Patterns of Negotiation of Meaning Routine in Online Forum Discussion

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ABSTRACT

This study examines a text-based, asynchronous online forum discussion among English language teacher trainers who were involved in a two-week online professional development course. It investigates the participants' negotiation of meaning routine when they come across new content related item and describes the pattern of this negotiation of meaning routine. A textual analysis method, employing Smith's (2003) expansion of Varonis and Gass Model (1985) for negotiation of meaning, was utilised to analyse the discussion threads. The analysis revealed that the participants did engage in negotiation of meaning and all the four negotiation of meaning steps (trigger, indicator, response and reply to response) were evident. It was also revealed that content triggers, local indicator, elaboration in responses and task appropriate response were frequently used. As the application of CMD for teaching and learning is increasing, findings of this study could inform educators about the kind of strategies that could enrich online interaction.

Keywords: Computer Mediated Discussion (CMD), Online Forum Discussions (OLFD), Negotiation of Meaning (NOM)

INTRODUCTION

The usage of technology in the classrooms has led to rapid changes in the way students communicate and the role they play in the process of communication. Information Communication Technology (ICT) in teaching and learning refers to the application of computer-mediated discussions (CMD),

which are highly employed for long-distance learning programmes. Such setting allows educators and learners to confer beyond physical boundaries and limitations of time (Liu & Burn, 2007; Kim, 2009; Millard, 2010). This unique attribute of CMD has directed educators and researchers' attention to analyse and describe the nature and value of online communication and strategize ways and methods to generate meaningful interactions (Saade & Huang, 2009; Hancock, 2012; Marra, Moore, & Klinczak, 2014).

Computer-mediated discussions (CMD) is an authentic communicative situation that requires the participants to apply linguistic strategies in the course of making meaning (Fernandez-Garcia & Martinez-Arbelaiz, 2013). The concept of negotiation of meaning is often studied in the light of second language acquisition, as according to Patterson and Trabaldo (2006), interaction along with negotiation of meaning are essential elements of language acquisition in SLA. More studies, however, are needed to provide descriptions of the patterns of interaction in the CMD amongst proficient ESL users. These findings could offer general linguistic features of the language, the nature of negotiation of meaning, knowledge construction and the strategies they employ, all of which could be emulated by second language learners. Hence, this necessitates the development of an empirically based study to be done to identify the features of the discourse generated during learner-learner communication in online discussions (Fernandez-Garsia &

Martinez-Arbelaiz, 2013). The learners of this study are proficient ESL users who are teacher trainers undergoing a professional development course.

Many studies on CMD found that the process of comprehension and learning transpires only when there are productive and meaningful social interactions among the participants, as propagated by the theory of social constructivism. In addition, these meaningful interactions could further contribute to the building up of strategies that encourage higher order thinking (Kern, Ware, & Warschauer, 2004; Uzuner, 2007; Woo & Reeves, 2007; Swee Kim, 2009). Based on these premises, this study aims to add to the pool of knowledge on online discourse by describing the pattern of negotiation of meaning (NOM) routine (Smith, 2003), in an online forum discussion (OLFD) that consists of TESL teacher trainers who are proficient users of the language. McLoughlin and Luca (2000) support this by stating that when learners explicate ideas to each other, regardless of the abilities of those engaged, a more explicit and organised understanding can result in the form of construction of knowledge, leading to cognitive change that is vital to the expansion of higher order thinking.

The research questions are:

1. To what extent do the online forum discussions (OLFD) trigger negotiation of meaning (NOM)?

2. What is the pattern of negotiation of meaning (NOM) amongst TESL teacher trainers in the OLFD?

3. What are the levels of thinking involved in the process of negotiation of meaning in the OLFD?

LITERATURE REVIEW

Computer-Mediated Discussion (CMD)

Computer-mediated discussion is found to be an expedient tool for language teaching and learning as well as for research. It was found that CMD draws more learner participation as it creates a less stressful environment for learning other than having quality language use amongst its participants (Smith, 2003; McLoughlin & Mynard, 2009). There are two types of computer-mediated discussions which are the synchronous and asynchronous CMD. The former generally refers to real-time, instantaneous, textual communication amongst people over a local-area or wide-area network (Smith, 2003). Asynchronous CMD refers to delayed, non-real time interaction. Both modes of CMD offer opportunities for cooperative learning and teaching process, which can be dialogic in nature (Saade & Huang, 2009; McLoughlin & Mynard, 2009). The discussion could also create an opportunity for participants to employ several indicators to signal non-understanding and give responses to request for clarification (Hardy & Moore, 2004).

