A Review on Using Internet Discussion Boards to Supplement Collaboration in English Language Composition Writing

Pengiran Shaiffadzillah Pengiran Omarali

***Abstract*—With the imminent role of ICT in education, schools are taking imperative measures to educate its learners by means of new technologies. This exploratory review elaborates on how existing computer facilities are being utilised to teach English, in particular the area of composition writing, to a class of Bruneian students where English is both a subject and a foreign language. This article focuses on the technology of Internet discussion boards and how they empower students through a socioconstructivist and collaborative approach towards composition writing.**

***Index Terms*—collaborative writing, computer assisted classroom discussion, computer mediated communication.**

I. Introduction

The 'model class' portrayed in this review is a representative of a common upper secondary level class in any school in Brunei. The average number of students is 20 and their capacity in English is average [1]. The students have adequate computer skills as a result of their ICT learning experiences in primary school level [2] as well as external exposures based on using computers at home. These students are purportedly 'Millenials', meaning that they are born as 'native' users of digital technology [3][4].

English language teachers for the secondary level usually abide to a set curriculum, syllabus and government issued textbooks. However teachers are able to deviate from this convention and are encouraged to exploit other resources that befit their students. The use of computers is greatly supported to the extent that English Language teachers are always prioritised to utilise them.

One area of concern for English teachers is composition writing. Brunei Darussalam ultimately assesses its students using the Cambridge GCE 'O' Level Examinations. Composition writing carries the bulk of the qualitative marks and thus this task is a common challenge for students, as it tends to focus on both accuracy and creativity. Teaching composition writing to students involves time-consuming rituals of classroom discussions, writing drafts, individual consultations, and proofreading and editing in phases.

The primary objective of using Internet discussion boards is to provide a medium where students can communicatively collaborate by discussing ideas for writing and peer proofreading. Hitherto it is anticipated that less classroom time would be exhausted and more opportunities to communicate could be gained through posting comments and real-time chat beyond the temporal and spatial boundaries of a classroom. Discussion boards are a medium of both Synchronous and Asynchronous Computer Mediated Communication and as such the discourse of this review revolved around these communicative features of online discussion boards.

P. S. P. Omarali is with the School of Environment, Education and Development, Oxford Road, the University of Manchester, M13 9PL, the United Kingdom (e-mail: pengiranhajishaiff.omarali@manchester.ac.uk).

II. Literature Review

A. Conceptualising Computer Mediated Communication

This review focuses mainly on elaborating and exemplifying text-based Computer Mediated Communication (CMC) and its sub variants, viz. 'one-to-one', 'many-to-many', 'synchronous' and 'asynchronous'. CMC in relation to online discussion boards can be reviewed through the conceptualisations of Computer Assisted Classroom Discussion [5] and Asynchronous Computer Conferencing [6]. Furthermore, due to the similarity of 'CMC *in* collaborative learning' and 'Computer Mediated Collaborative Learning', the two terms are used interchangeably.

Computer Mediated Communication (CMC) is a term to define communication that uses computers which involves among others, e-mails, chatting, forum boards and video-conferencing [5], [6]. Educationists identified these methods of communication as potentially useful to learning thus consequently integrating CMC in teaching and learning.

English learning benefits from CMC because it "provides opportunities for language learners to practice their language" [7]. CMC is also perceived as a "possible cognitive amplifier that can encourage both reflection and interaction" [8] and as a bridge that connects speech and writing allowing both reflection and interaction to take place in one medium [9]. In addition, Computer Conferencing has been defined as "a group communications medium enabling groups of people to exchange ideas and opinions and to share information and resources." [10].

The keywords that could be extracted from the last paragraph are 'medium', 'interaction' and 'reflection'. 'Medium' in this case exists as a virtual classroom environment where students have opportunities to learn and be taught together; 'interaction' as a means to communicate among students and between students and teacher(s), and 'reflection' as the facility to revisit what has been interacted through the medium. Hence, compared to the ephemeral properties of unrecorded spontaneous speech in onsite classroom discussions, the discussion board medium has the useful attribute of retaining all text-based communication that in turn encourages students' reflexivity.

To successfully implement CMC into learning, the 'medium' of choice should cater effectively to the needs of reflection and interaction where optimal collaboration can take place and very little of the social dynamics of the classroom is lost. In essence,

discussion boards "allow (idea) exchanges or quick questions and answers" and "combine almost real-time capabilities with the flexibility and potential depth of asynchronous communication" [11]. For these reasons, discussion boards can become a virtual classroom where it can adapt and build upon the social dynamics of the onsite classroom. Fittingly, the term Computer Assisted Classroom Discussion encompasses learning that transpires and is negotiated through both the onsite classroom and the virtual Internet classroom [3].

In composition writing tasks, students are usually encouraged to collaborate during the early stages of the syllabus to provide them initial scaffolding, particularly when the task at hand is challenging. Collaborative learning has been described as situations where students interact to produce a joint solution to some problem [12]. In the case of using a discussion board to collaboratively complete composition writing, students are able to assist one another through constantly providing peer feedback to each individual's writing process.

