Effects of topic threads on sustainability of email interactions between native speakers and nonnative speakers

GLENN STOCKWELL

Ritsumeikan University, 1-1-1 Nojihigashi, Kusatsu, Shiga 525-8577 Japan
(*Email: gstock@ec.ritsumei.ac.jp*)

Abstract

There has been much enthusiasm shown in the literature about Native Speaker-Nonnative Speaker (NS-NNS) e-mail interactions, associating them with increased motivation and participation and reduced anxiety (Beauvois & Eledge, 1996; Leh, 1997; Aitsiselmi, 1999). Recent research has now also begun to link these interactions with increases in L2 proficiency (Floréz-Estrada, 1995; Stockwell & Harrington, 2003). As some studies have suggested that L2 learners should reach a certain number of e-mail interactions in order for benefits to accrue (Lamy & Goodfellow, 1999; Stockwell & Harrington, 2003), researchers have started to turn their attention towards what factors play a role in helping to facilitate longer interactions. One factor that appears to be important in sustaining longer conversation sequences is the topics discussed during the interactions (Stockwell & Levy, 2001). While Lamy & Goodfellow (1999) investigated the topic threads during on-line discussions with multiple participants, threads in NS-NNS paired interactions through e-mail remain largely unexplored. Thus, in this study, 48 learners of Japanese involved in e-mail interactions with native speakers were investigated to determine what features of topic threads contributed to sustaining interactions. The end-of-thread messages (i.e., those messages which were the last message in a conversation thread) were examined in terms of whether or not a reply was invited, and those messages for which a reply was invited were further analysed to determine why a reply was not received. The paper concludes with suggestions for how conversation threads may be sustained, and some directions for future research.

1 Introduction

It is now widely recognised that learners of a second language require opportunities to use the target language above and beyond that which can be achieved in classroom practice. One means of providing such opportunities that has increased in popularity in recent years is e-mail, and there is now much written in the literature about various projects where language learners are coupled with native speakers in 'key-pal' relationships. In this arrangement, a group of learners at one institution is paired with a group of native speakers of the target language, and communication occurs predominantly, if not exclusively, in the target language.

As Lee (2001) argues, e-mail provides learners with opportunities to use the target language to negotiate meaning and form in a social context, which is now thought of as essential for acquisition of a language. Other advantages associated with e-mail include motivational increases through interacting with a real audience (Jor & Mak, 1994), reduced anxiety through more anonymous exchanges (Beauvois, 1995; Kinginger, 1994), provision of authentic communication (Saita, Harrison & Inman, 1998), improved cultural awareness (Gray & Stockwell, 1998; Liaw & Johnson, 2001), increased participation (Aitsiselmi, 2001), an equalising effect for the participants (Warschauer, Turbee & Roberts, 1996), and development of learner autonomy (Leahy, 2001).

One of the more significant developments in research into the use of e-mail in second language learning environments has been the potential to contribute to second language proficiency. There have been a few studies which have emerged in the last few years which have shown a relationship between the use of e-mail and proficiency gains in the target language. Floréz-Estrada (1995), for example, found that learners of Spanish involved in e-mail exchanges with native speakers showed greater improvements in grammatical accuracy than those who were not, and Stockwell & Harrington (2002) showed that advanced level learners of Japanese showed significant gains in L2 syntax and vocabulary through task-based e-mail interactions with native speakers. While such evidence still remains relatively sparse, what these studies have served to suggest is that e-mail has the potential to be a very powerful tool indeed in the second language classroom, and benefits afforded the learners may extend well beyond the motivational gains which appeared to dominate much of the early research into e-mail usage. There are, however, some difficulties associated with e-mail as a tool in the language classroom, not the least of which is the issue of sustainability, which is discussed below.

