VIRTUAL EDUCATION SYSTEM: A RESPITE FOR OUT-GROUP TEEN STUDENTS

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Abstract

The recent pandemic has presented a unique opportunity to test the impact of remote learning on students globally. Despite several shortcomings, the virtual education system had a beneficial effect on students who have been outcasted, bullied, or othered. Often, it is observed that the teenagers who are more likely to be bullied and display neuroticism, are shy and introverted. Studies have shown that intrinsic motivation is the key for the mind development of shy teenagers and operant conditioning strategies often fail, impacting their minds negatively.

Analyzing the personality traits on data collected through 126 surveys conducted in-person, electronically, and over phone, I observed that the statistically significant number of students who prefer a virtual education system over an in-classroom environment, are typically shy-natured and had faced some forms of othering situations while attending school in-person. Many were demotivated, disengaged, and felt un-included in traditional schools, stressing them towards behavior alteration, fake liking, and many times developing an aversion towards the school system itself.

Much of my initial research is conducted at Fulton Academy of Virtual Excellence (FAVE), a K-12 virtual public school based in Fulton County, Georgia, USA, which first opened its virtual classes during the pandemic and continues to enjoy popularity among certain sectors of the student population even in the post-pandemic era. The research here points out that an opportunity exists to extend the strategies that make up an effective virtual education system for teenagers to create leaders suitable for modern-day needs, because intrinsically motivated minds are found to be more effective leaders in the new knowledge economy.

Keywords: Virtual, shyness, othering, intrinsic motivation, knowledge economy.

1. Introduction

As a 10th grade student with exposure to both in-person and online schooling due to the pandemic disruption, I am a datapoint myself experiencing the pros and cons of both online and in-person learning approaches. Virtual learning systems may pose some unfamiliarity and challenges, but it also can lead to some advantages to a sector of students who have been ignored due to them being a minority in numbers for various reasons. I noticed that I could learn better in a virtual setting and prefer the virtual education system over in-person classes, the reasons of which I have discussed in the following sections.

The current research is motivated from my own experience and understandings that were generated from my discussions with friends that made me believe that my experience is not unique. This made me delve into finding connections between personality traits and effectiveness in a virtual learning environment.

1.1. Impact of digital technology on mind formation in Generation Z

I was born just a year before the first release of the iPhone. By the time I was 2 years old, I was playing with an iPhone. I used to enjoy playing with my smartphone more than any of my other toys which might have shaped parts of my early childhood behavior as well as my personality (Savina, E., et al. 2017).

I didn't speak till I was 4 ½ years old, which was classified in my elementary school as a speech delay. I went through speech therapy, and I always enjoy being in my own world: I love numbers, playing video games, electronic media, alongside possessing a vivid memory of numbers/images often not important to others. When I introspect, I have been considered and still am an extremely shy person. I want to point out that the digital media does and can play an impacting role for this generation of smartphone, shy-natured kids and the virtual education system could provide a shelter for their mental growth.

After I graduated from my first grade, I can remember that I started fake-liking my school. I have some recollection that I was afraid of being ridiculed at school because of my actions. Later, I understood that the school system was primarily focusing on behavior which I felt was providing restrictions to freedom as well as flexibility. Now I realize many students go through similar dislikes as they attend schools.

1.2. Deficiency with the current school system

School may not be rewarding for many reasons, esp., if the kid is out grouped, bullied, or does not perform well on tests. Out-grouped kids feel unequal to the majority and tend to possess low self-esteem (Zhang Y, et. al., 2021). Lack of good teachers, teaching resources make the situation worse. Traditionally, two main attractions of school have been friends and playgrounds. But most kids do not have intimate friends in the US schools today primarily because of classmates changing from one class period to another and stars need to be aligned to get the same set of friends in next year's classes. Playgrounds are also losing their charm because most schools promote competitiveness in games as opposed to having fun, to a degree where an average student player gets no recognition, thus finding even games rather a demotivator. These somewhat unpopular, loner kids fall back on social media, where though they face other risks, they feel less threatened.

The recent pandemic had presented a unique test ground for virtual learning; across the world, schools tried remote teaching methods and understood the pros and cons. During this time, it brought a great opportunity for me as well to discover the best way to learn without sacrificing self-esteem. Moreover, much of the content taught in classes are easily and freely accessible through the Internet. Sometimes, the quality of the material on Internet are more appealing than in a classroom setup. These together raise a question; how does traditional schooling today contribute to the progression of our generation?

