Handbook of Research on Computer-Enhanced Language Acquisition and Learning

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Chapter XXII
Developing L2 Strategic Competence Online

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ABSTRACT
Research on CALL environments that explicitly focuses on the development of strategic competence is almost non-existent. This chapter reports on an exploratory study which was conducted as a semester-long, Web-based project to facilitate the development of L2 strategic competence by means of online collaboration among advanced EFL (English as a foreign language) learners who are students in an EFL teacher education program at a German university. The project—called the “Online Learner ABCs”—combines an autobiographic approach to raise the learners’ awareness of their own strategy use with data-driven activities to foster diagnostic skills with regard to strategy use. Overall, the “Online Learner ABCs” was found to be conducive to the students’ development of L2 strategic competence, in particular by raising the students’ awareness of a considerable number of language learning strategies. Deep-level reflections on strategy use, however, remained scant, indicating that further instructional fine-tuning is needed.

INTRODUCTION
Research on L2 strategic competence has become a continuous effort since the 1970s. In the beginning, the focus was on communication strategies which second language learners employed when their linguistic prerequisites were not adequate (Selinker, 1972; Varadi, 1980). That is, speech production and the mismatch between communicative intentions and linguistic resources were...
emphasized (Bialystok, 1990; Canale & Swain, 1980; Faerch & Kasper, 1983; Rababah, 2002; Stern, 1983).

In the 1980s and 1990s, the need for life-long learning triggered another perspective on L2 teaching objectives (Finkbeiner, 2005), and alongside it research on the cognitive and metacognitive aspects of autonomous L2 learning. These developments have been reflected in language learning strategy research (Cohen, 1998; Finkbeiner, 1998, 2005; O’Malley & Chamot, 1990; Oxford, 1990, 1996; Rababah, 2002; Rubin, 1975). Most recently, a group of renowned L2 strategy researchers has initiated the International Project on Language Learner Strategies (IPOLLS) as a comprehensive effort to further advance language learner strategy research (Cohen & Macaro, 2007). This chapter links up with IPOLLS’s work on learning strategies and situates it in a collaborative online environment.

Given the long-standing tradition in L2 learning strategy research, it is surprising that empirical studies looking at the intersection with CALL (computer-assisted language learning) have remained rather scant. For example, when consulting the ERIC (Education Resources Information Center) database, a search for (empirical) research reports yields a total of 29 publications (as of June, 2007) based on database queries using combinations of the following descriptors: “English (second language),” “foreign language instruction,” “foreign language learning,” “foreign language teaching,” “language learning (foreign),” “second language instruction,” “second language learning,” “computer assisted instruction,” “computer-assisted learning,” “intelligent computer-assisted instruction,” “computer uses in education,” “communication strategies,” “learner strategies,” publication type: “reports research.” As will be evident from the literature review further below, research on CALL environments that explicitly focuses on the development of strategic competence is almost non-existent.

In order to begin filling this void, this chapter reports on a semester-long, Web-based project to facilitate the development of L2 strategic competence by means of online collaboration among advanced EFL (English as a foreign language) learners who are students in an EFL teacher education program at a German university. The project uses the “Online Learner ABCs” as a vehicle to promote reflection on one’s own language learning history as well as on language learning strategy use. It is an adaptation of the ABCs of cultural understanding and communication (Finkbeiner & Knierim, 2006; Finkbeiner & Schmidt, 2006; Schmidt, 1998; Wilden, 2006). The “Online Learner ABCs” project designed here employs an autobiographic approach (Schmidt, 1998; Schmidt & Finkbeiner, 2006) together with the LMRPlus approach (Finkbeiner, 2001, 2004), which is a professional tool that aims at raising learners’ awareness of their own strategic competence.

LANGUAGE LEARNING STRATEGIES

The core question of the “Online Learner ABCs” project is, first of all, whether and, secondly, how learners’ L2 strategic competence can be fostered through online collaboration. Therefore, we will first define the key construct “strategic competence” and then examine how this notion has been taken up in the CALL community so far.

Following Cohen (1998), one can distinguish between “language learning strategies” and “language use strategies” as being two subsets of “language learner strategies.” It should be noted, though, that the distinction between language learning strategies and language use strategies is not always clear-cut in that the latter (e.g., a communication strategy such as circumlocution) can also contribute to L2 learning (e.g., acquisition of a new lexical item based on an interlocutor’s circumlocution). In the SLA (second language
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acquisition) literature, the term “strategic competence” has predominantly been associated with learners’ communicative language ability, as evidenced in the following definition by Bachman (1990):

Strategic competence is seen as the capacity that relates language competence, or knowledge of language, to the language user’s knowledge structures and the features of the context in which communication takes place. Strategic competence performs assessment, planning, and execution functions in determining the most effective means of achieving a communicative goal (p. 107).

Bachman’s definition addresses only one subset of language learner strategies, namely strategies of language use, leaving aside Cohen’s (1998) second subset, that is, language learning strategies. To arrive at a more comprehensive definition of strategic competence, we would therefore like to extend Bachman’s definition as follows:

1. Strategic competence is seen as the capacity that relates language competence, or knowledge of language, to the language user’s knowledge structures and the features of the context in which not only communication but also language learning takes place.

2. Thus, strategic competence performs assessment, planning, and execution functions in determining the most effective means of achieving a communicative goal on the one hand and a language learning goal on the other hand.

3. Furthermore, we argue that L2 strategic competence can enhance the language learning process by connecting, in a synergetic manner, declarative L1, L2, L3, etc. knowledge (knowing about the L1, L2, L3, etc.), procedural L1, L2, L3, and so on, knowledge (knowing how to use the L1, L2, L3, etc.), and conditional knowledge (knowing how to use the L1, L2, L3, etc. in a specific context) (Brown, 1987; Finkbeiner, 2005; Garner, 1990).

Based on this more comprehensive notion of L2 strategic competence, this chapter specifically focuses on language learning strategies (and not on language use strategies). According to Oxford and Schramm (2007), a language learning strategy is “a specific plan, action, behavior, step, or technique that individual learners use, with some degree of consciousness, to improve their progress in developing skills in a second or foreign language” (pp. 47-48). This represents but one of numerous definitions that have been put forward over the last three decades. It is necessary, therefore, to be aware of the fact that there is still a lack of terminological coherence and consensus in the field of learning strategy research, including the discussion of criterial features of language learning strategies (Finkbeiner, 1998).

For instance, Oxford and Schramm’s definition conceives of learning strategies as exhibiting “some degree of consciousness,” which is in line with Finkbeiner’s (1998, 2005) proposal to situate learning strategies along three continua: from conscious to unconscious, from explicit to implicit, and from observable to non-observable. Cohen (1998, p. 4), in contrast, emphasizes that “the element of consciousness is what distinguishes strategies from those processes that are not strategic.” A full discussion of this issue and related matters is beyond the scope of this chapter, but readers need to be cognizant of possible caveats in learning strategy research emanating from the current state in the field, which clearly necessitates further research.