Peer feedback is a fundamental aspect of computer assisted collaborative learning. It allows for the formative assessment of work in progress [13], including private feedback from peers [14] and the construction of knowledge through a system of commendations and criticisms [15], provided that that peer feedback is of good quality and not misleading [13]. These affordances contribute to the collaborative environment of discussion boards.

In Brunei classrooms, students are accustomed to collaborative learning in composition writing as it is the norm of approaching the task. The task itself comprises of several stages of writing. Rather than having students undergo the stages individually, students attempt the task in groups because "there is evidence that in the discourse in which learners articulate and share their understandings, there is potential for sharing the cognitive load of the learning task" [12], When CMC is involved in these stages, collaborative learning can lead to learning outcomes comparable with those achieved in face-to-face classes [16].

Computer Mediated Collaborative Learning enables collaboration via five principles [9] that, if present in the classroom, are improved further by CMC; and if absent from the classroom, are uniquely provided by CMC. The five principles are "(1) text-based computer mediated communication, (2) many-to-many communication, (3) time- and place-independence, (4) long-distance exchanges, and (5) hypermedia links" [9]. Apart from principle (2), which can occur in onsite classrooms, the other principles can be regarded as unique to CMC.

Text-based computer mediated communication is a combination of both writing and speech. Text-based CMC enables the student to both communicate and reflect on what has been communicated. Further reflection allows quick editing and evaluation while in communication [9]. Hence, text-based CMC is regarded as the fourth evolution of human communication and cognition after 'language', 'writing' and 'print' [17]. The affordances of text-based discussion therefore enhance interaction among students in writing activities [14]. In an online discussion board setting, a student can interact with other students or a teacher while simultaneously reflecting upon the discussion at hand. Many-to-many interaction and reflection can occur simultaneously provided that time is given to reflect on the many-to-may interaction.

Therefore, a functional characteristic of the discussion board is its capacity to allow many-to-many communication without fail. A reliable discussion board provides enough individual space for each student in addition to providing pockets of opportunities where students can seek help from peers or the teacher(s) [18]. Since this principle exists in the traditional classroom it can be argued that supplement lessons with CMC would result in an insignificant improvement. On the contrary, many-to-many CMC permits students to discuss while simultaneously have the content of their discussions retained in text form allowing for constant and repetitive reflection [9].

Furthermore, past studies concluded that many-to-many CMC has its own social dynamics that actually promotes equality in participation as compared to face-to-face discussions where more often than not introverted students are left out [9]. One experimental study found that CMC creates "an intellectual environment that encourages active, thoughtful, and equal participation from all comers" [19].

The constraint of time is of a lesser concern with Computer Mediated Collaborative Learning compared to onsite classroom. The Internet enables constant access to the discussion board. This in turn allows students to work at their own pace as well as in their own time compared to the group work in the classroom where spatial and temporal constraints are determined by the school. Through Internet discussion boards, students and teachers can therefore interact outside of the classroom and prepare their compositions when they see fit [9].

The last two principles, viz. 'long-distance exchanges' and 'hypermedia links' are not as significant as the previous principles. The longest distance a student would experience would be the distance from the school to home. Hypermedia links are indeed useful in online learning but with regards to composition writing the most a student or a teacher can do is to provide links to resources and ideas that relate to the composition topic, including the sharing of useful online tools such as digital dictionaries [18].

The principles of Computer Mediated Collaborative Learning defined CMC as an empowering supplement for composition writing task. CMC enables students "to share not only brief messages, but also lengthy (formatted or unformatted) documents - thus facilitating collaborative writing" [20]. In addition, students "can also use the Web to publish their texts or multimedia materials to share with partner classes" [20]. In consideration of the above, CMC is a potentially effective medium for collaborative learning.

B. CMC and Collaborative Composition Writing

Word-processing is a powerful tool for writing compositions. In fact, "many composition and language teachers believe that word processing encourages new pedagogical relationships in the class, by facilitating student revision and collaborative writing" [21].

Discussion boards at present are very similar to word-processing applications from the formatting of text such

as font faces, styles and sizes to the editing and deletion of words. Students can type their compositions directly into the discussion board or alternatively they can complete their composition in a word-processor and paste them into the board, making their composition readily available to be edited by them through author privileges and to be given feedback by students and teachers. Thus, the discussion board by virtue of design is a simplified word-processor, providing a platform on which students can discuss ideas and comment on each other's compositions.

Many composition teachers agree that composition writing takes a lot of preparation tasks from planning to drafting to editing to proofreading, and time invested in these activities onsite restricts opportunities for meaningful and comprehensible discussions [21]. This justifies the reason as to why English as a first language (L1) composition teachers were the earliest proponents of CMC using computer conferencing among the students in a class to enhance collaborative writing and the social production of knowledge [21].