According to Kim (2009), CMD requires the readiness of participants in putting forth their ideas or opinions or responding to other participants' posting. In doing so, the participants will be relying on their prior knowledge, past experience and online competency that they possess. CMD provides a platform for the participants to be engaged in productive skill (writing) practice by employing linguistics strategies in order to function effectively in the online discussion (Nandi, Hamilton, Chang, & Balbo, 2012). Subsequently, the participants of asynchronous CMD could take time to plan their messages and they are also exposed to the construction of knowledge through negotiation of meaning in the online discussions (Lee, 2012).

Online Forum Discussion (OLFD)

Online forum discussion is a form of CMD implementation that offers an avenue to connect individuals with the same interests in a virtual environment. Most OLFDs are unstructured and serve as an outlet of ideas and thoughts, which have been used for educational purposes as a tool for promoting different modes of learning that can lead to enhanced learning outcomes (Saade & Huang, 2009; Montero, Watts, & Garcia-Carbonell, 2007). The communication that takes place in OLFD can facilitate students involvement in authentic conversations, where they engage in the discourse on task related topics in the process of learning (Sutherland, Watts, Garcia-Carbonel, Montero, & Eidsmo, 2003) and that OLFD provides a catalyst in facilitating critical thinking skills in learners when it is used effectively (Yang, 2008; Zhu, 2006). It is asserted that OLFD encourages more in depth thinking and offers ample time for the

participants to reflect on their comments or responses before posting them (McLoughlin & Mynard, 2009; Pena-Shaff & Nicholls, 2004).

McLoughlin and Mynard further claimed that taking part in an OLFD reduces the anxiety learners feel when they are involved in a face-to-face interaction. This could lead to active participation that enhances learning outcomes. Such online participation could help learners to identify and solve problems related to their work and hence making it an excellent vehicle for exchanging information to support professional development (Montero, Watts, & Garcia-Carbonell, 2005).

Negotiation of Meaning

In an online discourse, participants negotiate for meaning as they modify their speech linguistically to create comprehensible input, which is achieved by repeating a message, adjusting the syntax, changing the vocabulary or modifying its form and meaning (Patterson & Trabaldo, 2005; Akayoglu & Altun, 2009). Many studies on CMD have suggested that OLFD can stimulate negotiation for meaning amongst its participants. Lee (2012) states that in such online discussion, participants are involved in real-life communicative interactions and hence are exposed to construction of knowledge through the process of negotiation of meaning. In the context of teachers' development of content knowledge, negotiation of meaning allows them to learn through the processes of involvement, orientation and reification

that can transform their own practices as part of ongoing professional development (Keily, 2011).

Theoretically, constructivists posit that the process of constructing knowledge that learners undergo when they try to make sense of their experiences can assist in higher mental process, as well as learning of new concepts (Driscoll, 2000; Woo & Reeves, 2007; Taylor, 2007). This happens as the higher mental process grows through social interaction, whereby learners test their own knowledge against those of others through the process of negotiation of meaning and ideas. Learning could be enhanced when ideas, opinions, experiences and perceptions are discussed and negotiated with colleagues and peers. In the OLFD, course participants can compare their own understandings with others', negotiate meaning through suggestions and ideas given by others, and construct new ideas related to the topics discussed.

NOM comprises explicit indication of communicative difficulties that force participants away from the main line of discourse in order to resolve the problems (Varonis & Gass, 1985, cited in Rozina, 2005; Rozina, 2009). Meanwhile, Varonis and Gass proposed a model for NOM which involves the stages of *trigger*, which spurs the negotiation routines; *indicator*, which indicates a non-understanding; *response*, which responds to the *trigger* and/or *indicator*; and optionally *reaction* to *response*. Their model allows for multiple embedding of negotiation stages and they believe that the key to successfully aiding

acquisition is the dynamic interaction that takes place (Rozina, 2005, 2009).

Smith (2003) expanded this model by having descriptions for each of the negotiation stages. He listed four types of *triggers* which are *lexical, syntactic, discourse,* and *content*. He also suggested three types of indicators, namely global, local and inferential. The types of response that he listed are *minimal, repeat trigger plus lexical, rephrasal* and *elaboration*. Finally, four types of *reaction to response,* which are *minimal, metalinguistic talk, task-appropriate response* and *testing deductions*. He studied the pattern of negotiation of meaning amongst the participants who engaged in jigsaw and decision making tasks, involving students of intermediate level, representing five different countries and speaking four different languages. The task employed in the discussion centred on new lexical items and it was found that most of the negotiations were lexical *trigger* (Rozina, 2005).

