

## The Impact of Studying "Learning, Thinking and Research Skills Course" in Improving Freshmen's Study Skills

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**Abstract:** *This study aims at determining the impact of studying "Learning, Thinking and Research Skills Course" in improving the Preparatory Year Program (PYP) freshmen's study skills in Najran University. To achieve the objectives of the study a scale was developed and distributed to (100) male and female freshmen of the PYP before studying the course and after completing it. The scale consisted of (60) items distributed on eleven study skills domains: Speed-reading, summarizing, note taking, monitoring cognitive development, mind mapping, test taking and preparing, critical thinking, problem solving, monitoring of cognitive development, research writing, accessing to information and economy knowledge skills. Data was processed using means, standard deviations, and Independent-Samples T-test. The results showed that the level of freshmen's study skills before studying the course was moderate before studying the course and significant after studying it in all study skills domains. The results also showed that there was a statistically significant correlation in improving freshmen's study skills after studying "Learning, Thinking and Research Skills Course" and that there was statistically significant differences in the posttest according to gender in favour of females and in three study skills domains.*

**Keywords:** *Study skills, freshmen, Speed-Reading, Summarizing, Note Taking, Critical Thinking, Problem Solving, Research Writing.*

### Introduction

There is no doubt that students in higher education often face more complex and demanding learning challenges than they met in schools, so their study skills will need to develop to meet such demands (Murphy, 2001). The students' transition from high school to university requires a set of skills to enable them to adapt to academic life. Unfortunately, some students face problems in not having the results they expect because of the lack of sufficient study skills (Gettinger and Seibert, 2002).

Due to the gap between the secondary school and the university life, the Preparatory Year Program (PYP) in Kingdom of Saudi Arabia is introduced for independent learning required in higher education. It considers a vital stepping stone to higher education for young people from the region. The general goal of the PYP in Najran University in KSA is to bridge the gap between the requirements of study, university life and the previous studying stages. The study

plan of the PYP consists courses in English skills, mathematics, computer skills in addition to study skills. The PYP comprises of two levels and the duration of each level is one semester. Passing this programme is a prerequisite for joining majors that require the PYP like College of Medicine, Dentistry, Pharmacy, Applied Medical College, Engineering and Administrative Sciences.

One of the courses required in PYP is "Learning, Thinking and Research Skills Course" for first level freshmen. It is prepared and set to provide and develop student's study skills. The student is expected to achieve the following learning outcomes:

1. Learn how to learn through storing, classifying, and organizing information in a scientific manner using helping tools to remember and retrieve information when needed.
2. Manage the mental abilities and communicative manner led to success through developing thinking and problem solving skills.
3. Acquire writing research, access to information and knowledge-based economy skills.

There are many various definitions for study skills in literature. (Thomas, 1993; Uluğ, 2000; Yıldırım, Doğanay & Türkoğlu, 2000) defined study skills as "using specific methods efficiently to learn something". Harris and Hodges (1995) defined them as "techniques and strategies that help a person read or listen for specific purposes with the intent to remember". According to Tonjes and Zintz (1981) study skills are competency skills that students need to master the content of their texts. They are the ability to manage time and allocate other resources in accordance with the demands of the academic tasks, ability to organize, summarize and integrate material. (Crede and Kuncel , 2008).

In this study, study skills are group of strategies, mechanisms and means that help students to improve their performance, increase their efficiency and raise their ability in learning. These skills include speed- reading, summarizing, note taking, monitoring cognitive development, mind mapping, test taking and preparing, critical thinking, problem solving, monitoring of cognitive development, research writing, accessing to information and economy knowledge skills.

### **Statement of Purpose**

The researcher noticed – while teaching freshmen at PYP in Najran University -a disparity in the impact of studying "Learning, Thinking and Research Skills Course" in improving their study skills. These views are noticed too from faculty members in colleges which the students transfer to after finishing the PYP. This encouraged the researchers to conduct a study to detect the impact of studying "Learning, Thinking and Research Skills Course" in improve freshmen's study skills.

