

# Study Approaches Utilized by Occupational Therapy Students during Clinical Practice

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Study Approach, Deep Approach, Superficial Approach, Strategic Approach.

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**ABSTRACT**

Study approach is the technique of learning that a student utilizes when searching and gaining information. Deep approach, strategic approach, and surface approach are the three study approaches that discussed in this study. It is essential to understand the types of study especially among students who are attending to clinical practice. It is because it helps the students to learn better while catching up the theoretical knowledge in application into performance in their clinical practice. Besides, this would assist the program in modifying the teaching-learning delivery system and beneficial for curriculum review. To determine study approaches utilized by occupational therapy (OT) students during clinical practice and association towards demographic factors. A cross-sectional study was conducted among 99 OT students (n=99) from University Technology MARA (UiTM) Malaysia through a convenience sampling. The Approaches and Study Skills Inventory for Students (ASSIST) short version used to identify the study approaches adopted by the students. Respondents commonly used deep approach (DA) (M = 22.41, SD = 3.00) then followed by surface apathetic approach (SAA) (M = 20.15, SD = 4.20) and strategic approach (SA) (M = 19.43, SD = 3.89). Chi-square test shown no association between types of study approach and the demographic characteristics. Majority of OT students chosen DA as their learning style during the clinical practice, followed by SAA and SA. While, these study approaches were not influenced by age, gender and academic achievement of the OT students.

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## 1. INTRODUCTION

Study approach is defined as the different practices that learners used to make sense of their learning [1] which address the method that a learner used for searching knowledge or obtaining information [2]. Study approaches can be observed as a description of the learned motives, aims, and the process, which are determined in part by the study approach relating to the student's attitude toward the task requirements [3]. A study suggested that students change their learning technique depending on the needs of the course they have enrolled in. In other words, as learners learn something, they would be able to adapt to a specific learning condition and to handle their learning in an acceptable way or in the way they chosen [4]. However, there are differences in learning styles used by students between the groups who attending to

lecture series alone and those who have combination of lecture and clinical attachment. Clinical practice offers the students an opportunity to apply what they've learned in lecture series into the clinical setting. This situation indicating their belief that coping and adapting mechanisms for learning are different which they determined their learning styles in order to improve their learning and performance in the education program [5]. As a result, clinical practice is said to be strongly correlated with situational learning, in which students apply academic knowledge to on-site authentic clinical experiences [6]. During clinical practice, students are demanded to develop problem-solving skills, improve clinical expertise optimally, and better deal with different situations which was set to be the important skills and knowledge for entry-level clinicians [21]. This requirement is crucial for the students to have a better understanding on the theory and application into practices that driven by their study methods. According to [22], once students begin clinical practices, they are exposed to a variety of supervised learning environments and evaluation from the educational program as they gain expertise and skills through participation in the administration of patient safety. They are also exposed to unpredictable situations in which the safety of the patients is extremely crucial. In those study among the Health Science students of College of Medicine in Saudi Arabia, their students mostly used deep approaches during clinical. This is because students must include knowledge sharing, writing reports, and self-testing in order to be prepared for evaluation, clinical problem solving, and safety patient care during clinical. According to [23], most of those students who used the deep approach will carefully reviewed, relating what they have learned to other subjects, checking logic and arguments carefully and logically, and then reviewing evidence and comparing it to a final result.

There are three main study approaches that commonly used by students during their study time in an educational program, (i) deep approach (DA), (ii) surface apathetic approach (SAA), (iii) strategic approach (SA) [7]. Students actively draw their ideas to the learning principles, using evidences, assess the logical and common sense, and continue to observe their level of understanding in the deep approach. The deep approach involves a concentration on concepts, information or knowledge sharing, accumulated experience, and also emphasis on intrinsic motivation and material ownership, active learning, and interactions and networking. While the surface method addresses students' learning is confined to a routine memorization as their goal is just to accomplish the assignment. In a strategic approach, students are highly motivated to attain the greatest possible scores when using a strategic study approach. It requires an effective time management and research preparation from the learners [8]. Students can improve their learning and performance in the educational program by determining their learning styles or study approach. For instant, the deep and strategic approach is encouraged for the profession with clinical skill [9]. A study reported that deep approach of learning was the preferred learning approach among medical students at the Faculty of Medicine and Health, University Putra Malaysia [5]. As a result of this learning style, students who learn to understand the subject matter may become effective learners. In the future, their knowledge of the subject will be applied to their clinical practice. This scenario seems to be applicable to other health science programs including occupational therapy field which the clinical practice sets the foundation to prepare students for a real field practice in the future. The approach that the students adopt during their clinical placement will determine the achievement of learning outcomes set forth by the education system.

