

**This is an electronic reprint of the original article.
This reprint *may differ* from the original in pagination and typographic detail.**

Author(s): Blin, Françoise; Jalkanen, Juha

Title: Designing for language learning: agency and languaging in hybrid environments

Year: 2014

Version:

Please cite the original version:

Blin, F., & Jalkanen, J. (2014). Designing for language learning: agency and languaging in hybrid environments. *APPLES : journal of applied language studies*, 8(1), 147-170.
<http://apples.jyu.fi/ArticleFile/download/433>

All material supplied via JYX is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the repository collections is not permitted, except that material may be duplicated by you for your research use or educational purposes in electronic or print form. You must obtain permission for any other use. Electronic or print copies may not be offered, whether for sale or otherwise to anyone who is not an authorised user.

Designing for Language Learning: Agency and languaging in hybrid environments

*Françoise Blin, Dublin City University &
Juha Jalkanen, University of Jyväskylä*

Since the beginning of the 21st Century, we have witnessed a remarkable shift in the ways learning takes place across networks, multiple sites and timescales. As the world changes, language teaching is facing growing pressures to rethink and redesign language learning environments to respond to the demands of the 'knowledge society'. While new digitally enhanced learning spaces offer new affordances to language teachers and learners, they also increase the complexity of language teaching and learning. Furthermore, it has become evident that the affordances of new tools and spaces for learning are not always realised in formal education. Language teachers, who are willing to embrace new technologies and transform their teaching practice, need to reconceptualize their approach to language, language learning, and language teaching. In this paper, we argue that a renewed focus on design is needed. Following a brief discussion on languaging and agency, we present three educational design models and approaches, namely learning design, designed based research and activity theoretical designs, which are being used to assist course designers and teachers with the design of technology-rich learning environments and activities. We argue that design models rooted in cultural historical activity theory (CHAT) in particular can help us address the challenges briefly outlined above. Drawing on CHAT principles and their applications to design for language teaching and learning, we revisit the design of a Finnish literacy skills course offered to international students at the University of Jyväskylä (Jalkanen & Vaarala 2012a, 2012b, 2013) and its enactment, with a particular focus on the development agency and languaging episodes.

Keywords: agency, learning to design, designing for learning,
teacher education

Corresponding author's email: francoise.blin@dcu.ie

ISSN: 1457-9863

Publisher: Centre for Applied Language Studies, University of Jyväskylä

© 2014: The authors

<http://apples.jyu.fi>

1 Introduction

Since the beginning of the 21st Century, rapid societal changes have been emerging as a result of globalization and technologization. We have witnessed a remarkable shift in ways people access, process and produce information and in how learning takes place across networks, multiple sites and timescales (Castells 1996; Bliss 1999; Ludvigsen et al. 2011). Both learning and technologies have become ubiquitous (Cope & Kalantzis 2009). One example of the technologization of society is the ever increasing adoption of social media applications in personal, professional and educational contexts, along with the emergence of new social learning spaces such as those making use of augmented reality, gaming technologies or 3D-graphical immersive environments (e.g., Second Life). However, while technologies, and more specifically social media applications, offer new affordances to language teachers and learners, they also increase the complexity of language teaching and learning and present new educational challenges. In particular, the emergence of informal technological spaces requires from the students and teachers an ability to make use of the tools and resources available to them and to combine them to construct and shape their own personal learning environments (Laakkonen 2011). Yet, as McLoughlin and Lee (2008) remark:

“Student-centred” and “constructivist” learning has become somewhat of a mantra in higher education, yet there continue to be significant gaps between the espoused and enacted pedagogies of teachers, both in face-to-face and online environments. (McLoughlin and Lee 2008: 641)

Furthermore, teachers often replicate, at least initially, their face-to-face teaching practice in new digital spaces as stated by Conole (2008):

A disappointing aspect of current practice when using new technologies is that it often seems to offer more of the same, replicating, mirroring existing practice in the new medium rather than exploiting the opportunities of creating a truly new learning environment and associated experience. (Conole 2008: 188)

It has indeed become evident in many studies that the affordances of new tools and spaces for learning are not realised in formal education (Taalas 2005; Luukka et al. 2008; Kankaanranta & Puhakka 2008; Blin & Munro 2008; Jalkanen et al. 2012). As the world changes, language teaching is facing growing pressures to rethink and redesign language learning environments that respond to the demands of the ‘knowledge society’, in other words, that “match the needs of our learners to a world that is changing with great rapidity” (Jacobs 2010: 7).

Among many others, Wiggins and McTighe (2005: 15) argue that “too many teachers focus on the *teaching* and not the *learning*”. Teachers “spend most of their time thinking, first, about what they will do, what materials they will use, and what they will ask students to do rather than first considering what the learner will need in order to accomplish the learning goals” (*ibid*). We suggest that a renewed focus on *design* might provide some new prospects for this

educational dilemma. Pre-service and in-service language teachers, who are willing to embrace new technologies and transform their teaching practice, need to reconceptualise their approach to language, language learning, and language teaching. This reconceptualisation is likely to lead to profound focus shifts, such as:

- a shift from language viewed simply as a code to *linguaging*;
- a shift from a focus on learner autonomy to *learner agency*;
- a shift from teaching to *designing for learning*.

Following a brief discussion on linguaging and agency, we present three educational design models and approaches, namely *learning design*, *design-based research* and *activity theoretical designs*, which are being used to assist course designers and teachers with the design of technology-rich learning environments and activities. We argue that design models rooted in cultural historical activity theory (CHAT) in particular can help us address the challenges briefly outlined above. Drawing on CHAT principles and their applications to design for language teaching and learning, we revisit the design of a Finnish literacy skills course offered to international students at the University of Jyväskylä (Jalkanen & Vaarala 2012a, 2012b, 2013) and its enactment, with a particular focus on the development agency and linguaging episodes.

2 Rethinking language and language learning in digitally enhanced environments

The concept of *linguaging* is frequently used in the literature to capture and explain the dynamic and multidimensional nature of language (Swain 2006, Swain et al. 2009, Pietikäinen et al. 2008, Dufva et al. 2011, Zheng & Newgarden 2012). By using a verb instead of a noun, the focus shifts from language as an object of study to language as an action or process. According to Swain (2006: 98), linguaging is “the process of making meaning and shaping knowledge and experience through language”. In particular, linguaging about language is an integral part of the language learning process itself:

Linguaging about language is one of the ways we learn language. This means that the language (the dialogue or private speech) about language that learners engage in takes on new significance. In it, we can observe learners operating on linguistic data and coming to an understanding of previously less well understood material. In linguaging, we see learning taking place. (Swain 2006: 98.)

Although primarily concerned with ‘linguaging about language’, Swain’s notion of linguaging is in line with ecological perspectives on language and learning. From an ecological perspective, van Lier (2000: 246) argues that “the learner is immersed in an environment full of potential meanings [... that] become available gradually as the learner acts and interacts within and with this environment”. He further argues that, in terms of language learning, “language emerges out of semiotic activity” (van Lier 2000: 252). The environment

“provides a ‘semiotic budget’ (analogous to the energy budget of an ecosystem) within which the active learner engages in meaning-making activities together with others, who may be more, equally, or less competent in linguistic terms” (*ibid*).

