CALL for autonomy, competence and relatedness: Motivating language learning environments in Web 2.0

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In the last 30 years, computer assisted language learning has gone through significant changes, as illustrated in Warschauer's taxonomy of structural, communicative and integrative CALL (Warschauer, 2000). Computer technology itself has greatly influenced these developments and prompted innovative applications. It seems that yet again new opportunities for CALL are emerging in what is labelled Web 2.0 in the computer world (O'Reilly, 2005).

Web 2.0

The Internet has changed. Wikipedia, Blogs, Flickr, RSS[1], YouTube, Tags replace Web-pages, bookmarks, online directories and reference materials that we just started to recognise as acceptable equivalents of print materials. Moving away from a replication of the print media (and the book metaphors), the Web begins to develop its own identity, less product focused (as print was) and more process oriented (as life is).

The Internet is not only growing in content and modes; the main carrier of the new development seems to be its users. This shift is expressed in O'Reilly's description of eBay which "grows organically in response to user activity, the company's role is as an enabler of a context in which that user activity can happen" (O'Reilly, 2005). The implications of this development for language learning are significant. Translated to the world of language learning, O'Reilly describes an online environment that facilitates autonomous learning.

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1 A RSS (or a feed) is not just a link, but a subscription to a Website, with notification every time that the page changes

The example of the blog in comparison to a traditional webpage illustrates the changes from a top down to a bottom up environment. Webpages are static, referred to as pages, they are updated by a Webmaster and they allow no user input. The reader is an observer. Blogs on the other hand are dynamic, instead of a fixed page a reverse chronological post appears on top, they can be updated by the blogger and they allow for user input through comments. The reader is a contributor.

Table 1. Overview of some significant changes:

Web 1.0	Web 2.0
authentic materials text, pictures, audio, video	live materials RSS, Flickr, last.fm, podcast, videocast
webpages	blogs, wikis
discussion forum	blogs
separate applications for email, chat, photos, music, video etc.	social networking (e.g., MySpace)

Whereas Web 1.0 supplies resources and means for communication (CMC) for the foreign language classroom (many text book publishers provide supplementary material on a website) Web 2.0 offers additional structures that can be used as learning environments. These structures are highly adaptable to the needs of language learners and enable them to actively become part of a learning community or target language community.

Web 2.0 in the light of motivational theory

It has been recognised that CALL can positively influence language learner motivation (Egbert, 2003; Fotos, 2004; Warschauer, 1996). The motivational effect of CALL may be explained through two diverging views of motivation.

One model ties the motivation to the tool itself. In the case of CALL software such as a vocabulary trainer, its motivational force can be linked to the *stimulus*, the item appearing on the screen that the learner needs to respond to, the immediacy of the *feedback* and the *reinforcement* that the learner receives through visual or auditory signals. This behaviourist model of motivation has a long tradition, leading back to Skinner's pre-computer learning machines. However, it is still popular today and this principle is applied in leading language-learning software or in online learning programmes such as *Quia* or *Hot Potatoes*.

While the stimulus-response approach might be appropriate for the acquisition of lower thinking skills (such as basic vocabulary), it has only limited success at higher proficiency levels where more complex structures involve conceptual learning.

The other model explains motivation as an inner tendency to explore one's surroundings. This self-determination theory adopts a dialectic view and explains motivation as: ''interaction between an active, integrating human nature and social contexts that either nurture or

impede the organism's active nature'' (Ryan & Deci, 2002, p. 6). Whereas the behaviourist model assumes the need to create a stimulus for motivation, the self-determination model focuses on how to support one's natural tendencies to learn.

Referring to self-determination theory, I have previously (Alm-Lequeux, 2004) argued that Internet-based language-learning environments can be motivating because of their potential to support basic human needs.