2 The issue of sustainability

One of the major problems that e-mail faces as a tool in the classroom is that despite the many benefits that the interactions appear to give learners, while enthusiasm is high at the start, the number of e-mail communications between the learners generally tends to drop off, sometimes completely, as time progresses (for example, see Tella, 1991, 1992; Warschauer, 1995). This problem has serious repercussions for the use of e-mail. Most important has been the existence of a 'first message effect'. Stockwell & Harrington (2003) have suggested that students involved in e-mail interactions will only start to show improvements in second language proficiency after a minimum number of e-mail interactions has been reached. Their study indicated that measured proficiency levels for syntax and vocabulary showed marked decreases from the first to the fifth messages, and then slow increases from the fifth message to the end of the interaction period. They suggested a possible cause of this was that in an attempt to make a good impression in the early stages of the e-mail interactions, learners used their repertoire of formulaic expressions over the first few messages. As the exchanges continued, the learners were asked to discuss an increasingly wider variety of topics, and in addition needed to respond to questions posed to them by the native speakers, forcing them to move beyond their stock of formulaic phrases and structures, giving lower proficiency scores. Over a period of time, learners started to demonstrate steady increases in proficiency after a low

point, gains which continued from around the 5th message all the way through to the end of the interaction period.

Taking this into consideration, the significance of sustaining e-mail sequences becomes evident. If learners are not able to continue with interaction sequences beyond the minimum number of messages, they will not have access to the possible linguistic benefits that e-mail provides. Moreover, as the results of the above study have suggested that these proficiency gains continue for the length of the interactions, it would seem natural that interaction sequences should be continued for as long as possible.

3 Factors affecting sustainability

Sustainability of e-mail interaction sequences has been shown to be a complex issue. There is, of course, a very large impact from the type of task itself. As Robinson (2001) argues, the type of task can, to a very large degree, determine the degree of language output. In other words, depending on the selection of the task in an e-mail project, the amount of language which learners need to or wish to produce will vary greatly, thus affecting the degree to which interaction sequences will be sustained. However, even when the task is kept constant, there appear to be a range of other factors which also play a role in determining sustainability.

Stockwell & Levy (2001) have suggested that sustainability can be affected by language proficiency, computing experience, ratio of interlocutors, pair dynamics and the topic threads. They argue that learners with lower proficiency levels will often lack the linguistic resources to continue with e-mail interactions for an extended period of time with native speakers. Similarly, learners who have limited computing experience may experience difficulties in sustaining interactions as the actual task of writing the emails itself becomes too demanding, and learners may write shorter messages, or even cease completely. Another important factor is the ratio of interlocutors. They found that when there were differing numbers of participants at each of the institutions, students were often required to 'double up' with students (i.e., one native speaker with two nonnative speakers), which also greatly reduced the number of interactions which occurred between each NS-NNS pair. Yet another factor was that of dynamics of the pairs themselves. While there were some pairs that got along very well from the beginning and easily exchanged e-mails with each other, there were other pairs that could not find any common ground with each other, hence there were obvious difficulties in continuing with the interactions beyond the minimum requirements.

Each of these points can be, however, controlled to some extent before an e-mail project begins. It is possible to ensure that the learners have sufficient linguistic and computing skills to be able to write the e-mail messages without too much difficulty. Certainly it is important to control the numbers of participants at each of the institutions to ensure that there is little or no need for participants to pair up with more than one person. Even the pairing of the students can be organised with some degree of preknowledge of the backgrounds of the participants, such as likes, interests or hobbies, to try to ensure as suitable a match as possible. However, in the study cited above, even when many of these factors were relatively constant, there were still large variations in the degree to which the e-mail interactions were sustained.

The major factor which appeared to affect this sustainability was that of the topic

threads in the e-mail messages. Topic threads are one aspect of e-mail interactions which are very difficult to control at the outset of a project. While topics may be assigned for an e-mail exchange project, the ways in which each of these assigned topics are continued, or more importantly, how the individual personal topics are continued has a very large effect on how e-mail interaction sequences are sustained. One particularly notable point in Stockwell & Levy's (2001) study described above, was that there were many cases where participants were discussing a particular topic thread, but this thread suddenly stopped, even though a response was invited from one participant in the discussion. This leads to an important question. What are the factors that cause these topic threads to suddenly cease, even though one of the participants has shown a desire to continue with this topic thread? What are the features of the e-mail interactions that contribute to this premature cessation of the topic thread? These issues are discussed forthwith.

