Online Student Participation:
A Multidisciplinary Review

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As technology is being more integrated into the curriculum at post-secondary institutions, we are seeing changes in the ways students can participate in class. For example, rather than in class participation being only verbal, there are now programs such as Top Hat which allow students to participate online and have the option of being anonymous or non-anonymous. Anonymous online participation may be beneficial for shy, introverted students; however, there are many problems with inappropriateness on other online platforms that utilize anonymity. Also, it may be possible that students studying certain disciplines are more prepared or better equipped to participate through programs such as Top Hat than students of different disciplines. This white paper presents several recommendations for achieving the highest rate of in class participation:

University Administration:

- Improve the on campus Wi-Fi internet connection

- Provide workshops available on how to use programs used in class

Teachers:

- Monitor what is posted to online programs

- Conduct hybrid classes (some tech integrated into class)

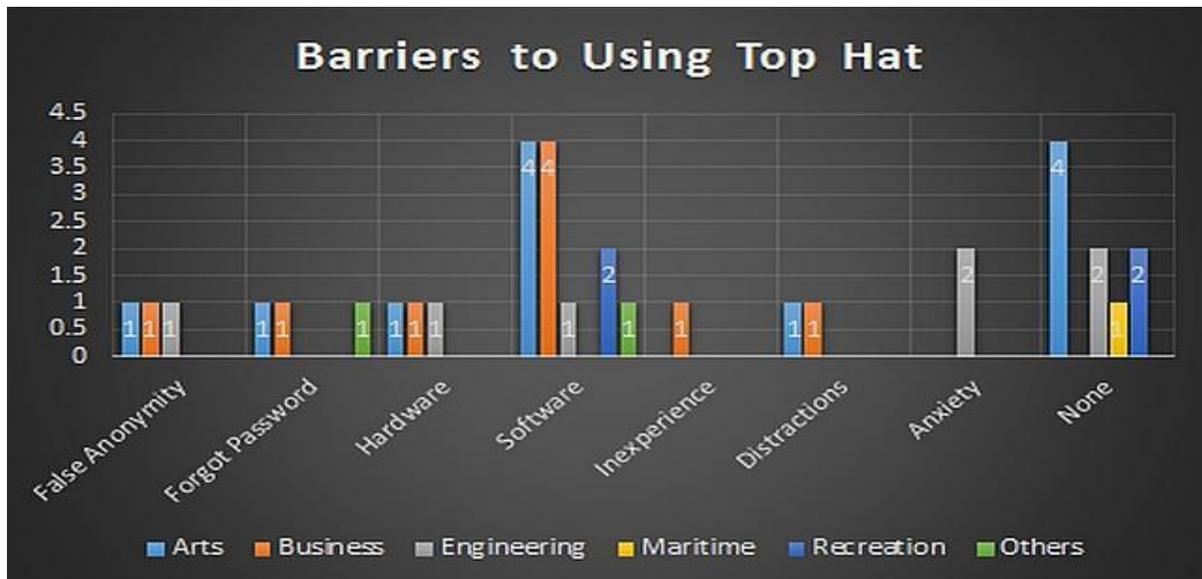- Use complete anonymity when using online platforms in class

Figure 1

PROBLEM DESCRIPTION:

How does Top Hat affect students of various disciplines participation in a classroom setting?

Although Top Hat is a great tool to be used for in-class student participation, some of the negative aspects from our technology journals and survey data included a lack of Wi-Fi signal strength, isolation of inexperienced students with the software, anonymity, and inappropriate usage. To begin, we need to define what participation means. In Dancer and Kamvounias study, "participation can be seen as an active engagement process which can be sorted into five categories: preparation, contribution to discussion, group skills, communication skills, and attendance." (as cited in Rocca 2010) Burchfield elaborates more that "participation also has been defined as the number of unsolicited responses volunteered" (as cited in Rocca 2010).