In short, proper stimulus in the online interaction could indeed trigger NOM and hence construction of knowledge pertinent in the students' development. This potential of NOM is also an avenue for possible enhancement of learning quality, especially in the aspects of content and critical thinking development, which will definitely be beneficial to the education field. This study would give insights to educators and trainers about the kind of strategies that could catalyse and sustain a healthy academic oriented online interaction.

METHODS

The data consisted of a discussion thread from a task-based OLFD. The 14 participants involved in the online forum discussion are teacher trainers participating in a Reading Fluency course and their continuous professional development (CPD) course trainer. These teacher trainers have had at least five years of experience teaching in teacher training institutes. They had a two-week face-to-face interaction before they continued with an online mode of interaction. The online discussion was based on an article read "Why reading fluency should be hot?" by Rasinski (2012), and a question posted by the course trainer; "What do you think: Where are we with reading fluency in our education system?" The Course participants needed to log into Canvas Instructure, which is a Learning Management System (LMS) used for the training. Two weeks were allocated for the discussion and within that period, all the course participants contributed to a total of 69 postings including 7 postings from the CPD course trainer. There were a total of 10,609 words in the discussion thread that was analysed.

A textual analysis method employing the Smith's (2003) expansion of Varonis and Gass's Model for negotiation of meaning (Figure 1) was utilised for analysing the 69 postings in the discussion thread. The postings were analysed for words, phrases and sentences that indicate the negotiation of meaning stages. The basic unit of analysis for this study comprised of phrases within

the interaction that took place in the form of a word, a phrase or a sentence that implies meaning to the entire discourse. For example, the appearance of the question, "What do you think?" (TrR1) in a post is identified as a trigger, while the phrase "…or is reading fluency about prosody - the intonation and rhythm patterns in a language?" (CP4R1) is identified as an indicator.

Subsequently, the thread was analysed for reflections of Bloom's taxonomy to identify the levels of thinking occurring in the discussion. The analysis was done by matching the participants' responses to the description of the Bloom's taxonomy levels. For example in CP1R1, the participant employed the application level when he responded "…I believe fluency in reading which could be achieved through speed, deep or wide reading, could enhance students' confidence in reading. When his confidence grows, so does his interest in reading…this would improve his comprehension..." This response is an indicative that he is able to apply his knowledge to solve the problems of his students' reading ability.
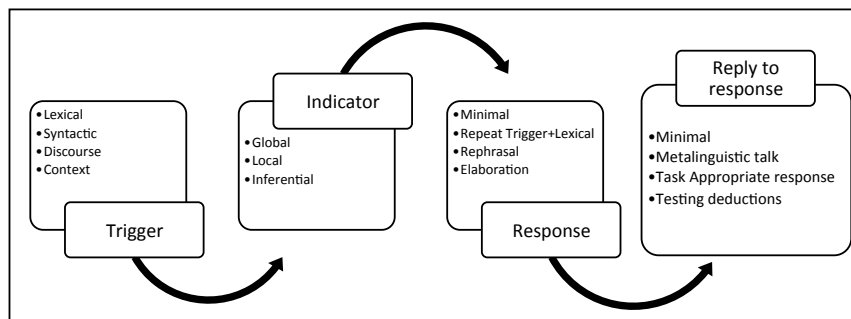

Figure 1. Smith's (2003) Expansion of Varonis and Gass Model for Negotiation of Meaning

RESULTS AND DISCUSSIONS

In order to find the negotiation of meaning routine and arrive at the patterns, the discussion thread was carefully analysed. All the course participants (CPs) and their trainer contributed a total of 69 postings in the two weeks' online discussions. Out of the total, there were 7 postings from the trainer that managed to generate 62 postings from the CPs. This is encouraging because it reflects student-centred discussion.

All the negotiation steps (trigger, indicator, response and reaction to response) were found in the discussion thread and more than 90% of the discussion reflected *trigger, response* and *reaction to response (T-R-RR)* negotiation routine. This negotiation routine is different compared to Varonis and Gass's (1985) model and Smith's (2003), as well as Rozina's (2005) findings, where three negotiation routines were listed: 1) *trigger, indicator, response* and *reaction to*

response (T, I, R, RR); 2) *trigger, indicator* and *response (T, I, R)*, and 3) *trigger* and *indicator (T, I)*. In this particular study, the *indicator (I)* step was not frequently used in the discussion studied, hence manifesting the *T-R-RR* negotiation of meaning pattern.