4 Method

4.1 Setting

The purpose of the study was to identify cases where topic threads in e-mail interactions between language learners and native speakers ceased prematurely, and to determine the possible causes for this premature cessation. In all, 48 students at an Australian university and 34 students at a Japanese university participated in the project over two five-week periods. Students in Australia were advanced level learners of Japanese language, while students in Japan were studying intercultural communication. Participants were assigned weekly topics over the five-week periods, which were agreed upon by the teachers at both institutions at the outset of the project to reflect the objectives of the courses at both universities. The topics were as follows: 'Self introductions', 'Perceptions of ourselves and others', 'Dining out', 'Relaxation and leisure' and 'Dating and socialising'. While participants were expected to discuss the assigned topics, they were also encouraged to move beyond the assigned topics if they wished. The language of all of the e-mails was Japanese, and both the Australian and the Japanese participants were asked to try to write at least 4–5 e-mails per week for the entire 5-week period.

4.2 Procedure

All incoming and outgoing e-mails were recorded on the computers at the labs in Australia and were collated into interaction sequences for each pair at the end of the interaction period for topic thread analysis. There was significant variation in the number of messages produced by each participant, with some learners producing large numbers of messages, and others not writing a single message (see Stockwell & Levy (2001) for a detailed breakdown of the messages produced by each participant in both cohorts).

There were a total of 927 interactions from the 82 participants in the study, which included a total of 1691 topic threads. Of these topic threads, more than 70% were considered as having ceased naturally, as no reply or request for further information was invited in the final message of the topic thread. This left, however, nearly 30% of the

topic threads which invited a reply but did not receive a response, hence could be thought as having ceased prematurely. The breakdown of the numbers of topic threads which did or did not invite a response can be seen in Table 1.

After sorting all of the messages into their respective pairs, the end-of-thread messages which invited a reply were categorised according to the possible causes. This categorisation was based partially on the factors outlined by Lamy & Goodfellow (1999) in their analysis of topic threads in an online discussion, but refined to suit the one-to-one e-mail environment as opposed to the many-to-many environment of a discussion group. The results of this analysis are described forthwith.

5 Results

Analysis of the results showed that by far the most common reason for premature cessation of a topic thread was multiple topics in one email, which accounted for approximately a third of all of the end-of-thread messages which invited a response. The other reasons, in order of most frequent to least frequent, were sudden cessation due to the assigned topics, lack of explicitness, syntactic error, asking about a question already answered, pragmatic error, and one speaker closing the topic. This list has been included as Table 2. It is also interesting to note that nearly 20% of all of the topic threads that ended prematurely ceased for unknown reasons. That is to say, a reply was invited from the interlocutor, but no reply was forthcoming, regardless of the fact that there was no apparent reason why a response should not have been given.

Table 3 outlines the differences in the causes for both the native and nonnative speakers. The heading 'NNS' in Table 3 means that the response was invited from the non-

Table 1. *Overview of topic threads*

Type of Topic Thread	Number
Total topic threads	1691
End-of-thread messages not inviting a reply	1199
End-of-thread messages inviting a reply	492

Table 2. *Causes of premature cessation of threads*

Cause of End of Thread	Number
Multiple topics in one e-mail	163
Sudden cessation due to assigned topics	93
Lack of explicitness	84
Syntactic error	34
Asking about a question already answered	16
Pragmatic error	8
One speaker closes topic	4
Unknown	90

