



Learning Styles and Academic Achievement of Criminology Students

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If everyone learned the same way, it would be easy to determine teaching strategies to optimise learning. This is not the case, however, for each individual is a unique learner. Some learners are identified to be inclined toward specific techniques or strategies known as learning styles. This study aims to determine the learning styles and academic achievements of the Criminology student body as a whole and when segregated into curriculum year level. To carry out this study, the Index of Learning Styles (ILS) questionnaire of Felder and Soloman (2014) was utilised to assess the learning styles of participants in four dimensions. Data was collected using stratified random sampling from 166 Criminology students of Northern Iloilo Polytechnic State College at the Ajuy Campus for the first semester of the 2016-2017 academic year. The results indicate that the majority the students, as a whole group or when classified as to their curriculum year level, are fairly well balanced in all four dimensions presented in the ILS questionnaire. As to their academic achievement, students were found to have generally good performance, while senior students exhibited fair academic performance when curriculum year level was taken into consideration.

Key words: *Learner, learning styles, academic achievement, Philippines.*

Introduction

Teaching is a complex process with a primary purpose of learning. The teacher must keep in mind that he or she is developing independently thinking beings and that learning cannot be done for these students. The teacher must consequently provide learners with carefully mentored experiences to develop their knowledge, skills, values and dispositions, and to



positively impact their learning and development. It is the responsibility of everyone who takes part in the educational system to provide a valuable and competent learning environment wherein learners can experience different learning opportunities that encourage them to explore their world, to actively discover knowledge, to reflect on such knowledge and to think critically.

Research shows that people learn by actively participating in observing, speaking, writing, listening and doing. Learning is also enhanced when potential implications, applications, and benefits to others are noticed by students. If all students learned the same way, teaching strategies would be chosen easily and simply in order to optimise learning. Individual learning, however, is a widely varied process and involves many different preferences for receiving and processing information. Individuals learn and think in distinct ways, and various learning characteristics exist in any group of learners, particularly in the areas of information processing. Some students may absorb the lesson better when physically working with their hands, while others might prefer to watch video about a topic, and others still would learn best by writing, drawing, or even with music or dance. These preferences involve learning styles which refer to the one factor that brings about students' differences within the classroom.

Students preferentially take in and process information in different ways: by seeing and hearing, reflecting and acting, reasoning logically and intuitively, or analysing and visualising. Some students focus on principles and others on applications, some emphasise memory while others focus on understanding. Individuals tend to process information actively sometimes and reflectively at other times, each of which may hold a stronger preference than the other.

When disparities exist between student and professor learning styles, students may become bored and inattentive during lessons; perform poorly on tests; get discouraged about the course, curriculum or themselves, and in some cases may change to another curricula or even drop out of school. To overcome this problem, professors should strive for a balance of instructional methods presented within the classroom. Professors must be aware of which learning style students perform well with and implement such approaches to ensure effective understanding and high academic performance. This study will explore the possible relationships of students' styles of learning with other varied dimensions of the educational process.

Framework of the Study

Many researchers have proclaimed the significance of identifying preferred teaching styles and preferred learning styles. Claxton and Ralston (1978) alluded to this significance:



The research findings on learning styles offer substantial promise to teachers, counsellors, and the students themselves in terms of finding better ways for students to learn. But while matching learning style with instructional mode apparently facilitates positive interpersonal relations and it would seem to point the way for increased learning. The empirical data that supports this idea are rather scarce. Such a significant gap in the research must be filled if knowledge about learning styles is to become a significant force in improving college and university teaching.

However, identifying and defining the vast number of learning styles can become an enormous task. According to Cornett (1983), learning style is a complex construct involving the interactions of numerous elements. The experimenter is then faced with the difficult task of having to decide which dimensions of learning style to elucidate and which interactions might be meaningful, in a practical sense, in understanding their contribution to achievement.

This study is based on Silverman's theory which claims that the performance of the individual is a product of his or her interaction with several influencing factors. This is supported by Gardner's Multiple Intelligences theory (Davis et al., 2011) which posits that individuals possess different intelligences of varying degrees of strength and skill, and that individuals draw on these intelligences to create relevant products and solutions to problems, either individually or cooperatively.

Study Objectives

This study aims to identify the learning style preferences and the level of academic achievement of students studying the Bachelor of Science (BS) in Criminology, the flagship course of NIPSC Ajuy Campus, for the 2016-2017 academic year.

Methodology

This study utilises the descriptive research design to describe participants' learning styles and academic achievements. These participants comprise of 166 Criminology students sampled from a population of 474 Criminology students of NIPSC Ajuy Campus for the first semester of academic year 2015-2016. The researchers used stratified sampling to ensure that the different groups of Criminology students were adequately and fairly represented in the sample.



The researchers utilised the Index of Learning Styles (ILS), an instrument used to assess preferences on four dimensions: 1) active/reflective; 2) sensing/intuitive; 3) visual/verbal, and 4) sequential/global. The ILS is a self-scoring questionnaire for assessing preferences on four dimensions of the Felder-Silverman model. Part I of the instrument includes the student's personal data (name, sex and curriculum year level) while Part II covers 44 questions regarding learning styles. For each question, respondents were instructed to check either A or B to indicate his or her answer. If both A and B seemed to apply, students would choose the option that applied to him or her more frequently.

Permission to conduct the study was secured from the Campus Administrator and from the Chairman of the Criminology Department. The researchers personally administered and retrieved the questionnaires to and from the respondents. Data obtained was then subjected to descriptive analysis using frequency distribution and percentage. This analysis determined the number of criminology students in each category on the scale of measurement and the learning style preferences of Criminology students.

