

Psychological Aspects of Online Discussion: Implication for Online Learning Approaches

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Abstract: Online discussion provides an avenue for social interaction, which is said to be beneficial for the knowledge-construction process. It is hypothesised that this new learning environment will also affects the student learning process. This paper discusses psychological aspects of online discussion as experienced by a group of students who participated in an online-discussion activity. The sample consists of 55 postgraduate students enrolled in a research-methodology course in one public university in Malaysia that includes online discussion as one of its learning activities. Data was collected using an open-ended questionnaire. Findings were reduced into thematic categories to represent psychological aspects of the participants' experience in online discussion process, by the phases of the online discussion. The results of the study found some benefit in these discussions as well as issues that are needed to be addressed. Several psychological themes emerged namely: self-esteem, self-efficacy, motivation and academic anxiety. These findings reflect the importance of considering psychological aspects in the implementation of online learning approaches.

Key words: Psychological aspects • Online discussion • Online learning • Asynchronous learning

INTRODUCTION

The theory of *social constructivism* emphasises that the construction of knowledge is supported through social interaction. It is suggested that social interaction can provide an avenue for deep thinking and the process of construction and reconstruction of knowledge. Internet-based communication technology provides support for social interaction in the learning process [1]. Currently, the use of *social interaction* in the learning process in online discussion is an important aspect of online learning. Learning through online discussion is one type of *asynchronous learning*. The main characteristic of this type of learning is that the interaction does not happen in real time. Students can engage in a dynamic interaction with a learning community via computers at their convenience. Online discussions allow students to interact virtually, which has a different nature than face-to-face discussion. Previous studies have proposed that online learning communities promote active participation, increase academic achievement, contribute to knowledge creation and improve learners' cognitive abilities [2].

Asynchronous discussion allows students to do some critical thinking and hence express their own opinions. Although more time may be required for this

process, students are given a chance to familiarise themselves with others' ideas and then develop a better response for discussion [3]. One study, [4], categorises online discussion as a network of collaborative learning which places the emphasis on networking people and resources together and on collaboration as the major form of social relationship within the learning context. The key characteristic of this form of learning is it allows the students to read and respond to messages at their convenience. This element makes it more open and accessible and allows people who need more time to contribute [5]. Another important characteristic of online discussion is that forum messages can be archived for access at any time. In general, the salient feature of asynchronous learning is that students can work according to their own needs and time constraints.

Despite its benefits, the use of asynchronous discussion raise a question regarding its impact on students and how it might affect the learning process. Understanding students' learning process is important as a means to identify their strengths and weaknesses in order to help improve instructional strategies. However, not many studies look into the psychological factors that may be relevant to the use of this approach. Bandura's *social cognitive theory* proposed three

interrelated factors that reciprocally affect each other: 1) *personal determinants*; 2) *environmental determinants*; and 3) *behavioural determinants* [6]. Bandura perceives a triadic relationship between environmental influences, personal disposition and behavioural effects (which in their turn are also determinants). For example, the effect of environmental determinants (online discussion-especially the psychological aspects) might influence the behavioural determinants (desire for involvement in the learning activity). These *psychological aspects* were examined to see how they can inform the management and application of an online-learning approach.

The scholarly literature on the psychological aspects of learning mainly concerns constructs such as self-esteem, self-concept, self-efficacy and motivation. These factors are hypothesised to have impact on student learning in traditional face-to-face settings. Adopting novel learning activities such as online discussion, it is assumed, can motivate students to get involved in a learning activity. Moreover, in this new learning landscape and amidst a vast improvement in internet-based communication technology, many students find this kind of learning environment more accessible than a traditional classroom environment.

The emphasis on the importance of *social interaction* in the knowledge-construction process is suggested by Vygotsky [1]. In this premise, students' social interactions play a key role in successful learning. In the face-to-face classroom, the main challenge is to get students to participate in the discussion. One of the major reasons cited is that many students do not willingly involve themselves because of shyness and low confidence levels that stop them from sharing ideas or responding to others students' opinion. The issues of self-concept, self-efficacy and self-esteem play important roles in determining whether students will take part or not.

Students who have high academic self-concept and belief that they can do a task will more readily get involved in face-to-face discussion. The problem lies in motivating students who lack of self-efficacy and academic self-concept to take part in the process. Self-efficacy and academic anxiety seem intuitively linked [7]. Students who feel ineffective or feel that they have inadequate skills and knowledge about the task they are going to do cannot help but be anxious at the thought of how they will manage.

The nature of online discussion, which provides anonymity and also 'time space', can be exploited to address these phenomena and encourage student participation in discussion, thus aiding their knowledge-

construction process. This paper intends to look into these psychological aspects as experienced by the participants during their involvement in online discussion.