Nonetheless, the potential of collaborative CMC is only as good as the benefits it brings compared to that of face-to-face communication (f+f). Prior to the Internet, traditional f+f itself has benefits that far outweigh group lectures, yet CMC is capable of replicating f+f in addition to new affordances. One study found that academic performance improved when f+f processes are complemented with CMC, establishing that, "a combination of face-to-face and computer-mediated discussion provides a superior learning environment compared to the traditional classroom alone" [19].

Bearing in mind that Computer Mediated Collaborative Learning is the main supplement to the f+f communication already present in the class, the benefits of implementing this change can be categorised into several aspects, notably (1) time, (2) quantity and quality of collaboration, (3) learning motivation, (4) the role of the teacher and (5) the facilities provided by the discussion board.

As mentioned earlier, 'time' is a fleeting component of classroom lessons particularly when the year's syllabus is a chock-a-block schedule of learning activities. Segregating the tasks to become independent of onsite presence allows students to proceed at their own time and pace [9], [20] and [22], and free up class time for other activities [20].

When students discuss in the classroom, not many can be presented on classroom tabletops within the expanse of a few hours prior to writing. With discussion boards, students are able to initiate discussions within the expanse of weeks and the discussions are more enriched because students are given opportunities to reflect carefully what they are about to contribute and what have been contributed, contributions can be edited and re-edited and there is equality in contributing. All these factors improve the quality of collaboration and consequently the resulting compositions [4], [22]-[24].

Equality in participation is a distinct benefit that CMC has over f+f. Equality is seen as "one of the most pervasive and beneficial effects of using electronic synchronous discussion in L1 writing instruction" [3]. One study found that "silent students increase(d) their participations online" and "those who are traditionally shut out of discussions (are) benefitting most from the increased participation," [9].

Learning motivation increases when students participate in online classroom discussions. This notion is validated by another study on students' motivation in using computers for composition writing [21]. Students' motivation increase because via CMC they become part of the community, develop thoughts and ideas and learning from others, they overcome isolation and feel less threatened when contacting others and also they believe computers help them learn English and write essays better [21]. The role of discussion forums in overcoming language learning anxiety is however not as defined as motivation and further research in this aspect is warranted [25].

There are instances where a teacher explains the writing task and moves around the class to provide quality individual attention to students, but oftentimes fail to attend to every single student due to time constraints. The online discussion board helps the teacher to access each student's work and provide valuable feedback outside onsite contact time. The teacher becomes the online moderator who organises the content, moderates and facilitates the social dynamics as well as commenting on the intellectual input submitted by students [26] and delegating roles to students [15] including providing peer feedback. Furthermore, students' compositions are accessible by peers, whereby peer proof-reading both lightens the teaching burden and encourages student reflexivity beyond their own schema of the writing task.

The discussion board itself brings several aesthetical benefits. It has similar functions to word-processors. It is capable of organising content and discussion thus preventing clutter. It is usually protected by a password entry thus allowing a class to maintain exclusivity of their discussion space. It doubles as a data archive where students can store and retrieve their compositions. It can be personalised based on design and functionality to suit the learning preferences of the students.

III. Discussion And Conclusion

The effective use of CMC to encourage online collaboration in composition writing is seemingly dependent on the strategies mentioned in the previous section, including but not limited to collaborative knowledge construction, synchronous and asynchronous communication, peer feedback, leveraging on its technical features of file sharing, Word-processor interface, collaborative writing, hypermedia links, and its capacity to promote motivation and equality of participation. This technology is however not without its challenges. Furthermore, there are conflicting opinions in literature on the shortcomings of CMC. One study believes that CMC motivates introverted students to participate [21], but another argues that, "lurking can occur... group members read the electronic discussions, but do not contribute" [16]. Moreover, "lack of non-verbal cues may diminish "social presence" [27] and "some students dislike the text-based nature of conferencing because of the increased time it takes to type messages and read other people's messages' [28]. The worst problem that may arise is 'information overload' whereby students may be overwhelmed by 'posts' thus ignoring them resulting in conversations becoming

monologues [9]. Extending from these issues of peer collaboration, web-based peer feedback do not benefit every student as success of the collaborative environment depends on how the feedback system is run and the quality of its collaborative exercises [13].

From a technical standpoint, technology always has the tendency to malfunction. Even when the provision of technology is adequate, other variables such as power supply or faulty hardware may come into play. One caveat is that anything that can go wrong will go wrong so it is advisable to have technical support to maintain the running of the online discussion board [4]. Fortunately, the challenges of implementing CMC in the classroom are far outweighed by the benefits gained from implementing it. Furthermore, the negative connotations originated from old studies when computers were not as reliable as today and students were not as computer literate as they are now.

This review has attempted to create a discourse pertaining to the benefits of implementing discussion boards in preparation for writing tasks. It has elaborated on the issues that need to be considered in relation to CMC and f+f. It is best to acknowledge that this medium acts as a supplement to prepare students wherein students' compositions can be improved through collaborative interactions. One theory attained from this review is the possible correlation between the quality and quantity of discussions and the quality of compositions. Ultimately, the theoretical underpinning discussed by this article provides a platform for future research into the advantages of online discussion boards and practical investigations on its effectiveness.

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