

Age, Residence, Parents' Educational Attainment and Exposure to Media Affect Students' Learning Styles

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ABSTRACT

Most students are unaware of their learning styles and emotional intelligence. Thus, it is important to know one's learning styles and emotional intelligence because they can be used to increase self-awareness as to their strengths and weaknesses as learners. The study determined the learning styles and emotional intelligence of the students in the College of Technology of University of Northern Philippines, Philippines. The study utilized descriptive-correlational method of research. Results showed that student respondents have an overall high level of learning style in all of its three dimensions: visual, auditory, and kinesthetic. Also, they have an overall high level of emotional intelligence in all of its dimensions. The overall level of learning styles of the respondents is significantly related with self-motivation while visual learning style is significantly linked to self-regulation. Likewise, auditory learning style is significantly related

to self-awareness, self-motivation, social skills and the overall level of emotional intelligence. Meanwhile, kinesthetic learning style is significantly related to social awareness and self-motivation. The university should conduct an assessment of learning preferences of the students to determine their strengths and weaknesses. Likewise, emotional intelligence tests should be given to students to provide essential data on the attitudes of these students.

Keywords – Education, learning styles, emotional, intelligence, students, descriptive-correlational design, Ilocos Sur, Philippines

INTRODUCTION

Teaching and learning are two processes which involve a teacher and his student. The teacher gives the knowledge and the students receive the learning. Teaching is the teacher's responsibility while learning is the student's responsibility.

A high proportion of the studies on learning styles seemed to have been conducted in the domain of higher education (Cofeld, Moseley, Hall & Ecclestone, 2004; Guild, 1994; Hartman, 1995). Even if these studies classify different learning types and/or styles in different ways, their aims and approaches are somehow similar. Felder (1993) claims that since the instructional method around the cycle of learning models are similar, it is not important, which learning styles instrument have been preferred in each investigation. The study of Hatcher (2000) found that the sex of learners had a significant impact on their learning styles.

The teacher is the critical element in the teaching-learning process. Teachers play multiple roles in the teaching-learning process, and administrator, leader and manager roles in the classroom. Most of all, a teacher is the facilitator of learning that lays the foundation by initially establishing an environment conducive for learning. Lastly, the teacher is tasked with the selection of the appropriate subject matters along with the set of methodologies and strategies to achieve the objective.

Learning style refers to the preferred way a student wants the lesson to be presented. Sometimes, students take the process of information in different ways like information by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analyzing and visualizing, steady or in parts. Some teachers vary their teaching styles like lectures, demonstrate or lead students to

self-discovery, focus on principles and application of skills that things are learned, emphasize memory and understanding. There is an appropriate learning style that complements a specific teaching style.

To produce globally competitive instructors who are synthesizers of organized knowledge and efficient facilitator of learning. Hence, the study is forwarded. The researchers felt a strong need to conduct a study on the learning styles since Bachelor of Science in Technology students had poor performance in the National Certification Level II. In addition, the study could facilitate the identification of the learning styles of these students as future teachers. Consequently, proposals can be made from the empirical data gathered in the investigation for designing the integration of the learning styles in the curriculum program.

Finally, the researcher intends to know these variables to determine the effectiveness and weaknesses of the teaching and learning styles in Electrical Technology. Hence, the study is also the best way to evaluate the area of instruction and curriculum of the Electrical Technology, College of Technology in University of Northern Philippines, Philippines.

OBJECTIVE OF THE STUDY

The study aimed to determine the teaching style of the Electrical Technology instruction and learning styles of the students enrolled in the College of Technology in University of Northern Philippines, Philippines.

METHODOLOGY

The study used descriptive correlational method to determine the learning styles and emotional intelligence of the students in the College of Technology. Descriptive method was used to describe the learning style of the student respondents in terms of visual, auditory and kinesthetic/ tactile. Likewise, the emotional intelligence along self-awareness, self-regulation, social awareness, self-motivation, and social skills was also determined. The questionnaire used in the study was adapted from Wyman's Personal Learning Styles Inventory (1999). The correlational method was employed to look in the relationship between the personal profile and the learning styles and emotional intelligence of the Electrical Technology students. Frequency and percentage were used to determine the profile of the respondents in terms of the student-related factors. Simple correlation analysis was also used to identify the relationships between the learning styles, emotional intelligence and their profile.