Results and Discussion

Learning styles of BS Criminology students as a group

When classified as a whole group, students' learning style preferences were fairly well balanced in terms of active and reflective, visual and verbal, sequential and global dimensions. Within the dimensions of sensing and intuitive learning, preferences were recorded as moderate.

Results show that the majority of participants were fairly well balanced on both active and reflective dimensions. However, 20% of the total participants (33 students) indicated a fairly well-balanced preference for the reflective dimension. This suggests that students actively think about the information taught to them rather than learning simply to retain information. These learners tend to work well alone or with another peer (Felder and Silverman, 1988).

Most participants were found to have a moderate preference to the sensing/intuitive dimension, with a larger weight on moderate preferences for sensing. These results are represented by scores which are focused on the sensing dimension. Students showed an indication to memorise facts and tended to be slow and careful in completing their work. Felder (1993) claims that to be an effective learner, one must practice both sensing and intuition.

With regards to visual and verbal dimensions, results showed that 32% of respondents (53 students) are fairly well balanced within the visual learning dimension. Visual learners are



those who easily learn when information is presented visually, such as images, graphs, charts or diagrams. Results posit that teachers' efforts to organise lessons into visual presentations are well-received by learners and highly benefit their learning processes. Further, only 2% of respondents (3 students) had very strong preferences for visuals, classing them as the only strictly visual learners in the group. Contrastingly, 7% (12 students) had very strong preferences for verbal dimensions, while 28% (46 students) were fairly well balanced for visual dimension learning preferences.

In the sequential/global learning dimension, students showed well balanced preferences for global learning. Global learners tend to learn in bits and pieces and, as a result, may understand material well enough to practically apply it in a way that sequential learners could not (Felder and Silverman, 1988).

Learning styles of BS Criminology students according to curriculum year level

Active/Reflective dimension

When classified according to curriculum year level, results show that the majority of Criminology students were fairly well balanced in two dimensions when classified to year level, except for third year Criminology students who showed a well-balanced preference. These results indicate that all year levels had little or no class time for thinking about new information; the active learners in the class were unable to fully discuss ideas or engage in problem solving activities, while reflective learners were unable to properly think about the new information provided to them.

Sensing/Intuitive dimension

The majority of the BS Criminology students from all year levels had a fairly well balanced preference for the sensing/intuitive learning dimension. Sensing involves the gathering and observation of data via the senses like sight, smell, touch, taste and hearing. Sensor learners remember and understand information best if they can see how it connects to the real world. If an intuitive student happens to be in a class that deals primarily with memorisation and rote substitution in formulas, they may experience boredom and subsequent learning issues.

Visual/Verbal dimension

The visual/verbal dimension reveals that most students across all year levels were fairly well balanced with this learning preference. This indicates that many Criminology students are visual or verbal learners who learn best with a combination of visual representations and written or spoken explanations.



Visual learners learn best with pictorial representations, including images, diagrams, flow charts, timelines, films and physical demonstrations. Felder and Silverman (1988) indicate that the way people receive information may be divided into three categories or modalities: 1) visual – sights, diagrams and symbols; 2) verbal – sounds and words, and 3) kinesthetic – taste, touch and smell. They explain that visual and auditory learning involves learning processes that perceive information through imagery and hearing, and kinesthetic learning involves a combination of these perceptions with information processing like physical movement.

Sequential/Global dimension

In the sequential/global dimension, most first year students showed moderate preferences and recorded easier learning within teaching environments that favoured this style. The second and fourth year students in the sequential/global dimension had a well-balanced preference for both dimensions. The results further indicated that students were open to the potential of learning in the solving problems. These learners may tend to learn following consistent step-by-step procedures. Conversely, third year students reported fairly well-balanced preferences for both sequential and global styles. Sequential learners tend to gain understanding in linear steps while global learners tend to learn in large jumps.

Academic achievements of BS Criminology students

Table 1: Academic achievements of BS Criminology students when classified as a group

Category	Mean	Descriptive Interpretation
Curriculum Year Level		
First Year	2.0	Very Good
Second Year	2.4	Good
Third Year	2.2	Good
Fourth Year	2.6	Fair
Entire Group	2.34	Good

Scale: 1.1-1.5	Superior
1.6-2.0	Very Good
2.1-2.5	Good
2.6-3.0	Fair

Table 1 shows the academic achievements of BS Criminology students of NIPSC Ajuy. Data reveals that students elicited good academic achievement as a whole group with a mean grade



weighted average (GWA) of 2.34. When classified according to curriculum year level, however, first year students showed very good academic achievement, second and third year students exhibited good academic achievement, and lastly, fourth year students showed fair academic achievement.

Conclusions

The majority of BS Criminology students presented fairly balanced learning preferences when examined both as a whole group and when classified according to curriculum year level. Data gathered on the learning style preferences of these students can potentially form the basis for a number of propositions to enhance student learning in the future.

When examined as a whole group, the BS Criminology students showed good academic achievements on average. When classified according to curriculum year level, first year students performed better compared to the three higher year levels, with fourth year students showing particular difficulty in performing well academically. Teachers' knowledge of which learning styles are preferred by their students, and the subsequent implementation of these different styles, could potentially improve students' academic achievements. The effect of these varied teaching styles in the classroom would not only enhance student learning according to preferred technique, but would also elicit positive behavioural effects. When students learn efficiently and effectively, for example, they are shown to perform better, gain more confidence and ultimately become more motivated to continue their education.

Recognising a student's individual learning style may aid teachers in becoming more sensitive to individual differences in the classroom, thus promoting tailored teaching practices that best suit each of these unique preferences. As stated by Cuthbert (2005 in Gappi, 2012), awareness of learning styles is vital for allowing adjustment in the educators' pedagogic approaches. Garth-Johnson and Price (2000 in Gappi, 2012) pointed out that the learner's unique learning style and their academic achievements are powerfully related.



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