

An Introspective Study: Re-enforcing Higher Education Learning through Learning Styles over the contemporary Disruptive Education of the Covid-19 Era

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ABSTRACT: This is a research paper of the outcome of an introspective study in a SEED-GRANT 2020. Despite the contemporary learning reinforcements at the higher education level, learners' plight on the existing common methodology of learning is identified as a gap or constraint that needs to be addressed effectively on catering learning reinforcement through appropriate learning styles which suits individual learners. This study brings in the focus on lifting the constrain, with a clear study of the background, need and scope and eventually links to the Applied Research study. The study focuses on profiling the learners according to visual, verbal and social learning styles. The Convenience Sampling technique was employed for the research and 188 students from General Education, Business and Engineering were assessed. The results of this study indicate that the learners' learning style varied significantly across 3 Schools of study.

Keywords: Visual learning style, Verbal learning style, Social learning style, Disruptive Education, Covid-19 era Higher Education Learning

1. Introduction

Higher Education Teaching and Learning though thrives to its full potential, despite the COVID 19 pandemic regulations and challenges, thanks to the disruptive technology, there are learners who face new challenges with the online learning. The Higher Education concept views students as clients and the academic faculty members as facilitators (service providers) (Tjeldvoll, 1997).¹ wherein institutions have in prospect that the members of the faculty meet the demands of the students making the learning environment flexible. Sternberg (1997) wrote that one of the mistakes done by lecturers at higher institutions is failing to recognize learning and thinking styles of students. As a result, lectures and learning activities were conducted in a manner that does not match or suits the students. This can only be achieved when faculty members are aware of students learning style and its impact on academic performance. Therefore, there is a need to profile students on their learning preferences in order to improve their learning efficiency.

1.1. Background of the study

Higher Education Institutions (HEIs) have invested significantly in digital technologies for learning and teaching; Virtual Learning Environments (VLEs) are universal. However, technologies provided by HEIs have not been universally successful in terms of adoption and usage (Blin & Munro, 2008). Faculty members and students use technologies not owned or controlled by HEIs to support and enhance their learning and teaching. Several researchers have anticipated that the use of technologies in learning and teaching would disrupt learning and teaching practices in higher education (Blin & Munro, 2008); (Sharples, 2003). Covid-19 pandemic has switched the entire teaching and learning online, adopting various technologies to reach out to the students, inline with the safety norms and social distancing. This newly emerged disruptive technology environment adaption, no wonder, has also levied equal and more stress to the learning side of the process in various courses across the disciplines. Disruptive technologies are those that disrupt established practices, often starting with a small number of users, but growing over time to the extent that they displace a previously dominant, incumbent technology.

1.2. Reviewing Research

Brown (2000) defines learning styles as the manner in which individuals perceive and process information in learning situations. He argues that learning style preference is one aspect of learning style, and refers to the choice of one learning situation or condition over another. Celcia-Murcia (2001) defines learning styles as the general approaches—for example, global or analytic, auditory or visual—that students use in acquiring a new language or in learning any other subject. The manner in which a learner perceives, interacts with, and responds to the learning environment. Learning style is sometimes defined as the characteristic cognitive, affective, social, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment” (MacKeracher, 2004) According to Grasha (1996), learning style is a personal quality that influences a student’s ability to acquire information, to interact with peers and teachers and otherwise participate in learning experience (p 41). Grasha and Riechmann assessed the learning styles of college students on the different ways’ individuals approach the classroom environment (Keefe, 1979).

In order to achieve the ultimate goal of student learning it is important to use a combination of teaching methods and to make the classroom environment as stimulating and interactive as possible. Students learn in many different ways. Some students are visual learners, while others are auditory or kinaesthetic learners. Visual learners learn visually by means of charts, graphs, and pictures. Auditory learners learn by listening to lectures and reading (Cuaresma, 2008)

It is viewed as visual learners think in pictures and learn best in visual images. They depend on the instructor’s or facilitator’s non-verbal cues such as body language to help with understanding. Sometimes, visual learners favor sitting in the front of the classroom. They also take descriptive notes over the material being presented (LdPride, 2009). Verbal individuals discover information through listening and interpreting information by the means of pitch, emphasis and speed. These individuals gain knowledge from reading out loud in the classroom and may not have a full understanding of information that is written (LdPride, 2009).