There are several factors influencing study approach among the students, that include gender, age and academic achievement. A study reported that students with older years engage less in surface learning and mostly choose more in deep approach because intrinsic goals encourage them more than extrinsic, career-oriented ones [10]. While, female students are more likely to use more in deep and/or fewer surface approaches than male students [11] which those female students are more inclined than male students to participate in deeper and fewer surface methods [10]. Besides, other study agreed that students who preferred study approaches on the deep approach and strategic approach scales have an increased chance of

academic achievement [12] as proven by Cano (2007) [13] that claimed students who succeed academically are more likely to apply a deep learning strategy than those who do not.

Thus, this study was carried out to provide further evidence about the learning approach that most practiced by the occupational therapy students while attending to clinical practice.

### 1.1 Objectives

This study was conducted with objective to identify the study approaches used by the occupational therapy students during clinical practice. This study also aimed to identify the association between the types of study approaches with demographic characteristics of occupational therapy students.

## 2. STUDY METHODOLOGY

This study utilized a cross-sectional study design that targeted the undergraduate occupational therapy students. There were 99 respondents (n=99) were enrolled through a convenience sampling method in this study. The respondents were the occupational therapy students from Faculty of Health Sciences, University Technology MARA (UiTM) in Selangor, Malaysia who are in semester six from post-diploma group and semester eight from post-diploma and post-matriculation groups during the study was conducted. Data collection was conducted via an online mode due to the restriction for a physical appointment with the respondents during the pandemic time and while movement control order was taking place in Malaysia. This method was adapted with an invitation through a social media platform such as Whatsapp and direct messenger (DM) to distribute a set of questionnaire using Google Form. The questionnaire was divided into two sections which are demographic data of students (age, gender and academic achievement) and a short version of Approaches and Study Skills Inventory for Students (ASSIST) [14] assessment tool which consists of 18 items. There are 3 types of study approaches addressed in ASSIST, (i) deep approach (DA); (ii) strategic approach (SA); (iii) surface apathetic approach (SAA) that used Likert point scores from 5, strongly agree to 1, strongly disagree. Data were gathered and analyzed using the Social Data Statistical System (SPSS-Version 25) with using some descriptive and inferential statistics. Ethical approval was obtained from the University Technology MARA (UiTM) Research Ethical Committee (REC) prior to conduct the study.

## 3. FINDINGS

### 3.1 Demographic characteristics of the respondents

The demographic characteristics of the respondents are shown in Figure 1. This study had gathered 99 respondents (n=99) of occupational therapy students who participated in this study. The majority of students are females (93.9%, n=93) and some male respondents (6.1%, n=6) had participated in the study. Most of them are age between 22 to 25 years old (90.9%, n=90), followed by 26-29 years old (5.1%, n=5) and 18-21 years old (4.0%, n=4). The students' academic achievement was indicated through a Cumulative Grade Average (CGPA) point that was majority fall within for 3.00-3.49 (71.7%, n=71) followed by 3.50-4.00 (26.3%, n=26) and 2.99 and below (2.0%, n=2).

**Figure 1** Demographic characteristics of the respondents (n = 99)

Demographic	Frequency (%)
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<b>Gender</b>	
Male	6 (6.1)
Female	93 (93.9)
<b>Age</b>	
18-21	4 (4.0)
22-25	90 (90.9)
26-29	5(5.1)
<b>CGPA</b>	
3.5-4.00	26 (26.3)
3.0-3.49	71 (71.7)
2.99 and below	2(2.0)

### 3.2 Study Approaches used by Occupational Therapy Students during Clinical Practice

The first study objective was analyzed using a descriptive analysis (mean and standard deviation). Figure 2 shows the mean scores of the study approaches used by the occupational students during clinical practice. The findings indicated the deep approach (DA) (M=22.41, SD=3.00) was the most common study approach employed by occupational therapy students during clinical practice, followed by the surface apathetic approach (SAA) (M=20.15, SD=4.20). However, less students were used a strategic approach (SA) as their study approach during clinical practice (M=19.43, SD=3.89).

**Figure 2** Descriptive data of study approaches

Types of Study Approaches	Mean (SD)
Deep Approach (DA)	22.41(3.00)
Surface Apathetic Approach (SAA)	20.15(4.20)
Strategic Approach (SA)	19.43(3.89)

### 3.3 Association between Study Approaches and Demographic factors

The second study objective analyzed on the relationship between study approaches and demographic characteristics (gender, age, CGPA point) of occupational therapy students. The data was tested using inferential statistics, that was Chi-square test.

### 3.4 Association between Study Approaches and Genders

Figure 3 shows the results of association between study approaches and gender. The findings indicated that only SA learning style has a significant association with gender ( $\chi^2=30.73$ ,  $df=18$ ,  $p=0.03$ ). While the DA and SAA learning styles have no significant association towards gender of students,  $\chi^2=6.93$ ,  $df=12$ ,  $p=0.87$  and ( $\chi^2=35.71$ ,  $df=18$ ,  $p=0.08$ ) respectively with  $p>0.05$ .