One approach to determine the impact of a course on freshmen's study skills is to make a comparison before and after studying the course. In this way, this approach may provide information as to whether students' skills are met because of studying the course or not.

The purpose of this study is to compare the perceived freshmen's study skills a week before taking the course, with perceived study skills after completing the course and therefore determine the impact of studying "Learning, Thinking and Research Skills Course" in improving freshmen's study skills. Therefore, the following questions were set:

- 1) What is the level of freshmen's study skills before and after studying "Learning, Thinking and Research Skills Course"?
- 2) Are there statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) in studying "Learning, Thinking and Research Skills Course"?
- 3) Are there statistically significant differences at the significance level ( $\alpha \leq 0.05$ ) in the posttest of studying "Learning, Thinking and Research Skills Course" according to freshmen's gender?

### Study Limitations

This study is limited to first level freshmen in PYP at the University of Najran in the second semester of the academic year 2013-2014.

### Theoretical Framework

Gettinger and Seibert (2002) viewed study skills as academic enablers which function as critical tools for learning. Others like Polansky Horan and Hanish (1993) found that training in study skills significantly influence retention of at risk students. Cox (2001) has shown that the students who received the study skills program were more successful than those students who did not receive. On the other hand, students with better study skills are "active" learners and demonstrate initiative and responsibility in facilitating their own acquisition of knowledge and skills (Gettinger and Seibert, 2002).

There is a volume of researches that shed light on study skills. These researches examined the issue of study skills from different views. Some correlated study skills to academic performance like Griffin, Mackewn, Moser and Vuren (2012), Fazal, Hussain and Majoka (2012), Awang and Sinnadurai (2011), Crede and Kuncel. (2008), Proctor, Prevatt, Adams, Hurst and Petscher (2006), Gettinger and Seibert, (2002). Some studied study skills in accordance with the strengths and weaknesses related to students like (Onwuegbuzie, Slate and Schwartz (2001). Others made relations between study skills and other variables like anxiety and success (Cox, 2001). And others assessed some study skills curriculums, courses and training courses like (Demir, Kilinc and Dogan, (2012), Fergy Heatley, Morgan and Hodgson (2008), Cukras, (2006), Wingate, (2006), Cox, (2001), Petrie and Helmcap (1998).

Demir, Kilinc and Dogan (2012) assessed the effect of curriculums, courses, or training programs in developing the study skills and its' impact on academic achievement. They indicated that students can acquire efficient study skills by means of Curriculum for Developing Efficient

Studying Skills and they increased their academic achievements. Fergy, et al. (2008) examined the impact of pre-entry study skills training programmes on students' first year experience in health and social care programmes. The findings showed that the study skills weekend programmes prepared students realistically for their first year university experience. In addition, the evaluation helped to develop insight into the first year experience which has informed a number of academic initiatives.

Cukras, (2006) investigated study strategies that maximize learning for underprepared students. She found that college students, especially freshmen, are not independent learners. And to help them become self-regulated learners, they must develop an inventory of study strategies than can be selectively employed to meet the particular demands of the materials and assignments involved reading and study skills courses as well as academic assistance programs should be designed to address this concern. On the other hand, Wingate, (2006) argued that the widespread approach to enhancing student learning through separate study skills courses was ineffective, and that the term 'study skills' itself has misleading implications, which are counterproductive to learning. Petrie and Helmcamp (1998) evaluated a twelve week academic study skills course. And after completing the course, students reported more frequently and consistently using the following skills and behaviors: organizing new information in meaningful ways, using techniques to increase retention of information, and knowing when they understood information during studying or test taking. They indicated experiencing less anxiety and fewer distractions when studying or taking exams suggesting the increased use or effectiveness of coping skills.