As they look from the social and affective perspective that deals with patterns of preferred styles for interacting with teachers and peers, their styles are classified as social interaction scales (Anthony F. Grasha, 1984). Social learners like to study and learn in groups rather than individually. They easily get accustomed to large groups and are ready to accommodate different team players. 'Social learning builds a sense of community, creates standards or reference points, and offers alternative perspectives.' (Douglas, J., & McKenzie, S. (2016). This style of learning if encouraged might help to determine leadership quality in students.

1.3. Research gap

Contemporary academia learning, in spite of its disruptive educational technology, as observed by the researchers, gets the learners learning over longer periods of time. Learners are currently exposed to work on all the activities, and accents of the disruptive technology, and have no time to buy for themselves, resulting in an unhealthy exhaustive lifestyle. However, other available interactive modes of delivery don't get higher adaptability. How well can we fill in this constraint in learning?

1.4. Research Questions

The present study intends to answer the following questions

1. Is there a significant difference in learning styles based on the programs, students have enrolled in General Education, Business and Engineering?
2. Which learning style is dominant among the students in each of the schools General Education, Business and Engineering?

2. Methodology

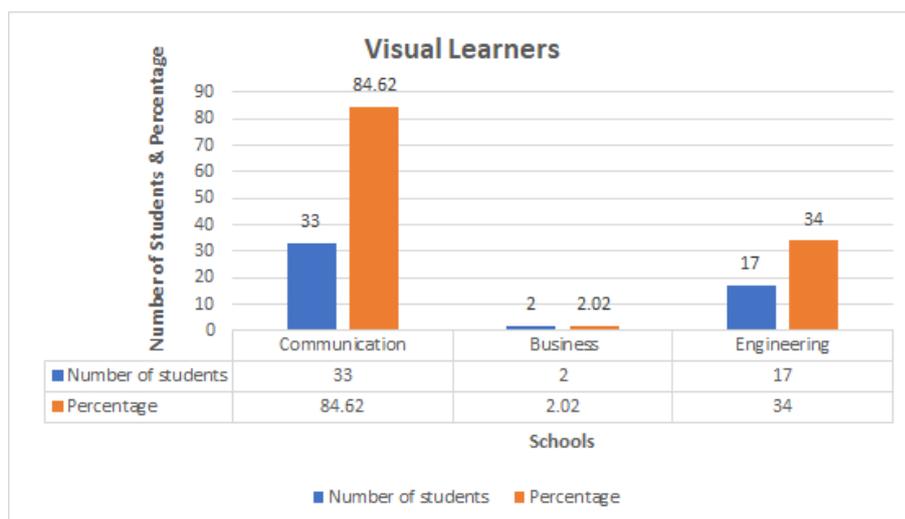
The present study focuses on profiling the learners according to 3 learning styles namely Visual, Verbal and Social learning styles. The researchers from three different backgrounds General Education, Business and Engineering assessed the students based on their respective courses they had taught during the period August 2020 to December 2020 viz., CM1040, HN1110, HN1120, CSD1055, MC1704, PT1250 to identify which learning styles the students fall into and in the process, the research identifies if students from different departments have affinity towards any specific learning style. The assessment was planned into three parts of ten questions each. The visual and verbal learning questions were assessed in Desire to Learn (D2L) platform and the Social styles was assessed using Kahoot. To reinforce the taught courses, quizzes in D2L and Kahoot were prepared by the Principal Investigators for their respective courses and quizzes were conducted in varied numbers with respective to their schools based on the number of students who had opted the courses. The Convenience Sampling technique was employed for the research and 188 students were assessed as a part of the research in which 39 students were from School of General Education (Communication (COM)), 99 students from School of Business (Human Resource Management (HRM)) and 50 students from the School of Engineering (Safety (SAF)).

3. Results and Analysis

The students were assessed based on the courses taught and ten questions each in visual, verbal and social were provided to the students aiming to understand the learning style they fall into. Percentage analysis was done on the three types of quizzes for students in COM, HRM and SAF.