According to O’Malley and Chamot’s (1990) taxonomy of language learning strategies, one can distinguish between cognitive, metacognitive, and social and affective strategies: Cognitive strategies (such as repetition, translation, summarizing, resourcing, elaboration, or inferencing) “involve
interacting with the material to be learned, manipu­
ating the material mentally or physically, or applying a specific technique to a learning task” (O’Malley & Chamot, 1990, p. 138). Metacognitive strategies (such as planning, selective attention, self-monitoring, or self-evaluation) “involve thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned” (O’Malley & Chamot, 1990, p. 137). Social and affective strategies (such as cooperation, questioning for clarification, or self-talk) “involve interacting with another person to assist learning or using affective control to assist a learning task” (O’Malley & Chamot, 1990, p. 139).

Chamot and O’Malley (1994, p. 372) argue that the efforts of language learning strategy research rest on the assumption that “explicit metacognitive knowledge about task characteristics and appropriate strategies for task solutions is a major determinant of language learning effectiveness” (Chamot & O’Malley, 1994, p. 372). As we have seen, there is quite some discrepancy in the discussion of the role of dimensions such as explicitness, implicitness and so on. Furthermore, many L2 learners do not use strategies when left at their own devices, or at least they do not use them effectively. This can be due to affective factors, such as fear of failure (Covington, 1985, 1997), but also due to difficulties in judging and evaluating the dynamics of situated and adequate strategy use (Finkbeiner, 2005, p. 421). This observation has given rise to research on and the implementation of learning strategy instruction, driven by the argument that L2 learning can be more effective “if students become more aware of the range of possible strategies that they can consciously select during language learning and language use” (Cohen, 1998, p. 65). To this end, Cohen (1998) outlines the following goals of learning strategy instruction:

1. Self-diagnose their strengths and weaknesses in language learning;
2. Become more aware of what helps them to learn the language they are studying most efficiently;
3. Develop a broad range of problem-solving skills;
4. Experiment with both familiar and unfamiliar learning strategies;
5. Make decisions about how to approach a language task;
6. Monitor and self-evaluate their performance; and
7. Transfer successful strategies to new contexts (pp. 66-67).

To implement these goals of learning strategy instruction, highly individualized, learner-centered, context- and task-specific learning scenarios can prove beneficial (Finkbeiner, 2005, pp. 424-478). As a first step, learners should be guided to become aware of their own language learning processes and behaviors. For this reason, most approaches to strategy instruction include an awareness-raising component as their fundamental building block (e.g., Chamot, Barnhardt, El-Dinary, & Robbins, 1996; Cohen, 1998; Finkbeiner, 2005; Oxford & Leaver, 1996; Yang, 1996). The project described in this chapter focuses explicitly on awareness raising as the participants’ starting point on the way to becoming strategically competent L2 learners.

**STRATEGIC COMPETENCE AND CALL**

Let us now turn to the question in what ways L2 learning strategies (as a component of L2 strategic competence) have been addressed in the area of CALL. When examining the relevant literature, the following categories of studies emerge:

1. Descriptive studies. Studies in this category examine learners’ strategy use during CALL activities which are not specifically
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grounded toward fostering learners’ strategic competence; taken as manifestations of actual learner behavior. The results of this type of study are typically used to make informed decisions as to how the design of the CALL activity under investigation can be improved.

2. Interventionist studies. Studies in this category are based on CALL activities which specifically aim at fostering learners’ strategic competence; they are interventionist in that the CALL activity under investigation seeks to influence the students’ learning processes and behaviors (e.g., by eliciting strategy use, by raising the learners’ awareness of strategies). It should be noted, however, that two of the studies listed in Table 1 (i.e., Barnes, Medina, Plaskoff, & Robertson, 1990; Bull, 1997) are pilot studies which describe the intended intervention (e.g., task design, software features) without implementing and testing it empirically.

Among these studies one can further distinguish between studies within the computer-as-tutor vs. computer-as-tool framework: “With a CALL tutor, a computer program analyzes and evaluates an individual learner’s response to a question, and provides feedback on it” (Levy & Stockwell, 2006, p. 22) whereas “with computer tools the role of the technology is best described as an ‘enabling’ device” (Levy & Stockwell, 2006, p. 24). For example, in the latter scenario, the computer provides and facilitates access to dictionaries and other databases, electronic writing and publishing environments (e.g., wikis, blogs), as well as means of computer-mediated communication (CMC; e.g., e-mail, forums, text/voice chat, MOOs).

Table 1 contains references to studies representing each of these categories. In line with this chapter’s focus on the development of strategic competence (rather than the mere description of strategy use), we will now review selected interventionist studies in more detail.

### Interventionist Studies Within the Computer-As-Tutor Framework

In an early interventionist study, Barnes et al. (1990) describe the development of software which aims at supporting ESL (English as a second language) students’ essay planning skills by focusing on task-specific metacognitive strategies. The software raises the students’ awareness of effective essay planning strategies (e.g., techniques

**Table 1. Studies on learning strategies in CALL environments**

<table>
<thead>
<tr>
<th>Type of study</th>
<th>Purpose/studies</th>
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<tr>
<td>Descriptive studies</td>
<td>Descriptive studies investigate strategy use during CALL activities which do not specifically aim at fostering learners’ strategic competence</td>
</tr>
<tr>
<td>Interventionist studies</td>
<td>Interventionist studies investigate CALL activities which specifically aim at fostering learners’ strategic competence</td>
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</table>
to organize one’s ideas). Several essay planning strategies are described and practiced, and their usefulness regarding the different stages of the writing process is highlighted. However, since this study is primarily concerned with the design of the program, Barnes et al. do not make any attempt to assess learners’ development of strategic competence by using their software.

Bull (1997) reports on the development of an intelligent CALL program, called Mr. Collins, which aims at raising learners’ awareness of learning strategies for specific language learning exercises (e.g., pronoun placement). Based on individual learners’ profiles as well as the interactions between the learner and the software (e.g., learner errors and learner self-assessment), Mr. Collins introduces selected strategies. Furthermore, students are encouraged to request information about alternative strategies. The primary aim is to “encourage a learner to reflect on what may work best for him as an individual” (Bull, 1997, p. 31). Like Barnes et al. (1990), Bull (1997) does not refer to any empirical data that would elucidate to what extent the software authors’ design decisions result in improving students’ strategic competence in practice.

Knierim (2000) describes the development of a Web-based listening/viewing task for beginning university-level learners of German (N = 20). To facilitate the students’ comprehension, the Web environment provides technology-enhanced scaffolding (e.g., pausing/reviewing video clips at will, listening to key words from each section of the video clip, access to an online dictionary) and strategy-based pre-listening activities. Each segment of the video clip was preceded by strategy-based pre-listening activities which were supposed to elicit context-specific strategies such as personal/world elaboration, voice/paralinguistic inferencing, and summarization (Knierim, 2000, p. 22). To raise the students’ awareness of how the strategy presented can be helpful, the rationale of each of these activities is explained. Knierim (2000) found that “the students who received only technological support or no support at all performed best, followed by the group with technological plus strategic support” (p. 32), while the students provided only with strategic support performed worst. These results were taken to indicate that the beneficial effect of technological support during the listening task investigated may have been more immediate; in contrast, strategic support may require more extensive practice in order to take effect.