## **Methodology**

This study is an applied study follow quasi-experimental study design based on a pretest and posttest scale to a one group of students who participated in this study. This design is in this formula: O1 X O2. The symbol O1 refers to the first views of the students group or the pretest stage, the symbol X refers to the intervention measure in studying the course, and the symbol O2 refers to the views of the posttest stage.

## **Study Population and Sample**

The population of this study consists of all freshmen of the first level in the preparatory year at the University of Najran, enrolled in the second semester of the academic year 2013-2014, which numbered according to statistics Deanship of Admission at the University (322) freshmen (245 male and 77 female). However, the sample of the study consisted of (100) male and female freshmen (52 male and 48 female).

## **Study Instrumentation**

The study instrument, designed by the researcher for the purpose of this study, is a scale directed to the PYP first level freshmen enrolled in "Learning, Thinking and Research Skills Course" at

the University of Najran. It was given prior to, and after, students participation in the course in the second semester 2013 - 2014 (2<sup>nd</sup> week and 15<sup>th</sup> week). The scale consisted of 60 items distributed on eleven study skills – according to main objectives of the course. These items describe the study skills used by the student in different educational situations. Table 1. Shows the distribution of study skills according to the domains.

**Table 1. Distribution of Study Skills Domains**

No.	Item number	Study Skills Domains
1.	1-5	Speed Reading
2.	6-10	Summarizing and Note Taking
3.	11-16	Monitoring of Cognitive Development
4.	17-21	Mind Mapping
5.	22-26	Test Preparing and Taking
6.	27-31	Critical Thinking
7.	32-36	Creative Thinking
8.	37-41	Problem Solving
9.	42-47	Metacognitive Thinking
10.	48-54	Research Writing and Access to Information
11.	55-60	Knowledge Economy

Consequently, Three-Point Likert Scale was used (Significantly available, moderately available, and weakly available). For the purpose of analyzing the results of the study, the scale has been classified according to the means into three levels: (Weak study skills (1-1.67), moderate study skills (1.68-2.35), and significant study skills (2.36-3.00). Validity was enhanced through content and face validity, and the instrument (tool) was standardized on the response of four experts in education, teaching methods, and measuring and evaluating in Najran University. Those experts were asked to comment on and discuss the ambiguous or irrelevant parts of the instrument. Nine items were omitted and eight items were corrected. Reliability of the instrument was determined through internal constancy coefficient using the Cronbach's Alpha Coefficient. This technique revealed a highly reliability coefficient ( $r=.90$ ).

### Findings

Results related to the first question: "What is the level of freshmen's study skills before and after studying "Learning, Thinking and Research Skills Course"?" Means and standard deviations are computed. Table 2 demonstrates the results.

**Table 2. Means, Standard Deviations, and Availability Level of Freshmen's Study Skills before and after Studying "Learning, Thinking and Research Skills Course"**

Study Skills Domains	Test	M	SD	Availability Level
Speed Reading	posttest	2.6150	.24697	Significant
	pretext	2.3117	.23047	Moderate
Summarizing and Note Taking	posttest	2.5080	.23855	Significant
	pretext	1.8440	.34062	Moderate
Monitoring of Cognitive Development	posttest	2.5733	.22638	Significant
	pretext	2.0250	.28952	Moderate
Mind Mapping	posttest	2.3940	.37114	Significant
	pretext	1.9320	.43505	Moderate
Test Preparing and Taking	posttest	2.5220	.31256	Significant
	pretext	2.0860	.39620	Moderate
Critical Thinking	posttest	2.5040	.26890	Significant
	pretext	2.0000	.32536	Moderate
Creative Thinking	posttest	2.4400	.27117	Significant
	pretext	2.1100	.28902	Moderate
Problem Solving	posttest	2.6140	.25466	Significant
	pretext	2.2960	.31970	Moderate
Metacognitive Thinking	posttest	2.6433	.21843	Significant
	pretext	2.2367	.28346	Moderate
Research Writing and Access to Information	posttest	2.4486	.22974	Significant
	pretext	1.9143	.30254	Moderate
Knowledge Economy	posttest	2.6150	.24697	Significant
	pretext	2.3117	.23047	Moderate
<b>Total</b>	<b>posttest</b>	<b>2.5222</b>	<b>.08196</b>	<b>Significant</b>
	<b>pretext</b>	<b>2.0560</b>	<b>.10624</b>	<b>Moderate</b>

