

Learning Styles and Multiple Intelligences of Selected Business Administration Students

Rowanne Marie R. Maxilom^{1,2}

¹Department of Communications, Linguistics & Literature, University of San Carlos, Cebu City, Philippines

²Department of Teacher Education, Cebu Technological University, Cebu City, Philippines

Email address:

rmmaxilom@gmail.com

To cite this article:

Rowanne Marie R. Maxilom. Learning Styles and Multiple Intelligences of Selected Business Administration Students. *International Journal of Education, Culture and Society*. Vol. 1, No. 3, 2016, pp. 95-100. doi: 10.11648/j.ijecs.20160103.16

Received: December 2, 2016; **Accepted:** December 19, 2016; **Published:** January 20, 2017

Abstract: This study determines and analyzes the learning styles and multiple intelligences of the selected Bachelor of Science in Business Administration students of the University of San Carlos. The respondents answered the VARK Learning Styles Test questionnaires and McKenzie's (1999) Multiple Intelligence Survey. The results of this study provide implications for pedagogy, teaching styles, curriculum, and workbook preparation, especially in Purposive Communication intended for School of Business and Economics students.

Keywords: Administration, Business, Learning, Multiple Intelligences, Styles

1. Introduction

As observed, the English 2 SBE classes of the researcher has usually handled are very energetic, talkative, and less motivated during class discussion. In fact, the students' ability to talk can result in too much noise and misunderstanding in the classroom setting. Such observations led the researcher to determine the learning styles and multiple intelligences of the students in order to align the teaching styles with the BSBA student's learning styles and multiple intelligences.

So far, there have been studies on learning styles (e.g. [5]; [4]; [9] while there have been empirical papers on multiple intelligences (e.g. [10], [2], [3], [7]). On the one hand, none of these studies focused on university students' learning styles including multiple intelligences from the School of Business and Economics. This present study fills this research gap in integrating learning styles and multiple intelligences of selected business students in English class since the reviewed previous studies only focused on the learning styles separately from the multiple intelligences.

This study would surely provide pedagogical implications for teaching styles, strategies, and activities, curriculum development, and preparation of instructional materials such as workbooks/textbooks intended for students from the

School of Business and Economics. Hence, this study aims to determine the learning styles and multiple intelligences of the selected students. This study will also help the teachers in understanding the learners with diverse learning styles and corresponding multiple intelligences and use suitable activities that align with the students' learning styles and multiple intelligences.

1.1. VARK Learning Styles



The source of the image in Figure 1 was taken from www.google.com.

Figure 1. VARK Learning Styles.

Fleming & Mills [15] suggested four modalities that reflected the experiences of both teachers and students. However, this study focused on the students' learning styles. These are the four modalities (i.e. learning styles): visual (V), aural (A), reading/writing (R), and kinaesthetic (K).

First, visual learners can get information from maps, spider diagrams, charts, graphs, flow charts, and other symbolic figures that learners use instead of words. In the second type, the aural/auditory learners prefer to learn from lectures, group discussion, radio, e-mail, mobile phones, speaking, web-chat and talking things through. Also, this type of learner involves talking out loud and self-talk. They also introduced the third modality which is reading/writing [15]. The learners of this type focus on text-based input and output, that is reading and writing in all forms especially manuals, reports, essays, assignments, power point, the Internet, lists, diaries, dictionaries, quotations, and words. The last category of VARK modalities is kinesthetic. The kinesthetic learners prefer demonstrations, simulations, videos and movies of real things, case studies, practice and applications. These learners learn by doing.

In regard to learning styles, the empirical studies of the following were reviewed: [5], [4], [14] and [9]. This study attempted to identify which of the variables might act as predictors appropriate for the styles correlated with the students' interpretation of virtual education [5]. The short questionnaires with Kolb's list of learning styles were distributed to the respondents of the study. Then, this study concluded that learning educational performance. Correlations were also evident among personality traits, interests, motivations and the intelligence of learners.

This study is similar to the present study since it also focused on students' learning styles, however, the method used was correlation unlike in the present study which used the descriptive method [5].

Second, the study [4] aimed to identify the difference and similarities of learning styles through an action research. This study used a questionnaire based on Gardner's theory of multiple intelligences and learning styles [4]. The results of this study revealed that there were differences of learning styles because of the students' exposure to the various VAK teaching styles. On the other hand, the present study did not only focus on visual, auditory/aural and kinesthetic, but also included reading among the learning styles of students using the questionnaires.