RESULT AND DISCUSSION

On Visual Learning Style

The student respondents have a “High” level of visual learning style. It is significant to note that the respondents “Agree” on all the 12 items except on the item, “When I put something together, I always read the directions first” (\bar{x} =4.53) where they “Strongly Agree” while the item “I often doodle when I am on the phone or in a meeting” (\bar{x} =3.62) had the lowest mean.

This suggests that for students to help themselves, they should need the bigger picture of a subject before they can master details. Spending time on every subject in the evening is not advisable as it may be more productive to immerse themselves in individual subjects for large blocks.

This is in consonance to the statements of Felder (1993) stating that students preferentially take in and process the information in different ways: by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analyzing and visualizing, steadily and it fits and starts. Teaching methods also vary. Some instructors lecture, others demonstrate or lead students to self –discovery; some focus on principles while others on application; some emphasize memory and some on understanding.

Felder and Silverman (1988) added when mismatch exists between learning styles of most students and the teaching style of the professor, students may become inattentive in class. They got low scores in tests, get discouraged on the present course, the curriculum, themselves, and in some cases change to other courses or drop out of school. The instructors are also confronted with low test grades, unresponsiveness, poor attendance and dropouts. In addition, the instructors may begin to wonder if they are in the right profession. To overcome these problems, professors should strive to balance instructional methods. If the instructional method is balanced, all students will be taught partly in a manner they prefer which will bring an increased level of comfort and willingness to learn, and partly in a less preferred way, provides practice and feedback by ways of thinking and fixing problems which could lead them in becoming effective professionals although they may not be comfortable with it at first.

Further, this also implies that in helping themselves, instructors should determine the skipped steps or fill them in by consulting references. When students are studying, they should take the time to outline the lecture material for themselves in a logical order. The global thinking skills can be strengthened by relating each new topic where it is likely to be.

Mintz (2002) related that traditional classroom lecture focused on the presentation of content by an instructor does not promote active participation and engagement. Students just write down what the instructor writes on the board or show a PowerPoint presentation. Students also need deep rather than broad knowledge of the subject and learn differently as novices than they do as intermediate learners become experts.

On Auditory Learning Style

Auditory learning style of the respondents is at a “High” level ($\bar{x}\bar{x}=3.99$). Taking the items individually, the respondents “Strongly Agree” on the item “When I am alone, I usually have music playing or hum or sing” ($\bar{x}\bar{x}=4.21$). The respondents “Agree” with the item “When I talk, I like to say things like I hear that sounds good or that rings a bell” getting the lowest mean score of 3.71.

The “High” level of auditory learning style of the respondents is backed-up by the findings of Vincent and Ross (2001) that auditory learning is a learning style in which a person learns through listening. They may struggle to understand a chapter they have read, but then experience a full understanding as they listen to the class lecture. An auditory learner may benefit by using speech recognition tool available in many personal computers.

Vincent and Ross (2001) added that auditory learners may have a knack for ascertaining the meaning of someone’s words by listening to audible signals like a change in tone. When memorizing a phone number, an auditory learner will say it loud and then remember how it sounded and recalled it.

On Kinesthetic Learning Style

The data in Table 1 shows that the level of learning style along kinesthetic of the student respondents was at a “High” level with an overall mean rating of 3.98. Taking the items singly, the respondents “Strongly Agree” on two items: “I love working with my hands and building or making things” ($\bar{x}\bar{x}=4.42$); and “I learn best doing” ($\bar{x}\bar{x}=4.28$). Among the items where the respondents “Agree”, the item “I generally use my finger to point when I read” got the lowest mean rating of 3.59.

This conforms to the explanation of Repp and Coutinho (2009) that several different instructional techniques are utilized for students who have problems in learning, remembering, and communicating information. One of these techniques is Direct Instruction, a method based on systematic curriculum design and highly structured, fast-paced lessons in which students participate

actively and often. Another learning strategy is to enhance problem-solving skills. Instructors may also help students to work around individual learning disorders. For example, instructors may allow a student with memory problems to use a tape recorder to dictate notes and record class lectures.

Overall Learning Style

Table 1. Mean Ratings Showing the Level of Learning Style of the Electrical Technology Students

Dimensions	Mean	DR
Visual Learning Style	4.02	High
Auditory Learning Style	3.99	High
Kinesthetic Learning Style	3.98	High
Overall	4.00	High

The result conforms to the study of Burns (1995) that learning is defined as “a relatively permanent change in behavior, including both observable activity and internal processes such as thinking, attitudes and emotions”. Students have undertaken learning process using various processes such as reading, thinking, listening, observing, talking, writing etc. in both formal and informal ways. However, the aforementioned description in the statement of Brown (2004) could not give how students learn nor do they account for why they teach. Researchers have to put more effort in the area of psychology to realize various perspectives and process of learning.