Table 2 shows that there are statistically significant differences between the mean scores of the freshmen's study skills in the pre and posttest in favor of the posttest. The mean scores of the pretest are between (1.84-2.31), and of the posttest are between (3.39-2.64). On the other hand, the level of study skills availability in all themes in the pretest is (Moderate) and (Significant) in all the themes in the posttest, which means that there is an improvement in all study skills domains after studying the course.

Results related to the second question: "Are there statistically significant differences at the level of significance ( $\alpha = 0.05$ ) in improving study skills after studying the course?" Means, standard deviations and t-test formula are computed. Table 3 illustrates the results.

**Table 3. Means, standard deviations and Independent-Samples T-test of studying "Learning, Thinking and Research Skills Course"**

Study Skills Domains	T	Df	Sig. (2-tailed)	Mean Difference
Speed Reading	8.979	198	.000*	.30333
Summarizing and Note Taking	15.967	198	.000*	.66400
Monitoring of Cognitive Development	14.920	198	.000*	.54833
Mind Mapping	8.079	198	.000*	.46200
Test Preparing and Taking	8.640	198	.000*	.43600
Critical Thinking	11.940	198	.000*	.50400
Creative Thinking	8.327	198	.000*	.33000
Problem Solving	7.780	198	.000*	.31800
Metacognitive Thinking	11.364	198	.000*	.40667
Research Writing and Access to Information	14.065	198	.000*	.53429
Knowledge Economy	8.979	198	.000*	.30333
<b>Total</b>	<b>34.741</b>	<b>198</b>	<b>.000*</b>	<b>.46617</b>

\*  $p \leq (0.05)$

Table 3 illustrates that there are statistically significant correlation in improving freshmen's study skills after studying "Learning, Thinking and Research Skills Course". Table 3 shows that the probability of significant in all study skills domains is less than (0.05) and the calculated value of T is statistically significant at  $p \leq (0.05)$ .

Results related to the third question: "Are there statistically significant differences at the significance level ( $\alpha=0.05$ ) in the posttest according to gender"? Means, standard deviations, and t-test formula are computed. Table 4 illustrates the results.

**Table 4. Means, Standard Deviations and Independent-Samples T-test of the Posttest according to Freshmen's Gender**

Study Skills Domains	Gender	N	Mean	Std. Deviation	T	df	Sig. (2-tailed)
Speed Reading	Male	52	2.4514	.32066	-.339	98	.735
	Female	48	2.4733	.22581			
Summarizing and Note Taking	Male	52	2.4743	.24358	-	98	.030*
	Female	48	2.5867	.20965			

Monitoring of Cognitive Development	Male	52	2.5476	.23595	-	98	.083
	Female	48	2.6333	.19278	1.753		
Mind Mapping	Male	52	2.3743	.37132	-.810	98	.420
	Female	48	2.4400	.37287			
Test Preparing and Taking	Male	52	2.4800	.30532	-	98	.039*
	Female	48	2.6200	.31228	2.087		
Critical Thinking	Male	52	2.4600	.26887	-	98	.012*
	Female	48	2.6067	.24344	2.569		
Creative Thinking	Male	52	2.4429	.27217	.160	98	.873
	Female	48	2.4333	.27334			
Problem Solving	Male	52	2.6171	.24729	.188	98	.852
	Female	48	2.6067	.27535			
Metacognitive Thinking	Male	52	2.6238	.22286	-	98	.173
	Female	48	2.6889	.20405	1.371		
Research Writing and Access to Information	Male	52	2.4571	.20580	.568	98	.571
	Female	48	2.4286	.28074			
Knowledge Economy	Male	52	2.6190	.21822	.249	98	.804
	Female	48	2.6056	.30789			
<b>Total</b>	<b>Male</b>	<b>52</b>	<b>2.4174</b>	<b>.06749</b>	-	98	.005
	<b>Female</b>	<b>48</b>	<b>2.6467</b>	<b>.10167</b>	2.853		