METHODOLOGY:

We used autoethnography as a method to gather data from our in-class technology journals and from an online survey given to 40 of our peers in Sociology 2120. "Autoethnography utilizes the ethnographic research methods and is concerned about the cultural connection between self and others representing the society" (Chang 2008). By using a completely anonymous survey distributed to every class member online via email and comparing and contrasting data from our technology journals, we were able to amass a concrete amount of info on the topic of in-class student participation. We compiled our data and grouped together students whose majors were in the Arts, Business, Engineering, Maritime, and Recreation. Students who were undeclared and anomalous to the class were placed into the "Others" category. (see Figure 2)
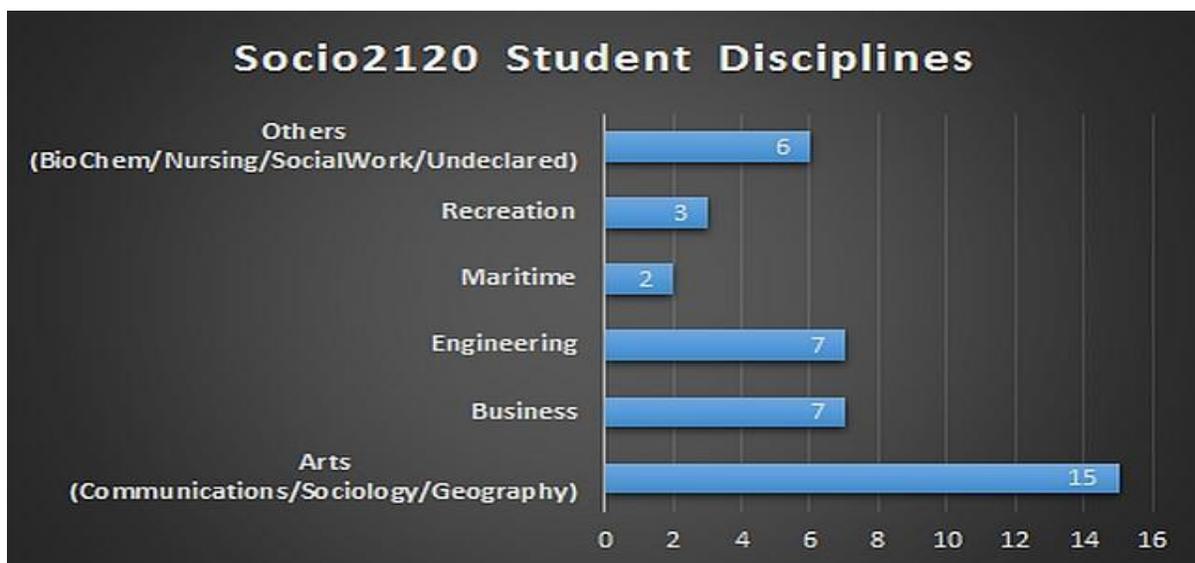
Figure 2

FINDINGS:

"The type of course can have an impact on whether students participate. Not surprisingly, students are more likely to participate and feel comfortable in communication courses than those in the other social sciences or the natural sciences." (as cited in Rocca 2010) "Students are more likely to ask questions in the natural sciences than in the arts or social sciences, but more likely to talk for longer periods of time in the arts and social sciences than the natural sciences" (as cited in Rocca 2010).

The leading cause of barriers experienced by students using the Top Hat program was software issues. 57% of business students and 67% of recreation students reported experiencing software problems while using Top Hat. This suggests that students studying these disciplines may not be as exposed to online class technology as those studying disciplines such as engineering, where only 14% reported software issues. Some of these problems included trouble logging into the Top Hat program and feeling uncomfortable using the platform. Providing a workshop to teach students how to properly use the technology that is incorporated into class may reduce the amount of problems and confusion experienced.

