Stimulating reflection through engagement in social relationships

Kamakshi Rajagopal, Steven Verjans, Jan Van Bruggen, and Peter Sloep

Centre for Learning Sciences and Technologies, Open Universiteit,
Valkenburgerweg 177, AT 6649 Heerlen, Netherlands
{kamakshi.rajagopal,steven.verjans,
jan.vanbruggen,peter.sloep}@ou.nl
http://www.celstec.org

Abstract. Reflection on one's own behaviour and practice is an important aspect of lifelong learning. However, such practice and the underlying assumed principles are often hidden from the learner's vision, and are therefore difficult to evaluate. Social interactions with others stimulate the learner to re-asses and reflect on the nature of the learner's own behaviour and practice, such as in professional networking contexts and intercultural encounters. This paper describes the prerequisites of learning from these interactions and the possibilities of technological support. It presents one approach to providing support for developing the required skills, with the example of the CEFcult tool, which supports intercultural communicative competence building.

Key words: reflection, learning, social interaction, communication, networking skills, intercultural skills

1 Introduction

Reflection on one's own practice is an important aspect of lifelong learning [1]. For professional lifelong learners, this means questioning their professional practice (way of working), the self-created and organizationally-imposed structures they operate in, and the processes they use in their daily professional life [4]. However, such practice and the underlying principles are often hidden from the surface, and therefore, difficult to evaluate [2].

In discourse comprehension theory, the description of situations and practice is described in the terms of "schema" and "script" [6, 7]. A schema is a mental semantic representation of a situation or of an event. It is a prototypical storybook, a "what is to be expected". Schemata describe the unmentioned rules in a social interaction, depending on the context. The peculiarities of the instance decide the actual scripts used. These different layers of context have an influence on the way language is used to convey meaning and conduct conversations.

Socially agreed frameworks can be called into question in interactions with *others*, namely in those formal, non-formal and informal conversations between two or more individuals. These interactions can occur with particular learning

goals in mind, but do not need to. A clear example of this are conversations in an intercultural setting, where speakers may belong to different social groups. Their social identities will determine the underlying context of the conversation [8]. In professional settings, the underlying context of interactions are formed by the professional identities of the dialogue partners. These interactions occur in face-to-face networking activities, and even more so in online networking activities. We define professional networking as the act of making connections with other professionals, with or without the intention of making long-term ties with them [9, 10]. Such interactions can create the setting for misunderstandings, needing clarification and explanation, and consequently leading to situations where learning can take place [5]. The resulting dialogues creates a possibility for negotiation of common ground between the speakers. The level of trust between the dialogue partners can also influence the occurrence of misunderstandings and the extent to which they can be negotiated [17]. Also, a cognitive model of the partner will be created by each speaker, as complete as it is needed for achieving individual goals [5]. In short, dialogue with such others can be learning environments where the learners are encouraged to explain their practice more completely and potentially even redefine their own behaviour in a larger framework.

In the following sections, we will first describe the skills needed to engage in these interactions, from a perspective of learning and how technology can support the development of these skills. Next, we will describe the example of technology in the CEFcult project, which aims to support the development of intercultural communicative competence. Finally, we will look at future research steps.

2 Understanding the context and skills required

Social interactions can put lifelong learners in settings in which their underlying assumptions can be questioned and reflected on. But do all social interactions trigger reflection and learning? And does merely engaging in a social interaction automatically result in a learning situation? Can these social interactions be supported with technology? There appear to be some prerequisites for this type of learning: below, we discuss some situational requirements and skill requirements in the learner. We do not aim to be exhaustive in this discussion, but to describe some aspects that are relevant for technology design. Further research is needed to define a clearer picture of the nature of social interactions as learning settings.

2.1 Situational requirements

Not all social interactions necessarily result in a reflective learning situation. There are some situational requirements that need to be fulfilled.