The notion of *emergence* is also discussed by Pennycook (2010):

[G]rammars and structures of language [...] are always emergent rather than predefined. Once we accept that language is a social practice, it becomes clear that it is not language form that governs the speakers of the language but rather the speakers that negotiate what possible language forms they want to use for what purpose.’ (Pennycook 2010: 129).

Pennycook (2010) further argues that the concept of *competence* needs to be revisited in light of the above. Drawing on Canagarajah (2008), he suggests that ‘if we want to retain a notion such as competence, it refers not so much to the mastery of a grammar or sociolinguistic system, as to the strategic capacity to use diverse semiotic items across integrated media and modalities’ (Pennycook 2010: 129). Indeed, the ubiquity of technology in everyday life as well as the many digital environments that we inhabit for work, play or socialisation, provides us with an ever expanding ‘semiotic budget’. They thus provide us with increased opportunities for languaging about the world and about language as we engage in diverse activities (as in the case of online games requiring the use of a specific lexicon, register or genre in order to complete a mission or quest), and consequently for developing a capacity to use various semiotic items when the situation we find ourselves requires it (as in the case of having to use a car voice-activated command in a foreign language when abroad).

According to Holland and Lachicotte (2007), “semiotic mediation provides the means for humans to control, organize, and resignify their own behavior” (Holland & Lachicotte 2007: 115). The development of a capacity to use various semiotic resources as required in a given context or local situation can thus be seen as intrinsic to what has been traditionally referred to as the development of learner autonomy and more particularly of autonomous language use (see for example Blin 2004, 2005; Benson 2007).

However, “without ownership, agency and self-determination, autonomy cannot develop” (van Lier 2007: 48). The notion of *agency* is also particularly relevant to approaches to language teaching and learning that see languaging and emergence as constituents of the language learning process. According to Ahearn (2001: 112), agency is the “socioculturally mediated capacity to act”. More specifically, it is the “capability to transcend a present situated activity context and create a new one” (Holland and Lachicotte 2007: 116), thus, as proposed by Engeström (2007: 363), enabling teachers and students to become “masters of their own lives”. Such capability is in turn “made possible by the human capacity for semiotic regulation of one another and of oneself” (Valsiner 1998: 388; cited in Holland & Lachicotte *ibid.*), in particular with the help of tools made by oneself (Engeström 2007: 363).

Constructing and developing language pedagogies based on the above principles remain a challenge. In any given institutional context, a number of factors are likely to both afford and constrain the design activity. In the next section, we will review prevalent design models and argue for the instantiation

of models that seek to bring together the concepts of languaging and agency within a systemic and ecological approach to second language development.

3 Educational design models

Lund and Hauge (2011) remark that “[w]hen the complexity of learning environments and, thus, learning trajectories increases it becomes difficult for teachers to plan or predict how learning activities will be enacted in class” (p. 259). They use design “as a term that affords the unexpected but is enacted without resorting to mere improvisation or rigid planning” (*ibid*). In recent times, many researchers have pointed to the need for conceptual models that would structure the educational design process and support the analysis of the resulting learning activity for further enhancements (see for example Barab 2006; Laurillard 2012; Conole 2012). This interest in educational designs has led to the development of new design methodologies as well as frameworks to evaluate designs with a view to enhance them. We briefly review two of these conceptual models below, *learning design (LD)* and *design-based research (DBR)*.

3.1 Learning design

Conole (2012) describes learning design (LD) as

[a] methodology for enabling teachers/designers to make more informed decisions in how they go about designing learning activities and interventions, which is pedagogically informed and makes effective use of appropriate resources and technologies. This includes the design of resources and individual learning activities right up to curriculum-level design. A key principle is to help make the design process more explicit and shareable. (Conole 2012: 7-8)

According to Conole (2010), “[t]he learning design research work has developed in response to a perceived gap between the potential of technologies in terms of their use to support learning and their actual use in practice” (p. 10). The primary motive behind the approach is thus to promote the use of technologies in teaching and learning in ways that are innovative and ‘pedagogically sound’. The main focus of the learning design methodology is to produce representations of teachers’ designs with a view to make them explicit and shareable (Conole 2010: 10).

Different representations of learning designs have been advocated by proponents of this approach. Koper and Oliver (2004) focus on the technical description of a learning design, which they define as “an application of a pedagogical model for a specific learning objective, target group and a specific context or knowledge domain” (p. 98). Together with their colleagues at the Open University of the Netherlands (OUNL), they developed what is commonly known as the IMS LD specification, which is a metalanguage represented in XML that describes teaching strategies and educational objectives. According to Sitthisak and Gilbert (2009), “[t]he IMS LD specification was developed to support pedagogical diversity and innovation, as well as to promote the

exchange and interoperability of E-learning materials” (p. 3). However, its high level of abstraction and generality makes it difficult for teachers and designers to apply it in their everyday practice (Sitthisak and Gilbert 2009). Although the IMS LD specification continues to be refined and expanded, in particular through the development of tools that can run IMS LD specifications, Conole (2010) argues that “the work has not had a fundamental impact on changing teacher practice, focusing more on the technical description and running of the designs” (p. 11). Other learning design approaches are more practice-oriented and aim to capture actual practice while providing teachers and designers with guidelines and tools to help them implement a wide range of pedagogical models in their own context. One such approach has been developed by the Open University in the UK.

The Open University Learning Design Initiative (OULDI) centres around three areas:

1. Conceptualisation – the development of a range of conceptual tools to help guide the design decision-making process and to provide a shared language to enable comparisons to be made between different designs.
2. Visualisation – use of a range of tools to help visualise and represent designs.
3. Collaboration – mechanisms to encourage the sharing and discussing of learning and teaching ideas. (Conole 2010: 15)

The visualisation aspect is particularly interesting to us. It makes use of diagrams and icons to represent the key features of a learning activity. The connections between these key features thus give “an indication of structure and a sense of flow or movement” (Conole 2008: 192), which allow teachers and designers to focus on possible sequences of mediated actions. As an example, we adapted Conole’s (2010) “task swimlane”, and created a visual representation (Figure 1) outlining the intended trajectory that we imagined as we were designing an online language learning task according to the following scenario¹:

A charity dealing with homelessness has approached your group to help raise money for them. Your group is tasked with coming up with a completely new event that would raise awareness on the issue, raise funds for the organisation and also would be fun and enjoyable for participants. It must be a completely new concept, traditional events such as auctions or race-nights are not acceptable!

Intended learning outcomes:

After completion of the task, and using the target language to communicate and to produce semiotic artefacts, learners will be able to:

- Plan for a small project work
- Negotiate a joint outcome for a project work
- Create a project proposal and introduce it orally

Starting from the left, the first column (orange dots) outlines the pedagogical reasoning (or goals) for the task and each of the sub-tasks. The second column (blue dots) defines the activities that learners are expected to carry out using the

tools and resources specified in the third column (green dots). Finally, the last column (red dots) represents anticipated teaching interventions.

