Keeping Student Personality Types in Mind: Online vs. Face-to-Face Discussions

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Over the past few years, technology has increasingly been implemented to enrich teaching and learning experiences (Paechter, Maier, & Macher, 2010). In addition to creating a more dynamic classroom, improvements in technology and decreased costs have led to an increase in online and blended classrooms. These types of online classrooms are of greater convenience and make higher education more accessible for distance learners (Harrington & Loffredo, 2010). As a college level professor, it is essential to begin increasing the use of technology in the classroom in a variety of ways in order to facilitate accessibility, develop convenience, and enrich the learning experiences of students. Utilizing technology in the classroom is important in creating an interactive and engaging learning experience. Although there are multiple benefits to online learning, it is important to note that a large percentage of students continue to prefer face-to-face classes (Harrington & Loffredo, 2010). For some, the belief that more is learned in face-to-face classes than online classes is a common research finding. It comes into question what continues to influence this preference.

Psychological factors such as personality type may impact learning style, comfort level, and motivation in learning environments (Harrington & Loffredo, 2010). It is hypothesized that not everyone can perform all tasks as effectively as one another. This reveals that personality traits play an essential role in performance of individuals completing the same tasks (Ahmed, Campbell, Jaffar, & Alkobaisi, 2010). Personality types can create a great deal of diversity in the performance of various activities and tasks that individuals do. Additionally, personality impacts the way people perceive their environment, create meaning, and make decisions in the world. It has been noted in previous research that people with particular learning styles and personality types are more inclined to failure in online learning environments (Harrington & Loffredo,

2010). For example, DiTiberio (1996) concluded that extraverts typically prefer collaborative

learning environments whereas introverts prefer and do well with computer-assisted instruction.

In a study done by Harrington and Loffredo (2010), it was found that introverted individuals

preferred online classes and extraverted individuals preferred face-to-face classes. Therefore, it

can be hypothesized that introverts would prefer and excel more in online learning than in face-

to-face.

Theory

Motivation reflects investment in cognitive, emotional, and behavioral engagement and

interest in school (Fredricks, Blumenfeld, & Paris, 2004). However, motivation has traditionally

been seen through an intrapsychological lens. Most theories related to motivation place an

individual as the agent who processes information and presents feelings related to motivation.

However, it is important to note that learning often occurs most in sociocultural contexts

(Vygotsky, 1978). Therefore, conceptualizing motivation through the lens of social

constructivist, based on the work of learning as a cognitive construct (Piaget, 1950) is essential

for this study. Social constructivist theory suggests that the individual is not the instigator of

motivation; rather motivation is socially constructed and results in cognitive and behavioral

engagement (Sivan, 1986).

Social constructivism theory is a shift towards viewing the construction of meaning

through the interaction of individual with context (Sivan, 1986). The components of social

constructivist theory include cognitive activity, cultural knowledge, tools and signs, and assisted

learning. For this particular study, the assisted learning component will be the main focus and

this is the approach to social construction that will be used. Assisted learning is a process of

socialization, occurring through the construction of shared understandings in the environment.

Assisted learning is described as the movement of inter-psychological functioning to

intrapsychological functioning, resulting in a shared construction of meaning and understanding

(Sivan, 1986). According to this theory, learning occurs when students share background

knowledge and participate in the reciprocation of information, collaboration, and activities in

order to achieve highest potential of learning (Sthapornnanon, Sakulbumrungsil,

Theeraroungchaisri & Watcharadamrongkun, 2009). In terms of the present study, assisted

learning would be demonstrated through face-to-face literature circles where students interact

and collaborate with one another to form a comprehensive understanding of the literature that

was read.

With the ever-changing world of technology, it is important to consider how social

constructivism theory may be implemented into an online learning environment. An online

environment may be useful in stimulating slow thinkers, introverted personalities, and those who

are reluctant to engage in face-to-face discussions (Sthapornnanon et al, 2009). Online

communication provides students with more time to think about their responses and an equal

opportunity to share their thoughts. This type of learning environment provides an opportunity

for collaborative learning to be more inclusive of all students, therefore allowing all students to

benefit, contribute, and learn from one another.

As noted above, it is apparent that socially constructed learning can occur in both face-to-

face settings as well as online settings. However, it comes into question whether one setting is

more beneficial or preferred than the other.

Method

The findings above have led to questioning the pedagogical choices that are made in terms of meeting the needs of diverse learners, and in particular how motivation and student learning are related. The questions addressed are the following: 1) How do face-to-face literature circles and online literature circles impact motivation? 2) Is there a measurable difference in motivation based on personality type (extrovert vs. introvert) in relation to the type of literature circle utilized?

Instruments

As part of normal classroom activities, students explored their own personality traits through a Jung personality self-assessed survey. The Jung Typology Test is a personality assessment based on four criteria called dichotomies, which represent a continuum between two opposite poles. The four dichotomies are extraversion/introversion, sensing/intuition, thinking/feeling, and judging/perceiving. The first criterion, which is the focus of this study, is extraversion-introversion. This criterion signifies the source and direction of a person's energy expression. Specifically, an extrovert's source of energy is mainly from the external world, while an introverted individual finds their energy mainly from their own internal world.

Throughout the course, students participate in both face-to-face and online literature circle discussions. After each of these activities, students take an Intrinsic Motivational Inventory assessment to measure motivation to participate and learn in the literature circle. The Intrinsic Motivational Inventory is a multidimensional instrument intended to measure participant's subjective experience to a given activity. The instrument assesses participants based on their interest/enjoyment, perceived competence, effort, value/usefulness, felt pressure and tension, and perceived choice while performing a given activity.