Another factor related to class participation was anonymity. When Top Hat was completely anonymous, 85% of students reported contributing to class. When the student's identity was completely exposed, contribution dropped to 67% - an 18% decrease. When identity is completely exposed the frequency of class contribution was also reported to have decreased (see Figure 3).
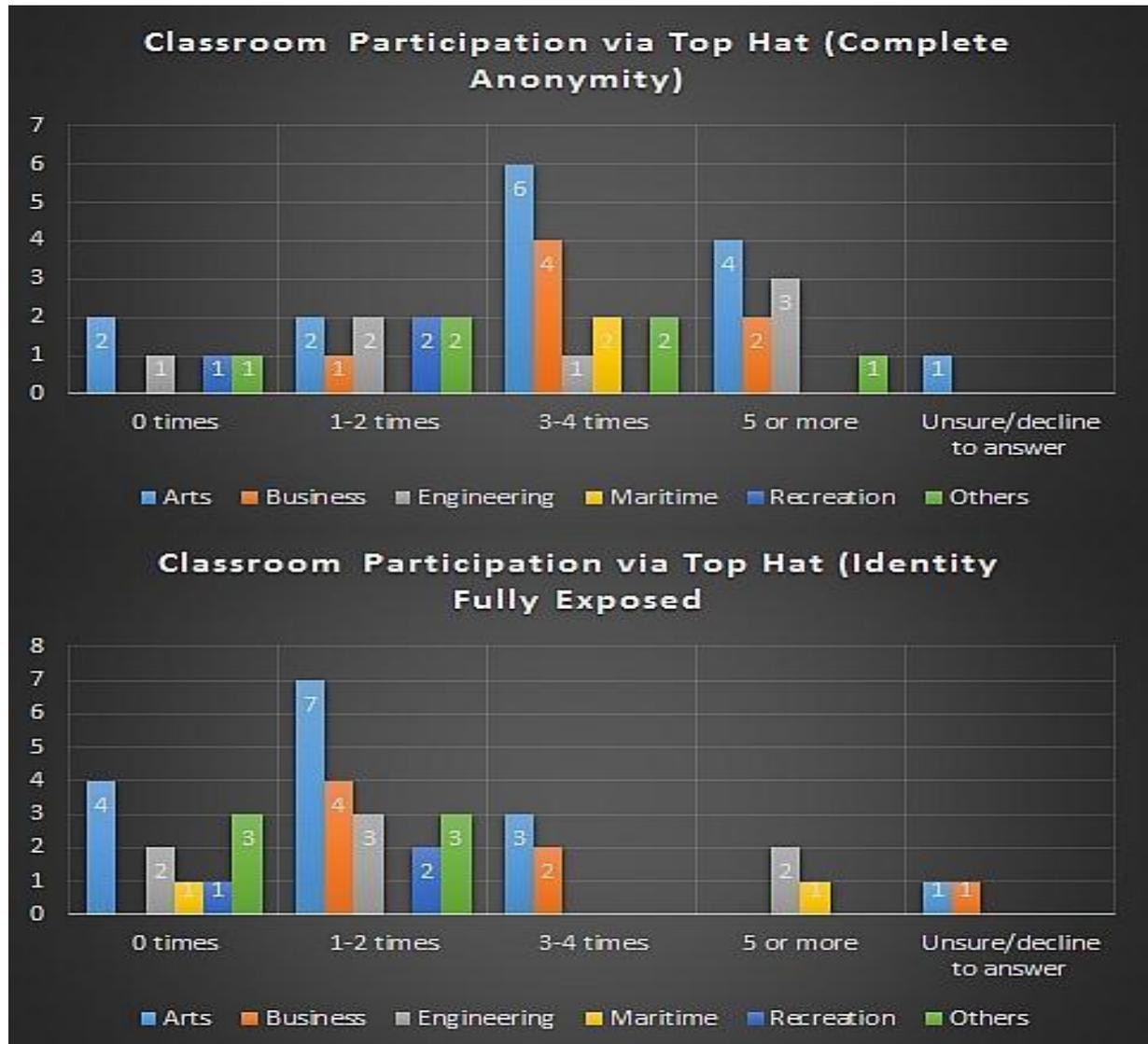
This gives the impression that in order to maximize class participation through the use of an online platform, complete anonymity is necessary.