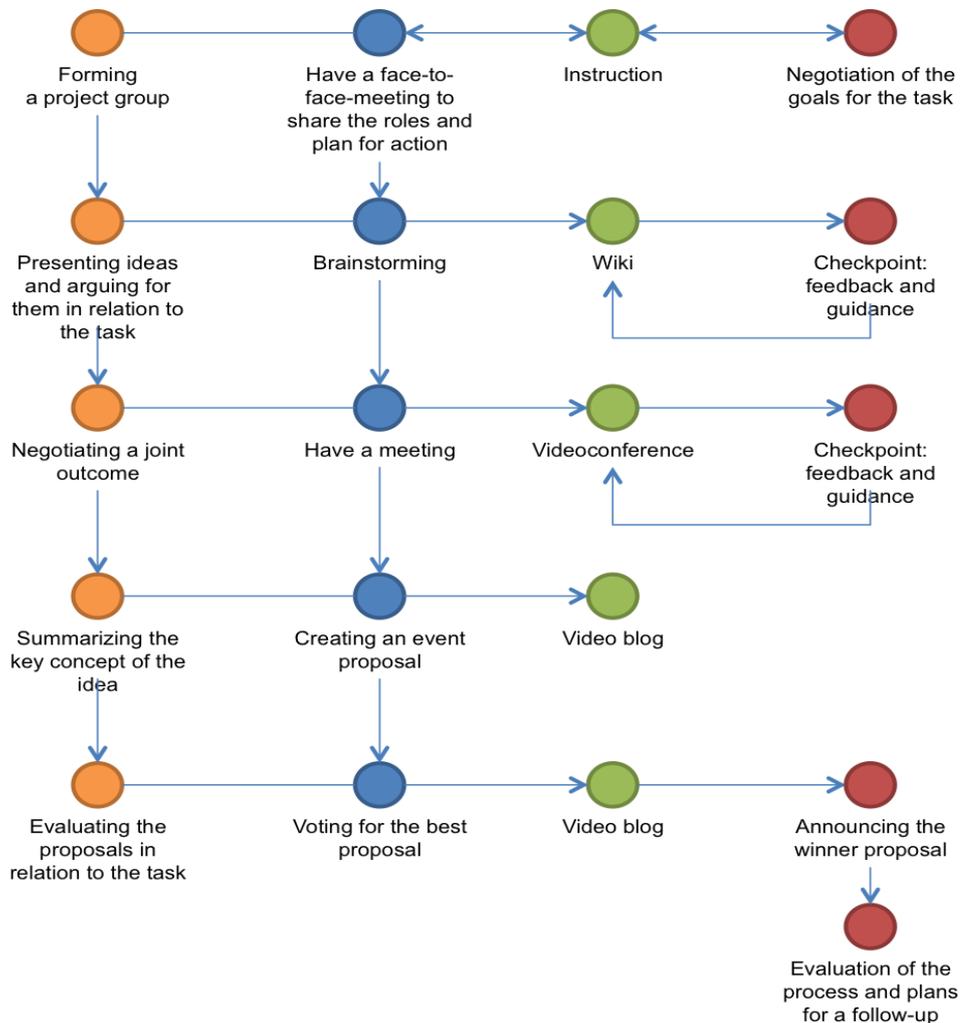


Figure 1. Visualisation of a learning design (Scenario 1)

As an alternative to textually constructed lesson plans, visual representations such as Figure 1 above enable teachers to represent, share and discuss their design ideas, among each other or with their students (Conole 2012). They function as a pedagogical blueprint, which can then be used to track the actual trajectory produced by students and teachers when the design is enacted. However, the learning design methodology as it has been described thus far does not offer conceptual tools nor does it suggest methods to critically assess the designs produced by teachers as they are enacted in real settings. Nor does it provide means to understand deviations from the intended trajectory or to deal with the unexpected. For this, the learning design methodology needs to be complemented with other approaches that strive to address theoretical as well as practice-oriented questions that are likely to emerge in complex learning environments.

3.2 Design-based research

Methods originating in the design-based research (DBR) tradition may complement the above learning design methodology by enabling researchers, designers, and teachers to “bridge the gap between educational research and practical educational innovation” (Engeström 2007: 368). According to the Design-Based Research Collective (2003), “design-based research [...] is an emerging paradigm for the study of learning in context through the systematic design and study of instructional strategies and tools” (p. 5). In practical terms, design-based research involves the setting up of design experiments. The latter are iterative and involve “putting a first version of a design into the world to see how it works” (Collins *et al.* 2004: 18) and refining it constantly “until all the bugs are worked out” (*ibid.*).

Design experiments are both pragmatic and theoretical in orientation: they “are conducted to develop theories, not merely to empirically tune what works” (Cobb *et al.* 2003: 9). Bergroth-Koskinen and Seppälä (2012) provide a detailed example of the instantiation of DBR in the context of language teaching and learning in higher education. Drawing on Conole (2012) as well as Lund and Hauge (2011), they adopt a design-based research approach to investigate learning designs that are enacted in real settings and seek to promote the development of learner’s agency and communication expertise in the context of higher education language teaching. Taking on the role of teacher-researchers, they examine the development of learner agency as it emerged as the result of the enactment of their initial designs. Their analysis enables them to refine the latter while providing them with new insights into the affordances that potentially enable learners to shape their own learning paths, thus contributing to theory development.

Cobb *et al.* (2003) also emphasise the complexity of educational settings, which consists of interacting complex systems “rather than [...] a collection of activities or a list of separate factors that influence learning” (p. 9). According to them, a key aim of design experiments is to provide a better understanding of a learning ecology “by designing its elements and by anticipating how these elements function together to support learning” (Cobb *et al.* 2003: 9). Typical elements of a learning ecology include “the tasks or problems that students are asked to solve, the kinds of discourse that are encouraged, the norms of participation that are established, the tools and related material means provided, and the practical means by which classroom teachers can orchestrate relations among these elements ” (*ibid.*).

3.3 Activity theoretical perspectives on design

Despite its focus on learning ecologies and its methodology consisting of iterative cycles of enactment, reflexion, and refinement of the design, DBR remains nevertheless a linear process, with a beginning (the initial design) and an end (a ‘refined’ design), suggesting an “emphasis on completeness, finality, and closure” (Engeström 2007: 369). Engeström further argues that the notion of refinement implies that “researchers have somehow come up with a pretty good model which needs to be perfected in the field” (*ibid.*) and summarises his main criticism of DBR as follows:

To sum up, in discourse on “design experiments”, scholars do not usually ask: Who does the design and why? It is tacitly assumed that researchers make the grand design, teachers implement it (and contribute to its modification), and students learn better as a result. This linear view ignores what sociologists teach us about interventions as contested terrains that are full of resistance, reinterpretation, and surprise from the actors in the design experiment. (Engeström 2007 : 369)

Even when they are combined together, the learning design methodology and DBR fall short of enabling, among all stakeholders, the formation of *critical design agency*, which includes “the will and courage to say “no” -- to challenge the designs offered previously” (Engeström 2007: 370):

Students form specific cognitive “endpoints” in complex learning ecologies and actively make sense of and reconfigure tasks and the contexts of the tasks among the participants. In other words, what is initially presented as the problem or the task is interpreted and turned into a meaningful challenge several times over in the process of the intervention. (Engeström 2007: 370).