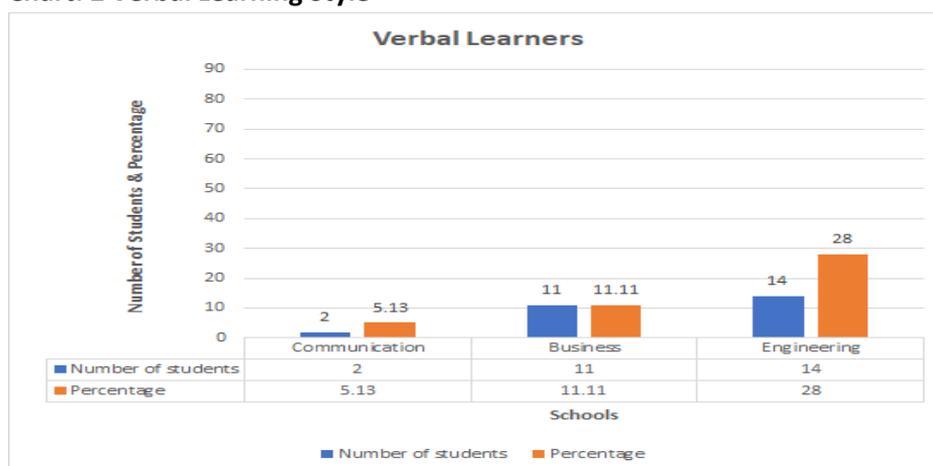
The charts are based on the partial findings of the research. The representations are based on learners' classification according to their three learning styles Visual, Verbal and Social.

Chart: 1 Visual Learning Style



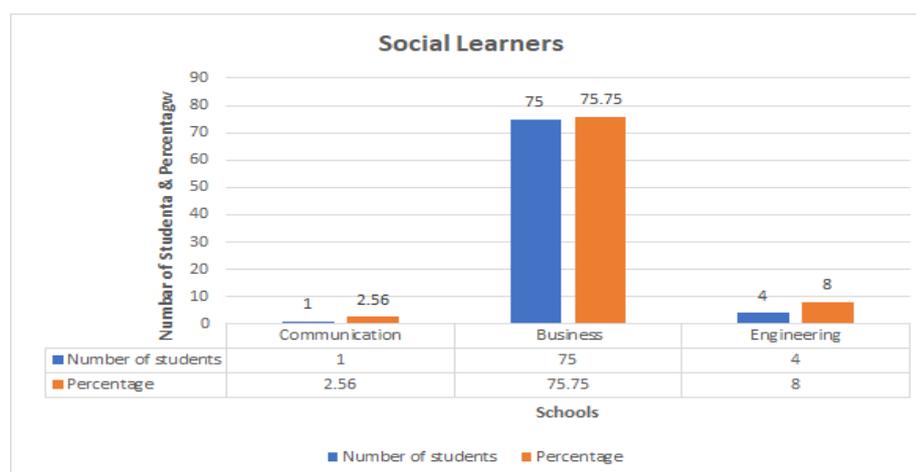
From the Chart 1, we infer that the COM shows 85% as more pronounced in the Visual Learning Style category with SAF and HRM showing 34% and 2 % respectively. This could be because of the hands-on learning methodology followed by the School in majority of the courses.

Chart: 2 Verbal Learning Style



From the Chart 2, it is clear that the 28% of the students in the SAF are Verbal learners with 11% in HRM and 5% in COM. Though we see that the highest percentage is in the School of Engineering, this style falls in the second category as the most preferred learning style though their first priority was Visual Learning Style.

Chart: 3 Social Learning Style



From Chart 3, we can understand that the majority, 75% of the HRM (Business) students are social learners, who collaborated well within groups towards answering the synchronous quiz. On the contrary, only around 8% of SAF (Engineering) and 2.56% of COM (Communication) students preferred this learning style.

4. Discussion

The results of this study indicate that the learners' learning style varied significantly across COM, HRM and SAF. While COM and SAF had the students with priority as Visual learning style, HRM students scored high in the Social learning style. These findings suggest that learning styles are subject area sensitive, that a majority of the students perceive different disciplines require different learning strategies, and that they are able to adapt or style-flex to meet the requirements of the learning task. This finding is consistent with previous research confirming that students do have the ability to style-flex from their preferred learning styles to meet the learning strategy requirements of other learning situations (Cornett, 1983); (Entwistle, 1981); (Kolb, 1984); (Ornstein, 1977).