Firstly, for learners' assumed schemata and scripts to be questioned, there needs to be sufficient and relevant differences between the dialogue partners. In circumstances where the partners are alike, it is more likely to have shared schemata and less misunderstandings, creating less opportunity to learn from

each other . However, too many differences between the dialogue partners will create little opportunity for creating common ground. (In other words, the dialogue partners need to be in each others' "zone of proximal development" [16]). Differences between dialogue partners can occur due to differences in social and cultural background, language differences, differences in professional backgrounds and interests, etc.

Secondly, the context in which the social interactions take place (particularly, time, place, social setting, etc.) can also play a role. For example, professional networking often occurs in work-related settings, where new encounters are made. Intercultural encounters can take place within different aspects of personal and professional life. However, the extent to which people are willing, able or required to engage in or dismiss professional or cultural differences can depend on the environmental setting [11]. Relatedly, the extent to which these interactions trigger reflection on one's own behaviour can also follow from this setting.

In recent years, Web 2.0 technologies, especially blogs and social networking sites, have created virtual environments where people can interact and enter into dialogue with many different people of various backgrounds. Research is ongoing in how far these new connections create learning situations for lifelong learners.

2.2 Required skills

Even when dialogue partners portray sufficiently interesting differences, this does not necessarily entail a learning situation. For a learning situation to occur (as opposed to a conflict for example), dialogue partners need to trust the other, and her intentions [17]. Learners also need to have the necessary reflective skills to be able to identify and understand the differences between themselves and their dialogue partners. For practicality, we have paraphrased the required skills as follows:

1. *"I can see that the other is talking from a different point of view"*: This involves the learners skills to be able to observe that the other person has different assumptions than ones own. It follows from being able to understand the other's language and infer the underlying worldview from the other person's messages [6, 5]
2. *"I understand the intention of the other in expressing a different point of view and trust her willingness to enter into dialogue about this issue"*: This involves the level of trust that exists between the dialogue partners. The learner needs to be able to assess the intentions of the other in their willingness to negotiate their point-of-view, in order to set up common ground. The learner needs to be able to identify the other's boundaries and her own [17].
3. *"I can understand that different point of view*: This refers to the learners skills to be able to understand and re-assess the conversation in light of the other persons framework. Meanings are negotiated in and during the interaction with the other person [12].

4. *"I can take up that different point of view and different perspective, as and when needed"*: This refers to the ability of the learner to understand the worldview of the other person and the ability to take the perspective of the other person, as far as it is needed and as far it is possible [6, 5]

Examples of these scaffolded reflective skills can be seen in intercultural competence development and networking competence as well. Research in intercultural competence development shows that knowledge, skills, attitudes and awareness of values are key factors in developing intercultural competence [8]. Figure 1 illustrates Byram's Model of Intercultural Competence Development [13]. Advanced intercultural skills entail the ability to show appropriate and effective behaviour in culturally sensitive issues [14]. This follows from the ability to "take the others' perspective." An interesting aspect to these interactions is that the learner also becomes self-aware of her own culture and cultural values. This is echoed in [5] when talking of "mutual modelling" in interactions. Similar reflective skills are involved in networking and personal network building [15]. By engaging in professional networking interactions, learners can explore and understand others' professional identities and define their own [18, 19]. Although quite some literature exists on the benefits of networking in professional contexts, more research is needed to explore the nature of professional networking and the required networking skills.

Learners develop these reflective skills often through self-reflection or guided reflection, triggered by social interactions. As more and more of these type of interactions take place online, it creates the opportunity to engage much more in this type of learning. The interest of the authors is to explore how technology can play a role in supporting the development of these reflective skills and promote this type of learning.

3 Issues in technological support

Technology can be used to train learners in their reflective skills of recognising, understanding and appropriating other peoples perspectives. The goal of using technology here is to capture a learner's behaviour in a particular social interaction (with at least one other person) and to provide feedback on this behaviour, taking into account some aspects of the other participant. When looking to design technological support to develop these skills, there are a number of issues to consider.