Table 3. *Causes of premature cessation of threads*

Cause of End of Thread	NNS	NS
Multiple topics in one e-mail	102	61
Sudden cessation due to assigned topics	39	54
Lack of explicitness	51	33
Syntactic error	2	32
Asking about a question already answered	10	6
Pragmatic error	3	5
One speaker closes topic	2	2
Unknown	53	37

native speaker, but the nonnative speaker failed to respond, and 'NS' means that the response was invited from the native speaker. As the table shows, the proportion of end-of-thread messages for both the native speakers and nonnative speakers was comparable, with approximately 54.1% of the failures to respond coming from the nonnative speakers, and 45.9% from the native speakers. The causes for the failure to respond to the messages followed approximately the same order for both the native and nonnative speakers with the exception of syntactical accuracy, which, as expected, was virtually zero for the native speakers. The two instances of syntactical error were caused by typographical errors which resulted in sentences that may not have been comprehensible to the nonnative speakers. The other variation in the order of the causes of failure to respond was that of lack of explicitness, which was slightly higher for the nonnative speaker. The number of topic threads that ceased for unknown reasons was also a little higher for the nonnative speaker than for the native speakers, with nearly 60% of the unknown cessations coming from the nonnative speakers. Descriptions and examples of each of these causes (as shown in Table 3) have been included below.

5.1 Multiple topics in one e-mail

As mentioned above, the most common cause for a topic thread to cease prematurely was when multiple topics were included within a single e-mail. If one of the interlocutors included a barrage of questions within an e-mail, there were many cases where a number of the questions or requests for information were not dealt with. In the following example, the native speaker has asked four separate questions of the nonnative speaker, each on a different topic. When faced with this large number of questions, the nonnative speaker has selected one of the topics to deal with, and has ignored the remainder of the questions.

NS: インドは映画大国なんだって、知ってた？日本の映画見たことある？日本人のミュージシャンでは、どんな人を知っているの？彼氏にどうやって知り合った？

NNS: 日本に行ったときに彼氏に知り合った。

NS: Did you know that India is a major movie producing country? Have you ever seen a Japanese movie? What kind of Japanese musicians do you know? How did you meet your boyfriend?

NNS: *I met my boyfriend when I went to Japan.*

The reasons why the nonnative speaker has selected this particular question to answer are not clear, however it is possible that it was the topic of most interest to the nonnative speaker, or alternatively it could simply be that it was the last question posed to them.

5.2 Sudden cessation due to assigned topics

Second to multiple topics in a single email was sudden cessation caused by the assigned topics. This referred to when a topic was stopped due to one participant deciding not to deal with a topic thread in favour of the assigned topics for the given week. In the example below, the two participants had been discussing different types of foods that are popular in each country over the past few emails in the third week of the interaction period, for which the topic was 'Dining out'. The interaction by the nonnative speaker was sent on the Saturday of the third week, and the response from the native speaker was sent on the Monday of the fourth week.

NNS: オーストラリア人はパスタがよく食べます。とても人気です。日本にもパ
スタが人気ですか。[sic]
NS: 今週のトピックは「Relaxation and leisure」です。ペニーさんは暇なときに
何をしますか。
NNS: *Australians eat pasta a lot. It is very popular. Is pasta popular in Japan too?*
NS: This week's topic is 'Relaxation and leisure'. What do you do in your spare time, Penny?

As the example shows, the topic regarding different types of food has not been dealt with at all by the native speaker, who has immediately commenced the assigned topic for the fourth week, 'Relaxation and leisure'.

5.3 Lack of explicitness

Another major cause of the premature end of a topic thread was that of lack of explicitness. This referred to situations where a request for further information has been made, but this is not immediately obvious to their e-mail partner. There were instances of this for both the native and the nonnative speakers, but, as Table 3 shows above, the native speakers were more likely not to respond to an email if it was not clear that a reply was expected. In the following example, it is the native speaker who has asked an implicit question about the difficulty of Japanese language, specifically the grammar.

NS: 日本語の文法とか難しいんでしょうね。
NNS: *明日は、日本語の試験があるの。ちょっと心配だね。*
NS: Japanese grammar and stuff is really difficult, isn't it?
NNS: *I have a Japanese test tomorrow. I'm a little worried.*

In the Japanese sentence, despite the fact that the normal question marker has not been included in the sentence, it would be expected that a response be given. The nonnative

speaker, however, appears to have interpreted the statement as a general observation on the part of the native speaker, hence has not responded, but instead slightly changed the topic to one of the impending test.