I realized that many see school as a boring, mechanistic, system which primarily teaches through an operant conditioning strategy where test-taking abilities are rewarded more than actual learning. The ongoing school system is derived from the onset of the Industrial Age when manufacturing workers were needed (Brooks, D., 2012). Over the last 100+ years, the education system had been modified, but it still tries to fit in the old framework where obedient behavior, rote-based learning, and competition between students are rewarded more than collaboration and creativity. PBAs, or Project Based Assessments, are newly introduced practices in school that are designed to increase collaboration amongst students. However, most often, one or two group members hard carry the rest of the members. To those contributors, PBAs do not feel "just" in terms of rewards, efforts, as well as contributions being put forward for the project.

With the new millennium, the work nature has shifted towards knowledge space, where knowledge workers will be fueling growth, economy, as well as future practices. This requires overhauling of the education system. If we need to improve the education system, it should be driven by the need of the students of my age rather than a modified system designed by the educators who had been educated and associated within the past system. This has been my second main incentive for carrying out this research.

1.3. Creativity, motivation, and teen psychology

Based on my own experience and inputs from my friends, I have formed a hypothesis that shy or introverted kids who are intrinsically motivated and had experienced being outcasted find the virtual education system as a better fit. I am outlining the rationale of my thought in the following sections.

Perceived fear of embarrassment prohibits the timid and out-grouped kids to try and thus side-tracks them from gaining valuable hands-on experience; this also makes them learn fake-liking early on creating a distance between their outward and inward persona. Internally, they feel less confident, but they cannot afford to show the same feeling outside due to peer pressure or potential embarrassment. Over the years, the lack of having fun in school and the existing reward-punishment system practiced in schools can push some kids to develop anxiety, even depression. This is quite unfortunate for the newer generation of Gen Z and Gen Alpha because knowledge economy leaders should be fundamentally self-motivated, confident, creative, and problem solvers. Many of these left-out kids could have fulfilled that need.

In the article "Motivation for Creation", Jessica Koehler describes how Intrinsic motivation is the soul of a creative mind and how natural curiosity inspires imagination to spark creative thoughts (Koehler, J., 2019). According to the prominent psychologist Beth Hennessey, "Over the years, my colleagues and I have discovered that intrinsic motivation, the motivation to engage in an activity out of sheer interest in and excitement about a task, is essential for creativity; and extrinsic motivation, motivation driven by someone or something outside the task itself, is almost always detrimental." We must not forget this great observation. Shyness has its power, and the shy individuals often prefer digital platforms as information sources as well as to express their minds (Appel, M., et. al. 2019). The 2012 cover article in Time Magazine talked about the strength of shyness (Walsh B., 2012). It defined that "Shyness is a form of anxiety characterized by inhibited behavior. It also implies a fear of social judgment that can be crippling." But this

inherent characteristic can be powerful, as the later part of the article points out, "Wharton Business School psychologist Adam Grant has found that introverted leaders mesh best with empowered and independent employees, while traditionally extroverted executives work best with employees who take orders easily."

If the above observation is right, then the loner group could be turned into becoming leaders of the next generation. This has been my third motivation for this research because identifying and promoting the personality traits is key to build our futuristic leaders.

2. Objectives & methodology

To prove my hypothesis, I initially carried out 130 surveys electronically, in person, and over telephone, but 4 were dropped due to data errors. So, I had 126 surveys that I could use for the analysis. There were 3 demography related questions and 15 personality trait questions that were framed using 16PF and Myer-Briggs methodology. The survey was conducted and targeted towards middle and high school students, though for a generalization purpose, a decent number of surveys were also conducted amongst the college students and graduates. The 15 "virtual learning mentality" survey questions were prepared in a way so the responses can be grouped to ascertain if the students will fall in one or more of the three categories, e.g., "shy and introvert", "outcasted", "intrinsically motivated", along with their likings for a virtual learning environment. The answers to the survey questions generated an ordinal data set. Ordinal data are not quantitative enough for deriving a meaningful correlation coefficient, but they give a sense of 'preference order' alongside a qualitative relationship between the traits and the learning preference.

*Figure 1. Survey questions and personality trait funneling.*
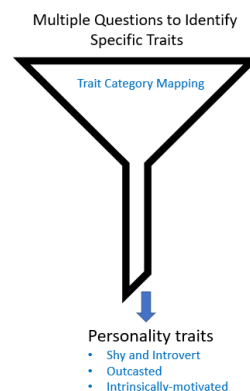
The responses to the survey questions that are pertinent to each personality trait category were first converted to a number between 1 and 5 (1 being strongly disagree, and 5 being strongly agree) and then were grouped on an average basis to create a score for that personality trait for each respondent. The score may not reflect the degree of the trait in a person e.g., how shy a person is but is indicative enough to classify if the person is more "shy and introvert" than not. Once the personality traits score is established, I used that to link with their virtual learning preferences. Figure 1 describes this funneling methodology.