The self-determination theory (SDT) is based on the assumption that all humans share the psychological needs of *competence*, *relatedness*, and *autonomy* to develop a sense of self. We are driven by a natural inclination to pursue the fulfilment of those needs and our motivation, performance and development will be greatest when we are able to satisfy them. Ryan and Deci (2002, pp. 7-8) define the three psychological needs in the following terms:

- Relatedness refers to feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness both with other individuals and with one's community.
- Competence refers to feeling effective in one's ongoing interactions with the social environment… The need for competence leads people to seek challenges that are optimal for their capacities.
- Autonomy refers to being the perceived origin or source of one's own behaviour. Autonomy concerns acting from interest . . . One can quite autonomously enact values and behaviours that others have requested or forwarded, provided that one congruently endorses them.

The relevance of these needs is recognised in educational theory and SLL. The need for relatedness can, for instance, be seen in approaches which emphasise that most people not only learn better in a social context, but that they also take on new ideas (and language) because of the interaction with others (Vygotsky, 1978; Hymes, 1971). The idea of providing a learning environment of optimal challenge has been popularised by Krashen's concept of input +1, which proposes instruction just above the learner's present state of knowledge (Krashen, 1985). The concept of autonomy has been the subject of many studies in the field of language learning and is considered as a crucial determinant of successful language learning. In the framework of SDT, autonomy is based on our need to feel agentic. Opposed to older theories of motivation (deCharms, 1978), SDT maintains that people do not need to be the initiator of an action to act autonomously. This concept is particularly relevant for the classroom situation where demands from the syllabus and personal interest do not necessarily coincide.

Motivating learning environment

A motivating learning environment has to support the three basic needs. The following section will briefly outline each need in the language learning context, give some examples of Web 2.0 applications that support that need and show how these applications can help to provide need-based feedback.

Relatedness

Language learners have basically two communities they need to relate to in order to develop a sense of belongingness, the learning community in the classroom and the community of the target language. In most cases, however, the communication, be it orally in the classroom or written through assignments, happens between the teacher and the student. The dialogue is teacher-initiated and teacher-focused. The teacher supplies the feedback in a language classroom. He or she is the one who asks questions in class, reflects on student answers, corrects assignments, evaluates projects and grades tests. Depending on the teaching style, other classmates might also be involved in the feedback process. CMC extends the feedback options further by including people from outside the classroom, from the target country or other learning communities.

Web 1.0 technologies have started to support L2 interaction, for example with email tandem programmes, educational MOOs, chat programmes or discussion boards. Some studies show that these technologies have helped shy students to become more vocal (Pelletieri, 2000; Braine, 2004) and therefore integrate in the learners' community. The technology allows teachers to create a learning environment in which students (instead of teachers) initiate discussions with fellow learners and receive feedback through their replies.

Social software extends the opportunities for interaction with peers of the learner or target community. Blogs, initially conceived as public journals, can be used for a variety of learning situations. Campbell (2004) has identified three kinds of blogs, the tutor blog, the learner blog, and the class blog, all of which allow learner interaction through comments. The popularity of blogging can possibly be explained through the need for relatedness, the need to be seen and recognised by others. This would also explain Pinkman's observation (2005, p. 20) that the most motivating factor about blogging in an ESL class was the comments learners received from peers and teachers to their posts.

The phenomenon of social networking shows the strength of the need for relatedness. While some high schools in the United States are already starting to ban sites such as *MySpace*, it should possibly be considered how these sites could be integrated into an educational context.

Wikis, to name a final Web 2.0 example, are particularly suited for cooperative writing activities. On the same principle as Wikipedia, an entire class can be involved as the "collective intelligence" (O'Reilly, 2005) in the writing, rewriting, correction and modification of a theme-based foreign language Wiki site.

Competence

While a sense of relatedness can be important to initiate the learners' engagement in a task, it is also crucial that the task is situated at the right level. If the task is too hard, the learner is likely to give up. If it is too easy, no learning will occur. It is the role of the teacher to provide a learning environment in which the learner is optimally challenged and is clearly guided through the learning process. This implies a rationale for the task and appropriate feedback.

Web 2.0 supplies an abundance of online resources which make it relatively easy to locate materials at the learners' proficiency level and to develop tasks around this material. To support a feeling of competence in the learner, however, it is important to avoid controlling

feedback during the learning process (which could lead the learner to drop below his or her optimal level of challenge in order to ensure competence[2]).