We will illustrate these technological issues with a running example: Suppose the feedback system is aimed at supporting journalists in training their interview techniques for live television interviews. In live interviews, these professionals have only limited time and opportunity to extract key statements from their interviewees. They need to perform to their best in these circumstances, picking the relevant issues from their interviewee's answers and building on them with the most appropriate questions. The feedback system is designed to support these journalists in training the relevant skills to perform better in live interviews.

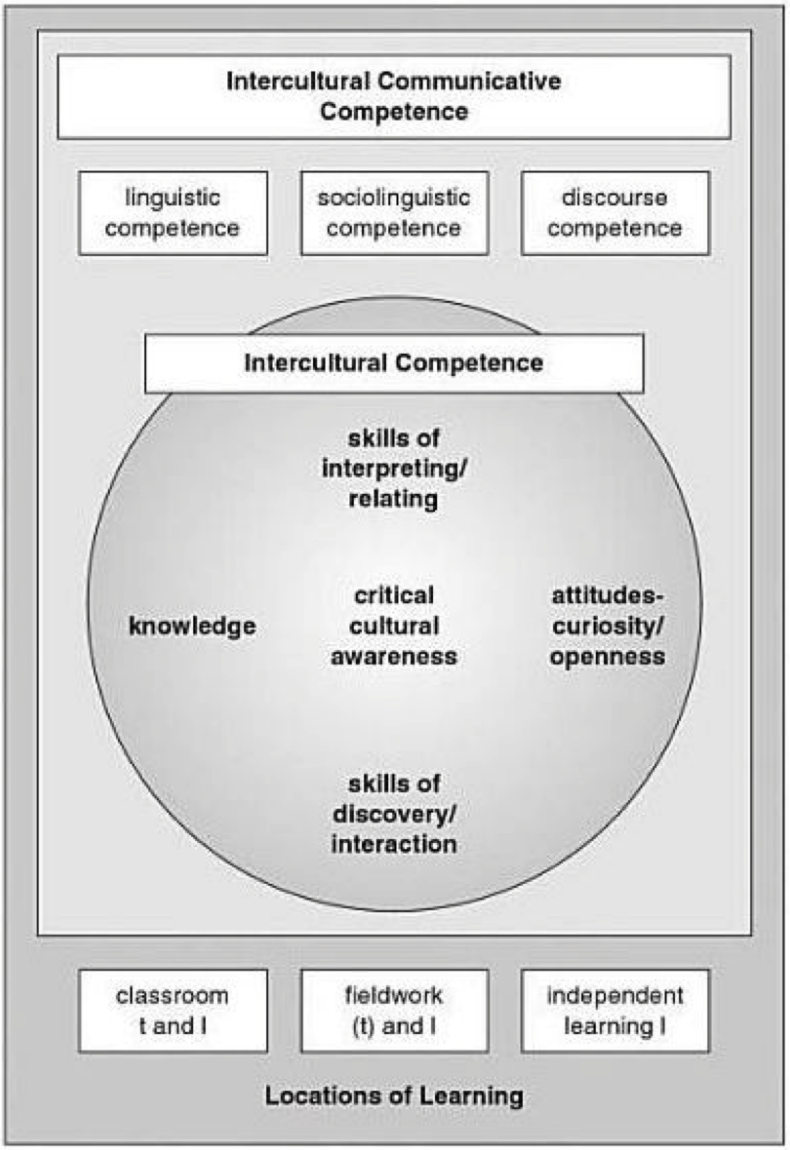

Fig. 1. Byram's Model of Intercultural Competence Development

- The technological support is aimed at training individuals in evaluating the behaviour they portray in social interactions, for example in the live interview. The users of the technology should therefore be able to exhibit their authentic behaviour within the environment, so that it can be scrutinized and reflected upon. In our example, the feedback system is a learning space, where the journalist should have the freedom to make mistakes in a (mock) live interview setting (without feeling bad about it) and to learn from these mistakes. As using technology for learning still forms a barrier for many people, the challenge here is to provide the learner with **a sufficiently safe environment to confidently engage in the learning experience, without inhibitions.**
- The technological support should also ensure that the elicited behaviour is the one that needs to be trained and that it is authentic. In our example, the feedback systems needs to allow journalists to portray their interviewing skills as they would in a real live interview. The challenge for the technology here is **to create settings in which the targeted behaviour is triggered or elicited from the learner in an authentic way.**