3. Result interpretation

This survey was targeted to only those who are directly linked with the US education system and regularly experience a virtual learning environment. 71% of all who took the survey were middle and high school students. Figure 2 describes that about 80% of all who took the survey were either Asian or Pacific Islander or African American in ethnicity. Approximately, 78% belonged to the age group of 10-17. Here I want to point out that the survey was not discriminatory and was floated to all, but those who chose to take the survey are described in this demographic. To understand the hidden relationships between the virtual learning preferences expressed by the students and the personality traits, e.g., "shy and introvert", "outcasted", "intrinsically motivated", I chose to present my analysis using scatter plots rather than calculating a Pearson or Spearman correlation coefficient.

Figure 2. Survey details e.g., demography, age group, education levels.
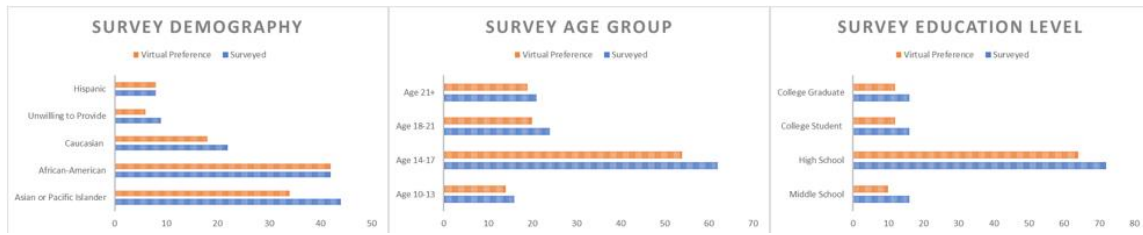
The inherent difficulty of ordinal data over a quantitative measure, and on top, the impossibility of ranking one person's response over another made me choose this approach. Figure 3 describes the "Virtual Preference" by the three personality traits for all who took the survey, whereas Figure 4 shows these same trends for those who are in middle and high school.

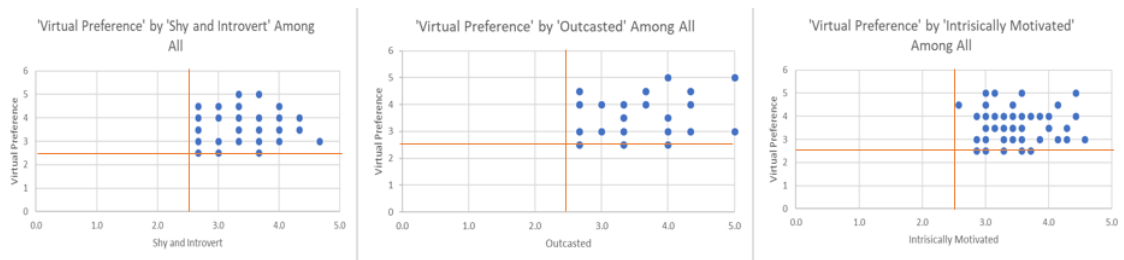*Figure 3. Virtual preference by personality traits for all respondents.*

Figure 4. Virtual preference by personality traits in Middle and High School.
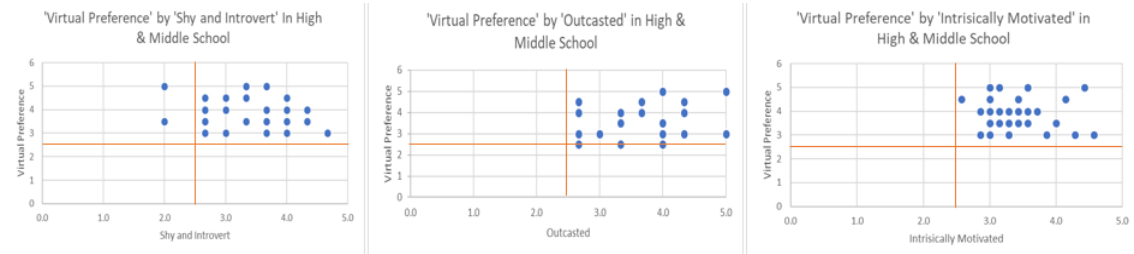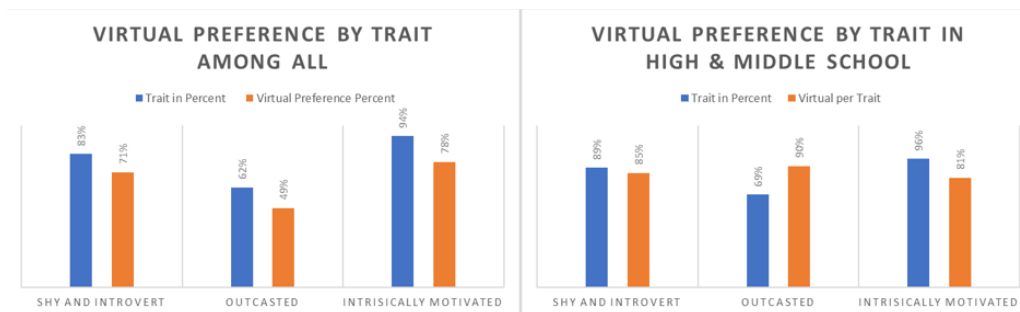

Figure 5. Virtual preference by personality traits.