The research study also records some of the outliers as 'Exceptional' and 'Low scores'. Students who excelled in more than one learning style are recorded thus: COM (7.7%), HRM (2%) and SAF (26%) as 'Exceptional'. Similarly, there were students who scored low in more than one learning styles, i.e, COM (2.6%), HRM (9%) and SAF (4%). The way forward for these students will be to analyze further their learning styles, while on other hand, the respective schools shall consider strengthening and reinforcement from the Foundation Program.

The findings of this study have important implications for community college research and instructional practice. First, although students may have some intuition regarding how they learn, many may simply not be consciously aware of their learning preferences in general, let alone learning in different disciplines. Increasing student awareness of their own learning styles may be quite helpful in increasing control of their learning habits and strategies, which should, in turn, influence their academic performance.

5. Concluding Remarks

Upon summation, there is a significant difference recorded on the learning styles of learners based on the programs as well as dominant styles of learning among the students in each of the schools, General Education, Business and Engineering. Therefore, this study calls attention to the re-enforcement of

higher education learning through appropriate learning style, as learners are totally onto the disruptive learning platform during Covid-19 era.

6. Limitations and future research

The scope of the further research could be based on exploring multiple variables like gender, experience, exceptional categories wherein students are experts in more than one styles or much lower in more than one style. Attempt could be made to explore involving Artificial Intelligence techniques in choosing the appropriate learning styles when we handle large database in colleges/ universities or region-specific students.

CONFLICTS OF INTEREST

There are no conflicts to declare.

REFERENCES

- [1] Anthony F. Grasha. (1984). Learning Styles: The Journey from Greenwich Observatory (1796) to the College Classroom (1984). *Improving College and University Teaching*, 32(1), 46-53.
- [2] Blin, F., & Munro, M. (2008). Why hasn't technology disrupted academics' teaching practices? Understanding resistance to change through the lens of activity theory. *Computers and Education*, 50, 475-490.
- [3] Brown, H. D. (2000). *Principles of language teaching and learning* (4 ed.). New York: Longman.
- [4] Celce-Marcia, M. (2001). *Teaching English as a second or foreign language*. New York: Dewey Publishing Services.
- [5] Cornett, C. E. (1983). What you should know about teaching and learning styles. In *Fast Back* (p. 191). Phi Delta Kappa Educational Foundation.
- [6] Cuaresma, J. (2008). *Learning Style Preferences and Academic Performance of PHEM Majors at the University of the Cordilleras*. Baguio City: Unpublished Undergraduate Thesis. University of the Cordilleras.
- [7] Entwistle, N. (1981). *Styles of learning and teaching: An integrated outline of educational psychology for students, teachers and lecturers*. New York: Wiley.
- [8] Grasha, A. F. (1996). *Teaching with style: A Guide to Enhancing Learning by Understanding Teaching and Learning Styles*. Pittsburgh: Alliance Publishers.
- [9] Keefe, J. W. (1979). Learning Style: An Overview. In *NASSP's Student Learning Styles: Diagnosing and prescribing program* (pp. 1-17). Reston, VA: National Association of Secondary School Principals.
- [10] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs: NJ: Prentice-Hall.
- [11] LdPride. (2009). *What are learning styles?* Retrieved from <http://www.ldpride.net/learningstyles.MI.htm>

- [12] MacKeracher, D. (2004). *Making sense of adult learning*. Canada: University of Toronto.
- [13] Ornstein, R. E. (1977). *The psychology of consciousness*. New York: Harcourt: Brace, Jovanovich.
- [14] Sharples, M. (2003). Disruptive devices: mobile technology for conversational learning. *International Journal of Continuing Engineering Education and Lifelong Learning*, 5(6), 504-520.
- [15] Sternberg, R. (1997). *Thinking styles*. New York: Cambridge University Press.
- [16] Tjeldvoll, A. (1997). A service university in Scandinavia. *Studies in comparative and international education*, 1(9).



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