



Using Computer Animation to Assess and Improve Spoken Language Skills

Nicola Halenko

University of Central Lancashire (UK)

nhalenko@uclan.ac.uk

Abstract

The theme of the paper is using digital technologies to assess and improve the spoken communication skills of English as a Second Language (ESL) students during their UK study abroad experience. A Computer Animated Production Task (CAPT) was designed for this investigation and has a specific focus on the language of requests and apologies. It offers an interactive, audio-visual dimension to oral practice which is lacking in standard published material.

This research intends to investigate whether the CAPT can effectively elicit authentic, albeit simulated, non-native speaker (NNS) speech samples. In addition, its effectiveness as a stimulating learning tool given the trends for many learners to be involved in gaming and 3D worlds as a social activity outside of the classroom and calls for practitioners to embrace digital technologies inside it, are also analysed. The presentation will demonstrate the types of animations possible with the software, chosen for its accessibility, and intends to encourage even the technologically-shy practitioner.

The investigation employs a mixed method approach of stimulus-led oral and written Discourse Completion Tasks (DCTs), supported by post-activity student questionnaires. The data were captured from 45 undergraduate Chinese learners of English studying at a British Higher Education institution and assessed by 3 experienced native speaker EFL tutors on a 5-point Likert scale. The results indicate that the CAPT was able to stimulate responses which were assessed as being more 'satisfactory' than their written DCT counterparts. In addition, the students themselves found the activity both enjoyable and motivating and recommended it as a potential learning tool for developing their awareness of the two speech acts.

1. Introduction

The development of computer-aided language learning (CALL) technologies, particularly over recent years, has been explosive. The recognition that CALL can provide an exciting, complementary dimension is evident in the introduction of i-tools and other interactive programmes alongside many popular ELT textbook series available today.

Computer-mediated communication (CMC) is acknowledged as offering learners real-world context within the classroom. This may be particularly salient for learners who do not utilise the advantages afforded by a study abroad (ESL) environment to develop their communication skills. Anecdotal evidence from staff at a British higher education institution found that despite achieving an appropriate level of grammatical and linguistic proficiency to study on an undergraduate degree programme, NNS students were often unable to produce pragmatically appropriate language in interactions inside and outside the classroom [1].

The CAPT was devised to address this knowledge gap and this paper aims to evaluate its effectiveness in the following areas:

1. To what extent can the CAPT elicit authentic NNS requests and apologies?
2. To what extent is the CAPT a motivating learning tool?

2. Literature Review

The second language classroom is not synonymous with the teaching of pragmatics (i.e. the study of how more gets communicated than is actually said [2]). Although pragmatic competence is acknowledged as an essential component of communicative competence e.g. [3], pragmatic-based instruction rarely makes an appearance on curricula, in spite of the positive benefits reported in empirical research. Studies posit that, without any specific attention, it is a difficult skill to acquire for NNSs [4]. This is supported by findings reporting clear disparities between linguistic proficiency and pragmatic competence even in advanced level learners of English [5]. If instruction is therefore key to improved competency, it is welcome news that features of pragmatic language are indeed teachable [6] and these are best addressed through explicit instructional techniques [7]. Finally, high quality input is known to be a requisite to successful pragmatic development [8] yet this is not readily available to

the teacher or learner. Inside the classroom, the inadequacies of textbooks as a reliable source of authentic pragmatic input have been heavily criticised e.g. [9]. Outside the classroom, studies have illustrated the limited opportunities for genuine pragmatic input due to difficulties establishing NS contact [10] and problems with simplified, pragmatically inappropriate, input in NS-NNS exchanges [11].

CMC may then present NNSs with an ideal opportunity to address the aforementioned issues. Firstly, authentic, meaningful interaction can be created through the use of online materials [12]. This is enhanced by an, arguably, more dynamic and motivating learning environment. As in this study, it is anticipated that interaction is further stimulated by the 3D animated interlocutors who are also able to display a range of non-verbal signals such as facial expressions and gestures. These are often considered to be as powerful as verbal cues in interaction, improving the authenticity of the interaction and perhaps the NNS language produced. Pressures from the face-threatening nature of apologies and requests, for instance, are alleviated in simulated contexts, allowing for a stress-free, 'low-risk' learning experience [13]. Finally, as in the present study, interaction with high status interlocutors can be linguistically and socially challenging for NNS learners, particularly in an academic context. Gaming and simulated environments have been shown to not only lower the affective filter [14] but also to encourage learner individuality and creativity [15].

3. Methodology

This study employs a mixed method approach of a stimulus-led oral DCT in the form of the CAPT and traditional written DCTs used for comparison purposes. These instruments were supported by post-activity student questionnaires. The data were captured from 45 undergraduate Chinese learners of English studying at a British Higher Education institution and assessed by 3 experienced native speaker EFL tutors on a 5-point Likert scale.