As outlined above, Web 2.0 applications offer new channels for learners to receive informative and constructive feedback. In blogs learners can receive continuous feedback on their developing language through comments from classmates, teachers and possibly even native speakers. Feedback on a product such as learner-produced audio programmes or video projects can also be rewarding. These can be evaluated in class or published online as podcasts or videocasts. While a teacher or in class evaluation might be necessary for assessment purposes, a comment from a real-life audience is likely to have a stronger motivational impact on the learner. A high quality performance will receive attention and praise from other learners or speakers of the target language and a lower quality product will be ignored.

Wikis were already mentioned for their appropriateness for collaborative writing. Texts can easily be modified while keeping a colour-coded record of deleted and added text. While Wikis can be used for any kind of class project, they are also particularly suited for process-oriented feedback on written accuracy.

However, it must be noted that the openness to feedback can also have a negative impact on learners. If comments are perceived as controlling (even if they are meant to be informative), learners might withdraw and stop writing in public spaces. In such cases, one might opt to restrict the open access to the class or even to a smaller group of students.

Autonomy

According to SDT, the feeling of competence is crucial to engage in an activity, feedback from others is needed to continue and the degree of autonomy will determine how persistent the learner will be in the task (Ryan & Deci 2002, pp. 19-20).

To become autonomous, the learners need to be encouraged to be self-initiating, to solve problems independently and receive feedback that supports autonomy.

If learners see no value in an activity, they will pursue it only reluctantly, or not at all. However, if the activity is of interest to them, if it reflects personal interests and it allows them to make choices, they are likely to engage in the activity. In some instances, it might be necessary to explain the rationale of a task, its use, importance and value (Reeve, Deci, & Ryan, 2004) before the learner sees its relevance. Warschauer (2000, p. 52) has found that activities for which learner understood the purpose and which they valued as socially and culturally relevant resulted in strong motivation. He also stresses that the technology should support the purpose of the activity.

One of the main reasons for the rapid uptake of Web-based language learning was the unprecedented availability of authentic materials. Web 2.0 has yet again extended this resource with "live" sites. These sites allow users to personalise webpages to their individual needs (for examples see the personalised Google browser or the online radio station last. fm), to automatically receive updates through feeds (no need for bookmarks to check for changes). There is no lack of interesting and relevant materials, but it might still be a chal-

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2   This also happens with expected rewards: The prospect of a reward tends to become the focus of our motivation, making us do the minimum just to achieve the reward.

lenge for the teacher to structure the task in such a way that the chosen material leads to information sharing for interaction. It is the careful balance between structure and choice that allows learners to become autonomous. Autonomy-supportive feedback means giving structure without imposing authority and control through threads, deadlines, directives, imposed goals and imposed rewards[3] (Noels, 2001, p. 55).

The reversal of the hierarchical order, the "inversion of control" (Hinchcliffe, 2006) currently experienced in the Web 2.0 environment as outlined above, supports the idea of online learning environments as an enabler of a context in which that learner activity can happen, e.g. the structure of the blog is suited for student-initiated discussions of topics of their choice, wikis can be used for theme-based projects that feed from Internet-based materials.

Observations of a language-learning unit incorporating Web 2.0 applications: From traditional media to social networking

Television and video have been used for a long time in the L2 classroom. A valuable source of linguistic and cultural information, they made their way over video recordings into the language classroom.

With the advent of Internet TV, video-sharing websites and online TV recorders, the once difficult access to foreign language television is now overcome. Television channels release streamed videos on their websites, video-sharing websites offer an impressive selection of (often pirated) video clips and online TV recorders enable language learners to download current television programs onto their computer hard drive. Television lends itself as a topic for study in the foreign language classroom. Different programmes and channels viewed comparatively lead learners to valuable insights into the working of today's society. For the purpose of this paper, I will outline the use of Web 2.0 applications for an intermediate German language-learning unit on the topic of soap opera.