However, complete anonymity creates problems due to some students misusing and abusing the power of anonymity. This was evident in one of the classes where Top Hat was the main form of interaction. Even though there were constructive anonymous discussions, there was an instance where a student used the classroom technology to anonymously post an inappropriate image. Creating a system that allows professors to monitor and delete anonymous posts to online platforms if necessary may allow continuing the use of complete anonymity while maintaining productive, on topic discussions.

Moreover, the survey data also revealed a lack of a strong Wi-Fi internet connection. 23% of students reported trouble accessing Top Hat due to poor internet connection on campus. In order for Top Hat to be used for in-class student participation, Wi-Fi is necessary. Therefore, it is important that university administration ensure that Wi-Fi connection is easily accessible to students anywhere on campus.

The argument of using only the traditional teaching methods such as chalkboard and verbal participation and abolishing Top Hat technology may have a detrimental effect on class participation and interaction. An overwhelming 85% of class reported that they would prefer a hybrid class which would not dispose of traditional teaching and participation, but would incorporate interactive classroom technology as well.

Figure 3

Classroom Participation via Top Hat (Complete Anonymity)

Classroom Participation via Top Hat (Identity Fully Exposed

23% of students felt that Top Hat did not provide any benefits towards their classroom participation while 65% were more likely to engage in classroom discussion because of Top Hat. Seven business majors all agreed that Top Hat was beneficial. Two students from Arts and Engineering were more focused in class through the use of Top Hat and two more students felt that they could understand complex topics and perform better on tests. Barbara Rogoff (as cited in Garcia et al., 2014) suggests that sociocultural learning theorists argue that within all social interactions, learning is occurring at multiple, mutually constitutive levels—the personal, interpersonal, and institutional—and that this learning can be analyzed best as a process of shared activity. In the case of connected learning, this shared activity is mediated through the use of technology, a uniquely powerful tool for amplifying and disseminating youth voice (Garcia et al., 2014). If teachers incorporate both technology and old fashioned pedagogical methods, this would enhance the participation of the class as a whole which would enhance learning.

References

Bowers, J. W. (1986). Classroom communication apprehension: A survey. Communication Education, 35, 372-378. (ES)

Chang, H. (2008). *Autoethnography as method*. Walnut Creek, Calif.: Left Coast Press.

Cornelius, R. R., Gray, J. M., & Constantinople, A. P. (1990). Student faculty interaction in the college classroom. Journal of Research and Development in Education, 23, 189-197. (ES)

Crombie, G., Pyke, S. W., Silverthorn, N., Jones, A., & Piccinin, S. (2003). Students' perceptions of their classroom participation and instructor as a function of gender and context. Journal of Higher Education, 74, 51-76. (ES)

