

Discovering the Type of Motivation and Corresponding Regulatory Processes That Drives Asynchronous Online Discussion Activities

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Abstract. Prior research has revealed that students have different attitudes towards online activities for learning, in our case, asynchronous online discussions (AOD). We have seen students participating due to either rewards given, their own learning purposes or just lurking around. The objective of this paper is to identify the students' self-regulation processes while learning informally through surveys carried out using the Behavioural Regulation in Exercise Questionnaire. Through a series of case studies carried out from 2008 till 2011 on 402 participants, the findings revealed that identified regulation had the highest mean score while non-regulation received the lowest mean score. This implies that some students often viewed the AOD as providing some value and benefit to their learning. However, due to some reasons, some other students could not participate actively, even with the prospect of receiving rewards. It is thus important for an instructor to investigate the reasons instead of offering rewards to encourage active participation because too much reward can become detrimental to the intrinsic motivation of a student. It also becomes crucial for the instructor to develop scaffolds based on identified regulation processes, i.e. personal importance and conscious valuing. These scaffolds will eventually enable students to progress from a lower degree of self-determination or autonomy to intrinsically-motivated self-determination or autonomy.

Keywords: Motivation, ICT, Asynchronous Online Discussion, Blended Learning

1. Introduction

It is an apparent fact that Southeast Asian nations (ASEAN) want to promote the use of ICT among students so that they will adopt extra skills such as the ability to articulate thinking which traditional lecture will not allow [1]. When a majority of the students only choose to read the topics posted without giving any feedback, it is difficult for the instructor to gauge the understanding level of their students. Writing skills in the form of questioning or feedback will also promote the use of the English language and ICT which in return could prepare the student for life-long learning as envisioned by ASEAN [1].

The adoption of ICT into the blended learning environment allows improved pedagogy, increased flexibility, increased access to information, and increased cost effectiveness compared to traditional teaching [2]. Due to the potential of asynchronous online discussions (AOD) reaching out to large groups of undergraduate students, AOD provides a means to experiment with ways to improve pedagogy and increase flexibility in teaching-learning processes [3].

2. Problem Statement

Although AOD is known to provide a valuable learning platform to students, it is often found that many students still participate passively, i.e., at the level of reading and looking at the information posted at the discussion board. These students are known as the lurkers [4, 5]. This scenario is also supported by Nonnecke and Preece [6], who find that a large number of their students also turn into lurkers in an AOD environment. Although the number is not alarming, lurkers do not contribute to the learning community because they hold onto their thinking without expressing it in the form of writing. Their values are thus

hidden and not explicit to the community of students who are supposed to share their information and knowledge. Although Azilawati and Quek [7] acknowledge the positive role of lurkers in AOD, we believe students should participate actively in writing because from the writing, the instructor/peers can understand and interpret what a student is thinking.

Realizing the importance of participating actively via the discussion board, we are interested to investigate how an AOD can be designed and carried out to increase our students' intrinsic motivation to learn beyond classroom time. To achieve this, we have carried out several case studies since 2008 to date just to understand our student's motivation and self-determination towards learning in AOD.

3. Theoretical Framework

In order to identify the students' motivation towards AOD, we adopted Deci and Ryan's Self-determination Theory (SDT) that positions the responsibility of learning on the students instead of the instructor [8]. Figure 1 shows the model of the theory that explains how regulation should be viewed on a continuum, based on the three types of motivation, Amotivation, Extrinsic Motivation and Intrinsic Motivation. In amotivation, students do not know why they have to participate in the online activities. They may not see any value or benefit in doing so. Hence, they do not self-regulate when participating in online discussion activities. A student who falls in this category will not read or post any topic in the AOD. However, some might at least read some of the post.

The second type of motivation is extrinsic motivation. Students who are extrinsically motivated are prone to participate due to some external reasons such as rewards (marks or recognition) given to them. If instructors give them some marks for the learning activity, they will participate. Furthermore, if they will be promoted or recognised when their participation reaches a certain level, then they will also participate actively. Else, they will ignore the activity even though it is beneficial to them.

The third type of motivation is intrinsic motivation. In contrast to extrinsic motivation, students who are intrinsically motivated will participate in an online activity simply because they see a reason and value in participating. They will feel happy while carrying out an activity that they enjoy. Even when no reward is given, students will still pursue the activity because of they are genuinely interested.