\*  $p \leq (0.05)$

Table 4 illustrates that there are statistically significant at the significance level ( $\alpha=0.05$ ) in the posttest between the mean scores according to freshmen's gender. And in comparing the mean scores, it was in favour of females and in three domains (Summarizing and Note Taking, Monitoring of Cognitive Development, and Critical Thinking Skills).

## Discussion

This study aims to determine the impact of studying "Learning, Thinking and Research Skills Course" in improving Najran University PYP freshmen's study skills in Kingdom of Saudi Arabia. Results indicated that the level of freshmen's study skills before studying "Learning, Thinking and Research Skills Course" was moderate. Moreover, the level was significant in all study skills domains after studying the course. This result can be explained on the bases that this course have influenced the improvement of study skills among freshmen's in all study skills domains: Speed Reading, Summarizing and Note Taking, Monitoring of Cognitive Development, Mind Mapping, Test Preparing and Taking, Critical Thinking, Problem Solving, Metacognitive Thinking, Research Writing and Access to Information and finally, Knowledge Economy Skills. This result is consistent with the study of Demir et al. (2012). They found that students can acquire efficient studying skills by means of Curriculum for Developing Efficient Studying Skills and increase their academic achievements. However, The Dearing Report NCIHE, formally known as the reports of the National Committee of Inquiry into Higher

Education, recommended that transferable or "key" skills should be developed at university in addition to cognitive and other specific skills. (Dearing, 1997)

Wingate (2006) mentioned that students are expected to enter university equipped with adequate skills to study effectively. In the case of the PYP in Najran University, it provides freshmen with such courses as requirements so as freshmen may not stumble at the beginning of their university life due to the lack of study skills.

Results also showed that there were statistically significant differences in improving freshmen's study skills after studying "Learning, Thinking and Research Skills Course" in all study skills domain. This can be explained that there is an impact of studying the course on freshmen's study skills especially that freshman today are assessed across a broader range of skills and knowledge than ever before. In sum, this course improves freshmen's study skills and provides freshmen with support and assistance in their study skills to ease the process of becoming a university student. As (Gettinger and Seibert, 2002) stated, students with better study skills are "active" learners and demonstrate initiative and responsibility in facilitating their own acquisition of knowledge and skills. On the other hand, this result shows that freshmen fulfilled the learning outcomes of studying the course.

This finding consisted with Fergy et al. (2008) who showed that the study skills programmes prepare students realistically for their first year university experience.

Moreover, Results showed that there are statistically significant at the significance level ( $\alpha=0.05$ ) in the posttest according to gender in favour of female freshmen in three domains: (Summarizing and Note Taking, Monitoring of Cognitive Development, and Critical Thinking Skills). The means of female freshmen after studying the course were higher than the male freshmen. This may be interpreted that the female freshmen acquire these skills more efficiently as compared to the male. This result is consistent with Fazal et al. (2012) who showed that the girls were better using study skills as compare to boys and consistent too to Griffin et al. (2012) who showed that females significantly outscored males in Learning and Study Strategies Inventory (LASSI) assessment device.

## 5. Recommendations

In light of the findings, the researcher suggest some recommendations:

- 1) Design study skills placement tests for freshmen prior enrolling in PYP to determine the strengths and weaknesses of the student's study skills.
- 2) Raise the awareness of the freshmen about the level of importance of such courses in improving study skills, which is a prerequisite for them to other programs in the university.

- 3) Conduct a study about the effectiveness of study skills after joining majors that require PYP to improve the course according to these requirements.

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