**Figure 3** Association between gender and study approaches

Characteristic	Study Approach		
		x <sup>2</sup> (df)	P-value
Gender	DA	6.93(12)	0.87
	SAA	35.71(18)	0.08
	SA	30.73(18)	0.03

### 3.5 Association between Study Approaches and Age of Students

Figure 4 indicated the results of association between study approaches and age. The results show no

association between age and all study approaches employed by the occupational therapy students with DA  $x^2=20.46$ ,  $df=24$ ,  $p=0.67$ , SAA with  $x^2=24.66$ ,  $df=36$ ,  $p=0.92$  and SA with  $x^2=16.29$ ,  $df=36$ ,  $p=1.00$ . Based on the finding, it can be concluded that there was no significant association between age and study approaches used by the students.

**Figure 4** Association between age and study approaches

Characteristic	Study approach		
		$x^2(df)$	P-value
Age	DA	20.46(24)	0.67
	SAA	24.66(36)	0.92
	SA	16.29(36)	1.00

### 3.6 Association between Study Approaches and Academic Achievement

The results of association between academic achievement and study approach are addressed in Figure 5. The table displayed there is no association between academic achievement (CGPA) and all type of study approaches which  $p>0.05$  with DA of learning ( $x^2=30.19$ ,  $df=24$ ,  $p=0.18$ ), SAA of learning ( $x^2=19.92$ ,  $df=36$ ,  $p=0.99$ ) and SA of learning ( $x^2=35.15$ ,  $df=36$ ,  $p=0.51$ ). Based on the finding, it can be concluded that there is no significant association between academic achievement (CGPA) and study approaches used by the students during clinical practice.

**Figure 5** Association between academic achievement and study approaches

Characteristic	Study approach		
		$x^2(df)$	P-value
CGPA	DA	30.19(24)	0.18
	SAA	19.92(36)	0.99
	SA	35.15(36)	0.51

## 4. DISCUSSION

This study found that deep approach had been most common learning technique used by occupational therapy students during the clinical practice, followed by surface apathetic approach and strategic approach. Other study had a consistent finding which deep and strategic learning have been used among the health sciences pre-clinical, clinical and postgraduate students in Sri Lanka [15]. It is supported by the students' study methods which already been established before university enrollment. Thus, during their pre-university years, the quality of their teaching-learning environment and evaluation methodologies may have influenced the students' learning method [16]. Deep approach has been employed by majority of respondents because of the high-quality learning that meets the learning outcomes for medical and health sciences curriculum which was parallel to the deep approach. Nevertheless, there were a few of students had implemented the strategic approach that highlight the learning technique of memorization over comprehension. This technique seems not well justified to be utilized by clinical students [17] since it lacks of synchronicity in application of the knowledge into skills in clinical practice. While, the SA approach of learning techniques offers completely understanding the subject which focuses entirely on attaining good exam results. This study also reported that there was no different in deep and surface approach between genders. While strategic approach shows some differences between males and females. There was opposite finding stated male students were more likely than female students to use the deep learning approach [18]. This is because males are said to prefer rational evaluation and reasoning, which shown males preferred a deep approach. In contrast, females prefer "elaborative" processing, in which they look for personal significance or individual connections with the content being taught.

Findings from other study also discovered that study approaches has completely not associated to age of students which it was parallel to the findings indicated in this study [19]. In that study, higher-aged students are more likely to use a deep approach, whereas younger students are more likely to use a surface approach. This is because older students have more academic experience and knowledge. Older students may also be more encouraged by intrinsic goals like expanding their understanding rather than extrinsic goals like professional advancement.

Besides, this study disclosed that study approaches was also not associated to academic achievement. [13] suggested that study approach is essential factors in determining academic accomplishment. Students are more prone to employ a surface-level learning approach when they feel stressed or overwhelmed [20].

## 5. CONCLUSION

This study concluded that majority of occupational therapy students have chosen deep approach (DA) as their learning style during the clinical practice, then it was followed by surface apathetic approach (SAA) and strategic approach (SA). Other findings also indicated that the study approaches have no association to demographic factors of age, gender and the students' academic achievement. It means that the students' learning styles did influence by neither older nor younger age, females nor males and good nor poor academic performance.

There are several constraints identified along the process of conducting this study. This study was held during pandemic of Covid-19, where either student's clinical placement was cut short, or some were not able to experience real clinical practice. Hence their reflection may be limited, in addition to their adaptation for surviving with online distance learning during the movement control order. Next, less male participants was one of the limitations that affecting to generalization of population. This is because, in general, more females in the OT program have seen as nature in the local context. Besides, this study was not addressed other underlying influence such as students' perceptions of workload in their academic course and their background.

Nevertheless, the expected result from this research that identifying study approaches employed by occupational therapy students during clinical practice was an essential information which it could benefit the higher education service provider to highlight on the effectiveness of curricular and its delivery to the end user. This information also could help students to evaluate their learning styles that fit to their individual, subjects and hence to ensure better performance.

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