Level of Emotional Intelligence of the Electrical Technology Students

The student respondents have a “High” level of emotional intelligence as supported by the grand mean rating of 4.00. The data suggest that the respondents value the emotional intelligence as backed up by Network (2015) that a number of theorists have proposed the existence of emotional intelligence that is complimentary to the type of intelligence measured by IQ tests.

Table 2. Mean Ratings Showing the Level of Emotional Intelligence of the Electrical Technology Students

Items	Mean	DR
Self-awareness	4.05	High
Self-regulation	4.06	High
Social Awareness	3.95	High
Self-Motivation	3.84	High
Social Skills	4.10	High
GRAND MEAN	4.00	High

Legend:	<u>Range</u>	<u>Item</u>	<u>Overall</u>
4.21-5.00	Strongly Agree		Very High
3.41-4.20	Agree		Highb
2.61-3.40	Undecided		Fair
1.81-2.60	Disagree		Low
1.00-1.80	Strongly Disagree		Very Low

Hautman (2008) added that awareness is the first step to better understand why you feel, what you feel and why you behave as you behave. Further, he cited that understanding gives the opportunity and freedom to change those things you would like to change about yourself and create the life you want. Without fully knowing yourself, self-acceptance and change become impossible.

Self-motivation is very imperative. There are several reasons for self-motivation. It is one thing that is very important in a person’s life. Everyone needs to be self-motivated. Dinev and Hart (2005) concluded that motivation is a driving force that encourages an individual to get going. It is a boost to the self-confidence, faith and inner conscience of a person. All of us look for some motivations in life. It is almost impossible to face competition, achieve success of accomplishing a goal without motivation.

Relationship between the Socio-Demographic Profile of the Respondents and the Level of Learning Styles

The study also determined whether the learning style of the students is related to some selected personal factors in terms of technology. There is a significant relationship between the level of learning style of the students and the following: age (r=0.1729), residence (r=0.1578), mothers’ educational attainment (r=0.1412), and exposure to media (r=0.1801). The null hypothesis stating no

significant relationship between the cited variables and the level of the learning style of the student respondents are rejected. These findings suggest that the respondents who are older, residing in urban areas, with mothers who have high educational attainment, and are exposed to the media tend to have a higher level of learning style than the respondents who are younger, residing in rural areas, with mothers who have low educational attainment, and not exposed to media.

The older the respondents are, the more experiences they had encountered, particularly when they are living in urban areas, which could have made them more mature in life leading to their better level of learning. The mother is usually the one who gives guidance to her children. Her educational attainment could have added expertise in guiding her children in their studies. The exposure of the respondents to media could have increased their ability to deal with the challenges of learning.

Sex ($r=0.0014$), father's educational attainment ($r=0.0922$), father's occupation ($r=0.0645$), mother's occupation ($r=0.0635$), and parents' monthly income ($r=0.0970$) are not significantly related with the level of learning styles of the students. This means that the level of learning style of the respondents is more or less the same whether the respondents are males or females. Also, with fathers who have high and low educational attainment, no matter the occupation of their parents and their monthly income.

Relationship between the Socio-Demographic Profile of the Respondents and the Level of Emotional Intelligence

There is a significant relationship between the level of emotional intelligence of the students and their age ($r=0.1532$), father's educational attainment ($r=0.1599$), and mother's educational attainment ($r=0.2336$). The null hypothesis stating no significant relationship between the cited variables and the level of emotional of the students-respondents is rejected. These imply that the older the respondents whose parents have high educational attainment tend to have a higher level of emotional intelligence than the younger respondents whose parents have low educational attainment.

Table 3. Correlation Coefficients Showing the Relationship between the Profile of the Respondents and the Level of Emotional Intelligence

Variables	r-value	r-prob	Decision
Age	0.1532	0.0084	Reject Ho
Father's Educational Attainment	0.1599	0.0059	Reject Ho
Mother's Educational Attainment	0.2336	0.0001	Reject Ho

* - significant at .05 probability level

The more mature an individual is, his emotional intelligence also tends to be higher. Coupled with the educational attainment of their parents, the student respondents tend to be more armed or mature with his emotions especially when dealing with his studies.