Ma and Kelly (2006) describe the principled development of a vocabulary learning program called WUFUN for Chinese EFL learners. One of the program’s features are word memorization aids which provide advice on how the vocabulary covered by the program can be memorized by introducing strategies such as verbal association, imagery, and rhyming (Ma & Kelly, 2006, p. 26). The authors examined the question whether the learners were able to develop vocabulary learning strategies while using the program by asking the participants (N = 35) to indicate which, if any, strategies they acquired from using the software. Ma and Kelly (2006) found that “most learners mentioned just one or two strategies” and that “the learners tend to adopt the strategies that require less mental effort” (p. 37). The authors concluded that in future versions of the software vocabulary learning strategies instruction would have to be made more explicit.

**Interventionist Studies Within the Computer-As-Tool Framework**

In a study by Meskill (1991), ESL students (N = 34) worked with a student-controlled database of video sequences which contained syntactic, semantic, pragmatic, and cultural information about English conversation strategies. To facilitate the students’ interaction with the video sequences in a strategic manner, several kinds of advice messages were displayed by suggesting the use of strategies such as rehearsal, monitoring, planning, association, and resourcing (e.g., by using
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the program’s dictionary). The advice messages were in the form of “Why don’t you try ...” or “Think about ....” However, the performance scores of students receiving the advice messages and of those who did not receive the strategic advice were not statistically significantly different. Yet, additional qualitative data obtained from follow-up interviews suggested that most students were “inclined to attend to and follow suggestions concerning how to interact with the multimedia content presentation with weaker strategists attending more closely to and desiring more of the same kind of advice” (Meskill, 1991, p. 286).

Chang (2007) describes a Web-based instructional program focusing on EFL reading, which was embedded in an online course management system. To facilitate the students’ use of metacognitive strategies, they were required to fill in a self-monitoring recording form prior to beginning their online course work. The form asked the students, who were enrolled at a Taiwanese college (N = 99), to record:

1. Their starting time,
2. The place from where they were accessing the course,
3. Any persons they were studying with, and
4. A prediction of their score on an after-lesson quiz (Chang, 2007, p. 190).

After finishing a session, the students were also requested to indicate

5. Their finishing time,
6. The actual quiz score, and
7. Anything which distracted them from the learning process (Chang, 2007, p. 190).

Whenever a student began a new session, he or she was shown her learning history based on the information gathered from the self-monitoring recording form. It was found that the students who worked with the Self-Monitoring Recording Form performed statistically significantly better (as measured by comprehension tests, assignments, and discussions) than students who were not provided with this component of the Web-based course. Chang (2007) concluded that:

Students’ monitoring of their study time and the learning environment helped them complete the academic task and alerted them to any breakdown in attention or comprehension; the test-predicting strategy provided students with opportunities to evaluate their own learning (p. 194).

These positive results are especially noteworthy given the relative simplicity, both methodologically and technologically, of the treatment, that is, the self-monitoring recording form.

In the context of distance language learning, Hauck (2005) investigated the development of metacognitive strategies through online activities which relied on the “elicitation of learners’ self- and contextual knowledge and beliefs, articulation of what has come to awareness, confrontation with alternative views, and reflection on the appropriateness of revising, expanding one’s knowledge” (Hauck, 2005, p. 74, referring to Wenden, 1998; emphasis in original). Following these principles, Hauck utilized task-based activities focusing on individual learners’ skills and how these may be best utilized (or further improved) in Web-based distance language learning. Over a period of five weeks, the tasks were performed in group or pair work, mediated by a tutor, within a virtual learning environment which allowed for audio-graphic conferencing among the participants (N = 14).

To evaluate the students’ metacognitive growth, Hauck analyzed observation protocols of the learners’ verbal interactions as well as the learners’ reflective comments on each session. Moreover, a questionnaire inquiring about the learners’ “self-awareness as well as their awareness of their individual approaches to language learning online” (Hauck, 2005, p. 75) was administered upon completion of the project. Based on these data Hauck concluded that the approach taken in
her study "can enhance the cognitive capacities underlying effective LSM [learner self-management]" (Hauck, 2005, p. 79) as well as learners' strategic knowledge (Hauck, 2005, p. 80).

In sum, when looking at the interventionist studies on learner strategies in CALL environments, we can observe the following (see Table 2): The number of interventionist studies—that is, studies focusing explicitly on fostering students’ use of strategies or strategic competence as a whole—is still very small (see also Table 1). Not all of the interventionist studies identified in the CALL literature, which has been reviewed above, are empirical but are merely “design studies.” The results of studies which investigate the relationship between the elicitation of learning strategies by means of a CALL task and learners’ task performance are mixed, which is in line with the still ongoing debate on the empirical validation of the relationship between strategy knowledge/use and achievement (Friedrich & Mandl, 2006). While Knierim (2000) and Meskill (1991) did not yield any conclusive evidence, only the results of Chang (2007) are more positive, indicating that the approach taken in that study (i.e., by fostering students’ self-monitoring strategies) does indeed improve learning outcomes. Only two studies from the CALL literature (Hauck, 2005; Ma & Kelly, 2006) have been identified as attempting to assess learners’ development of strategic competence. Based on this review of studies focusing on learning strategies in CALL environments, the need for empirical research on the development of L2 strategic competence is clearly evident. In addition to learners’ self-reports on perceived changes in strategic competence, CALL strategy research needs to devise ways of rendering strategy knowledge and use visible so as to be susceptible to observation. Furthermore, given the recent developments in CALL which emphasize using the computer as a tool for L2 learning (as opposed to a tutor), the lack of research on strategies in computer-as-tool CALL is significant. In particular, this holds true for Web-based CALL activities which make use of a broad range of online communication and collaboration tools, such as e-mail, forums, chat (text-based and voice), instant messaging, MOOs, blogs, podcasts, and wikis (for recent overviews, see, e.g., Fotos & Browne, 2004; Hegelheimer & Knierim, 2006; Levy & Stockwell, 2006).

**THE “ONLINE LEARNER ABCS”**

The present study seeks to address the above identified gap in current CALL research by reporting on a semester-long project with 34 students (30 female, four male) in a graduate-level seminar on “language learning strategies” in an EFL teacher

<table>
<thead>
<tr>
<th>Study</th>
<th>Computer as tutor</th>
<th>Empirical</th>
<th>N</th>
<th>Assessment of L2 performance</th>
<th>Assessment of strategic competence</th>
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<tbody>
<tr>
<td>Barnes et al. (1990)</td>
<td>✓</td>
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<td>Bull (1997)</td>
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<td>Knierim (2000)</td>
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<td>35</td>
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<td>Chang (2007)</td>
<td>✓</td>
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<td>99</td>
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<td>Hauck (2005)</td>
<td>✓</td>
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<td>Meskill (1991)</td>
<td>✓</td>
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education program at a German university. The participants are advanced learners of English as a foreign language. The “Online Learner ABCs” aimed at facilitating the students’ strategic competence by supplementing the face-to-face classes as a blended learning project.