The two instruments consisted of 12 scenarios (6x requests, 6x apologies) on each of the CAPT and the WDCT. The (high status) animated interlocutors portrayed were people whom students were likely to encounter in a year abroad environment; a university lecturer, a librarian, a campus security guard and a landlady. The participant sample of 45 students completed the study from 3 intact classes of approximately 15 students. Students first completed the CAPT, to encourage spontaneity of response [16] then the WDCT exactly one week later, at the same time and location, to avoid the possibility of one task influencing the other.

3.1 The instruments

A well-known 'animated movie' site, Xtranormal [17] was used to create the animated scenarios. These sites transform text scripts to animated movies using text-to-speech and animation technologies and generally follow similar procedures. Users choose from a series of pre designed sets and characters and personalise the movie by adding their own dialogue via the text-to-speech software or importing ready-made recordings so the process is very accessible to even the technologically-shy.

Figure 1 illustrates one of the scenarios on the CAPT, devised using this technology. The study required learners to observe a Powerpoint presentation of the 12 scenarios. These featured a range of animated interlocutors and problems which the learners had to address by engaging in a brief interaction with the animated characters. Learners were first required to read the context of each scenario on the right. Following a timed interval, the animated interlocutor would open the conversation with a brief gambit such as, "The neighbours reported that you had a loud party last night?" Learners were then required to provide an oral response to this including a suitable apology, or request, as suggested by the context. Again, the learners had a timed interval within which to respond before the next scenario was presented. A pilot study provided the optimum times to use in all of these intervals and all oral responses were recorded for analysis and assessment.


<p style="text-align: center;">Scenario 1</p> <p>You had a party last night with your friends. Your neighbours called your landlady because of the noise. You know her well and want to apologise to her.</p> <p style="text-align: center;">What would you say?</p>	
--	--



Fig.1. An example of the CAPT

The WDCT followed an archetypal construct as depicted in figure 2. First, learners were presented with the setting of the scenario e.g. 'At your flat'. A description of the context and problem followed which included additional information about the interlocutor such as gender and age. Learners were then invited to provide a written version of their oral response.

<p>At your flat You had a party at your flat with friends at the weekend. Your neighbours called your landlady because of the noise. You know your landlady well and you want to apologise to her. She is female and 45 years old.</p> <p>Landlady: The people in the flat upstairs called me about the loud music last night. Did you have a party here?</p> <p>You:</p>

Fig.2. An example of the WDCT

4. Results

To allow for data comparability, all the written and oral responses were transcribed for the raters and presented together in a randomised order. In the case of the oral responses, instances of repetition, hesitation and backchannelling on the recordings were omitted from the final transcription [16] so the raters were not influenced by the task mode. The raters assessed the responses from both instruments on a Likert scale of 1-5 (1= unsatisfactory- the interlocutor would react negatively, 5= wholly satisfactory- the interlocutor would react positively). Each student could, therefore, achieve a maximum score of 60 on the completed WDCT or CAPT (12 scenarios on each instrument, maximum score of 5 per response). The interater reliability scores (0.7 CAPT, 0.8 WDCT) suggest a strong parity across the raters' assessment.

The results from the data indicate that the CAPT was able to stimulate responses which were assessed as being more 'satisfactory' than their WDCT counterparts. The request data was scored with a mean of 53 on the CAPT and 48 on the WDCT. Similar outcomes were found from the apology data (CAPT mean score= 52, WDCT mean score= 49). Though these differences between the instrument scores were not found to be statistically significant ($p=0.06$, $p=0.08$ respectively), the raters clearly viewed the quality of the responses on the CAPT as being superior. This suggests that the WDCT was unable to elicit language that was closer to being truly representative of the students' capabilities, as highlighted by the improved scores on the CAPT. This supports the claim that WDCTs are only likely to elicit language that learners *may* use in a given context, rather than their actual language use e.g. [18]. That the raters preferred the responses on the CAPT suggests then that the content met more of their expectations for actual language use and the CAPT, therefore, is perhaps a more effective way of collecting more authentic NNS data.

4.1 Student perceptions

All 45 students completed a post-activity questionnaire; the results of which are detailed in figure 3 below. Overall, the students overwhelmingly preferred the CAPT on all aspects. Unsurprisingly, the CAPT was considered to be a more 'realistic' task to complete in terms of assessing oral skills and being able to interact with an, albeit simulated, interlocutor. Results were less decisive regarding the ease of completing the task itself. Given this is one of the advantages of the WDCT design, this was expected.