Sex ($r=0.0047$), father's occupation ($r=0.1092$), mother's occupation ($r=0.1120$), parents' monthly income ($r=0.0080$), and exposure to media ($r=0.0576$) are not significantly related with the level of emotional intelligence of the respondents. This means that the level of emotional intelligence of the respondents is more or less the same whether they are males or females, no matter the occupation of their parents and their standard of living, and no matter how their exposure to media is.

The result backed up by Johnson (2008) who stated that there is no statistical difference between learning styles and emotional intelligence based on ethnicity, age, GPA, and gender. The Gregorc Style Delineator and the Mayer-Salovey-Caruso Emotional Intelligence Test are not interchangeable instruments measuring constructs from the same domain.

Relationship between the Level of Learning Styles of the Respondents and the Level of Emotional Intelligence

There is a significant relationship in the overall level of learning styles of the respondents and self-motivation ($r=0.1181$). The findings imply that the respondents with higher levels of self-motivation tend to have a higher level of overall learning style.

Table 4. Correlation Coefficients Showing the Relationship between the Learning Style of the Respondents and the Level of Emotional Intelligence

Emotional Intelligence	Learning Styles			
	Visual	Auditory	Kinesthetics	Overall
Self-Awareness	0.0492	0.1193*	0.0572	0.0705
Self-Regulation	0.1454*	0.1042	0.0738	0.0760
Social Awareness	0.0783	0.0408	0.1856*	0.0415
Self-Motivation	0.0681	0.2201*	0.1275*	0.1181*
Social Skills	0.0692	0.1413*	0.0715	0.0263
Overall	0.0191	0.1383*	0.0886	0.0985

* - significant at .05 probability level

The student respondents with higher levels of social awareness and self-motivation tend to have a higher level of kinesthetic learning style. The data suggest that the respondents value most visual learning style. It is important to note that the National Research Council's 1999 publication revealed the following: "a) Research shows clearly that a person must be engaged to learn. People are actively participating and observing, speaking, writing, listening, thinking, and drawing; b) Learning is enhanced when a person sees potential implications, applications and benefits to others.; and c) Learning builds on current understanding including misconceptions."

In addition, Vincent and Ross (2001) stated that auditory learners which make up 20% of the population are good at writing responses to lectures they have heard. They are too good in oral examinations, effectively by listening to information delivered lectures, speeches, and oral sessions.

CONCLUSIONS

Active Learning is centered on student participation towards learning process. It became popular in the 1990s after its appearance on the Association for the Study of Higher Education (ASHE) report (Bonwell & Eison, 1991). In the report, they discussed a variety of methodologies for promoting "active learning". It was mentioned that learning requires more than just listening skills, but students should also read, write, discuss, or get involved in problem solving activities. It can be related to the three learning domains referred to as knowledge, skills and attitudes (KSA), and that this taxonomy of learning behaviors can be thought of as "the goals of the learning process" (Bloom, 1956). It is also recommended that

students should be engaged in such higher-order thinking tasks such as analysis, synthesis, and evaluation. Active learning enables students perform and at the same time think about the tasks given to them.

In the study, student respondents have an overall high level of learning style in all of its three dimensions: visual, auditory, and kinesthetic. The student respondents have an overall high level of emotional intelligence in all of its dimensions: self-awareness, self-regulation, social awareness, self-motivation, and social skills. The learning style of the students is significantly related to their age, residence, mother's educational attainment and exposure to media. The emotional intelligence of the students is significantly related to their age and their parents' educational attainment. The overall level of learning styles of the respondents is significantly related with self-motivation. Visual learning style is significantly related to self-regulation. Auditory learning style is significantly related to self-awareness, self-motivation, social skills and the overall level of emotional intelligence. Kinesthetic learning style is significantly related to social awareness and self-motivation.

To the findings of the study is important for inventories of learning styles and processes can be used to help students be aware of their preferences and strengths as stated by Thanasoulas (2000). Attention should also be specified to help students develop strategies for succeeding in the course taught in ways that are incongruent with their primary learning abilities.

TRANSLATIONAL RESEARCH

The results of the study will show what aspect or dimensions needs to be improved or develop. Educators should design or create activities that could suit the learning styles of the students. This way, students will be motivated to study harder and not focus only in their situation and that they care about them. Administrators, faculty members and even the guidance counsellors of the College of Technology work hand in hand in improving the level of emotional intelligence of the students, not just during the completion period, but all throughout the year to sustain the teaching and learning process.

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