INSTRUCTIONAL DESIGN OF THE PROJECT

The pedagogical considerations underpinning the project are firmly grounded in constructivist and experiential approaches to foreign language education (Finkbeiner, 2000, 2005; Legutke & Thomas, 1991; Van Lier, 1996; Vygotsky, 1962, 1978). Specifically, the project is based on the following models and approaches, respectively:

The LMRplus Model

In the LMRplus model (Finkbeiner, 2001, 2004), L stands for learner, M for moderator, and R for researcher. The model focuses on “cooperation and collaboration among the changing roles of teacher and learner and researcher” (Finkbeiner, 2004, p. 114) as well as the different sets of competencies and strategies that one needs for each of these roles. Furthermore, it suggests that every participant in an educational setting can optimize his or her learning experience by assuming all three roles (e.g., during the course of a semester project and by developing the role-specific strategic competencies). The “plus” in the model refers to the fact that the foreign language (in this case, English) is used as the vehicle for classroom communication, thus rendering a subject-matter course (i.e., on EFL teaching methodology) into a content-based language classroom. The LMRplus model provides the overarching framework for the present study, since students will act as learners, moderators, and researchers throughout the project.

With regard to CALL, Finkbeiner (2001) examined the impact of the LMRplus model in two studies: (a) a qualitative study in an intensive tutorial program (N = 8) and (b) a qualitative-quantitative survey study with groups inside and outside a CALL environment (N = 82). A special focus was on CALL novices vs. CALL experts. By means of a questionnaire “students’ attitudes, experience and concrete behavior in different situations concerning CALL and cooperation” were investigated (Finkbeiner, 2001, p. 138). The most striking result was that attitudes towards cooperative learning in a CALL environment were filled with great skepticism in all groups. It was remarkable that the CALL novices expressed more apprehension as to cooperation in a CALL environment than the CALL experts (Finkbeiner, 2001, p. 145). The study showed that processes such as organization, planning, initiation, facilitation, and evaluation of a collaborative CALL classroom seem to be key in contributing to more positive attitudes towards cooperative learning in a CALL environment (Finkbeiner, 2001, p. 145). Furthermore, there was a gender issue with female students favoring cooperation in a CALL environment more than male students.

The ABCs Model of Intercultural Understanding and Communication

The first phase of the project utilizes and adapts the ABCs Model of Intercultural Understanding and Communication (Finkbeiner, 2006; Finkbeiner & Koplin, 2002; Schmidt, 1998; Schmidt & Finkbeiner, 2006) which originally aims at exploring cultural and intercultural differences through a three-step process involving two individuals from different cultural backgrounds. The three steps are:

1. A: Writing an autobiography. In the ABCs process, the autobiography is written in the mother tongue. It is considered a protected text which is immune to criticism, feedback and/or correction. It is individual and private and, thus, not shared with the partner; yet,
Table 3. Instructions for the “online learner ABCs”

<table>
<thead>
<tr>
<th>Step</th>
<th>Instructions</th>
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| A    | Writing a Learner Autobiography  
List and describe memories, starting with your earliest, as they relate to learning, literacy development, and language learning—inside and outside of school. Upload your autobiography by clicking on the link provided on the course Web site. Expected length: 200-500 words (more if you want to) in English. |
| B    | Writing a Learner Biography about Your Partner  
"Interview" your partner regarding his or her memories, starting with the earliest, as they relate to learning, literacy development, and language learning—inside and outside of school and write a learner biography about him/her. The process is reciprocal: You will write a biography about your partner, and he/she will write one about you.  
The “interviews” will be conducted on our course Web site (OCCO) using  
1. Chat rooms  
2. Forums  
The basic idea is to use the more fast-paced communication in the chat room to generate ideas you would like to talk about, to quickly exchange your opinions, and so on. The forum is more suitable for substantial answers, comments, reflections, and so on.  
After communicating with your partner, you will write a learner biography about your partner based on the information he or she provided during the chat sessions and forum discussions. Expected length of the biography about your partner: 200-500 words (more if you want to) in English.  
To conclude Step B of the learner ABCs, you are going to review the biography which your partner wrote about you. Also, you are going to revise the biography which you wrote about your partner. This process will be implemented on the OCCO course Website using a so-called wiki, which is an online tool for collaborative writing.  
Please look at the biography your partner wrote about you and review it by examining the following:  
• Content: Does your partner present your ‘life story’ as a language learner in an appropriate way? Are there any misrepresentations or inaccuracies? Also, are there any additional points that, from your point of view, would be important or interesting to add?  
• Language: Since we all English as a foreign language, it is always beneficial to check one’s language for appropriateness and correctness. Please highlight any language problems you notice. You do not need to provide the corrections but you may wish to add a comment.  
• Finally, please revise the biography which you wrote about your partner (based on your partner’s feedback). Please address any remarks, questions, and so on raised by your partner, and fix any language problems highlighted by your partner. |
| C    | Comparing Learner Biographies  
• Compare your own autobiography with the biography your partner wrote about you: Look carefully at HOW your partner describes the events and experiences from your life story as a (language) learner. Are there any subtle, “hidden” comments or interpretations in what your partner wrote about you? How do your partner’s perceptions of certain events, experiences, or learning processes in your life story as a (language) learner differ from your own perceptions (cf. your autobiography)? How might all this be related to learner-specific behaviors, values, and beliefs?  
• Compare your own autobiography with the biography you wrote about your partner: Do you see any interesting similarities in your partner’s and your own life story as a (language) learner? For example, are there similar experiences, events, or learning processes that were/are important in your lives? In what respect, precisely, are these “similar” experiences (really) similar, or how do they maybe differ after all? On the other hand, are there any striking events or experiences (“critical incidents”) in your partner’s life story as a (language) learner that would be unlikely to be part of your own life story as a (language) learner? Or, are there any striking events, experiences, or learning processes in your partner’s life that, in all likelihood, would have a different meaning, relevance or impact in your own life as a (language) learner? Do you see any connection to learner-specific behaviors, values, and beliefs?  
• Write down (in English) the findings from your comparisons post them in the forum for Step C. Only you and your ABCs partner have access to this forum. Respond to your partner’s comparison results (in this forum), comment on them, and ask for clarification (if necessary). (NB: If you wish, you can schedule another chat session with your partner to discuss your findings.) |
as part of the assignment it has to be shared with the teacher.

2. B: Interviewing the partner to write a biography about him or her. This text is written in the target language, it is shared, feedback by the partner is possible (see point 4.).

3. C: Comparing the autobiography of oneself with the biography about the partner (and, optionally, the partner’s biography about oneself) to explore cultural differences and similarities as well as self- and other-perception. This part of the assignment is written as an academic paper in the target language. It is evaluated with respect to the depth of metacognition, awareness, and reflection on the perception of the self and the other (Finkbeiner, 2006, pp. 35-39).

4. The European adaptation (extending the original ABCs model by Schmidt, 1998) includes a fourth step: validating the biography by re-reading the biography and allowing each partner questions for clarification and feedback (Finkbeiner & Koplin, 2002).

For the purposes of the present study, the ABCs model is used to explore similarities and differences in the participants’ life stories as learners within the framework of their individual “learning cultures.” The special focus thereby lies on L2 learning and L2 learning strategies. As in the original ABCs model, the “Online Learner ABCs” is done in learner dyads. However, in contrast to the original ABCs model, which is conducted in a face-to-face environment, the “Online Learner ABCs” has been adapted to the online environment (for further attempts to utilize the ABCs model in online scenarios, see Finkbeiner & Knierim, 2006; Knierim, 2006; Knierim, Wade, & Wilden, 2004; Wilden, 2006, 2007).