Bergroth-Koskinen’s and Seppälä’ (2012) aforementioned study is indeed a rare example of a DBR project where the initial design is produced and implemented by teachers, and where learner agency is a central feature of the design aims and process. The formation of critical design agency in formal education requires a new approach to design for complex and technology-rich learning environments. Lund and Hauge (2011) argue for a reconceptualisation of ‘didactics’, which they define as “the design of social practices in which learners, teachers and (social and material) resources are configured and re-configured in activities that make knowledge domains and knowledge advancement visible, and that continuously create opportunities for reflective participation in such activities” (Lund and Hauge 2011: 263). Linking design to didactics, their approach “gives priority to agency, dynamics, and object over content (what) and method (how)” and acknowledges the “vital role of artifacts in 21st century education” (Lund and Hauge 2011: 264). It seeks to reconcile the tension between teaching and learning, which they see as “as a unified and dialectic entity” (Lund and Hauge 2011: 262). According to them, *design for teaching* and *design for learning* are two distinct, yet mutually constitutive aspects of design:

Design for teaching is basically the teacher’s responsibility and emerges through interpreting curricula and competence aims, but may well involve learners in the process. However, the intentionality behind this aspect of the design is primarily that of the teacher and the larger educational policies. Thus, there is an institutional dimension to designs for teaching. *Design for learning* refers to the enacted design; what actually happens when teachers and learners engage in joint construction of the (learning) object. While designs for teaching delimit the activities, designs for learning are context sensitive and respond to, for example, immediate opportunities, learner initiatives and serendipity. Also, designs for learning open up for using

learners' out-of-school social and cultural experiences, their life worlds (Cope & Kalantzis, 2000). (Lund and Hauge 2011: 262)

The key design challenge for researchers, designers, and teachers is thus to achieve the delicate balance between design for teaching and design for learning. Lund and Hauge (2011) argues that cultural historical activity theory (CHAT) provides conceptual tools to guide educational designs that will address this challenge.

In line with Lund and Hauge (2011), we believe that “for educators CHAT is not only an analytical lens for examining (and explaining) phenomena, but can also be used as a framework for interventions that can effect change in learning and teaching” (Lund and Hauge 2011: 259). Following an overview of the main tenets of CHAT, we outline a CHAT inspired design model (Blin 2010), which was initially developed to facilitate the development and exercise of learner autonomy.

3.3.1 Cultural historical activity theory: an overview

CHAT has its origins in Marxist philosophy and in Vygotsky's cultural historical psychology (Chaiklin *et al.* 1999). It draws upon two related but distinct traditions: Vygotsky's (1978) concept of mediated action and A.N. Leontiev's (1978) *first generation* activity theory (Engeström 2001). Leontiev proposed a hierarchical structure of human activity, defined in terms of three constituents (*subject, object, and mediating tools and artefacts*) operating on three different interacting levels (*collective activity, individual or group actions, and routinised operations*). Activities are collective, oriented toward one or more objects, which can be both ideal and material, and motivated by the need to transform these objects into desired outcomes. This motive gives sense and direction to the goal-oriented actions that are carried out by the subjects (individuals or teams) of the activity. These actions are intentional, mediated by tools or artefacts, and carried out through a series of automated operations that are contingent on material conditions.

First generation activity theory mainly focused on the activity, actions and operations of an individual. Engeström's (1987, 2001) *second generation activity theory* takes a whole activity system as the unit of analysis. Engeström (2008) defines activities as object-oriented collective systems that have a complex mediational structure (Engeström 2008: 26), which includes not only Leontiev's tool-mediated relationship between subject and object but also 'social mediators' (Engeström 2008: 27). *Third generation activity theory* seeks 'to understand dialogue, multiple perspectives, and networks of interacting activity systems (Engeström 2001: 135). For example, individual learners involved in the co-production of a digital artefact are likely to bring to the activity different ideas or representations of what this artefact may be or look like (Roth 2004). They are also likely to participate in other related activities, within or outside formal education.

The mediational structure of an activity system is normally represented by a triangle (Engeström 1987) highlighting the relationships between its constitutive elements. In order to clarify the above concepts, we use our previous example and translate the earlier learning design visualisation (Figure 1) into activity theoretical terms (see Figure 2 below).

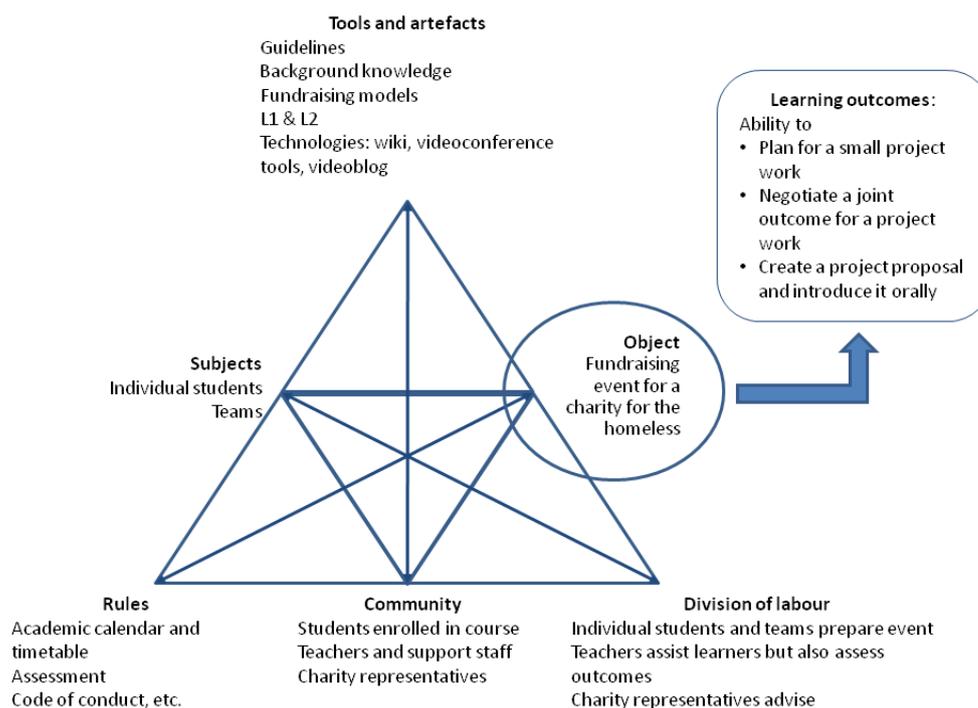


Figure 2. Representation of the mediational structure of the ‘fundraising event’ activity system (based on Engeström 1987)