- The technological support has several possibilities to give feedback on the behaviour in the social interactions. In our example, the feedback on the journalist's behaviour can be regarding (i) the questions she asks, (ii) her responses to the answers given or (iii) even her language skills. The challenge for technology designers here is to **explore and define the different kinds of evaluation or assessments possible in the development of these highly reflective skills**, and to **determine the most effective ways to provide this feedback within the technical environment**.

These challenges need to be addressed in the design choices of technological support environments for social learning.

4 Example: supporting intercultural communicative competence development

In this section, we take a closer look at the approach taken in the CEFcult project to support the development of intercultural communicative competence. The CEFcult project (`http://www.cefcult.eu`) aims to promote intercultural professional communication with foreign language users by means of an assessment tool, based on Web 2.0 principles. The online environment designed in the project aids the assessment of speaking skills and intercultural competence in professional communication.

The tool consists of a web-based platform on which learners can go through observation or production tasks. In observation tasks, the learner is asked to view a recording of an event of intercultural interest and reflect on it using the provided assessment grid. The issues identified by the learner can then be compared with the model results. In production tasks, learners can create recordings of their own intercultural performance, following a text-based question or audio-visual prompt (figure 2). They can then self-assess these performances by using

the provided assessments grids. They can also invite others to assess their performance using the same assessment grids (figure 3). This social evaluation can give learner a more complete view of how their performance is perceived by different individuals. Evaluations can also be extracted from the platform to be included in individual ePortfoilo's.

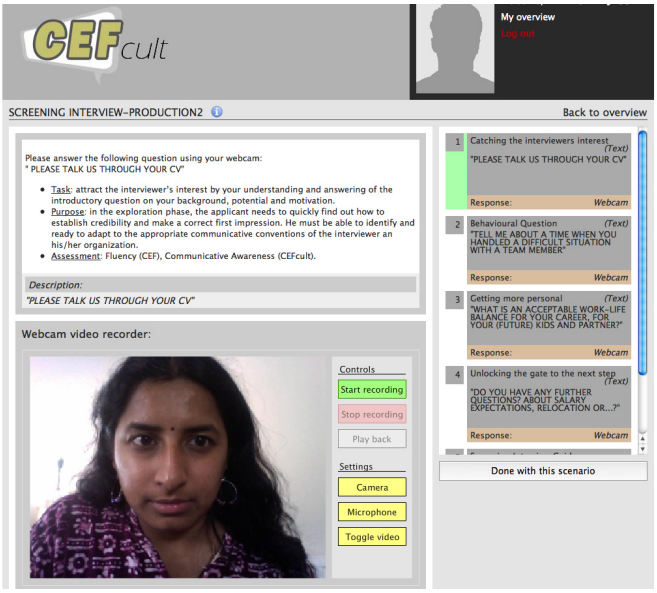

Fig. 2. Production Task in CEFcult tool

The training process embedded in the design of the CEFcult tool hinges on the following four principles:

