

# Pharmacy Students' Learning Styles and Preferences toward Teaching Methods in Learning Pharmaceutical Care Concept

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## Introduction

The paradigm concerning the role of pharmacist has shifted from supplying drugs to providing pharmaceutical care services.<sup>1</sup> Pharmacy faculties have responsibility to develop a curriculum that enables pharmacy students to provide pharmaceutical care services. Pharmaceutical care is provided by identifying, solving and preventing drug-related problems in patients.<sup>2</sup> There is a need to use alternative teaching methods to aid the students develop abilities for providing pharmaceutical care. Some research has demonstrated an association between preference toward certain teaching methods and individual's learning style.<sup>3</sup> Learning style is the process by which an individual obtains their knowledge or skills.<sup>4</sup> Understanding pharmacy students' learning style will support educators to facilitate learning process by applying appropriate teaching methods.<sup>5</sup>

## Objective

The purpose of the study was to describe pharmacy students' learning style and preferences toward some teaching methods in learning Pharmaceutical Care Concept.

## Methods

The study was a survey using questionnaire that consisted of two parts. Part one was Kolb's Learning Style Inventory to assess students' learning styles and second part were statements of four teaching methods to know students' preferences. The questionnaire was given to 4<sup>th</sup> year pharmacy students registered in Clinical Pharmacy II course. In Clinical Pharmacy II course students were taught to identify and solve drug-related problems as a component of pharmaceutical care services. After completed the questionnaire, students were asked to choose their preferences toward four teaching methods.

## Results

The study surveyed 63 pharmacy students. There were 11 incomplete questionnaires excluded from analysis. The characteristic of students surveyed is described in Table I. The students' learning styles and preferences are described in Table II. Of the 52 students, the largest group was Assimilators (52%). The remaining students were divided among other three learning styles (23% Divergers, 21% Convergengers, and 4% Accommodators). All Accommodator preferred case study as their teaching method. Lecturing was the most preferred teaching method for Divergers and Assimilators, while most Convergengers preferred case study as their teaching method. Of all teaching methods, the most preferred was lecturing.

## Discussion

According to literature, Accommodators will prefer case study, Assimilators will prefer case study or lecturing, Convergengers will prefer field work or observation, and Divergers will prefer brainstorming.<sup>3</sup> The study shows the case is true with Accommodators, Assimilators, and Convergengers.

**Table I. The characteristic of surveyed students**

Variable	N (%)
Gender	
Female	44 (84.62)
Male	8 (15.38)
Total	52 (100)
Age	
20	7 (13.46)
21	19 (36.54)
22	21 (40.38)
23	4 (7.69)
24	0 (0)

25	1 (1.92)
Total	52 (100)

**Table II. The students' learning styles and preferences**

		Teaching Methods				
		Case Study	Lecturing	Summarizing	Self reading	Total
Learning Styles	Accomodator	2	0	0	0	2
	Diverger	2	8	1	1	12
	Assimilator	6	13	3	5	27
	Converger	5	2	4	0	11
	Total	15	23	8	6	52

**Conclusions:** Pharmacy students in the course have different learning styles with Assimilators domination. Educator may use various teaching methods to deliver the pharmaceutical care concept through the course.

**Keywords:** Pharmacy students, Kolb's Learning Styles Inventory

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