The goal of this phase of the “Online Learner ABCs” is to raise the participants’ awareness of their backgrounds as L2 learners, of their learning habits and processes, and perceptions towards L2 learning, thus addressing one building block of strategy instruction. See Table 3 for the instructions given to the participants for each step of the project.

**DESIGN OF THE CALL ENVIRONMENT**

To implement a user-friendly and flexible Web-based environment for the project, we employ the Open Source online learning management system Moodle, which has been used in our departmental section of applied linguistics, foreign language research and intercultural communication for three years. Our Moodle installation, labeled OCCO (Online Course Companion), supplements all of our face-to-face classes. Therefore, the participants in this study were already familiar with the online environment before the beginning of the project.

The “Online Learner ABCs” makes use of the following features and activity types available in Moodle (see Figure 1).

In step A of the ABCs process, the participants write and submit their learner autobiography using Moodle’s “assignment” learning activity. In step B, the learners, who work in self-selected pairs, ‘interview’ each other regarding their life stories as L2 learners using text-based chat rooms and forums. The participants are asked to go through several cycles of online chat sessions (see Figure 2 for an example) and forum discussions so as to allow for both spontaneous, fast-paced interaction (using the chat room) and more in-depth reflection (using the forum). Each student pair can only access their own chat room and forum in order to facilitate a thorough one-on-one exchange and provide privacy. After finishing the interview process, the participants compose a learner biography (in the target language) about their partner. To conclude step B, Moodle’s ‘wiki’ learning activity is used, which allows for peer editing and feedback: The participants upload the biographies, which are then ‘reviewed’ by
Figure 1. The course website on the Moodle-based platform “OCCO”

Figure 2. Step A of the ABC’s model: Students interviewing each other in a chat room
Developing L2 Strategic Competence Online

the partner about whom the biography has been written. This way the content of the biographies can be validated (Finkbeiner & Koplin, 2002). Furthermore, the participants are asked to provide feedback to the partner on any language problems they notice (peer review). In step C of the ABCs process, each student composes a synopsis by comparing his or her own learner biography with that of his or her partner. Special emphasis is put on similarities and differences regarding learning strategy use, learning habits, and learner types. These synopses are shared in an online forum and discussed in the face-to-face class meetings. (See also Table 3.)

By moving the ABCs model to an online environment, we allow our students to be time- and space-independent when interacting and cooperating with their peers. This is especially important, since a large proportion of our students are commuters, which makes it hard for them to meet physically in study groups outside of class. Most importantly, chat session transcripts and forum discussions leave a ‘permanent trace’ (as opposed to oral communication), which can help the students reflect more thoroughly on the task at hand, both regarding content and language. The same holds true for wiki-based collaboration, which keeps track of everyone’s ideas and modifications, thus documenting the learning process in a way otherwise impossible or impractical at least. This approach also addresses one of the shortcomings of previous research on strategies in CALL environments, namely the lack of observation data as the basis for the subsequent analysis of the development of strategic competence. By utilizing these self-generated corpora as ‘permanent traces’ of the learning process we also expect the students to develop a higher level of metacognition and language awareness.

RESEARCH QUESTIONS AND PROCEDURES

To examine the development of the students’ strategic competence during the “Online Learner ABCs,” we focus on the following research questions:

1. In step A of the “Online Learner ABCs:” Is there any evidence of (a) awareness of and (b) reflection on one’s own language learning strategy use in the participants’ learner autobiographies?

2. In steps B and C of the “Online Learner ABCs:” To what extent do the online “interviews,” the composition of the learner biography about one’s partner, and the comparative synopsis trigger additional insights into one’s own L2 strategy use—in comparison to the autobiography—in terms of (a) awareness and (b) reflection, indicating the further development of strategic competence?

These research questions warrant a qualitative analysis of the data, following the principles and procedures of content analysis (Mayring, 2003), supplemented by quantifications (i.e., descriptive statistics). The data analysis is based on (a) the texts written by the students (autobiographies, biographies, comparisons), (b) the forum discussions, (c) the chat session transcripts, and (d) the peer editing and feedback during the wiki-based activities—all of which are stored on the OCCO course Web site. To ascertain the inter-rater reliability of the strategy coding procedure, the data were coded independently by two graduate students who were experts in learning strategy research and the ABCs model and who also received specific coding guidelines. In a second step, the authors of this chapter cooperatively
checked and discussed the instances of strategy use identified, eliminating those for which agreement could not be reached.

In addition to the aforementioned data collection procedures, an evaluation questionnaire asking the participants to provide feedback on the perceived usefulness of the project was administered upon completion of the project. The research outlined here is descriptive and exploratory as it represents the first attempt to adapt the original ABCs model to a Learner ABCs. Moreover, there is still little experience with implementing the ABCs model in a Web-based setting (Wilden, 2006, 2007). Hence, our goal is to document the participants' learning processes in such a way as to be able to reduce the observational data and interpret the results (Alassuutari, 1993). Specifically, we extracted certain categories from the data (i.e., cognitive, metacognitive, and social and affective strategies) in order to detect structures or patterns. This procedure allows us to have an overall as well as detailed look at the development of L2 strategic competence in the collaborative online learning environment investigated in this study.

RESULTS AND DISCUSSION

Is There Any Evidence of Awareness of One's Own Language Learning Strategy Use in the Participants' Learner Autobiographies?

We will define awareness of language learning strategy use with reference to the three out of the five domains used as indicators for language awareness by James and Garrett (1991): (a) the cognitive domain, (b) the affective domain, and (c) the performance domain. Accordingly, awareness of language learning strategy use is defined as the explicit or implicit knowledge of one's language learning process (including affective factors, such as emotions, interests, likes, and dislikes).

We used the participants’ explicit or implicit knowledge of their specific L2 learning plans, actions, behaviors, steps, or techniques as an indicator for awareness of their own language learning strategy use. Representative examples are shown further below.

As can be seen in Table 4, an average number of 5.8 strategies were mentioned or implied by the participants in their autobiographies at the beginning of the project, indicating a basic level of awareness of strategy use in their own experiences as a foreign language learner. Given the limited length of the autobiographies (200-500 words, see Table 3) and also in relation to Ma and Kelly's (2006) findings reported above, these findings appear to be well in the range of what can be expected from advanced L2 learners, especially at the outset of the project. It should be noted, however, that the level of strategic awareness differs considerably among the individual participants, as indicated by the minimum and maximum values in Table 4. Furthermore, when looking at the different strategy categories, the students' awareness of metacognitive strategies seems to lag behind that of cognitive and social and affective strategies. Against the background of previous strategy research, this finding is not surprising in that learners are less accustomed to verbalizing metacognitive processes, which makes them particularly challenging to uncover (Finkbeiner, 1998, 2005; Finkbeiner, Knierim, Ludwig & Wilden, in press; Finkbeiner, Ludwig, Wilden & Knierim, 2006). Finkbeiner (1998) labels this phenomenon as metacognitive illiteracy: "Another challenge for research projects working in the field of learning strategies and techniques lies in the fact that it is possible that many learners have no declarative knowledge whatsoever concerning their input of strategies and so can be described as 'metacognitive illiterates'" (Fundamental research questions, paragraph 11).