Soap operas are accessible because of their predictable plot and their focus on dialogue mean also that they are linguistically relevant for language learners (e.g., choice of register, frequent use of colloquialism and sayings). Students generally like working with this material because they can relate to it. As a student put it: "Soap operas are something I like in English as well and it is easier to understand a topic in German if you're familiar with it."[4]

The topic was introduced with the information provided on the programme's website about the characters and the plot. Video clips of the opening scenes from the website's archive enabled learners to get a first impression of the dynamics of the soap opera. More information about the 10-year history of the programme could be found on *Wikipedia*. Three episodes could be accessed through a TV online recorder. This wealth of material secured a thorough exposure to the topic, which led to an animated discussion of characters and plot and to a linguistic analysis of the observed language in the dialogues.

A class blog, which had already been established earlier in the semester, served as a forum to discuss the soap opera beyond the classroom. In a class blog, every student can

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3   However, time constraints can be perceived as positive if the task triggers a sense of being challenged.

4   Student comment in motivation questionnaire

submit posts (initiate discussion) and comment (give feedback). In this case, there was no perceived need to further classroom discussion and no student initiated a discussion about a particular aspect of the soap opera. However, when asked to comment on a favourite or least favourite character of the programme, all 17 students responded and almost every one of them picked a different character and had different reasons for their choice.[5]

The second part of this learning unit involved the production of a new soap opera. Beginning with a family tree of two feuding dysfunctional families, students chose a character, which they had to develop. Equipped with linguistic chunks from the TV programme they developed new dialogues fitting the nature of the new relationships with their classmates.

The class blog was initially meant to be used as a tool to share information on the development of the project: development in plot, characters and dialogues. One student initiated the introduction of his character and was followed by others. However, the blog did not seem the appropriate publishing tool for the dialogues, which needed elaboration, rewriting, correcting and editing. We moved therefore to a more flexible environment, a wiki.

Wiki pages allow users to edit their content from within the browser window. Students resubmitted information about their character, their picture and worked for a two-week writing period on their dialogues in wikispaces. This collaboration, the coming together of recycled language from the TV-series, learner language, learner and teacher feedback was rewarded with accurate and idiomatic near native language. The accuracy of the dialogues was important since learners memorised it for the performance.

In order to give students an aim and an idea how their soap opera could look, a German student production (from German native speakers) sourced on the video-sharing website *YouTube* was published on the wikisite. The integration of micro content is a further advantage of Web 2.0 technologies. The sharing of video, audio and picture files is one of the main attributes of social networking.

With their scripts in hand and a goal in mind, students started the filming of their scenes with digital cameras and a small group of students edited the video on *iMovie*. The clip was consequently submitted to *YouTube* where it received positive feedback from German native speakers (for example, on good accents). Some students integrated the video (from the *YouTube* source) on their social networking sites (*MySpace* and *bebo*) to share it with their community of friends who also provided ample feedback.

This learning unit addressed the three human needs in a number of ways:

1. The need for relatedness was supported by the technology that facilitated the script writing, the editing, the publication and sharing of the production. However, face-to-face relations played equally an important role in this project. Students met each other in new contexts (and were occasionally less inhibited in the new identity). A common goal resulted in a strong feeling of togetherness, which was reinforced by the achievement of a successful product.

2. The need for competence was supported on different levels. Learners felt supported throughout the script writing process as they were always only one part of the dialogue and could count on the other persons involved in the dialogue to correct and enhance their language. This support was also observable during the filming process

when especially weaker students were helped by others with the memorisation of their lines. Interestingly, it was one of the weaker students who had a higher technical expertise than others and was able to compensate for his lack of knowledge in one area with another. Finally, all students experienced a feeling of achievement with the completion of the production.

3. The need for autonomy was supported throughout the project. Students were given the framework for the task (topic, a role, software to elaborate dialogues, cameras, or computers for editing) and had choices in character development and script writing (they even had the choice of letting their character die if they wanted to transcribe scenes from the original TV series instead). The support for autonomy encourages students to go outside their classroom-bound comfort zone and to creatively explore new situations in the foreign language. And in the end, it was their decision to take the product out of the classroom context and into their private social networking zone.

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Biodata

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