Dancer, Diane, and Patty Kamvounias. "Student involvement in assessment: a project designed to assess class participation fairly and reliably." *Assessment & Evaluation in Higher Education* 30.4 (2005): 445-454.
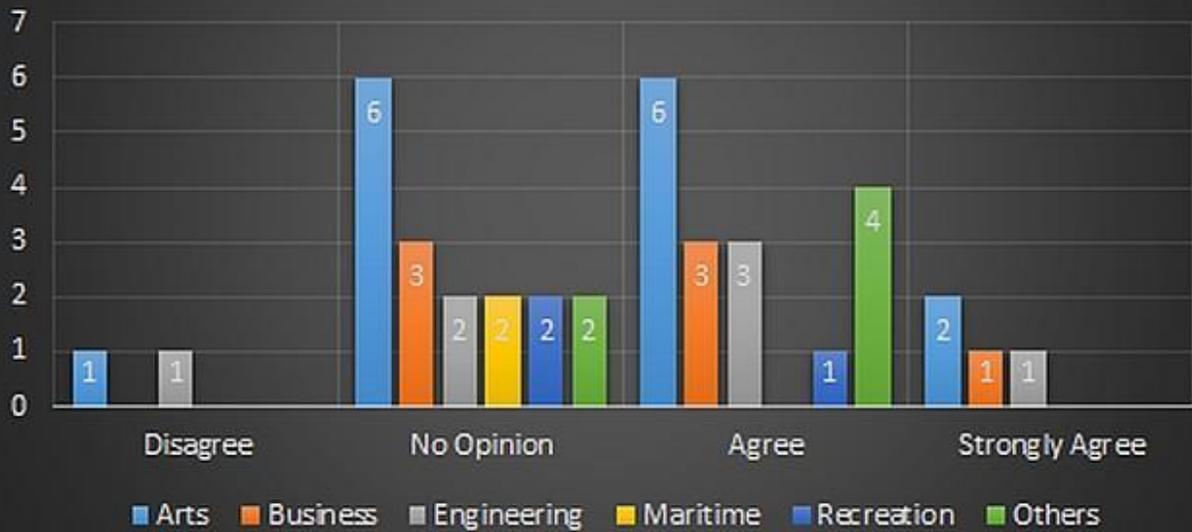
Garcia, A., Cantrill, C., Filipiak, D., Hunt, B., Lee, C., & Mirra, N. et al. (2014). *Teaching in The Connected Classroom*. Cork: BookBaby.

As cited in Rocca, K. A. (2010). Student participation in the college classroom: An extended multidisciplinary literature review. *Communication Education*, *59*(2), 185-213.