1. **Scaffolded eliciting of behaviour**: the learner can follow predetermined scenarios, with specified tasks related to performance in intercultural settings. Scenarios consist of observation tasks followed by performance tasks. This simulated performance or reflective exercise can be captured in a video recording, for further processing in the environment.
2. **Guided observation of behaviour**: in observation tasks, learners are provided with the necessary tools for learning to observe instances of interesting intercultural behaviour. These include assessment grids with task-specific descriptors pinpointing the issues of interest in a particular task. Learners can go through observation tasks, assess what they see and compare their assessments with model-assessments.
3. **Accepted Instruments for self-assessment and peer assessment**: the CEFcult tool uses the CEF scales (Common European Framework of Reference) for assessing oral language skills and the INCA scales for intercul-

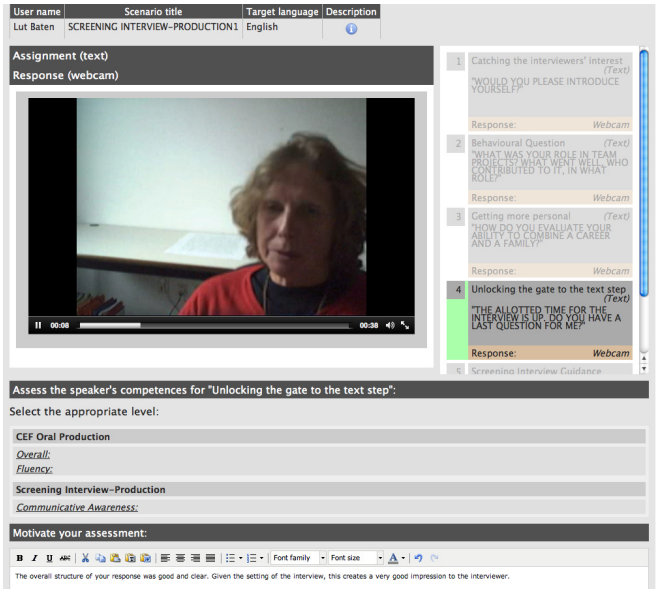

Fig. 3. Assessing a Production Task in CEFcult tool

tural competence skills, which operationalises Byram's Model of Intercultural Competence Development. Learners are also obliged to include textual annotations to the recording as part of their assessment. This forces them to express part of their reflections in a textual form.

4. **User control over performance and extraction to ePortfolio**: Learners can invite their selected peers to assess their performance according to the linguistic and intercultural scales. Only those peers invited by the individual learner can access the learners performance. Trust again plays a role here, as learners on the platform need to identify who can give them valuable feedback on their performance . The platform needs to enable learners in making these decisions, by giving them the information they need [17]. This gives the learner a high level of control over their own content on the platform. As a consequence, the CEFCult can also be used purely as a self-assessment platform.

Coming back to the technological issues raised in section 3, the principles followed in the CEFcult tool address the three issues in the following way: (i) the safe environment is ensured by giving more control to the user over their own performance videos and their choice of assessors, (ii) the authenticity of the elicited behaviour is targeted by the use of scenarios grounded in real situations and the use of role play and (iii) the feedback on the portrayed behaviour is guided through the assessment schemas based on known language and intercultural competence assessment frameworks, but allows for individual assessors to give personalised feedback through the annotations.

The CEFCult tool offers an approach that combines individual performance, individual reflection together with guided and controlled social feedback on an individuals performance. Similar approaches could be taken to support other contexts where these reflective skills are required. For example, to develop networking skills, a technological platform could be designed based on the same principles.

5 Conclusion: Further Research Steps

In this paper, we discussed how reflection on one's own behaviour and practice is triggered by social interactions. We described this process against the background of discourse comprehension, with examples from intercultural competence development and networking. We then looked at the prerequisites for social interactions for learning. Finally, the technological approach taken in the CEFcult project was described, which combines the individual training platform, with controlled social interaction.

Further research steps include developed understanding of social interactions as settings for learning and the design and development of similar technological platforms for the support of networking skills.