MATERIALS AND METHODS

Participants and Instrumentation: The sample consists of students involved in online discussion in one postgraduate course ($n = 38$, 27 female and 11 male). Data were collected through an open-ended *questionnaire* to determine aspects of the psychological state of students participating in online discussion. Three questions were asked: 1) *What are the feelings emerge during your participation in online discussion*, 2) *Why do such feelings emerge?* and 3) *What do you do to address negative feelings, if any?*. The students were asked to describe their feelings in three phases namely: 1) the beginning phase, 2) the middle phase and 3) the ending phase.

Data Analysis: Data were transcribed and coded with the aid of NVivo 7. Students' responses and trends of the development of the negative and positive feelings in the phases of online discussion process were analysed. Findings were sorted into thematic categories to represent psychological aspects that emerged.

RESULTS AND DISCUSSION

Data from the open-ended questionnaire revealed a few themes in terms of psychological aspects that emerged during students' participation in online discussion. These psychological aspects can be categorised into positive and negative feelings. Further examination revealed different trends in positive and negative feelings according to the phase of the discussion: 1) the beginning phase, 2) the middle phase and 3) the end phase.

Analysis of the number of positive and negative feelings at the beginning, middle and end phases is shown in Table 1. As a whole, the data showed that the number of negative feelings surpasses the number of positive feelings at the beginning of the process for both female and male respondents. The trend changed in the middle of the process, when the number of positive and negative feelings was more balanced, with positive feelings trending slightly higher than the negative feelings. At the end, positive feelings dominated the process, with a minimum level of negative feelings for both female and male respondents.

Table 1: Summary of the Number of Positive and Negative Feelings According to the Phase of Discussion

Phase	Positive feelings	Negative feelings
Beginning	6 (Female) + 5 (Male)	21 (Female) + 7 (Male)
Middle	16 (Female) + 7 (Male)	8 (Female) + 1 (Male)
End	19 (Female) + 5 (Male)	2 (Female) + 1 (Male)

The themes that emerged can be categorised into psychological terms namely: i) motivation, ii) academic anxiety, iii) self-efficacy and self-esteem and iv) self-confidence. In addition, the study also finds evidence of deep processing and the critical thinking in the online discussion process. The details of each finding are discussed below.

Motivation: Evidence of motivation can be seen in the beginning phase, when the respondents claimed that they get motivated to venture into this new mode of learning. The male and female respondents reported a feeling of excitedness especially at the beginning:

‘.....very excited...’ (F7, M1, ML8, F17).

At the end, the positive feelings overshadow the negative feelings. The majority of the respondents reported more positive feelings. Most of them reported feeling satisfied, happy and motivated to participate in the discussion.

‘I feel very satisfied and happy’ (F5, F6, F8, F9, F13, F15, F20, F23, F24, F25, F26, M5, M10).

‘...feel comfortable to discuss with friends online’ (F2, M9).

‘I like to read comments in the discussion’ (F1, F3, M5).

‘I can give my opinion and get input from others’ (F3, F6, F8, M3).

‘..feel confident’ (F20, F24, F27, F27).

‘...feel motivated’ (F21, F22, F26, M4).

Academic Anxiety: Many respondents, mostly females also reported mixed feelings of excitedness but also anxiety and lack of confidence to participate in the discussion. At the beginning of the discussion phase, high anxiety was traced, mostly emerging from the feeling of inadequacy of knowledge and technological skill, but also knowledge of the topic of discussion.

‘... excited but a bit worried and scared if I give wrong information ...’ (F14).

‘... just curious to know how the discussion online will be ... a bit nervous and worried ...’ (F13).

‘... scared and worried because never involved in discussion online before ...’ (F3).

‘... Worried because I don’t understand how to start ...’ (F11, F12, F20, F25).

‘... a little bit afraid and worried—not knowing what to write ...’ (F15, M2).

At the middle stage, negative feelings in the form of academic anxiety and psychological resistance can still be seen, but at a lower level:

still worry and scared if I give the wrong idea ...’ (F12)

‘... still feeling worry and nervous but also feel a bit excited during the process ’ (F15).

‘... after reading others postings, begin to feel scared and worried because their ideas are good and show that they already have clear pictures of their projects as compared to myself ...’ (F18).

‘... a bit anxious when I see other responses and participation ... a bit scared to try ...’ (F23).

Self-Efficacy and Self-Esteem: Most negative feelings reported can be linked to low self-esteem, rooted in a lack of self-efficacy. The elements of knowledge and skill with the technology were one factor that elicited these feelings, especially at the beginning. Students’ self-efficacy with regard to the task also influenced their feelings and behaviour. Negative feelings that are related to lack of self-efficacy and affect the respondents’ self-esteem can be traced.

