to a study schedule.	O	4	8	15	29	9	29.38	.00
		E	13	13	13	13	13		
4.	I have a regular place set aside for studying.	O	4	11	17	26	7	23.53	.00
		E	13	13	13	13	13		
5.	I make sure that I keep up with the weekly readings and assignments for this course.	O	3	14	18	17	13	10.92	.00
		E	13	13	13	13	13		
6.	I attend this class regularly.	O	19	25	12	5	4	25.01	.00
		E	13	13	13	13	13		
7.	I often find that I don't spend very much time on this course because of other activities.	O	8	15	18	21	3	16.76	.00
		E	13	13	13	13	13		
8.	I rarely find time to review my notes or readings before an exam.	O	1	14	20	24	6	28	.00
		E	13	13	13	13	13		
		O	46	105	118	172	79		
Overall		E	104	104	104	104	104		

Table No. 1 indicates that there is significant difference between the observed and expected frequencies with $X^2 = 36.12$ and $p\text{-value} = .015$. Therefore the null hypothesis “There is no significant difference among the views of students about time and study environment of scaffolding based self-regulated learning at higher education level” is rejected at 0.05 level of significance.

Table 2: Students’ views about Resource Management Strategies: Time and Study Environment in formal learning system. (N = 135)

S. N	Statement	f	SDA	DA	UD	A	SA	X ²	P
1.	I usually study in a place where I can concentrate on my course work.	O	2	5	20	41	67	1.09	.00
		E	27	27	27	27	27		
2.	I make good use of my study time for this course.	O	5	12	17	63	38	82.44	.00
		E	27	27	27	27	27		
3.	I find it hard to stick to a study schedule.	O	9	11	24	61	30	64.96	.00
		E	27	27	27	27	27		
4.	I have a regular place set aside for studying.	O	8	16	31	39	41	31.04	.00
		E	27	27	27	27	27		
5.	I make sure that I keep up with the weekly readings and assignments for this course.	O	3	11	27	63	31	79.4	.00
		E	27	27	27	27	27		
6.	I attend this class regularly.	O	1	9	29	39	57	75.85	.00
		E	27	27	27	27	27		
7.	I often find that I don't spend very much time on this course because of other activities.	O	14	9	38	45	29	34.89	.00
		E	27	27	27	27	27		
8.	I rarely find time to review my notes or readings before an exam.	O	6	19	31	49	30	37.56	.00
		E	27	27	27	27	27		
Overall		O	48	92	217	400	323	45.89	.00
		E	216	216	216	216	216		

Table No. 2 shows that there is significant difference between the observed and expected frequencies with $X^2 = 45.89$ and $p\text{-value} = .001$. Therefore, the null hypothesis “There is no significant difference among the views of students about time and study environment of formal learning system at higher education level” is rejected at 0.05 level of significance.

Table 3: Comparison of students’ view about time and study environment in both learning systems (N= 65)

System	Mean	S.D.	t	p- value
Scaffolding	26.04	5.36	0.167	0.185
Formal	29.38	4.40		
Total			0.167	0.185

Table 3 shows that there is no significant difference among the students’ view about time and study environment in both learning systems at higher education level. Therefore, the null hypothesis “There is no significant difference among the views of students about time and study environment of scaffolding based self-regulated learning and formal learning system at higher education level” is accepted at 0.05 level of significance.

Mu, X. (et al) (2003) presented results in an article “The Interactive shared Educational environment: User Interface, System Architecture and Field study” that comfortable learning and more effective environment for the task given can be facilitated by video player, shared browser and text chat room. Digital libraries can provide information enriched distance learning environment.

Paper published by Colorado J. T. and Eberle J. (2010) as “Students demographic and success in online learning environments”. The relationship between student demographics and success relates to online learning environment and possess self-regulated learning characteristics. It is in the form of online advising, technical support for students, course development support for faculty and collaborative software.

Cobb Jr, R. (2012) published article on “Management of Time and study environments: The implications on successful academic performance in Web-based Learning Experiences” in which he found significant relationship exist between time and study environment management and academic performance in web-based learning environment.

In this study, according to students’ views there is no significant difference to compare their views regarding time and study environment in scaffolding based self-regulated learning system and formal learning system. There is significant difference in the views of students in both learning systems about time and study environment at

university level. They regularly study in the environment to review the notes, concentrate and do their assignments in time.

CONCLUSIONS AND RECOMMENDATIONS

From the analysis and interpretation, it can be concluded that:

1. According to students' views of scaffolding based self-regulated learning system, there is significant difference among the views of students about time and study environment of scaffolding based self-regulated learning at higher education level.
2. According to students' views of formal learning system, there is no significant difference among the views of students about time and study environment of formal learning system at higher education level.
3. There is no significant difference among the views of students about time and study environment of scaffolding based self-regulated learning and formal learning system at higher education level.

On the basis of the conclusions, the following recommendations can be made:

1. Digital library plays as enriched information environment for both type of learning system. It may be activated in all university campuses.
2. Online learning environment can facilitate both teachers and students to study, take advice or technical support, etc.
3. Further researches can be conducted in different situations and contexts to compare the results of both learning systems.

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