The language learning activity relating to our example is shaped by its object, in this case the collective creation of a fundraising event. The top of the triangle diagram above (Subjects – Tools & Artifacts – Object) depicts the “visible curriculum” or “tip of the iceberg” (Engeström 2008: 90), as embedded in the tools and resources (e.g. CMC technologies, language, fundraising and project management methods, authentic materials and guidelines) used by students carrying out actions or chains of actions, including languaging about the object of their activity, in response to the given task. The bottom part of the figure represents what Engeström calls the “hidden curriculum” (2008, p. 86), mediated by the “deep social structure of the activity” (p. 90). In our example, social mediators include the implicit or explicit rules governing the actions carried out by the subjects of the activity (schedule of events, required assignments, expected mode of interaction, expected online behaviour, etc.), the community to which they belong and with whom they share the object of the activity (members of the class or group, teachers and support staff, charity representatives, etc.), and finally, the division of labour (students organise the fundraising event, teachers guide students, charity representatives advise students and teachers, etc.) and the associated distribution of power between the different actors (teachers not only carry out pedagogical interventions but they also assess students’ learning, students take on different roles within their team, etc.).

Contrary to frequent misconceptions (Roth 2004), activity systems are inherently dynamic and constitute unstable and multivoiced entities (Engeström 2001). They interact with other activity systems and evolve over time in response to internal and external contradictions (Engeström 2001), which

emerge within and between interacting activity systems. Contradictions ‘manifest themselves as problems, ruptures, breakdowns, clashes’ (Kuutti 1996: 34), or as disturbances, which Engeström (2008) defines as ‘actions that deviate from the expected course of normal procedure’ (2008: 27).

Contradictions are source of change and development. As they respond to emerging contradictions, activity systems move through cycles of transformations, which can be *expansive*, leading to new forms of activity that are shaped by expanded objects and characterised by a new mediational structure (Engeström 2001). Expansive learning is normally triggered when ‘individuals begin to question the existing order and logic of their activity’ (Engeström & Sannino 2010: 5).

3.3.2 A CHAT inspired design model

Building on the concepts briefly introduced above, Blin’s (2010) design model was initially developed to promote the development of learner autonomy, which is defined as the individual and collective capacity to resolve contradictions (Blin 2005). The model sought to provide teachers with practical means to both address the institutional and societal demands regarding education for the 21st Century while enabling the co-configuration and re-configuration of the learning context, together with learners. Consequently, the model is underpinned by the four principles below (Blin 2010: 186-187), which were derived from an earlier study (Blin 2005):

Principle 1: Language learning activities should be object-centred. Objects that are particularly suitable for the development of learner autonomy include the creation of multimodal artefacts whose purpose and life-cycle will go beyond those of the language course and that can be re-used or re-mixed by self or others (e.g., wikis, blogs, podcasts and video clips, electronic glossaries, interactive web-based exercises, etc.). The mediating components of the language learning activity should provide students with opportunities to construct and expand the given objects in different, yet converging, ways (i.e., to be agents of their own learning).

Principle 2: The language learning activity should be mediated by a rich horizontal division of labour. In other words, the construction of the object should require students to collaborate, and it should not be possible for the object to be constructed by students working independently of each other.

Principle 3: Carefully thought-out focus shifts should be built into the syllabus to avoid prolonged and unwelcome disruptions by providing students with basic digital literacies. Unforeseen focus shifts can then provide opportunities for further learning.

Principle 4: Internal and external contradictions are fundamental to the development and exercise of learner autonomy. Rather than being systematically eliminated, they should be identified and built upon through, for example, careful pedagogical scaffolding taking place at the macro, meso and micro levels (van Lier, 2007: 60) and helping students to question the established practice and to create new forms of activity. Contradictions that cannot be resolved by the

participants during the period allocated to the course, module or task should constitute the basis for future design initiatives.

The model can be used at the level of a whole programme of studies, a full course or a lesson, a project, or a discrete task. In line with Coughlan and Duff (1994) and Roebuck (2000), we propose that a language learning task is what designers and teachers *want* learners to do. Tasks thus act as a stimulus and provide students with an initial structure as well as boundaries and constraints for their actions. By contrast, a language learning activity is the “behavior that is actually produced when an individual (or group) performs a task. It is the process, as well as the outcome of the task, examined in its sociocultural context” (Coughlan & Duff 1994: 175).

The model comprises five distinct, yet interconnected steps (Blin 2010, 2012), and prompts teachers to reflect on different aspects of the learning activity they are about to design. In other words, the model helps teachers make *design for teaching* decisions that are cognizant of the broader educational context in which they operate and relevant to their target audience. The guiding questions in Table 1 below also serve as a guide to monitor and analyse the enacted design. The model thus also serves as a benchmark enabling teachers to assess to what extent “the enacted design for learning deviates from the intentions embedded in the design for teaching” (Lund & Hauge 2001: 269) and whether “the delicate teaching | learning balance is disrupted” (*ibid*).

Table 1. A five-step activity theoretical design model (Blin 2010: 190)

Step 1	<p>Identify expected and desired <i>learning outcomes</i></p> <ul style="list-style-type: none"> • What knowledge, skills and competencies will learners exhibit upon completion of the task? How can these be assessed?
Step 2	<p>Define the <i>object of the activity</i></p> <ul style="list-style-type: none"> • What kind of <i>object</i> can be transformed into the <i>desired outcomes</i>? What will learners attend to or construct during the realization of the task? • What <i>goal-oriented actions</i> or <i>chains of actions</i> are likely to facilitate the transformation of the <i>object</i> into the <i>desired learning outcomes</i>?
Step 3	<p>Identify and describe the <i>actors of the activity</i></p> <ul style="list-style-type: none"> • Who will be the <i>subjects</i> of the activity? What histories are they bringing to the language learning activity? What cultural tools do they bring to the activity, including their native language, communicative and literacy practices? Which other communities (networked or otherwise) do they belong to? • What motivates their participation in the language learning activity? • What are the characteristics of the <i>community</i> being shaped by the object of the activity (i.e., real vs. imaginary, local vs. geographically dispersed, networked, etc.)?

<p>Step 4</p>	<p>Specify the <i>mediators</i> of the activity</p> <ul style="list-style-type: none"> • What <i>tools and artefacts</i> will be available to learners (e.g., technologies, concepts and methods, texts, etc.)? How will communication and interaction be mediated (e.g., face-to-face, Web 2.0 technologies, synchronous or asynchronous CMC technologies, social networks, Virtual Worlds, etc.)? Which language will be the main mediator of the activity? • Are there <i>explicit and implicit rules and conventions</i> imposed from the outside (e.g., academic calendar and timetables, assessment schedules and methods, typical student workload, etc.)? What other rules and conventions will govern the realization of the task (e.g., directives, instructions, guidelines, etc.)? What implicit rules are embedded in the technologies deployed by the institution? • How will the <i>division of labour</i> be organized? Will learners work independently or in teams? What level of agency, power and control will be allocated to learners? To teachers?
<p>Step 5</p>	<p>Outline potential <i>internal and external contradictions</i></p> <ul style="list-style-type: none"> • What are the potential sources of conflict, breakdowns or disruptions? Are they likely to be resolved by the community? • What focus shifts are likely to occur? What level of teacher intervention may be required? At the design stage? During the activity? What are the competencies required from learners?