‘... shy to post my opinion Worry if I didn’t get any response from friends and feel inferior to participate in the discussion ...’ (F9).

‘... a bit uncomfortable to share opinion as my topic is personal to me’ (P10).

‘... worry whether my comment would appear stupid and/or childish’ (F15).

‘... not very confident, need to read the whole discussion from the start before giving response ...’ (F8).

Self-Confidence: However, in the middle of the process, negative feelings lessened and positive feelings begin to dominate the responses. It can be said that students begin to gain confidence to participate in the discussion. They learn how to do the expected task and have time to access additional information and reference materials before participating in the discussion.

‘... feelings of inferiority gone ... because my friends are also having the same problem as me ...’ (F14).

‘... felt confident with my ideas when I got the responses from friends ...’ (F16).

‘... become more confident after reading comments from other people. ...’ (F24).

‘... feel confident after sending my first post ... can review others’ and also my own ideas ...’ (M5).

Further examination revealed that online discussion gives students opportunities to prepare themselves before participating actively online, which cannot be done effectively during face-to-face interaction. The respondents reported that they prepare themselves by reading other people’s posts and other materials related to the topic of the discussion. Some of the respondents admitted that they prepare a draft and edit it a few times before posting it in the discussion forum.

‘...’ Prepare the draft first ... edit many times before posted it ...’ (M11).

‘...’ have to be careful ... scared if my ideas is not accurate ... draft the response first. Need to really understand before giving my response ...’ (F2).

Critical Thinking and Deep Processing: The online discussion gives students time to prepare themselves to participate in the discussion as compared to face-to-face discussion and this gives an advantage in terms of quality of the discussion that contributes to the students’ knowledge-construction process. Evidence of deep processing and critical thinking increases when the respondents began to participate more actively in the online discussion. The respondents’ reports supported the presence of critical thinking and deep processing: ‘... happy and excited because I got many inputs ...’ (F7).

‘... feels a bit interesting Because I can give responses to other people even though we never talk to each other in the class ... so I feel happy because it’s easy to communicate with other people ...’ (F9).

‘... feel relief when I get feedback ...’ (F16, F19).

‘... begin to like it because I get constructive criticism ...’ (F22).

‘... feel excited and happy after getting feedback and comments from others ...’ (M6)

Implications for an Online Learning Approach: The findings of this study suggested online discussion as a mode of course delivery needs to take into consideration

some psychological aspects that nurture and/or hinder students who wish to participate effectively in the discussion. Some of the respondents in the study revealed that they were not comfortable with online discussion. Thus, a structured, clear set of expectations is very important, because it gives an overview to students of what action should be taken and how to accomplish it. This support should be given to increase students’ sense of Internet self-efficacy.

The findings of the study also showed that discussions online have advantages as compared to face-to-face discussion. In the online environment, the number of students participating in the discussion is greater, thus providing more opportunities for exchange and sharing of information between students [8]. This situation results in a feelings of satisfaction, as reported by many respondents. This study involved 55 students and future studies should look into identifying a suitable number that will make for an efficient and effective group discussion.

The study also revealed the need to give enough time to students to prepare before they participate actively in the discussion. Allowing an adequate timeframe will facilitate student learning and encourage deep processing of the discussion topic. At the same time, it will help overcome related problems such as issues with self-efficacy, self-confidence, psychological resistance and academic anxiety. In psychological terms, this can be seen as a positive impact, as this process provides opportunity to students to gain confidence that will help them resolve whatever negative feelings have accrued to the process. Therefore, it is very important that a longer timeframe is provide for and explicitly communicated to students.

Another point to consider is the role of the instructor as a motivator and facilitator of the learning process. This study suggested the importance of an effective online learning instructor who gives appropriate responses and feedback. Immediate feedback can increase student motivation and learning quality, as students can immediately correct themselves and thereby reinforce what they have learnt [9]. These processes also generate a feeling of satisfaction among the students.

CONCLUSION

The study supports the contention that asynchronous learning in the form of online discussion has some distinct advantages over face-to-face interaction, especially in terms of psychological benefits such as the opportunity for students to increase their

confidence levels, which in turn gives them a chance to participate more meaningfully and aids their learning process. An obvious advantage in psychological terms is inherent in the nature of 'asynchronous learning', which provides a telescoped timeframe for students to prepare themselves, thus increasing their self-confidence and levels of participation. However, a good plan for incorporating this approach should include attention given not only to timeframe but to development of students' task self-efficacy and the active role of the instructor as the facilitator of the learning process.

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