5.4 Syntactic error

There were also a number of cases where topics were not continued on the basis of a syntactic error. In the following exchange, the nonnative speaker has made syntactic errors which have made the statement incomprehensible to the native speaker. The native speaker in this case has selected the part of the message which was comprehensible, and has responded to that part accordingly. The native speaker has made no attempt to negotiate the meaning of the non-comprehended portion, but has instead dealt only with what they could understand without further effort.

NNS: *休みの後は、学校に戻るのきか全然なにですか。で、レポートがたくさん*
      です。
NS: 毎日レポートが大変そうですね。
NNS   *After the holiday, what do you at all return to school [sic]? And, I have lot of*
      reports.
NS: It seems very hard for you with reports everyday.

5.5 Asking a question already answered

Though comparatively less than the other causes, there were also cases where topics were dealt with once, and then were mentioned again at a later date, hence were not responded to. In the example below, the native speaker states that soccer is his hobby, but for some reason this has been missed by the nonnative speaker, who asks about his hobby in the very next email. The native speaker decides not to respond to this question a second time, and instead asks the nonnative speaker whether or not she likes music.

NS: 僕の趣味はサッカー。週4回練習に出てる。
NNS: *趣味は何ですか。*
NS: サリーさんは音楽が好き？
NS: My hobby is soccer. I go training 4 times a week.
NNS: *What's your hobby?*
NS: Do you like music, Sally?

This example describes a particularly blatant case of asking a question about something that had already been answered in the previous email, and most other instances tended to be a few messages later.

5.6 Pragmatic error

While there was not a large number of cases where a topic thread was discontinued on the grounds of pragmatic error, there still were instances where the cessation of the topic could be attributed to errors of a pragmatic nature. In the exchange detailed below, the

two participants had been discussing their respective part-time jobs over the previous few emails. The nonnative speaker then asked the native speaker about the hourly wage, to which the native speaker chose not to respond.

NNS: *給料は1時間でどのくらいくれるの？「My best friend's wedding」という*
　　 映画を見たの？
NS:　*映画は、まだ見てないんだ。*
NNS *How much do you get paid an hour? Have you seen the movie "My best friend's wedding"?*
NS:　I haven't seen the movie yet.

Pragmatic error that caused cessation of a topic thread generally took two forms. The first form was that such as the one stated above where a question or topic was raised that was either considered as taboo or not comfortable for the interlocutor to deal with. The other form was when one participant used language that was deemed as too direct or inappropriate. In one pair, the native speaker failed to respond for almost a week, and the nonnative speaker wrote a message that was extremely direct regarding their desire to receive a response. This message was met with a curt apology from the native speaker, however no further emails were forthcoming from the native speaker until the end of the interaction period.

5.7 One speaker closes topic

This type of topic thread end differed from pragmatic error on the grounds that the question posed by the interlocutor was not of a nature that would feasibly be considered as inappropriate. In the following example, the nonnative speaker has asked the native speaker about the prefecture in which their university is located, Saitama, which is just outside of the Tokyo area. The native speaker has cut the topic thread off, stating that they would rather discuss Australia and the Gold Coast instead of Saitama.

NNS: *正博さんの大学は埼玉にあるの？どんなところなの？いろいろ教えて！*
　　 埼玉は田舎なの。オーストラリアのほうが面白いよ。ゴールドコーストは
NS:　*どんなところ？*
NNS: *Is your university in Saitama, Masahiro? What kind of place is it? Please tell me about it!*
NS:　Saitama is very rural. Australia is much more interesting. What's the Gold Coast like?

The request for information on the part of the nonnative speaker could not be considered as inappropriate, and nor could the use of language, which is clear and well formed, hence the reason why the native speaker did not want to deal with the topic is difficult to determine. The native speaker has, however, indicated that he did not wish to deal with the topic, thus the reason for cessation of the topic thread could not be classed as unknown.