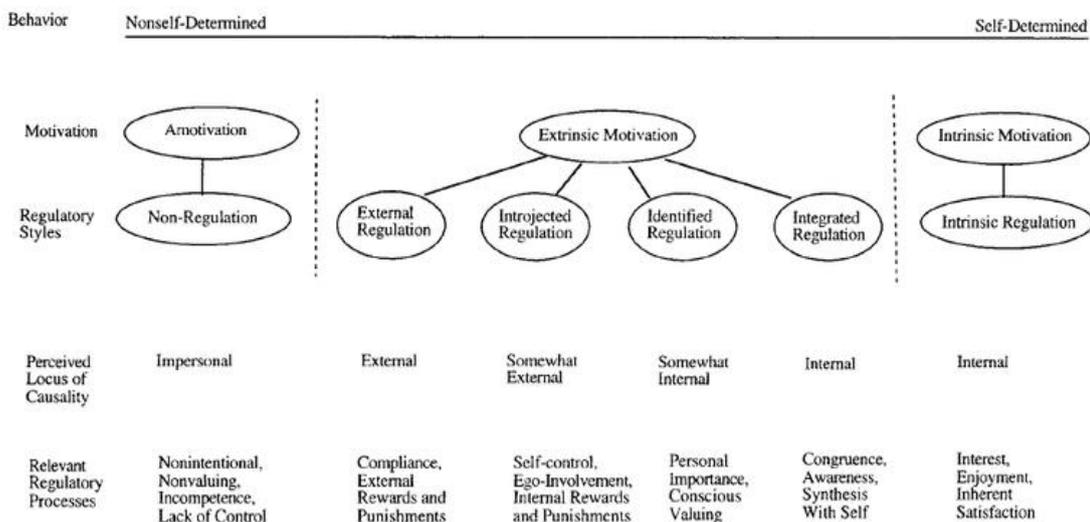


Figure 1: Different types of motivation by Deci and Ryan [8]

4. The Study

The students in the study were undergraduate students of a private institution of higher learning in Malaysia. There were a total of 402 respondents from four cohorts according to their year of intake from the year 2008 (129), 2009 (n=66), 2010 (n=167) to 2011 (n=40). The courses they took were taught by the first researcher. The conduct of the course included 2-hours of lectures, 2- hours of lab work and informal online discussion at anytime and anywhere. The online discussion board was hosted at <http://swling.metakm.com/discuss>. The objective of the survey was to examine the students' motivation for

participating in the online discussion board. The items for the online questionnaire were adapted from the Behavioural Regulation in Exercise Questionnaire because they reflected the activities carried out in the AOD [9]. The adaption was based on Deci and Ryan's guidelines for adopting the Intrinsic Motivation Inventory. An example given by Deci and Ryan was the question on "I tried very hard to do well at this activity." This item can be changed to "I tried very hard to do well on these puzzles" or "...in learning this material." According to Deci and Ryan, the changes do not affect its reliability or validity and are quite face-valid [8].

5. Methodology

For the purpose of this study, we carried out several case studies from 2008 till early 2011 on the students' self-regulation in doing the AOD activities. During the first two weeks of every semester, the students were required to register for an account to access the discussion board. They were required to register based on their student registration number in order for the researcher to track the identity of the students and the semester they were in. Throughout the 14 weeks of courses, students were encouraged to participate actively in the AOD using their individual account. There were mainly 5 main threads made available for them; announcement, discussions on lectures, discussion on tutorial/lab work, and discussion on their coursework. Only in 2011, a new thread was created for students to socialize among themselves. At the end of the 12th week, an online survey (hosted at the university's web server via <http://swling.mmu.edu.my/survey>) was administered to gauge students' feedback on the AOD experience. This was carried out till the 14th week of the course.

6. Data Analysis and Findings

The items in the questionnaires were grouped into five constructs based on the theoretical framework explained earlier: non-regulation under Amotivation, external regulation, introjected regulation, identified regulation under Extrinsic Motivation and intrinsic regulation under Intrinsic Motivation. Cronbach's Alpha value for the questionnaire items was 0.797, which indicated a high reliability of the items. Each item was rated by the respondents on the scale of 1 to 7 with 1 being the least true to the respondent (It is extremely not very true of me) while 7 being the highest (It is extremely very true of me). As such, mean value was calculated to find out which construct was more dominant. Mean value higher than 3.5 was considered as high, or showing greater agreement on the listed items for each construct.

Table 1: Mean values of Constructs according to intake year.