In the next section, we use the above model to revisit the *design for teaching* of a Finnish literacy course offered to international students at the University of Jyväskylä. Drawing on data collected during two consecutive enactments of the design (Jalkanen & Vaarala 2012a, 2012b, 2013), we propose a preliminary analysis of the designs for learning that emerged, with a particular focus on agency and languaging.

4 Designs for teaching and learning: the case of *Tekstejä suomeksi 2*

Tekstejä suomeksi 2 (Texts in Finnish 2) is a literacy skills course offered as part of the Finnish as a Second Language (FSL) curriculum at the University of Jyväskylä Language Centre. Although the course was not designed according to the activity theoretical principles outlined in the previous section, we believe that these can nevertheless be used, firstly to model and represent the *design for teaching* produced by the teaching team, and secondly to guide our preliminary analysis of the enacted *design for learning* in two instantiations of the course.

4.1 Design for teaching

Upon completion of the course, students are expected to be able to engage and participate in diverse activities (e.g. read, produce, and discuss) around different types of texts and media, and to gradually construct their identity as a 'competent' user of the Finnish language, able to function successfully in a variety of Finnish discourse communities (e.g., academic, social, etc.). To attain the intended learning outcomes, students are expected to carry out various tasks, individually and collaboratively, in and out of class, requiring them to read, listen, write and speak in a variety of registers and genres.

Recognizing that technology enables social processes that can foster the emergence of meaningful communities (Wenger, White & Smith 2009: 191), the tasks proposed as part of the *Tekstejä suomeksi 2* course are to be carried out across multiple spaces. Face-to-face sessions are led by the teacher and function as an arena for collaborative work in diverse group combinations and on different types of texts. Between these sessions, students have access to the institutional virtual learning environment, *Moodi*, which provides them with a shared space for analysing prescribed texts on multiple levels and from multiple perspectives, both individually and collaboratively. Finally, students were encouraged to use Twitter for media sharing and for one-to-one or whole group communication, using the course specific hashtag.

Recalling Pennycook's (2010) definition of competence given earlier, the object of the overall language learning activity is thus primarily ideal and is motivated by the need to help foreign students develop their "strategic capacity to use diverse semiotic items across integrated media and modalities" in the Finnish language. The object is also material in so far that students will be producing language in the form of spoken and written texts. In particular, they are required to prepare a group presentation to be delivered to the whole class at the end of the course. Working in small groups, students are required to select one of the course themes, which mostly relate to an aspect of Finnish culture and social or professional practice. Eight themes are prescribed by the course curriculum: Finnish music, education in Finland, Finnish design, traveling in Finland, climate change, social media (with a particular focus on blogs), information literacy, and working life and recruiting in Finland. Students are encouraged to support their presentation with creative artefacts that are to be collaboratively produced. Examples of possible artefacts include PowerPoint shows, posters, music mashups, images, etc.

Students participating in the course are international university students, some of whom are following a Masters or doctoral programme. Others are exchange students, only spending a relatively short period of time in Finland. All students are advanced learners in their own specialism, with good Finnish language skills (B1-B2), and based on the same campus (the University of Jyväskylä).

A range of tools and artefacts is made available to students. In addition to the tools and technologies offered by the institutional VLE, students are provided with personal tablets for the duration of the course in order to support literacy practices in and beyond the language classroom. The teaching and learning resources available within *Moodi* are to be supplemented by artefacts selected by students (e.g. newspaper articles, radio programmes, websites and other

documents as relevant to a given task). In terms of rules and conventions, students are expected to attend and actively participate in scheduled face-to-face sessions, to complete at least 80% of the tasks associated to each theme, and to actively prepare and present the group project, which are all elements of the course continuous assessment. Finally, the division of labour is primarily horizontal: students work independently between classes (although they may be interacting with members of the wider community), and in small groups during the face-to-face sessions, which are facilitated and managed by the teacher. The latter also assesses student participation, task realisation, and the final group presentation.

The following is an example of a design for teaching, illustrated in Figure 3 below, produced by a teacher for one particular task to be carried over a full week. From a *design for teaching* perspective, the task was motivated by the need to help students identify different perspectives related to the topic of their group presentation and to incorporate these in their discussion and arguments. Task specific intended learning outcomes include the ability to understand different viewpoints, to relate and analyse facts and opinions, and to participate in a whole class discussion. The task required that students follow media coverage of news items (e.g. economy, sport, entertainment, etc.) during the week, prior to the face-to-face session. In class, students were to share and discuss their findings, first in small groups, then as a whole class.

Most of the planned mediators are shared with the parent activity (in italics in Figure 3 below). The whole class discussion was to be led by the teacher, and throughout the face-to-face small group and whole class discussions, students had their tablets at their disposal.

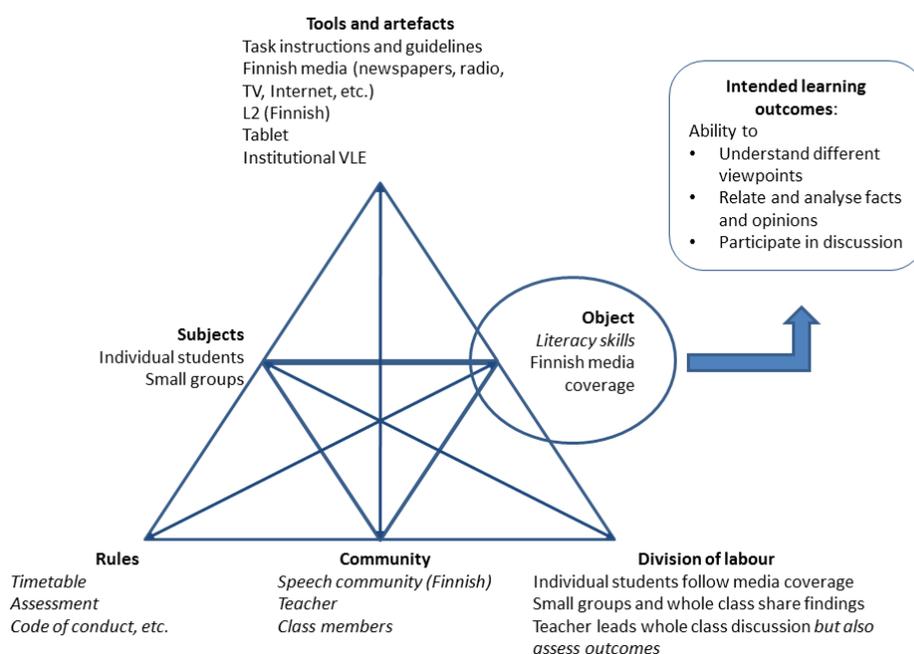


Figure 3. Design for teaching of the 'Finnish media coverage' activity system (based on Engeström 1987)