The overwhelming concentration of data points in the "Top-right" quadrant proves the hypothesis that shy and introverted students who are Intrinsically motivated and have a feeling of being outcasted disproportionately favor the virtual education system among all who took the survey. The red line at the 2.5 mark specifies the midpoint of the trait and the virtual preferences (note: both domain and range of the plots are between 1 and 5). The correlation between virtual preference and the personality characteristics of the students aligns with my expectation.

Figure 5 above displays a very interesting observation. The blue bar in Figure 5 shows the personality trait that is present in the group that took the survey, whereas the orange bar shows those who not only have the traits but also have the preference for virtual learning. The distinction between the "outcasted" respondents who are in middle and high school when compared to the rest bring out one significant observation. The right-hand middle plot shows 69% of all who took the survey from middle and high school felt that they were outcasted but overwhelming 90% of those outcasted students preferred virtual learning. When compared to all students in all age-groups, 62% believed they were outcasted and only 49% of them showed inclination towards virtual education. This demonstrates that among teenage minds, the "out-grouped feeling" plays a more impacting role, and they find that virtual system is a more comfortable learning environment.

I think I can rationalize this intriguing observation presented in Figure 5 through my own experience. Fulton Academy of Virtual Excellence, also known as FAVE, is an up-and-coming K-12 online school in Fulton County, Georgia, and I'm in this school. Many online school programs focus on synchronous learning techniques where classes are offered over mandatory video calls for the duration of the class. But in FAVE, we have the coursework, study material, and assignments laid out for the entire semester, and we work on them at our own pace though class meetings are available to join. I enjoy this tutoring-like, self-learning environment, and the opportunity of limited interactions makes me comfortable. Also, many students who have joined this school enjoy this freedom and control of their own progress.

One more uniqueness of this school is that we can take quizzes or assignments multiple times. The questions do not repeat in the subsequent attempts; however, it motivates the students to learn more and try multiple times and improve upon. I believe that school should create an environment of encouragement, promote trials, and remove the stigma that is attached to failures. Multiple failures should not draw shame, rather should be exemplified because someone is showing tenacity and trying many times. It appears to me that the virtual education environment which not only refuges the out grouped teens, but also possess the ability to foster the intrinsic motivation of a creative mind, can create the leaders we need for the upcoming knowledge economy.

4. Conclusions

Though the sample data sets were limited, the preliminary research presented here shows a strong link between the positive preference in virtual education and intrinsically motivated, shy, introverted characteristics that are often prone to be bullied in an in-person environment, especially in middle and high school. I believe that the research should be further carried out in a larger group with more diversity, and virtual education techniques should be perfected to create new knowledge economy leaders.

I extend my thanks to my teachers and acknowledge my friends in FAVE, and to those unknown to me who took the survey electronically and helped me prepare this study.

References

Appel, M., et. al., (2019). Shyness and social media use: A meta-analytic summary of moderating and mediating effects, *Computers in Human Behavior, 98,* 294-301, doi: 10.1016/j.chb.2019.04.018.

Brooks, D., (2012). The Relationship School, *NY Times.* Retrieved from https://www.nytimes.com/2012/03/23/opinion/brooks-the-relationship-school.html.

Koehler, J., (2019). Motivation for Creation: Understanding the intersection of intrinsic drive and creativity, *Psychology Today*. Retrieved from https://www.psychologytoday.com/us/blog/beyond-school-walls/201911/motivation-creation.

Savina, E., et al. (2017). Digital Media and Youth: a Primer for School Psychologists. *Contemp School Psychol 21,* 80–91. doi: 10.1007/s40688-017-0119-0

Walsh B., (2012). The Upside of Being an Introvert (And Why Extroverts Are Overrated), *Time,* Retrieved from https://content.time.com/time/subscriber/article/0,33009,2105432-1,00.html

Zhang Y, et. al., (2021). The Influence of Personality Traits on School Bullying: A Moderated Mediation Model. *Front. Psychol., Sec. Personality and Social Psychology, 12.* doi:10.3389/fpsyg.2021.650070