Students' measured personality styles (introvert vs. extrovert) were then compared to their motivation to determine what type of literature circle discussion helps improve student motivation for what type of student. In addition, students were given a survey at the end of the course asking for comments and preferences about both face-to-face and online literature group discussions.

Participants

Participants included 18 undergraduate students from a literacy course in a Midwestern university with 11,000 students. Participants consisted of twenty-one percent males (n=5) and seventy-two percent females (n=13), and were predominately Caucasian. All participants participated in all literature group discussions.

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Results

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Although extraverted individuals are more likely to strongly prefer face-to-face literature circles, it appears that both introverted and extraverted individuals typically are more motivated during face-to-face interactions. See Table 1. Specifically, extraverted individuals averaged a score of 4.913 for motivation during face-to-face literature circles and 3.909 for motivation during online literature circles. Extraverts' preference for face-to-face literature circles was found to be statistically significant with $t(18)=2.085$, $p < .05$. Introverted individuals averaged a score of 4.805 for motivation during face-to-face literature circles, and a 4.562 for motivation during the online literature circles. There was no statistical significance in the difference of preference for introverted individuals.

Overall, motivation was higher for all students regardless of their type in face-to-face literature circles. Students averaged a score of 4.871 in face-to-face motivation and a 4.163 in

online literature motivation. When examining actual preference, only one participant stated that they preferred online literature circles, and one participant stated they had no preference. Therefore, 88 percent of the sample stated that they preferred face-to-face literature circles, even those whose motivation scores were higher in online literature circles.

Survey results from students show that students overwhelmingly found value in face-to-face opportunities. One student stated, "I liked how when we met face-to-face we could enjoy rigorous conversation and see facial expressions, and when we were done we were done. I did not enjoy the discussion boards because I felt like we could never end the conversation. I felt I had to continuously post for the sake of posting when nothing meaningful was left to say."

Another student discussed the length of conversations by stating, "I thought as groups we had better discussions face-to-face. Also doing face-to-face I personally was more likely to keep the discussion going compared to online where my answers were rather shorter." Finally, students provided insight into the connected aspect of the two opportunities with, "Face-to-face discussions, in this class anyway, were much more personable, and therefore there was an enhanced feeling of connectedness. We all share a lot more in face-to-face than online because there was a feeling of detachment when you all you could see is typed words." The comments from the survey corresponded directly to what was found in the IMI results.

Limitations

The overall findings of the study were both encouraging and positive. However, the study has several limitations. There was a small n and the participants in this study were predominantly Caucasian and female, making the sample lack diversity. Future studies may benefit from utilizing more diverse populations to increase external validity and generalizability. Additionally, due to the

convenience of the sample, only education majors were selected for this study. There may be

themes or commonalities in the findings related to personality type and motivation due to the nature

of the type of people used for this study. In terms of future studies, further examination with a larger

sample size of the relationship among motivation, preference, and personality type in relation to

literature circle type would be important. The current study has created a foundation in which future

research can build upon to fully understand social aspects that may influence the learning process.

Conclusion and Implications

Referencing to social constructivist theory, learning is socially constructed. Specifically,

individuals learn through their contexts and environments as well as through their interactions with

others. Based on the results of this study, it appears that overall participants are more motivated to

participate and contribute to learning when they engage in face-to-face interactions, despite their

personality style. Contrary to much research that has been done, personality traits may not be as

much of a factor as previously thought in learning situations. Due to the lack of interpersonal

interactions, immediacy, and expression in online literature circles, it can be suggested that

motivation to learn occurs most when people are collaborating in person. This study provides an

interesting perspective of the power of nature vs. nature in that the power of social construction

overpowers personality traits.

Based on the findings, there are teaching and learning recommendations that can be

considered. First, these findings can help students understand their learning style and what type of

learning may be best suitable for them. This will help them as learners as well as future teachers.

Additionally, educators need to take into account the impact that students learning styles and

motivation have on student perception and participation in learning activities, but personality traits

may not be as crucial. If students are not provided with learning opportunities that meet their needs,

motivation becomes an issue and learning may be impacted. Teachers also need to provide

opportunities for students to explore content in social face-to-face settings. This study directly

pointed to the fact that these students clearly preferred face-to-face opportunities to learn with and

from their peers. Finally, in online or hybrid courses, teachers should consider integrating Skype or

Google Hangout as a way to make online discussions more engaging and interactive.

It is important to note that the majority of individuals stated they preferred face-to-face

literature circles, even if their IMI scores were higher for online literature circles. It comes into

question if comfort and perception of effectiveness impact participants' preference of literature

circle. Additionally, since we know students are socially conditioned to expect face-to-face delivery

methods in education, thought should be given to what types of encouragement, pedagogy, and

assignment deign might trigger trigger alternate ways of understanding in online learning, so the

online interaction is seen as equally, if differently, satisfying to students while still addressing

motivation. It would be beneficial to conduct further studies that examine comfort level and

perception of effectiveness of online and face-to-face literature circles as they relate to an

individual's personality type with these factors in mind. Additionally, looking at this as a pilot study

pointing to the need for more research looking at nature vs. nature and how social constructivism

may overpower an individual's personality type would be justified.

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Appendix A

Table 1

Intrinsic Motivational Inventory Scores

	Number of Students	Personal Preference for Online Discussions	Personal Preference for Face to Face Discussions	No Personal Preference	IMI Average Score for Online Discussions	IMI Average Score for Face to Face Discussions
Introverts	7	1	5	1	4.562	4.805
Extroverts	11	0	11	0	3.909	4.913