5.8 Unknown

The causes of the cessation of a large number of the messages remains unknown. Perusal of the message content does not give any indication as to why one of the interlocutors has decided not to deal with a topic. In all cases, the language used was syntactically and pragmatically acceptable, and on face value it is not possible to determine why the topic thread has ceased. In the example below, the nonnative speaker has made a request for information regarding inexpensive youth hostel accommodation in Tokyo. The native speaker has completely ignored this request for information, and has instead decided to ask a question regarding the nonnative speaker's part-time job.

NNS: *ちょっと聞きたいことがあるけど、東京で安いユースホステルがどこにあ*
るか知っていますか。
NS: *ザビ君のアルバイトはなに？*
NNS: *I'd just like to ask you, do you know where any cheap youth hostels are in Tokyo?*
NS: What's your part-time job, Xavi?

The contents of the topic threads that ceased for unknown reasons were varied, and appeared consistently throughout the five week period.

6 Discussion

The results showed that around 29% of the end-of-thread messages invited a response, and hence were considered as having ended prematurely. This figure is similar to previous results of 34% in asynchronous class discussion (Lamy & Goodfellow, 1999) and of 27% in NNS-NNS e-mail interactions (Stockwell & Gray, 2002). The three largest causes of premature thread cessation were multiple topics in a single e-mail, sudden cessation of topic due to the assigned topics, and lack of explicitness in formulating a question.

The nonnative speakers were nearly twice as likely as the native speakers to fail to respond to topics when they were faced with several topics with a single email. One possible explanation for this comes from Moran (1991), who proposes that learners will often write messages to others but will often fail to completely read messages directed towards them. In other words, learners involved in e-mail interactions often concern themselves with the production of new messages, without reading the content of received messages in detail first. Given this situation, it is possible that the learners read through the early part of the message received from their partner, and for the most part chose to respond to either the first one or two topics, and ignored the rest. It is also possible that when faced with a range of different topics, learners simply chose what they considered to be the most interesting topic, and decided not to deal with the others. Research is required to determine whether the topics which have been responded to by the nonnative speakers occurred primarily at the beginning of the messages written to them by the native speakers, or whether the topics have been selected on an interest factor basis only.

The medium of e-mail allows for the option of avoiding dealing with topics in a way

that is different from face-to-face interactions. In a face-to-face environment, interlocutors are often faced with a difficult situation when a topic that they do not wish to deal with is raised in conversation. While discomfort with a given topic may be evidenced to some degree by non-verbal communication, interlocutors in such a situation would normally be expected to provide a reason as to why they do not wish to deal with the topic before finishing the topic. In an e-mail environment, interlocutors may simply choose to not respond to questions they feel uncomfortable about addressing, either by dealing with other topics covered in the body of the message, or by introducing new topics for discussion. It is also interesting to note that in the current study, participants rarely chose to pursue unanswered questions, but rather moved on to different topics. There is a need to determine whether or not the reasons why these unanswered questions were not dealt with was because the participants simply chose not to, or whether there were other reasons behind the selection of topics for discussion.

The lack of explicitness in e-mail seems to be a problem which is associated with the nature of the means of discourse. As Lamy & Goodfellow (1999) point out, intonation and body language play an important role in sustaining interactions in face-to-face conversation, however in e-mail, where extra-linguistic features are not so readily expressible, it is possible that more explicit verbal or iconic interactional triggers are necessary to sustain interactions. In the present study, there were several cases where interactions contained requests for information, but to the nonnative speakers – who may be less aware of the interactional triggers than native speakers – these requests were often missed. In a face-to-face environment, a failure to notice such a trigger may be met with an immediate facial reaction or a clarification request, however in the current study at least, the majority of less explicit requests for information that were not responded to were not pursued.