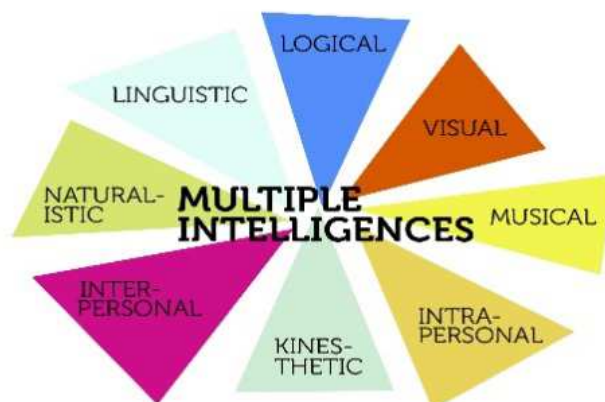
The third study [14] showed the findings of their pilot study that aimed to detect the learning styles among selected university students who are exposed to the modern technologies. Standardized questionnaires ILS (Index of Learning Styles) were used as the instrument of the study. Learners of this study were categorized as (i) active and reflective learners, (ii) sensing and intuitive learners, (iii) visual and verbal learners, (iv) sequential and global learners. As found, the university education students who were active and reflective learners predominated. In the present study, the learners, however, were classified into visual, auditory, reading and kinesthetic. The present study would not focus

more on students exposed to modern technology.

Lastly, a study on the learning styles of the students of the aforementioned university and presented their paper on March 11, 2016 during the USC Research Conference in USC Talamban Campus [9]. The VARK questionnaires developed by Flemming (1987 in [9]) were used in identifying the students' dominant learning styles. It was found that most of the students were predominantly auditory. Their study also involved gender as a factor in analyzing the students' learning styles. On the one hand, this present study dealt with the specific group of students (i.e. BSBA) in a particular class which also included multiple intelligences.

Overall, these studies had various focal points in investigating learning styles of students whether in the improvement of the curriculum of the students undertaken and alignment of teaching style, etc.

1.2. Multiple Intelligences



The source of the image in Figure 1 was taken from www.google.com.

Figure 2. Howard Gardner's Multiple Intelligences?

Howard Gardner developed the theory of multiple intelligences which consist of six categories which reached to nine categories [8] from the "Thirteen ed. online" (2004 in [8]), these are the following:

- i Verbal-linguistic intelligence (i.e. well-developed verbal skills and sensitivity to the sounds, meanings, and rhythms of words),
- ii Logical-mathematical intelligence (i.e. ability to think conceptually and abstractly, and capacity to discern logical and numerical patterns),
- iii Spatial-visual intelligence (i.e. capacity to think in images and pictures to visualize accurately and abstracts),
- iv Bodily-musical intelligences (i.e. ability to control one's body movements and to handle objects skillfully),
- v Musical intelligence (i.e. ability to produce and appreciate rhythm, pitch and timber),
- vi Interpersonal intelligence (i.e. capacity to detect and respond appropriately to the moods, motivations and desires of others),
- vii Intrapersonal intelligence (i.e. capacity to be self-aware and in tune with inner feelings, values, beliefs, and

thinking skills),

viii Naturalistic intelligence (i.e. ability to recognize and categorize plants, animals, and other objects in nature), and

ix Existential intelligence (i.e. sensitivity and capacity to tackle deep questions about human existence).

In contrast, existential intelligence was not included in the questionnaire used in the present study.

Furthermore, studies on the multiple intelligences include the following: [10], [2], [3], and [7] were reviewed. First, [10] focused on the multiple intelligences profiles and academic performance of intermediate pupils of St. Joseph's School. This study helped in the preparation of exemplary lesson plan. However, the present study focused on the college students not pupils.

Second, the researchers [2] identified the dominant intelligence areas of students based on the multiple intelligences theory as well as looked into the elements. In this manner, the scanner model which described the present situation was used. The 7th grade students participated in this study who answered Cepni's multiple intelligence inventories [2]. Also, SPSS software was used in the statistical analysis. Results demonstrate that naturalistic, interpersonal, and verbal intelligences predominated. To compare this with the present study, this study only focused more on the multiple intelligences. The present study dealt with the learning styles aside from the multiple intelligences. The present study used another questionnaire for the multiple intelligences.