4.2 Enacted designs for learning

The enactment of any educational design is likely to be characterised by unpredictability and varying degrees of student agency and languaging, which will both arise from and give rise to the emergence of internal and external contradictions (Engeström 2001, Blin 2010, Blin & Appel 2011). The enactment of the *design for teaching* of *Tekstejä suomeksi 2* is no exception. Throughout the two instantiations of the course (in 2012 and 2013 respectively), different contradictions within the enacted design activity system emerged, which manifested themselves through focus shifts, misunderstandings or conflicts. For example, in the second instantiation of the course, it soon became apparent that students had very little experience, if any, of Twitter and tablets, especially in a learning context. Similarly, the tools available through Moodi were configured in such a way that students encountered difficulties in using them. Intensive technical assistance was thus required to help students exploit the opportunities for learning that the various tools potentially offered. Finally, rules that were imposed from the outside, such as assessment regulations and standards, were not completely aligned to the course object and intended learning outcomes.

Most of the above contradictions can be addressed in future designs for teaching. For example, additional technical support or learner training in the use of tools can be embedded in the design, assessment regulations and standards can be better aligned to the intended learning outcomes. Others may however be unpredictable, contingent on a particular context at a particular time. Similarly, unpredicted opportunities for learning are likely to emerge as the result of “learner initiatives and serendipity” (Lund and Hauge 2011: 62, *op. cit.*). As a result, different *designs for learning* are likely to emerge, arising from, as well as providing opportunities for the formation of critical design agency and languaging.

4.2.1 Design for learning and the formation of ‘critical design agency’

In both instantiations, most students were new to the culture of sharing via digital means and using the work of others as a resource for learning. Some wholeheartedly embraced a new digital social practice for learning, others resisted and initially refused to question the social practice they were accustomed to.

In the first instantiation of the course (2012), most students appropriated the initial *design for teaching* and developed it further by contributing to the evolution of the learning community as well as repurposing tools and environments in line with their personal learning contexts and objectives (Jalkanen & Vaarala 2012a, 2012b). For instance, some students began to share life events in Twitter, thus creating a temporary space for the development of interpersonal relationships beyond the context of the course. Another student used her tablet to record a discussion at the doctor’s to be able to listen to it again at home. These examples illustrate the blurring of boundaries between in and out-of-school “social and cultural experiences” that is often characteristic of *designs for learning* (see Lund’s & Hauge’s (2011) definition of design for learning discussed earlier).

By contrast, in the next instantiation of the course (2013), some students initially rejected the *design for teaching* by resisting the use of Twitter and tablets, as they did not perceive the connection between the object of the learning activity and the tools available to them. However, feedback discussions at the end of the course provided evidence of a transformation in the attitudes of those students who were most critical towards the use of Twitter and the tablets. Students indicated that their understanding of literacy practices had widened during the course and that they now perceived Twitter and the tablets as valuable tools for learning. This transformation of students' attitudes and practices can be attributed to the sustained negotiation, co-construction, and re-construction of the learning object by both teachers and students. Teachers had to redefine their design for teaching to make the pedagogical reasoning behind it more visible to and shared by students. Students progressively developed some critical design agency, eventually accepting to challenge their old designs for learning, thus embracing a "radically wider horizon of possibilities" (Engeström 2001: 137). This however required "teachers to participate with a persistent presence in learners' trajectories" (Lund & Hauge 2011: 269) so that the enacted *design for learning* could be brought in line with the "intentions embedded in the design for teaching" (*op. cit.*).

4.2.2 Designs for learning and languaging

Designs for learning can also be seen as sites for languaging. As students performed different tasks around texts, several instances of 'making meaning and shaping knowledge and experience through language' (Swain 2006: 98) emerged. By examining some of these instances, and recalling Lund's and Hauge's (2011) definition of *design for learning*, we can identify episodes where teachers and learners respond to immediate opportunities and serendipity, or where learners take initiatives. In such instances, languaging directly contribute the development of the design for learning.

For example, in the context of the media coverage task performed in the first instantiation of the design (2012), some students had focused on sport news, and more specifically on rallying, a very popular motorsport in Finland. As three students discuss the media coverage of sporting events during the week, the name of a Finnish rally driver, Tommi Mäkinen, comes up in the discussion (Excerpt 1). S1 asks the other members of the group whether they know him. S2 confirms that he knows who the person is and provides additional information: "a motor sport man", which is further explicated by S1 ("rally driver"). However, S1 produces the wrong phoneme (S instead of R), and S3 and S2 do not understand the word. S3, using his tablet, types the driver's name in Google, finds the right form, and says it out loud. A shared understanding is then reached and the discussion can proceed.

Excerpt 2

S1: Tiedätkö Tommi Mäkinen	(Do you know Tommi Mäkinen)
S2: Tiedän joo mutta - - autourheilija	(I know yeah but - - a motor sport man)
S1: Lalliajaja	(*Sally driver)
S3: Mitä se - -	(What it - -)
S2: Lalli aa	(Sally aa)
S1: Lalli	(Sally)
S3: Tommi Mäkinen (käyttää googlea iPadilla) odota - - aa ralli niin	(Tommi Mäkinen [using Google on iPad] wait - - aa rally yes.)

In the above example, S3 operates on linguistic data unknown to him, accesses the rich semiotic budget afforded by the technology (i.e., the Internet accessible through the tablet), and turns a communication breakdown into a learning opportunity for his peers. As a result, S1 is made aware of her pronunciation error and comes to “an understanding of previously less well understood material” (Swain 2000: 98). The misunderstanding was resolved without teacher intervention, which is an indication of S3’s “strategic capacity to use diverse semiotic items across integrated media and modalities” (Pennycook 2010: 129) to overcome comprehension problems.

Later on in the same session, the teacher (T1) leads a whole class discussion. As the discussion moves to the topic of Tommi Mäkinen and his birthplace, Puuppola, the teacher asks where the latter is located (Excerpt 2). S6 replies that Puuppola is in Jyväskylä. T1 corrects the information provided by S6 and clarifies that the place is actually some kilometres up north from the town. However, she is not sure of the exact distance between Jyväskylä and Puuppola. Before she can provide an estimate, S6 comes up with the right answer, which he had looked up on the Internet. At first surprised, the teacher soon realizes that the student had access to Wikipedia.

Excerpt 2

T1: Vielä kysymys, missä on Puuppola?	(One more question, where is Puuppola?)
S6: Jyväskylässä	(In Jyväskylä)
T1: Puuppola on Jyväskylästä vähän matkaa pohjoiseen.	Puuppola is some kilometres up north from Jyväskylä.
Kuinkas monta kilometriä, oisko se tuota - -	How many kilometres, I wonder if it’s er - -)
(S6 kirjoittaa Puuppolan hakusanaksi Googleen)	(S6 types Puuppola on Google on her iPad)
S6: Kaksitoista	(Twelve)
T1: Kaksitoista. Mistäs te sen tiedätte?	(Twelve. How do you know that?
Aa, Wikipediakin tietää Puuppolan.	Ah, Wikipedia knows Puuppola as well.)