Another interesting result of the study was that the native speakers were more likely to change the topics to the assigned topics than nonnative speakers. While this appears to be consistent with results from face-to-face NS-NNS interactions, where native speakers often deal with topics more briefly, and nonnative speakers are more likely to use topic continuing moves (Long, 1983), there are difficulties in making comparisons with the current study. The main problem is that there were fixed topics for each of the five weeks of the interaction period in the current study, and it is possible that some of the participants felt that they were not allowed to continue with a conversation thread when the assigned time period for that topic had completed. Evidence from the total numbers of end-of-thread messages does not suggest that the native speakers were more likely to end the topic threads outright than the nonnative speakers, and there were, in fact, slightly higher numbers of end-of-thread messages for the nonnative speakers than the native speakers. An analysis of the topic continuing moves was outside the scope of the current study, and further investigation is required to determine the degree to which the interaction patterns seen in face-to-face NS-NNS interactions are applicable to an e-mail environment as well.

It is possible that many of the premature thread cessations could be reduced if learners were equipped with appropriate strategies to identify and rectify the causes. There are several strategies and suggestions that can be made to participants in an e-mail interaction project that may help to prolong topic threads. For example, it has been stated above that nonnative speakers were far less likely to respond to all threads when multiple

threads are included in one message. In response to this, teachers could suggest to the native speaking interlocutors that they try to limit the number of topic threads included in a single message in order to reduce the burden on the nonnative speakers. Alternatively, the learners could be made aware of the fact that there is a tendency for nonnative speakers to not read messages completely, and teachers could encourage them to consciously respond – even briefly – to each of the topics which have been raised in a message to them, thus allowing a topic to be continued.

There are other causes which can also be dealt with through providing participants with strategies or suggestions in advance of the project. For instance, if teachers decide to set assigned topics for students, it is important that all of the participants in the e-mail interactions be made aware that it is acceptable to continue with previous topics while introducing the new ones at the same time. Many of the premature thread cessations may also have been prevented by teachers suggesting that participants ensure that requests for information are explicit enough for their interlocutors to identify. Furthermore, the obvious cultural implications of interactions between native and non-native speakers means that there may be a need to make such requests more explicit than might be required in NS-NS interactions. This list of possible strategies is far from exhaustive. What is essential is that learners be made aware of the possible causes for premature thread cessation, and attempt to provide any assistance that they can to their interlocutors to avoid topic threads from ending before they need to.

7 Conclusions

As has been described earlier, there has been evidence to suggest that learners engaged in e-mail interactions with native speakers only begin to show improvements in second language proficiency after a certain threshold of messages has been reached (Stockwell & Harrington, 2003). Of the range of factors which lead to sustained e-mail interactions, Stockwell & Levy (2001) have proposed that the topic threads are one of the key determiners. Thus, the purpose of this study was to investigate e-mail interactions between native speakers and language learners to determine the primary causes of premature cessation of topic threads. The results suggested that the most common cause of threads ending prematurely was multiple topics covered in a single e-mail message, where participants selected the topic or topics from the message that were of most interest to them and ignored the others. Other causes included ending the topic thread because of the assigned topics, lack of explicitness in a request for information, syntactic or pragmatic errors, requests for information that had already been provided, and one speaker closing the topic suddenly. Many of these causes appear to be quite avoidable and it is possible to equip participants in e-mail interactions with strategies that may help them deal with a number of these factors, such as controlling the number of topic threads included in a single message, being as explicit as possible when requesting information, and continuing with topic threads of interest even when there are different assigned topics.

Even though this study has shed some light on the causes of premature cessation of topic threads in e-mail interactions, there are a number of aspects which require further investigation. While there are several points which have been suggested above, there are three primary areas in which further research is needed. Firstly, investigation is necessary to determine the degree to which equipping learners with strategies for sustaining

topic threads in the e-mail interactions affects the lengths of the interaction sequences. In addition, there remains a need to identify the possible causes of the threads which ended for reasons that were not evident on the face value of the messages themselves. Finally, assuming that the goal of sustained e-mail interaction sequences is improvement in second language proficiency, it is also important to ascertain whether or not learners who have been equipped with strategies for sustaining topic threads do indeed show evidence of enhanced second language development, and are thus able to achieve maximum benefit from the e-mail interactions.

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