Moreover, the study highlighted the research perspective of the evaluation of students' potential and profiles that were generated by the administration for the design instruction [3]. Still, using the ontological philosophical approach, the questionnaires were administered to two groups of grades 5 and 6 pupils. Results showed that there was a relevance of the type and quality of students' potential. For the differences, this study had younger participants compared with the present study.

Finally, another study provided applicable ideas for English teachers concerning the designing of materials through needs analysis with multiple intelligence theory as the focus [7]. Similar to the previously reviewed study, an inventory of multiple intelligences adapted by the researcher in [7] was used. The participants were 8th graders. As a result, the two classes differed in the most enhanced type of multiple intelligences. In fact, the bodily-kinesthetic & interpersonal intelligences dominated in class 1 while class 2 considered interpersonal intelligences as the most important.

To sum up, none of these studies focused on university students' multiple intelligences and these studies used various inventory of multiple intelligences.

2. Methodology

2.1. Research Design

This study is a descriptive study since it deals with the learning styles and multiple intelligences of the selected

Bachelor of Science in Business Administration of the University of San Carlos.

2.2. Research Environment

This study was conducted in a class with freshmen students taking up Bachelor of Science in Business Administration at the University of San Carlos-Downtown Campus during the Second Semester AY 2016-2017.

2.3. Research Respondents

The respondents of this study were the selected thirty-four (34) Bachelor of Science in Business Administration students of the University of San Carlos. Purposive sampling was used in selecting the respondents. These are the following criteria: (i) the respondent should belong to the School of Business and Economics (ii) the respondent should be able to answer the two tests. Respondents who answered the questionnaire on the learning styles were only thirty-two since the two students did not answer some of the items of the questionnaire.

2.4. Research Instruments

Two questionnaires were used in this study. The first questionnaire which was accessed in this website, <https://www.sportscoachuk.org/sites/default/files/VARK-Learning-Preferences-Questionnaire.pdf>, was intended for the VARK learning styles of the respondents. This twelve item- questionnaire consists of the possible preferred learning methods of learners whether they preferred visual, art, reading or kinesthetics. For the multiple intelligences of the respondents, this study used McKenzie's (1999) Multiple Intelligences Survey.

2.5. Research Procedure

- I Gathering of Data. These are the steps in gathering the data: First, the researcher asked permission from her students in one of her classes in the University of San Carlos-Downtown Campus. Second, the first questionnaire for the VARK learning styles was distributed. Then, the following meeting, the second set of the questionnaire on multiple intelligences test was distributed to the same class of students. Third, the data were tallied, tabulated, interpreted, and analyzed.
- II Treatment of Data. In analyzing and treating the data, the theories on VARK Learning Style and Gardner's Multiple Intelligences were used.

3. Results

This section presents the results of this study on (i) the learning styles of selected BSBA Students of the University of San Carlos and (ii) multiple intelligences of the same group of students.

3.1. Learning Styles

Table 1. Learning Styles of Selected BSBA Students N = 32.

VAR K Learning Styles	f
Visual Learner	0
Auditory	14
Read/Write	15
Kinesthetic	8

The data revealed that reading (15) predominated among the VARK learning styles. This implies that this group of students prefers to read more articles and learning materials related to Business and economics. To align this particular learning style with the teachers' style, more reading materials will be assigned to the students to read in order to get their attention and satisfy their need to read.

To sum up, this group of participants whose course is Business Administration students preferred read/write, auditory and kinesthetic learning styles.

3.2. Multiple Intelligences

Table 2. Multiple Intelligences of Selected BSBA Students N=34.

Types of Multiple Intelligences	Total	Weighted Mean
Nature Smart (naturalistic)	228	6.7
Music Smart (musical)	213	6.2
Logic Smart (logical-mathematical)	199	5.8
Picture Smart (visual-spatial)	215	6.3
People Smart (interpersonal)	230	6.7
Body Smart (kinesthetic)	238	7.0
Word Smart (verbal-linguistic)	209	6.1
Self Smart (intrapersonal)	270	7.9

Table 2 illustrates the various types of multiple intelligences of the selected BSBA students. Among the intelligences, self-smart (i.e. intrapersonal intelligence) was the highest weighted mean.

