

Investigating Students' Choice for Online Communication Tools in Flipped Classroom

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Abstract: Providing learners with an effective communication tool for online interactions with teachers is especially important for the flipped classroom approach which supports students cognitively and affectively outside a physical classroom. In this paper we conducted a survey on 203 Taiwanese students in order to examine two the most popular online social media sites and messengers from students' perspective. We found a pattern between preferred students' online self-disclosure level and preferred way of online communication with teacher. Students who tend to share less personal information prefer to use more private tools, such as messengers, and those who are open in online space tend to choose social media for communication with instructors. We also found that students with high level of online self-disclosure prefer their teachers to show the same openness. These findings suggest that cultures along with different online behaviors may require different online communication tools for the flipped classroom approach.

Keywords: flipped classroom, online communication, self-disclosure, social media

1. Introduction

The flipped classroom is an important teaching approach allowing students to go beyond usual classroom boundaries (Chen Hsieh, Wu, & Marek, 2017; Overmyer, 2012). During such lessons teacher uses a learner-centered model and gives students opportunities to construct new knowledge and deepen understanding themselves, most often with the help of online technologies. Since students explore course materials themselves outside classrooms, the communication with their instructor or classmates plays a significant role in the success of their learning outcomes, motivation and engagement (Chen Hsieh, Wu, & Marek, 2017; Rubin, Fernandes, & Avgerinou, 2013). Therefore, the convenience of such communication for learners should be prioritized. The purpose of this study was to shed a brighter light on the phenomenon of student-instructor online communication (such as social network sites and messengers) during flipped classroom from the vantage point of students' convenience and perceived appropriateness. Results from Mazer, Murphy, and Simonds' (2007) research show that a significant amount of learners are not satisfied with online communication tools used by their instructors' due to problems with appropriateness of their online profiles. In our study we investigated the connection between preferred online communication tools for interaction with their teachers and students' level of online self-disclosure (OSD). According to Social penetration theory (Altman & Taylor, 1973), self-disclosure is defined as the action of personal information exposure which includes every spoken or written message, pictures, photos, videos and other forms of information about oneself during communication with one or more persons. The results of this study would provide suggestions for the use of communication tools.

2. Method

2.1 Participants and Procedures

Online survey about OSD and online communication tools was posted on Google form from 22 of April till 26 of May, 2018. A sample of 203 Taiwanese students, 53.2% of them were female, participated in the self-administrated online survey. The majority of the respondents aged 20 - 24 (56.65%) with a bachelor's degree (46.31%). As for online communication experience, the majority of the participants stated that they used Facebook (67%) and popular in Taiwan messenger LINE (75%) to communicate with their teachers.

2.2 Measurements

The self-administered questionnaire contained 42 close-ended questions and consisted of 5 parts written in Traditional Chinese: (1) demographics, (2) online communication experience, (3) short modified version of The Revised Self-Disclosure Scale (RSDS) (Wheless & Grotz, 1976) about participants, (4) modified version of RSDS about preferred level of teachers' OSD, and (5) preferred way of online communication with instructors.

In the third and fourth parts respondents were asked to self-report using a 5-point Likert scale that ranges from strongly agree (5) to strongly disagree (1) how much information they reveal about themselves online and how much information they are comfortable to see shared online by their teachers. Factor analysis using direct oblimin and unweighted least squares as extraction method found four factors with eigenvalues greater than 1.0, explaining 73.56% of the variance for students and 67.6% for teachers: (1) honesty-accuracy, (2) positive-negative, (3) control of depth, (4) intended disclosure. Honesty-accuracy subscale consisted of five items used to measure how honestly and accurately respondents disclosed or prefer their teachers to disclose feelings, emotions, behaviors or experiences online. Positive-negative subscale had three items used to evaluate whether respondents revealed themselves or prefer teachers to post more positively or negatively online. Control of depth subscale contained three items used to assess whether respondents would intimately and fully reveal themselves online and how deep they prefer their teachers to reveal themselves. Intended disclosure subscale included three items used to judge whether respondents were fully aware of what they are saying online and what behavior they prefer for their teachers. The fifth factor, amount of OSD, measuring preferred length of shared personal information, originally in Wheless and Grotz (1976) was excluded in this study due to low validity and reliability for both teachers' and students' scales and factor analyses. Nowadays users avoid long posts, since short posts are easier and faster to read and therefore get more response from followers. As a result, length of posts may have had little connection with OSD. The last part of the survey was to see what kind of online communication with teachers would be preferred by respondents. Participants were asked to choose between "LINE", "Facebook" and "Doesn't matter" and explain their choice.

3. Results

The results showed a pattern between preferred students' OSD level and preferred way of online communication with teacher. This question was analyzed by the use of an independent-samples t-test between the two groups of participants chosen LINE or Facebook for online communication with teacher (Facebook: $n = 45$; LINE: $n = 138$) and their own level of OSD, yielding a significant difference, $t(181) = 8.308$, $p < 0.001$. Participants with higher level of OSD chose Facebook (that is more personal tool than messengers due to opportunity to check opponents' profile with information about interests, photos and posts) as communication method with teachers significantly more often. Participants with lower OSD preferred to choose LINE.

In order to find out whether there is any relationship between students' level of social media self-disclosure and preferred level of teacher's SM self-disclosure, a Pearson's correlation was run between these two variables. Results show that there is a significant positive correlation at the 0.01 level, $r = 0.61$. This means that students who are open online prefer their teacher to be also open in online space.

4. Conclusion and future study

The results confirmed that communication tools teachers use during flipped classroom are important for students' perception of the whole course. Data analysis revealed that there is a relationship between students' OSD level and preferred way of online communication tool with teachers. Students who share more personal information online tend to seek for high self-disclosure tools such as Facebook, while students with low OSD feel fully engaged in flipped classroom communication and activities only using low OSD tools such as LINE. No significant differences between two genders were found.

Based on the results of this study it is possible to say that Taiwanese students prefer to disclose online less in front of their teachers: 68% of participants chose to use LINE with their teachers, seeing it as more private communicational tool. Only 22% of sample chose Facebook for the same needs, seeking for more personal and open communication. A quasi-experiment comparing two classes where one uses LINE and the other uses Facebook for the flipped classroom with control of the teaching materials and questions posted by teachers will be conducted in the nearest future. It will include analysis of the interaction patterns such as students' self-disclosure depth and breadth in communication, types and amount of questions posted by participants, frequency of reactions to teachers' questions, number of tasks completed by students, as well as their learning outcomes.

Considering cross-cultural differences, people from collectivistic cultures (represented mostly Eastern countries) tend to disclose online less and in more indirect way than people from individualistic cultures (Kim & Dindia, 2011). Such diversity should be noted by teachers in different countries. Even though Facebook is encouraged to be used as educational tool by many researchers (Chugh & Ruhi, 2018) and also highly popular among Eastern students, teachers in Taiwan or other collectivistic cultures may use social media tools with learners in the flipped classroom with caution and firstly consider LINE or other messengers as more appropriate space for online interactions. At the same time teachers working in individualistic cultures such as America may consider social media as more suitable tool for online communication in the flipped classroom.

This study is an important first step in documenting the relationships between OSD and preferred way of communication with teachers in Taiwan. Most of the studies investigate Facebook communication in student-teacher relationship or concentrate on teachers' OSD positive outcomes, ignoring disadvantages. This research, however, clearly shows that communicational tools with high OSD level are not suitable for interactions in the flipped classrooms for all students. The evidenced of this study revealed some promising potential consequences of adjusted communication (at least in terms of communication methods such as messengers or social network sites) teacher-student collaboration from the student perspective.

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