Graphs

Class Preferences Per Discipline

How Does Top Hat Benefit Students?
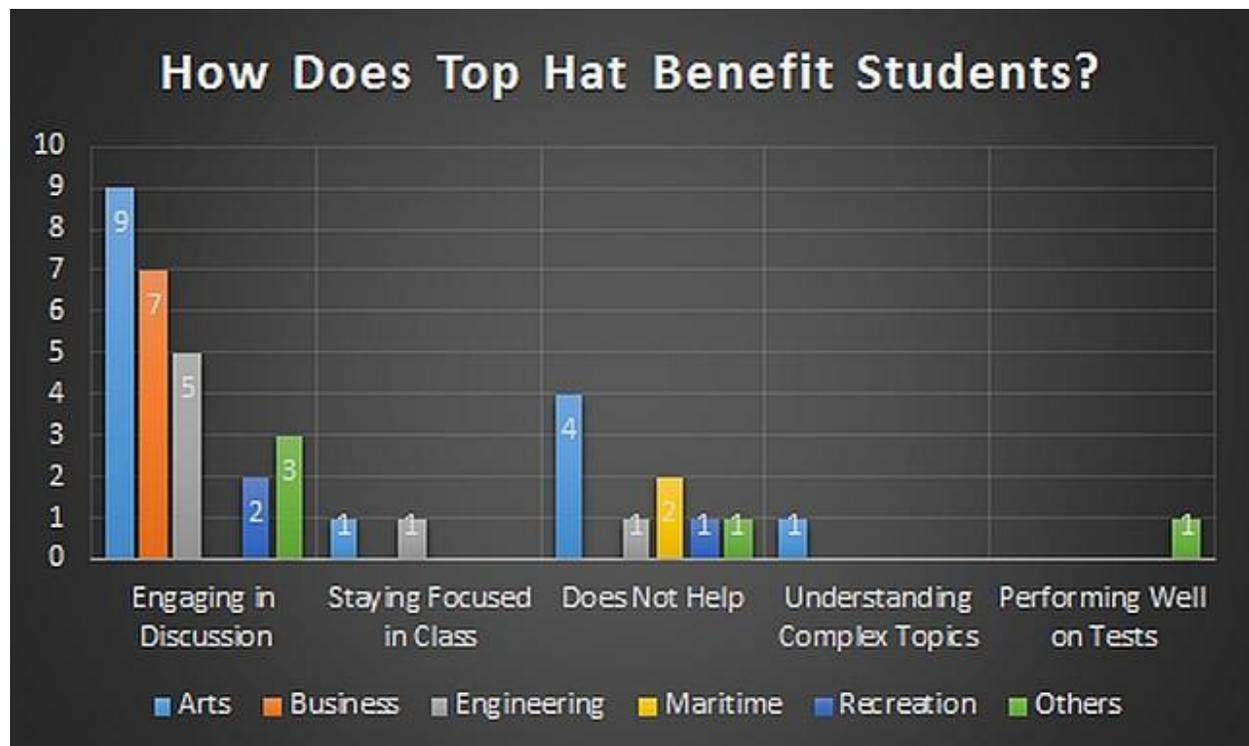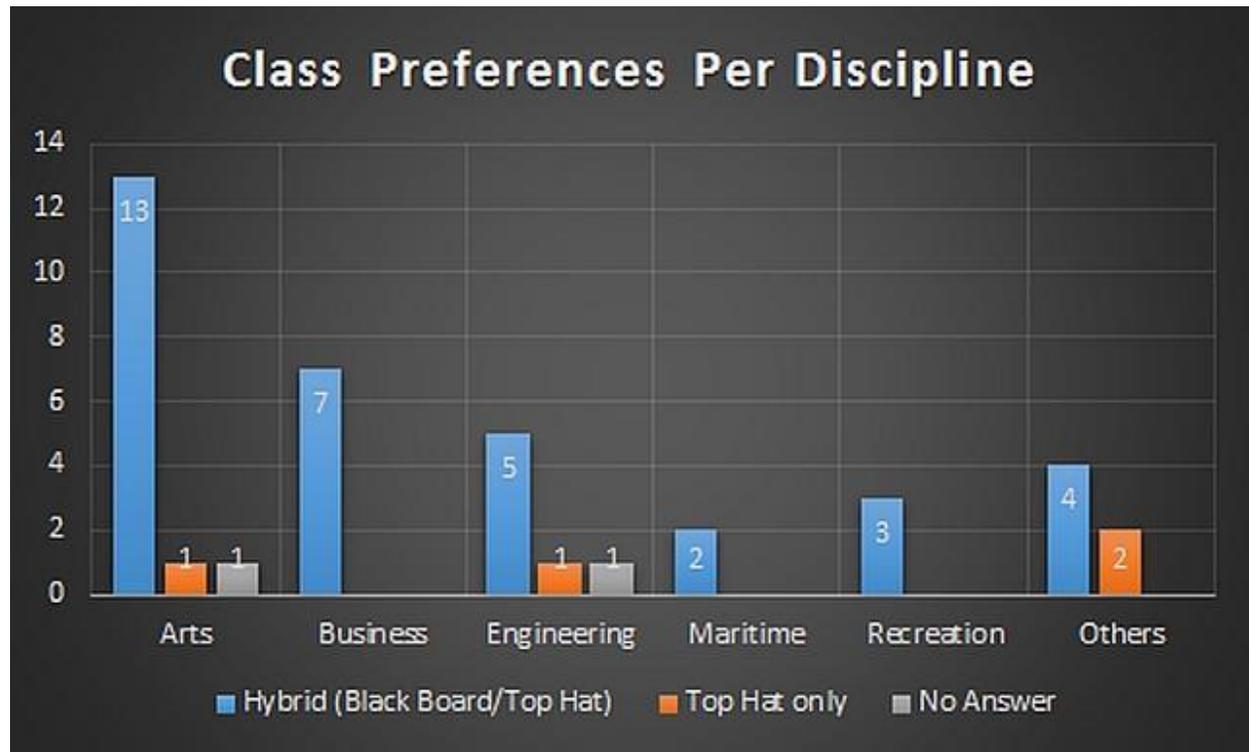
Is Top Hat Beneficial For Out of Class Use?

Top Hat vs. Paper Quiz