Acknowledgements. Part of the research described in this article has been conducted within the CEFCult project, which runs from November 2009 until October 2011. The project is funded with support from the European Commission, under the Lifelong Learning Programme of the Education, Audiovisual & Culture Executive Agency (key activity 2: Languages). The views expressed here are only of the authors of the article. The European Union is not responsible for any use that might be made of its content.

References

1. Schön, D.A.: Educating the Reflective Practitioner. Jossey-Bass. San Francisco (Calif.) (1990)
2. Watson J.S., Wilcox, S.: Reading for Understanding: Methods of Reflecting on Practice, Reflective Practice, 1(1), 57-67, (2000)
3. Brown J.S., Duguid P.: Organizational Learning and Communities-of-Practice: Toward a Unified View of Working, Learning, and Innovation. Organization Science 2(1) Special Issue: Organizational Learning: Papers in Honor of (and by) James G. March 40-57 (1991)
4. Wenger E.: Communities of Practice. Learning as a social system. Systems Thinker, `http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml` (1998)
5. Dillenbourg, P.: What do you mean by "collaborative learning"? In: P. Dillenbourg (Ed.), Collaborative-learning: Cognitive and Computational Approaches Vol. 1 1-15. Oxford: Elsevier. (1999)
6. Kintsch W. , van Dijk T.A.: Toward a model of text comprehension and production. Psychological review, 85(5), 363. American Psychological Association (1978)

7. Schank R.C., Abelson R.P: Scripts, plans, goals, and understanding. Hillsdale, NJ: Erlbaum (1977)
8. Byram M., Gribkova, B. , Starkey H.: Developing the Intercultural Dimension in Language Teaching. A Practical Introduction for Teachers. Strasbourg: Council of Europe (2002)
9. Compton, M. Cast Your Net: Networking Best Practices and Beyond. Women In Business, 61(2) (April/May 2009), 30-31 (2009)
10. Tempest, S., Starkey K.: The Effects of Liminality on Individual and Organizational Learning, Organization Studies, 25(4), 507-527 (2004)
11. Bennett, M.J.: Defining, measuring, and facilitating intercultural learning: a conceptual introduction to the Intercultural Education double supplement. Intercultural Education, 20(sup1), S1-S13. (2009)
12. Fox, B.: Interactional reconstruction in real-time language processing. Cognitive Science, 11(3), 365-387 (1987)
13. Byram, M: Teaching and assessing intercultural communicative competence. Clevedon, England: Multilingual Matters (1997)
14. Bennett, M.J., Castiglioni, I.: Embodied ethnocentrism and the feeling of culture: a key to training for intercultural competence. In The handbook of intercultural training, ed. D. Landis, J. Bennett and M. Bennett, 3rd ed., 24965. Thousand Oaks, CA: Sage (2004)
15. Rajagopal, K., Joosten-ten Brinke, D., Van Bruggen, J., Sloep, P.B.: Understanding Personal Learning Networks: their structure, their content and the networking skills needed to optimally use them (submitted)
16. Vygotsky, L.S.: Mind and society: The development of higher psychological processes. Cambridge, MA: Harvard University Press (1978)
17. Rusman, E., Van BruggenJ., Sloep, P.B., Valcke, M., Koper, R.: The Minds Eye on Personal Profiles; How to Inform Initial Trustworthiness Assessments in Virtual Project Teams, In: G. Kolfschoten, T. Herrmann and S. Lukosch (editors), Collaboration and Technology. Lecture Notes in Computer Science: Vol. 6257. Proceedings of the 16th International Conference CRIWG 2010. September, 20-23, 2010, Maastricht, The Netherlands. Heidelberg, Germany: Springer, 297-304 (2010)
18. Dulworth, M.: Enhancing Personal and Professional Development: The Role of Peer Networks. Employment Relations Today, 33(3), 37-41(2006)
19. Krattenmaker, T.: A Blueprint for Constructing a Personal and Professional Network. Harvard Management Communication Letter, 5(4), 3-4 (2002)