4. Discussion

4.1. Learning Styles

Concerning the learning styles, this study supports the study on the gender differences in students' learning styles that showed that read/write modality was the most preferred learning styles of the students [9]. Furthermore, the article titled "Read/write learning styles" [15] stated that most power point presentations and the Internet, Google and Wikipedia are suitable to those students with reading/writing learning style. This is supported by the researcher's observation of her students. As a matter of fact, business use is also based on reading and writing [15]. So, reading/writing learning style is very useful to the students with business administration background.

However, this predominance of reading/writing contradicts the results of [1] wherein the dental students who were the participants of the study preferred kinesthetic compared to reading/writing. This can be attributed to the students' area of

specialization.

Other learning styles evident in the data were auditory (14) and kinesthetic (8). This also implies that activities involving auditory enhance their listening ability and movement for kinesthetic. According to "What is my learning style" [17], auditory learners enjoy classroom and small-group discussion. This is quite reflected on the researcher's class with business administration students who are very interested in group discussion. In [9], only the male participants were found to be kinesthetic and auditory.

Surprisingly, none of the students were considered visual. On the contrary, female participants were visual learners [9]. In addition, high school students were mostly visual learners [6].

4.2. Multiple Intelligences

According to "Howard Gardner's" [8], intrapersonal intelligent learners are those who are self-aware and involved in the process of changing personal thoughts, beliefs, and behavior in relation to their situation" (p. 9). To support this finding, the study on optimizing linguistic intelligence through multiple intelligences with Asian College of Technology freshmen students found that intrapersonal intelligence was one of the predominant multiple intelligences of the participants aside from the interpersonal and linguistic intelligences [16]. It is however surprising that this group of students is found to be self-aware and involved in the learning process because the researcher at first perceived them to be restless and lack of focus. It implies that the teachers should know more about their learners. They do not stick to the assumptions and hypothesis only. Instead, they could conduct action research to know the reasons why students are sometimes restless. Teachers can also reflect on the teaching strategies they use in BSBA students and be sure that these teaching styles are aligned with their learners' multiple intelligences.

Moreover, body smart was the second highest weighted mean. This result validated the findings of the learning style in the previous table with kinesthetic also. Moreover, the study on the multiple intelligences profile of intermediate pupils, especially Grade 6 pupils had the dominant bodily-kinesthetic intelligence, 2nd among the eight multiple intelligences [10]. Furthermore, a study supports this study with bodily-kinesthetic and interpersonal intelligences that were also evident in the learners [7].

Finally, two intelligences got the same weighted mean. These are nature smart (naturalistic intelligence) and people smart (interpersonal intelligence). This study affirms the previous study [10] which found that naturalistic as well as interpersonal intelligences ranked first and second, respectively among Grade 6 pupils. In the same study, the naturalistic intelligence ranked third among the Grade 5 pupils. Overall, the BSBA students of this study had multiple intelligences such as intrapersonal, kinesthetic, intrapersonal and naturalistic intelligences which can provide pedagogical implications.

5. Conclusions

This section focuses on the conclusions and recommendation of this study.

5.1. Conclusion

Among the VARK Learning styles, reading and writing play a significant role in the learning process of the selected BSBA students. Based on the findings, the four multiple intelligences such as intrapersonal, bodily-kinesthetic, naturalistic and interpersonal can be the basis in designing the curriculum, teaching styles and strategies, workbook preparation to make these activities suitable to the intelligences of the learners.

5.2. Recommendations

Based on the findings and conclusions of this study, these are the following recommendations.

First, the teachers handling Bachelor of Science in Business Administration Students should align their teaching style, strategies, activities, and learning materials with the students' learning styles and multiple intelligences. Second, the English syllabus intended for School of Business and Economics can be modified with the activities tapping different learning styles, especially read/write, auditory and kinesthetic, and multiple intelligences of the students such as intrapersonal, kinesthetic, interpersonal and naturalistic. Third, the authors of textbooks/workbooks can also integrate the various learning styles specifically reading/writing with the preparation of books for this group of students. Fourth, the students from the School of Business and Economics can be assigned to read and write more articles related to their areas of specialization since they are into reading and writing.