The respondents in this study negotiated meaning in context, which is related to the assigned text - *Supportive fluency instruction: The key to reading success (Especially for students who struggle* - by Rasinski (2013). Therefore, the CPs purpose for negotiating meaning is to comprehend knowledge related to teaching pedagogy and not aimed at understanding specific lexical item or phrases found in the article. More *content triggers* (80.75%) are used by the CPs and 100% of the responses are in the form of *elaboration*. Examples of *content triggers* are as seen when CP4R1 states, "Please enlighten me on the role of prosody in reading fluency and are our teachers and children ready for prosody reading instruction…" and CP4R2 mentions, "… But do we have speed rate in our reading programme". On the other hand, *Elaboration* in *response* can be seen in an instance such as CP6R1's comprehensive explanation "… we need to teach our students to become fluent readers …I would like to highlight the importance of reading instruction because … the bridge to comprehension may never be built (Rasinski, 2013). When students do not pick up the connection intuitively… If Joseph as adult reader prefers reading aloud, I would like to suggest Assisted Reading Practice which is … If the student commits a reading error, the helping reader corrects the student error. The teacher is an important factor who needs to be well taught him/herself."

Table 1 illustrates the number of negotiation stage employed by the participants in the discussion thread. There are 59 *Triggers* altogether in the online discussion, 6 *Indicators*, 498 *Responses* and 58 *Reaction/Replies to Response*. This shows that the participants had no difficulties in conveying meaning in the form of ideas, opinion and suggestions in the OLFD.

Table 1
Negotiation stage and number of occurrences

Negotiation stage	No of occurrence
Trigger	59
Indicator	6
Response	498
Reaction/Reply to response	58

It can be perceived from Table 2 that not all the subcategories of negotiation stage are observed in the discussion thread analysed. Out of the 59 *Trigger* found, 84.75% are *Content Triggers* and 15.25% are *Discourse Triggers*. There are no *Lexical* and *Syntactic triggers* employed in the OLFD analysed. This could suggest that the participants, who are proficient users of the language, did not find the need to negotiate meaning in terms of lexical items, phrases or sentences, as they were able to understand them. Instead, they needed more clarification and elaboration on the content of the discussion.

When a problem is triggered, there would usually be an *Indicator (I)* that shows non-understanding. All the *Indicators* found in this study are *Local Indicators*, whereby a specific item is made explicit as the source of non-understanding, as exemplified by CP8's question, "What does *prosody* mean?" Here, CP8's enquiry is specific to his non-understanding of what *prosody* is. There are only 6 *Indicators* found in this study, in contrast to other studies (see for instance, Smith, 2003; Rozina, 2005) that focus on SLA, which found there were an immense number of *Indicators* used in the interaction. Thus, it can be said that the participants of this study have a better understanding of the topic discussed, which could possibly be attributed to their high proficiency level of the language and as teacher trainers, they possess the content and pedagogical knowledge of the subject.

All the *Responses (100%)* observed in the OLFD are in the form of *Elaboration*. The participants provided more input in terms of opinion, elaboration and ideas, which are all well supported with readings and experiences that they have had in the teaching profession. Finally, the *Reactions / Reply to Response* were all in the form of *Task Appropriate Responses*, which show that the participants were able to respond to the *Triggers* and *Reponses* appropriately and effectively by referring to the task and reading material provided.

Table 2
Subcategories of each element of the negotiation stage

Negotiation	Subcategory of element	No of occurrence	Percentage of total occurrence
Trigger	Discourse	9	15.25%
	Content	50	84.75%
Indicator	Local	6	100%
Response	Elaboration	498	100%
Reaction/Reply to response	Task appropriate response	58	100%

It was also found that the NOM employed is at a level beyond the Bloom's Taxonomy level of knowledge and comprehension. The asynchronous OLFD provided the participants with time to reflect on their ideas before sharing them and also reduced the anxiety that course participants usually experience during face-to-face interaction. The interactions can be categorised as moving upwards from the level of application to the extent of synthesis and evaluation of the Bloom's taxonomy.

In addition, it was also found that the respondents in this study did synthesize ideas by composing, inferring, modifying, predicting and combining thoughts in giving their responses as can be seen in a response given by (CP10R3):

> "*I agree with you (Tr). The students' learning environment must be*

filled with materials that will help them learn, be it reading, speaking or even writing. Reading corner, charts, word card s…just name it, they are all very important…"

Another example that shows the synthesis level of thinking occurring in the discussion is the response from (CP6R3):

"*Our teacher trainees need to be alerted on the fact that reading comprehension all comes down to meaning (Rasinski, 2013) and teaching reading fluency ultimately helps learners get better at deriving meaning from any text. As teacher trainers we need to help trainers to bridge comprehension and fluency and realise the importance of making it happen in the classroom*".