The following examples are representative of the students' statements and comments in their learner autobiographies resulting from the step
Developing L2 Strategic Competence Online

Table 4. Participants' reference to learning strategies in their learner autobiographies

<table>
<thead>
<tr>
<th>Category of strategies</th>
<th>Mean</th>
<th>Min.</th>
<th>Max.</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive strategies</td>
<td>2.3</td>
<td>0</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>Metacognitive strategies</td>
<td>1.4</td>
<td>0</td>
<td>3</td>
<td>0.7</td>
</tr>
<tr>
<td>Social and affective strategies</td>
<td>2.1</td>
<td>0</td>
<td>6</td>
<td>1.7</td>
</tr>
<tr>
<td>Overall</td>
<td>5.8</td>
<td>1</td>
<td>10</td>
<td>2.3</td>
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</tbody>
</table>

A in the ABCs process (examples from the data are presented verbatim, including any errors and mistakes):

"I used to write new words into my vocabulary books and then learnt these words writing them down on a piece of paper. Every word I did not write correctly, I had to write three times again." – Cognitive strategy (repetition)

"Up to today, I visualize contents whilst learning, but not really with pictures—I rather see the words in front of my closed eyes" – Cognitive strategy (imagery)

"I was very interested in music and I wanted to find out what the text meant. So I took the songbooks from the CDs and started translating the English songs. While hearing the songs again, I understood a lot and I could remember a lot of unknown vocabulary because I knew what the German translation meant." – Cognitive strategy (intertextual transfer, translation, repetition)

"I found out that at a special time in the afternoon I could keep in mind things best." – Metacognitive strategy (planning)

"Another characteristic strategy of mine was 'playing the teacher.' I imagined I was the teacher and I had to explain the learning matter to the students. I was sitting in my room and talked to a fictive class. And while explaining it to the 'others' I learned the stuff.” – Metacognitive strategy (rehearsing, simulation, self-monitoring, self-evaluation)

"During all those years I started to talk to people in English chatrooms from all over the world which helped me a lot to improve my language skills.” – Social and affective strategy (seeking opportunities for L2 exposure and use)

"Our parents are not highly educated and do not speak any foreign language, so whenever I had a problem at school, I asked my older brother to help me.” – Social and affective strategy (cooperation, questioning for clarification)

These examples also illustrate the most significant feature of the “Online Learner ABCs,” that is, its autobiographic approach, which allows the students to delve into their personal learning histories as the foundation of their continuing L2 development.

Is There Any Evidence of Reflection on One’s Own Language Learning Strategy Use in the Participants’ Learner Autobiographies?

Whenever a student comments on or evaluates specific plans, actions, behaviors, steps, or techniques employed in L2 learning, this is considered to represent reflection on his or her language
learning strategy use. An inductive analysis of the data revealed the particular relevance of evaluative statements; that is, the students voiced, for example, the perceived effectiveness of a certain learning-related behavior (or lack thereof). Furthermore, the students' comments frequently represented an affective response.

From a quantitative perspective, it is evident that most students' autobiographies included affective and evaluative statements: On average, each student commented nearly eight times (ranging from zero to 17 times) on his/her previous learning experiences in an affective or evaluative manner. (The figures for affective and evaluative statements are added up for readability reasons.) The following quotes from the autobiographies illustrate the personal and vivid character of the students' recollections:

"I have always been a person who liked working alone, even yet in those days. I knew well that the only person I can rely on was I and that is why I never liked teamwork very much. ... Often, I have been disappointed when I relied on fellow students, at school as well as at university." (Apprehension to cooperation).

"In secondary school I furthermore learned a lot about the English Grammar. All these new rules and explanations, which were mostly followed by gap texts or other exercises, sometimes really confused me. As I always had heard correct English I had developed this feeling which enabled me to do these exercises without looking at the grammar rules." (Written by a student raised bilingually, who had a lot of L2 exposure through his British mother) (Attitudes towards formal and functional grammar teaching approaches).

"I already had difficulties in German [i.e., his L1] and in the foreign language it got worse. I hated English. At the end of fifth grade I only just managed to get a four minus [i.e., minimum passing grade]. Due to private lessons I could improve to a weak three at the end of class six" (Self-fulfilling prophecy of the negative perception of the self as a language learner).

"In my first English lesson ever the teacher came into the classroom carrying a huge basket. The first thing he took out of the basket was an apple. He told us what it was called in English. He went on picking several things out of the basket. We had to repeat the English words. I enjoyed it very much because I found it very easy." (Positive attitude towards action-oriented teaching).

"When I arrived in Mexico I could hardly say a word in Spanish. Understanding what people were saying was almost impossible for me. But, after three to four months I was able to use the Spanish language quite fluently. But this happened from one day to the other. There was no process I recognized. I remember being frustrated all the time, and than suddenly it changed." (Feelings perceived during the transition from formal instruction to immersion)

"We used several colored cards in school, on which things like a cat, a clock or something to eat was shown and we learned how to read and how to write the words. This was fun; because my whole class was proud of the new words we could read and write." (Positive attitude towards holistic learning, using word-picture combinations).

"My father’s loveliest hobby is listening to music. So, my sister and I got to know the Beatles, Abba and the Rolling Stones when we were very young. Even in the kindergarten I started to hear and to sing songs like 'Satisfaction' or 'Take a chance on me.' As a matter of course the text I sang was completely wrong, but it was a wonderful feeling to realize what they really do sing in there songs when I entered the fifth class. Therefore learning English not only meant to learn a foreign language
but also to learn what the bands tell the world with their songs" (Prior experience with authentic texts and impact on L2 learning).

These examples are representative of the broad range of experiences which the students were willing to share from their individual learning histories. Obviously, the personal approach of the ABCs model helped the students tap into their past learning behaviors and processes as valuable starting points for reflection on one's own learning processes. On the other hand, these examples also reveal that there is still additional potential for further reflection.

Regarding example (1), the student might want to mention what exactly made her disappointed during group work, or how precisely she or her fellow students (failed to) work together, or what she can do in the future to make cooperative learning a more satisfying learning experience for herself. Regarding example (3), the student could have elaborated on what he did during the private lessons to improve his grade, for example, by reviewing grammar rules or vocabulary (and if so, how exactly he and his private tutor proceeded). Regarding example (5), the student might want to hypothesize, in retrospect, how her L2 fluency developed, for it seems logical that this did not really happen overnight as indicated in the autobiography. Of course, one may argue, it is quite challenging to recall details such as these especially if the episodes concerned happened many years ago. However, even if more specific details cannot be accurately remembered, the students might be able to discuss with their ABCs partner possible explanations or solutions, thus initiating more deep-level, metacognitive reflection. In other words, a successful exploitation of the learner autobiographies hinges upon the students' ability to wonder—that is, to recognize episodes in their learning histories which warrant further questioning about one's learning processes and, in particular, learning strategies. To what extent the chat- and forum-based interviews between the ABCs partners, which followed the writing of the autobiographies, contributed to triggering further reflection of this kind will be explored in the following section.