Intake Year		External Regulation	Introjected Regulation	Identified Regulation	Intrinsic Regulation	No Regulation
2008	Mean	3.3346	3.8966	4.4593	3.9380	2.8760
	Std. Deviation	1.05193	1.35388	1.08334	1.13796	1.10447
	n	129	129	129	129	129
2009	Mean	3.3283	3.6414	4.4735	3.9242	2.7424
	Std. Deviation	.84882	1.17424	.92936	1.00093	.85930
	n	66	66	66	66	66
2010	Mean	3.2864	3.4571	4.2799	3.6766	2.9775
	Std. Deviation	.99764	1.15846	.92359	1.11679	1.17030
	n	167	167	167	167	167
2011	Mean	3.0792	3.9583	4.9750	4.2313	2.4312
	Std. Deviation	1.11388	1.09957	.86008	1.08514	1.13226
	n	40	40	40	40	40
Total	Mean	3.2881	3.6783	4.4384	3.8563	2.8520
	Std. Deviation	1.00399	1.23511	.98955	1.11218	1.10775
	n	402	402	402	402	402

Table 1 shows the mean values for each of the construct according to year. For the past four years, across the four cohorts, identified regulation was noted to have the highest mean value (mean=4.4384), while no regulation (mean=2.8520) the lowest.

For the 2008 cohort, identified regulation had the highest mean value (mean=4.4593), followed by intrinsic regulation (mean=3.9380) and introjected regulation (mean=3.8966). A similar pattern was obtained for the 2009 cohort whereby identified regulation (mean=4.4735) also recorded the highest mean. This was followed by intrinsic regulation (mean=3.9242) and introjected regulation (mean=3.6414). In 2010, the respondents also indicated identified regulation (mean=4.2799) as a dominant construct but the value dropped slightly as compared to the two previous years. The second dominant construct was intrinsic regulation (mean=3.6766) while the third dominant construct was introjected regulation (mean=3.4571). As for the 2011 cohort, identified regulation was rated as the most dominant construct but with a higher mean (mean=4.9750). This was followed by intrinsic regulation (mean=4.2313) and introjected regulation (mean=3.9583). As indicated in Table 2, external regulation was not dominant across the four cohorts and items indicating no regulation were also not rated highly by the respondents (from 2008 to 2011).

7. Discussion and Implications

Whenever students turn themselves into lurkers as indicated in the mean=2.8520, we presume that they are not motivated to participate at all. As a result, we leave them behind. In an article cited in Ryan and Deci [8], students are not motivated in situations where they feel that they are not competent at a task given, or perhaps they do not believe that the activity will yield a desired outcome, i.e., they do not believe in the value of the activities. Knowing these reasons, it is important for an instructor to address this group of students by welcoming them so that they feel that they belong and see the value in participating.

Many instructors are prone to reward students with certain percentage of grades so that they would participate actively. It seems to the instructors that the students would definitely participate actively if rewards are given. However, the findings from this study revealed the opposite. External regulation is not dominant across four cohorts (mean =3.2881). The mean score for identified regulation (mean=4.4384) is high, signifying that the students have higher self-motivation to participate in AOD. This mean shows that a majority of the students already value the importance of self-learning in online discussion boards. They gained accurate information regarding the course subject, had their problem/questions answered, solved their technical problem and even made new friends in the AOD. The Intrinsic regulation mean value for 2011 (4.2313) is higher than the previous year's simply because of the introduction of the new thread, and because the AOD provides a place for the students to socialize with one another for matters they would like to discuss or share with.

However, findings also reveal that some students may not want to make comments on the AOD not because he/she is waiting for rewards from the instructor. Ling, Koo and Ong's [10] findings reveal that there are other reasons e.g. busy with other assignments, students forgetting their accounts and using their friends' account instead, lack of time to participate and lack of knowledge that inhibits students from participating actively. As such, instructors should not start an online activity presuming that all the students want to be rewarded. Instead, the instructor needs to find out why a student is not participating actively. The instructor also has to develop scaffolds based on identified regulation processes, i.e. personal importance and conscious valuing to encourage active and meaningful participation. These scaffolds will eventually enable students to progress from a lower degree of self-determination or autonomy to intrinsically-motivated self-determination or autonomy as reflected in Vallerand and Losier's Stairway to Intrinsic Motivation [11].

8. Conclusion

ASEAN wants to promote the use of ICT among students so that they will adopt lifelong learning skills such as the ability to articulate thinking which traditional lecture may not allow. Asynchronous online discussion board has the ability to promote writing skills, guide and assess students' thinking if it is well-designed pedagogically. As such, developing thinking and writing skills in the form of questioning or sending feedback and commenting on the AOD can prepare students with skills crucial to life-long learning as envisioned by ASEAN [1].

This study has shown that a majority of the students know the value of participating online. Therefore, sound design for online instructional activities must inculcate intrinsic motivation especially with regards to identified regulation processes such as creating personal importance and conscious valuing of activities and artefacts. It is crucial not to undermine intrinsic motivation with the assumption that extrinsic motivation is the panacea for all learning motivation problems.

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