Fifth, based on their preferred learning styles and multiple intelligences, these are the possible activities this group of students prefers: a. Read short and authentic articles and materials quite relevant to Business and Economics. (read/write& visual learning styles), b. Write reflection and reaction papers. (read/write learning style; intrapersonal intelligence), c. Group presentations using the power point presentations (read/write& auditory learning style), d. Watch video clips/movies on topics related to Business and Economics. (visual, audio, read/write learning styles), e. Field work/Projects (e.g. interview successful entrepreneurs, visit developers and/or real estate projects, etc.) (naturalistic, interpersonal & kinesthetic intelligences).

Acknowledgements

This research was made possible because of the following persons: Dr. Reynaldo Inocian, DPE Professor at Cebu Technological University-Main Campus for motivating the researcher to pursue this study; USC BSBA English 2 SBE Class 430 p.m. to 6 p.m. TTh Class), for answering the questionnaires; USC LRC Filipiniana librarian and working scholars for helping the researcher in gathering related

studies; supportive family, friends, and PO3 Melchor B. Mangompit, for continuously encouraging the researcher to conduct research.

References

- [1] Asiry, Moshabab (2016). Learning styles of dental students. *The Saudi Journal of Dental Research*, 7, 13-17.
- [2] Aydemir, Hasan & Karali, Yalçın (2014), Study of secondary school students' multiple intelligence areas (Malatya case), *Procedia - Social and Behavioral Sciences*, 152, 167-172.
- [3] Avram, Vîrtop Sorin (2014). Possibilities of instruction based on the students' potential and multiple intelligences theory, *Procedia - Social and Behavioral Sciences*, 191, 1772-1776.
- [4] Bhattacharyaa, Ena & Sarip, Ameri Bin Mohd (2014), Learning Style and Its Impact in Higher Education and Human Capital Needs, *Procedia - Social and Behavioral Sciences*, 123, 485-494.
- [5] Fariba, Tabe Bordbar (2013). Academic performance of virtual students based on their personality traits, learning styles and psychological well being: A prediction, *Procedia-Social and Behavioral Sciences*, 84, 112-116.
- [6] Favorito, Nicetas. (2009). The effect of the use of internet on students learning styles and values formation. *Unpublished master's thesis at the University of San Carlos, Cebu City*.
- [7] Gurkaynak, Evren (2015). A textbook adaptation using data gathered by a multiple intelligence inventory, *Procedia - Social and Behavioral Sciences*, 199, 285-292.
- [8] "Howard Gardner's theory of multiple intelligences". Retrieved on May 8, 2016 from the WorldWide Web at http://www.niu.edu/facdev/resources/guide/learning/howard_gardner_theory_multiple_intelligences.pdf.
- [9] Jacel, L., Elcullada, L., Abejar, G., Alquezola, T., Batocoy, E. M., Camomot, S., Co, M. J., Flores, A., Galeos, J., Go, C., Gorgonio, A., Lo, C., Olita, C. & Requilme, L. (2016). Paper presented during the University Research Conference on March 12, 2016.
- [10] Labitoria, Agnes. (2006). Multiple intelligences profile and academic performance of St. Joseph's School Mactan: Proposed Exemplar Lesson Plans. *Unpublished master's thesis at the University of San Carlos, Cebu City*.
- [11] McKenzie, W. (1999) Multiple intelligences survey. Retrieved March 24, 2016 from the World Wide Web at <http://surfaquarium.com/MI/inventory.pdf>.
- [12] "Personal development plan and training needs analysis tools" (2016). Retrieved on April 14, 2016 from the World Wide Web at <https://www.sportscoachuk.org/sites/default/files/VARK-Learning-Preferences-Questionnaire.pdf>.
- [13] "Read/write learning styles" (2016). Retrieved on May 9, 2016 from the World Wide Web at https://www.scss.tcd.ie/~doyleth/reachteach/index.php?option=com_content&view=article&id=162&Itemid=210.
- [14] Svarcova, Eva & Jelinkovi, Kristý (2016) Detection of Learning Styles in the Focus Group, *Procedia - Social and Behavioral Sciences*, 217, 177-182.

- [15] "The VARK modalities". Accessed on May 8, 2016 from the World Wide Web at <http://vark-learn.com/introduction-to-vark/the-vark-modalities/>.
- [16] Verano, Mardy. (1998). Optimizing linguistic intelligence through multiple intelligences strategies. Unpublished master's thesis at the University of San Carlos, Cebu City.
- [17] "What is my learning style?" (2016) Retrieved on May 9, 2016 from the World Wide Web at <http://www.whatismylearningstyle.com/auditory-learner.html>.