To What Extent Do the Learner Biographies About One's Partner and the Comparative Synopses Trigger Additional Awareness of Language Learning Strategy Use?

After composing their autobiographies individually (without sharing it with their partner), the students 'interviewed' their partners using a chat room and forum, which were kept separate for each ABCs tandem, to write a learner biography about the respective partner. At this stage of the ABCs Model, it is critical that the students go beyond merely retelling their individual autobiographies to their partner. Otherwise no additional insights into each other's learning histories (including strategy use) would emerge. (Note: Since the

<table>
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<th>Category of strategies</th>
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<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Cognitive strategies</td>
<td>1.5</td>
</tr>
<tr>
<td>Metacognitive strategies</td>
<td>1.0</td>
</tr>
<tr>
<td>Social and affective strategies</td>
<td>2.0</td>
</tr>
<tr>
<td>Overall</td>
<td>4.5</td>
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biographies were written and peer-edited in a wiki, it would be interesting to examine the composition process in detail instead of only the product, that is, the biography. However, this is beyond the scope of this chapter.)

Table 5 shows that an average number of 4.5 strategies per student were mentioned in the learner biographies which had not been mentioned in the autobiographies. This overall average frequency as well as the average frequencies for cognitive and metacognitive strategies are somewhat smaller than the corresponding frequencies found for the autobiographies; social and affective strategies were mentioned approximately the same number of times in steps A and B of the ABCs model (see Table 4). In sum, the process of interviewing one's ABCs partner still triggered the recall of a considerable number of episodes from the participants' learner histories, almost doubling the total number of strategies the students had become aware of by writing their learner autobiographies. This overall picture clearly indicates that the participants in this study went beyond regurgitating their autobiographies. Instead, the interaction with the partner appears to have stimulated the recall of additional details from their memories as (language) learners including learning strategies.

Furthermore, the use of chat rooms, forums, and wikis may have positively affected the interviewing process in several ways. Specifically, the students were able to use their preferred channel of communication: While some opted for the more fast-paced and interactive chat room, others appeared to favor the forum, which allowed them to be more time-independent and to develop their thoughts in a setting that exerts less communicative pressure. Thus, by providing different online tools, we were able to cater for different learner preferences. When comparing the “Online Learner ABCs” with a ‘traditional’ face-to-face ABCs (Finkbeiner & Koplin, 2002), the participants in the present study had a wider variety of options to monitor the ABCs process and harness the available information since the entire communicative process was stored online. Typically, in a face-to-face ABCs, quite a bit of information tends to get lost because the participants’ ability to take exhaustive notes during the interview is limited; and even if the interview is recorded on tape, the process of viewing or listening to the recording tends to be more cumbersome than reviewing the log of a chat session, forum entries, or wiki pages (as in an online ABCs). However, based on the present study it is not possible to fully ascertain whether these advantages of a Web-based ABCs outweigh the lack of face-to-face interaction.

When examining the individual ABCs dyads’ progression, it turns out that the interviewing phase was not equally effective for all student pairs. Specifically, there are seven students who uncovered only two or even fewer additional strategies in comparison to their autobiographies. On the other hand, there are eight students who—by being interviewed by their partner—became aware of a larger number of strategies than by writing their autobiographies. Interestingly, four of the seven students for who step B was least successful, were partners. One of these pairs ‘complained’ about the ABCs process in a class discussion because they had known each other extremely well before the beginning of the project thus rendering the interview phase—for these two students—into an artificial process. (Thus this kind of project might be particularly useful for e-tandem projects involving students at different locations.) For the remaining less successful students no particular explanation can be gleaned from the data available.

In contrast to the learner biographies, the comparative synopses (step C of the “Online Learner ABCs”) trigger hardly any additional awareness of strategy use. The students generally limited themselves to summarizing their findings by comparing the autobiographies and biographies at the surface level. Almost without exception, they focused on checking the biography, which
their partners had written about them, for any possible misrepresentations or oversights. Moreover, they merely named the similarities or differences between their partner’s learning history and their own; that is, they did not engage in any further reflections on the deeper meanings of seemingly ‘similar’ and ‘different’ episodes or incidents, as intended by the detailed instructions for step C (see Table 3). The rather superficial conclusion of the ABCs process can most likely be attributed to the time constraints imposed on the project (final exams, deadlines for term papers).

To What Extent Do the Learner Biographies About One’s Partner and the Comparative Synopses Trigger Additional Reflection on Language Learning Strategy Use?

When examining the biographies for affective and evaluative statements, which would be indicative of the students’ reflection on their strategy use, a striking difference becomes obvious: While each autobiography contained almost eight affective/evaluative comments, only 2.5 comments of this type appeared in the biographies (on average, respectively). In other words, the degree of reflection—as defined in this study—was much lower in the biographies than the autobiographies. This may be due to the fact that, apparently, the participants tried to write the biographies as ‘objectively’ as possible, avoiding any personal interpretations or judgments. By itself, the lack of reflection at this stage of the ABCs process does not constitute a significant problem. However, when taken together with the limitations of step C as described above, it becomes evident that the present instructional design does not yet fully exploit the anticipated potential for reflection on one’s strategy use, at least not at stage C of the ABCs process. Ways of amending this shortcoming will be discussed in the following.

Student Evaluation

The following feedback regarding the “Online Learner ABCs” was solicited from the project participants as part of the course evaluation. The students were asked to respond to the following stimuli: (1) what I really liked, (2) what really surprised me, (3) what I would like to learn more about, and (4) further comments. The most significant findings are captured by the following quotes from the students’ responses:

What the students really liked: “it was a good possibility to learn something about one’s learning strategies,” “the meta(cognitive) level, to become aware about, or to learn about your own steps of learning,” “compare with other person,” “you learn more about your partner this ‘connects’ people,” the chat session was fun—for me, the first time, I did a chat session!” “divided into small steps, clear instructions, good online platform.”

What really surprised the students: “how similar our learner biographies seem to be,” “during the chat session I really ‘learnt’ much more about me in detail,” “I was surprised how easy it was to have an interesting, in depth discussion in the chatroom,” “myself as a learner.”

What the students would like to learn more about: “more experiences; more documentation; more reporting; what others have written about,” “can you involve this into a class/do it with students?” (i.e., with high school students), “people from another country what would be different? Do they use different strategies...?”

Further comments: “the deadlines for step A and B were too hard,” “it is really hard in the ABC because it is not possible to ‘meet the partner.’”

The students’ feedback on the “Online Learner ABCs” suggests that the principles underlying the ABCs process did indeed trigger meaningful insights into one’s own as well as the partner’s learning behaviors as well as learning strategy use. Also, the students appear to have enjoyed using the Web-based environment; in particular, they
discovered online chatting, which some students had never done before, as a valuable tool for meaningful, educational purposes (and not only for the casual chit-chat among friends). On the other hand, the tight schedule for the project was considered problematic and probably this had a detrimental effect on the depth of the students' reflections in step C. Several students also expressed their curiosity with regard to the ABCs model itself and its applicability in different contexts (e.g., Web-based and face-to-face, in a cross-cultural setting, with high school students), which testifies to the appeal of the ABCs Model (Finkbeiner, 2006; Finkbeiner & Knierim, 2006; Finkbeiner & Koplin, 2002; Schmidt, 1998; Schmidt & Finkbeiner, 2006; Wilden, 2006, 2007).