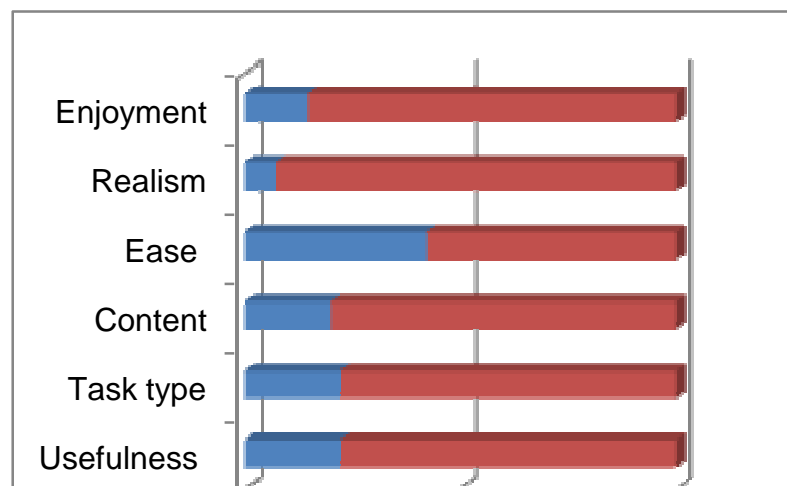


Fig.3. Post activity learner questionnaire results

5. Conclusions

This preliminary study has highlighted that, from the learners' perspective, the CAPT would be a motivating tool to improve their pragmatic awareness. Given learner participation is key to the quality and success of classroom materials and data elicitation, the CAPT may be a viable alternative for several reasons. First, in terms of use as an assessment tool, many of the benefits offered by the WDCT such as controlling test conditions and eliciting sufficient data are also managed with the CAPT. Though operationalising the CAPT is limited to laboratory settings, it goes some way to offering learners real-world context and interaction and can be employed with a number of learners simultaneously. As a diagnostic tool, the CAPT then may prompt learners to produce language more representative of their actual abilities so practitioners have a more accurate picture of learners' linguistic and sociocultural awareness. As a practice tool, there are many pedagogical possibilities for its use as self-access material or as a complement to text-based activities. For the purposes of this study, the CAPT has been devised in a basic form simply to highlight the possibilities offered by animation technologies. The intention, however, is to encourage practitioners to experiment with software like this to improve learner pragmatic competency in a highly motivating, stress-free environment.

References

- [1] Halenko, N., Jones, C., 2011. Teaching pragmatic awareness of spoken requests to Chinese EAP learners in the UK: Is explicit instruction effective? *System*, 39, 240-250
- [2] Yule, G., 1996. *Pragmatics*. Oxford, Oxford University Press
- [3] Bachman, L., 1990. *Fundamental considerations in language testing*. Oxford. Oxford University Press
- [4] Cohen, A., 2008. Teaching and assessing L2 pragmatics: what can we expect from learners? *Language Teacher*, 41, 213-235
- [5] Kasper, G., Rose, K., 2002. *Pragmatic development in a second language*. Blackwell, Oxford University Press
- [6] Kasper, G. 1997. Can pragmatic competence be taught? *Second Language Teaching Curriculum Center*, www.nflrc.hawaii.edu/NetWorks/NW06/
- [7] Rose, K. 2005. On the effects of instruction in second language pragmatics. *System*, 33, 385-399
- [8] Bardovi-Harlig, K. 2001. Evaluating the empirical evidence: grounds for instruction in pragmatics. In: K. R. Rose, G. Kasper, Eds. *Pragmatics in language teaching*, Cambridge, Cambridge University Press
- [9] Crandall, E., Basturkmen, H. 2004. Evaluating pragmatic-focused materials. *ELT journal*, 58, 38-49
- [10] Barron, A. 2003. Acquisition in interlanguage pragmatics: Learning how to do things with words in a study abroad context. Amsterdam, John Benjamins
- [11] Yu, M. 2005. Sociolinguistic competence in the complimenting act of native speaker Chinese and American English speakers: A mirror of cultural value. *Language and speech* 48, 91-119
- [12] Belz, J. 2008. The role of computer mediation in the instruction and development of L2 pragmatics competence. *Annual Review of Applied Linguistics*, 27, 45-75



- [13] Sykes, J., Oskoz, A., Thorne, S. 2008. Web 2.0, synthetic immersive environments and mobile resources for language education. CALICO, 25
- [14] Crookall, D. 2007. Second language acquisition and simulation. Simulation and gaming, 38, 6-8
- [15] Tomlinson, B., Masuhara, H. 2009. Playing to learn: A review of physical games in second language acquisition. Simulation and gaming, 40, 645-666
- [16] Sasaki, M. 1998. Investigating EFL students' production of speech acts: A comparison of production questionnaires and role plays. Journal of Pragmatics, 30, 457-484
- [17] Xtranormal. Available from: www.xtranormal.com
- [18] Golato, A. 2003. Studying compliment responses: A comparison of DCTS and recordings of naturally occurring talk. Applied Linguistics, 24, 90-121