At the evaluation level, the respondents were able to assess theories, compare ideas, evaluate outcomes and recommend solutions in the process of NOM. This can be seen in the response from (CP5R1):

"*…I am not against with this article on reading fluency. This article is saying that if one is already trained as a fluent reader, text comprehension is attained together with accuracy, speed and prosody*".

In another example, (CP7R4) stated:

"*…Incompetent readers can become skilled readers and develop their reading skills or fluency if they are provided with appropriate instruction about effective strategies and taught to monitor and check their comprehension while reading. In this regard, Al Mel (2000), has uncovered that some differences exists between successful and less successful readers in terms of their actual and reported reading strategies, their use of reading strategies, the strategy awareness, and their perception of the good reader. Consequently, helping students achieve functional literacy is one of the core tasks of the teachers and should be given the highest priority, particularly in rural schools where resources may be limited in the home. So I do very much agree, teaching reading strategies to the students is a necessity and crucial in the reading programme and it is an assurance to reading fluency*".

The CPs in this study demonstrated the ability to do the analysis as they were able to relate to each other and to the overall structure and purpose of the discussion by comparing, contrasting, criticising, discriminating, questioning, and classifying ideas. Their high level of language proficiency could be a contributing factor to this ability. This can be seen clearly in a response from (CP2R4):

"*…I disagree carrying out wide reading with disfluent readers. They*

are already struggling to read: recognising words, decoding words, pronouncing and meanings of words. When the foundation itself is not strong, how could they read and discuss? Wide reading is relevant to fluent readers. They are already knowledgeable and they do not have to struggle to understand the text. The Ministry of Education has to overcome the issue of disfluent reading in our pupils. It is a wakeup call to all trainers and educators. We are the ones. Be proactive for the future generations."

The extract above is an example that could suggest that the participants in the OLFD engaged higher order thinking. As proficient users of the language, the respondents could relate the articles read to other relevant sources of information as well as to their past experiences. Hence, that helped them to convey opinions and ideas effectively in the process of NOM. They negotiated meaning at a higher thinking level – application, analysis, synthesis and evaluation, as can be perceived from Bloom's Taxonomy.

CONCLUSION

This analysis provides empirical evidence that CMD is a platform that could trigger and enrich the development of negotiation of meaning which allows higher order thinking to occur. The findings also suggest that OLFD in the context of CMD amongst proficient users of the language encourages higher order thinking (HOT), especially at analysis, evaluation and synthesis level. Zhu (2006) asserts that various levels of cognitive engagement in an online discussion may influence varied individual learning and construction of knowledge. It is suggested that course trainers, as well as teachers, use tasks or materials that promote NOM at a higher level, which inculcate HOT. It would be significant to investigate and explore discussion threads involving proficient users of the language against critical thinking frameworks.

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APPENDIX 1

Categories and subcategories of the negotiation of meaning routine stages with description (Varonis &
Gass, 1985; Smith, 2003)

Categories of negotiation of meaning stages	Description	Subcategories of negotiation of meaning stages	Description
Trigger	functions as the "catalyst" of negotiation routine which can be initiated by any aspect of the discourse	Lexical	cases where problematic item can be linked to a specific lexical item
		Syntactic	occurs when the problem lies in the structure or grammatical construction of the message
		Discourse	related to the general coherence of the discourse
		Content	instances where the entire content of the message is in the same way problematic
Indicator	signals that an utterance has triggered a non-understanding	Global	when the respondent does not indicate any specific item as the source of non-understanding such as the question "what?" or the statement "I don't understand".
		Local	when a specific item is made explicit as the source of non-understanding such as "What does monolithic mean?".
		Inferential	occurs when a respondent tests out hyphotheses and in doing so indicates non-comprehension such as when a respondent says, "Does that mean I was wrong?"
Response	any utterance by the respondent that replies to a *signal* or *indicator* of non-understanding	Minimal	provides little new input to the indicator of the negotiation routine such as simple reply "yes".
		Repeat Trigger + Lexical	the learners' attempt to clarify his or her intent meaning such as "monolithic, I mean massive or huge".
		Rephrasal	when the respondent illustrates the nature of the problematic lexical item
		Elaboration	when more context on the previous discourse are provided

APPENDIX 1 *(continue)*

Reaction to Response	serves to signal that learners are ready to resume the main line of discourse	Minimal	normally takes the form of an explicit statement of understanding such as "OK", "Good" or "I see".
		Metalinguistic Talk	entails explicit comment on the cause of non-understanding such as " I see, I thought the meaning was something else"
		Task Appropriate Response	utterances that are contextually relevant to the preceding discourse
		Testing Deduction	when a learner puts forth his or her best guess relevant to the context of discussion