Summary of Findings

Overall, the "Online Learner ABCs" can be considered conducive to the students' development of L2 strategic competence. By writing their L2 learner autobiographies, followed by interviewing a fellow student in order to write a learner biography about him or her, the participants became aware of a considerable number of language learning strategies. As far as reflection on strategy use is concerned, the students frequently included evaluative and affective comments in their autobiographies. However, the students' learner biographies and comparative synopses yielded only a very limited number of reflective comments, and the level of reflection was lower than in the autobiographies; in part, this may be attributed to the project's tight schedule. Yet, this result also corresponds with Wilden's (2007) findings that the ABCs seem to trigger a lot more processes connected to the perception of the self than of the other (Finkbeiner, 2006, pp. 35-39). In sum, steps A and B of the ABCs process contributed effectively to raising the students' awareness of language learning strategies; step A was also conducive to initiating students' reflection on strategy use. The design of steps B and C, as implemented in this study, should be modified according to the time frame available; further suggestions for alternative implementations of steps B and C will be presented below. Given the exploratory nature of this study, the ABCs model appears to be a viable option to foster students' L2 strategic competence deserving further instructional fine-tuning and empirical investigation.

FUTURE TRENDS

Online communication and collaboration activities such as the ones described in the present chapter lend themselves very well to exploring personal experiences in a collaborative fashion. It is extremely useful, both for instructional and research purposes, that online course management systems (such as Moodle) allow for the convenient storage and retrieval of student-student and student-teacher interaction, providing additional opportunities for metacognitive reflection based on the 'permanent traces' left by forum/chat discussions, wiki-based activities, and so on.

Therefore, future research on L2 strategic competence (and other issues) in CALL environments should continue using digitally stored observation data, ideally in combination with self-report data (student interviews, questionnaires) and proficiency or achievement tests (as external reference criteria). The investigation of learner factors can shed more light on questions such as why some students appeared to benefit more from the "Online Learner ABCs" in comparison to others. A related issue concerns the learners' age (i.e. cognitive and metacognitive maturity) and L2 proficiency level if an "Online Learner ABCs" is to succeed. Accordingly, it may be necessary to use the L1(s) and incorporate more teacher guidance.

Also, since the ABCs process in its present form is quite time-consuming, one might consider turning step C into a whole-class activity (instead
of continuing the pair work, the results of which might be too challenging for weaker students to communicate effectively to the class); in such a scenario, the teacher could also provide more guidance in order to trigger deep-level reflections. For example, one can focus the students’ awareness on five most important, striking, surprising, interesting, or just thought-provoking words both in the autobiography and biography. Once the students have filtered out the five words for their personal hit list they will be encouraged to comment on each single one and reflect on it on a deep level, including dimensions such as attitudes, values, and beliefs (which might originate from a cultural script; Finkbeiner, forthcoming). On the basis of the hit lists and comments they will be encouraged to create a language learner profile in a mind map. The mind maps will then be exhibited in a learner mind map gallery in class (Finkbeiner, 2003). They will be compared in order to discover certain patterns, as well as similarities and differences. Only after this process has been successfully completed students will be asked to compare the two lists extracted from the autobiography and biography and start process C.

As the “Online Learner ABCs” appears to be suited for raising students’ awareness of L2 strategies, it may serve as the starting point in a series of activities to foster students’ L2 strategic competence (see the previous recommendations for strategy instruction).

CONCLUSION

In recent years, the intersection of CALL and language learning strategies has begun to attract the CALL community’s attention in order to better understand students’ learning processes in computer-enhanced language learning environments. However, based on research going beyond the description of strategy use in CALL applications, teachers and materials developers can also explore ways of developing learners’ strategic competence as such, which will facilitate L2 learning in face-to-face as well as technology-enhanced settings. As this chapter has illustrated, this endeavor does not necessarily require the development of complex and expensive software; rather, by devising tasks and learning scenarios which effectively employ easily available Web-based communication and collaboration tools—in this case, to become aware of and reflect on learning strategy use—teachers can significantly enhance their students’ L2 learning experience. The more the tasks in an online environment are related to the students’ own and authentic L2 learning experiences as well as their learner identities, the better and more powerful their insights into their own L2 learning processes will be. This way they will become active agents and win ownership over their own learning and over their own selves. By moving the ABCs model to an online environment, we take students seriously as active learners as we allow them to be time- and space-independent when interacting and cooperating with their peers. Furthermore, by using their own chat session transcripts and forum discussions as a ‘permanent learning trace’ we help them reflect more thoroughly on their learning process and use their self-generated texts as their own language learning mirror.

ACKNOWLEDGMENT

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**KEY TERMS**

The ABCs Model of Intercultural Understanding and Communication (Schmidt, 1998; Schmidt & Finkbeiner, 2006): Aims at exploring cultural and intercultural differences through a three-step process involving two individuals from different cultural backgrounds. The three steps are: (1) A: writing an autobiography about yourself (which is not shared with the partner), (2) B: interviewing the partner to write a biography about him or her, (3) C: comparing the autobiography of oneself with the biography about the partner (and, optionally, the partner’s biography about oneself) to explore cultural differences and similarities as well as self- and other-perception.

Computer-As-Tutor vs. Computer-As-Tool CALL: “With a CALL tutor, a computer program analyzes and evaluates an individual learner’s response to a question, and provides feedback on it” (Levy & Stockwell, 2006, p. 22) whereas “with computer tools the role of the technology is best described as an ‘enabling’ device” (Levy & Stockwell, 2006, p. 24).

Intelligent CALL (ICALL): Intelligent CALL denotes the use of artificial intelligence in the development of CALL materials, for example, to create intelligent tutoring systems which are capable of processing and giving feedback on free language input.

**Language Learning Strategy:** A “specific plan, action, behavior, step, or technique that individual learners use, with some degree of consciousness, to improve their progress in developing skills in a second or foreign language” (Oxford & Schramm, 2007, pp. 47-48). These plans, actions, behaviors, and so on, can be placed on three continua, ranging from conscious to unconscious, from explicit to implicit, and from observable to non-observable (Finkbeiner, 1998, 2005). Furthermore, learning strategies can be categorized into major groups, for example, by distinguishing cognitive, metacognitive, and social and affective strategies (O’Malley & Chamot, 1990).

**LMRplus Model:** In the LMRplus model, L stands for learner, M for moderator, and R for researcher. The model focuses on “cooperation and collaboration among the changing roles of teacher and learner and researcher” (Finkbeiner, 2004, p. 114) as well as the different sets of competencies that one needs for each of these roles.

**Strategic Competence:** Seen as the capacity that relates language competence, or knowledge of language, to the language user's knowledge structures and the features of the context in which communication and language learning takes place. Strategic competence performs assessment, planning, and execution functions in determining the most effective means of achieving a communicative or language learning goal. It connects declarative, procedural, and conditional knowledge. (adapted from Bachman, 1990, p. 107).