The above example is an instance of learners taking the initiative, in this case, configuring and reconfiguring roles through languaging and technology-mediated actions. The fact that the teacher is no longer the primary information provider encourages learner active participation. In this example, S6 contributes to the collective re-configuration of social and material resources in the classroom while solving an unpredicted information gap through the use of language and technology (Lund & Hauge 2011).

5 Conclusion

Throughout this paper, we have looked at the notion of educational design in the context of language teaching and learning in increasingly technology-rich environments. We have claimed that a renewed focus on design, which needs to be cognizant of the rapid societal and technological changes that characterize 21st Century knowledge creation and social practices, was necessary to address the increased complexity and unpredictability of language teaching and learning. Following a brief overview of agency and languaging as emerging approaches to language use and learning, we have discussed some recent developments in the field of educational design, namely learning design and design-based research, that are particularly interesting to the educational technology and Computer Assisted Language Learning communities. While we believe that these approaches provide robust methods and tools to develop strong designs for teaching, they however fall short of providing conceptual tools to describe and analyse the corresponding enacted designs for learning. In particular, they do not easily enable course designers and teachers to understand deviations from the intentions embedded in the design for teaching. Nor do they leave much room for unpredictability.

Drawing on Lund's and Hauge's (2011) definition of didactics, and in line with their focus on the dialectical relationship between design for teaching and design for learning, we have argued that designs rooted in cultural historical activity theory address these challenges. They do so by giving priority to the construction and re-construction of the object of the learning activity, and to the configuration and co-configuration of the mediational structure of the learning activity over pre-defined content, skills and methods.

The examples discussed in this paper have illustrated how activity-theoretical designs can be used for better understanding the relationship between *design for teaching* and *design for learning* in complex language learning environments. They also provided examples of languaging and of the formation of critical design agency in context. In particular, it was shown that students negotiated and co-constructed new 'horizons of possibilities', even though they may have initially rejected a new form of activity.

Maintaining the balance between teaching and learning called for by Lund and Hauge (2011) remains however difficult. Knowing when and how to intervene in enacted designs for learning is a teaching skill that increasingly requires the ability to reconcile societal and institutional demands, the will to challenge existing designs and their associated social practice, and the ability to seize opportunities arising from unexpected events. Most of all, it requires

teachers to fully participate in the joint construction of the object of learning with their students and to facilitate the formation of their critical design agency.

Endnotes

1. This scenario and the associated task are part of the resources created under the auspices of the SpeakApps Project, funded by the EU Lifelong Learning Programme, Project N° 511552-LLP-1-2010-1-ES-KA2-KA2MP, <http://speakapps.eu>
2. The authors want to thank M.A. Kristiina Litola for her indispensable help with the transcription of the video data.

References

- Ahearn, L. M. 2001. Language and agency. *Annual Review of Anthropology*, 30, 109–137.
- Barab, S. 2006. Design-based research: A methodological toolkit for the learning scientist. In R. K. Sawyer (ed.), *Cambridge Handbook of the Learning Sciences*. New York: Cambridge University Press.
- Benson, P. 2007. Autonomy in language teaching and learning. State of the art article. *Language Teaching*, 40 (1), 21–40.
- Bergroth-Koskinen, U-M. & R. Seppälä 2012. Teacher-researchers Exploring Design-based Research to Develop Learning Designs in Higher Education Language Teaching. *Apples - Journal of Applied Language Studies*, 6(2), 95–112. Available from <http://apples.jyu.fi/>
- Blin, F., 2004. CALL and the Development of Learner Autonomy: Towards an Activity-Theoretical Perspective. *ReCALL*, 16(02), 377–395.
- Blin, F., 2005. *CALL and the development of learner autonomy - an activity theoretical study*. Unpublished doctoral thesis. The Open University, UK. Available from: <http://webpages.dcu.ie/~blinf/BlinThesis.pdf>.
- Blin, F., 2010. Designing cybertasks for learner autonomy: towards an activity theoretical pedagogical model. In M. J. Luzón, M. N. Ruiz-Madrid, & M. L. Villanueva, (eds.). *Digital Genres, New Literacies and Autonomy in Language Learning*. Newcastle upon Tyne: Cambridge Scholars Publishing, 175–196.
- Blin, F., 2012. Bologna and the 21st century language learner: integrating technology for learner autonomy. In J. Burstson, D. Tsagari, & F. Doa, eds. *Foreign Language Instructional Technology: Theory & Practice*. Nicosia: University of Nicosia Press, 60–77.
- Blin, F. & C. Appel 2011. Computer supported collaborative writing in practice: an activity theoretical study. *CALICO Journal*, 28(2), 473–497.
- Blin, F. & M. Munro 2008. Why hasn't technology disrupted academics' teaching practices? Understanding resistance to change through the lens of activity theory. *Computers and Education*, 50, 475–490.
- Bliss, J., R. Säljö & P. Light (eds.) 1999. *Learning Sites: Social and. technological resources for learning*. Oxford: Pergamon.
- Canagarajah, S. 2008. Foreword in A. Clemente & M. Higgins, *Performing English with a post-colonial accent: Ethnographic narratives from Mexico*. London: The Tufnell Press, ix–xiii.
- Castells, M. 1996. *The Rise of the Network Society*. Oxford: Blackwell.

- Chaiklin, S., M. Hedegaard & U. J. Jensen (eds.) 1999. *Activity theory and social practice: cultural-historical approaches*. Aarhus: Aarhus University Press.
- Cobb, P., J. Confrey, A. diSessa, R. Lehrer & L. Schauble 2003. Design Experiments in Educational Research. *Educational Researcher*, 32(1), 9–13.
- Collins, A., D. Joseph & K. Bielaczyc 2004. Design Research: Theoretical and methodological issues. *Journal of the Learning Sciences*, 13 (1), 15–42.
- Conole, G. 2008. The role of mediating artefacts in learning design. In L. Lockyer, S. Bennett, S. Agostinho & B. Harper (eds.), *Handbook of Research on Learning Design and Learning Objects: Issues, Applications and Technologies*. Hershey, PA: IGI Global, 187–207.
- Conole, G., 2010. Learning design – Making practice explicit. In *ConnectEd 2010: 2nd International conference on Design Education*. Sydney, Australia. Available from: <http://oro.open.ac.uk/21864/> (Accessed August 31, 2013).
- Conole, G. 2012. *Designing for learning in an open world*. New York: Springer.
- Cope, B. & M. Kalantzis (eds.) 2009. *Ubiquitous learning*. Chigaco: University of Illinois Press.
- Coughlan, P. & P. Duff 1994. Same task, different activities: analysis of a SLA task from an activity theory perspective. In J.P. Lantolf & G.Appel (eds.), *Vygotskian Approaches to Second Language Research*. Norwood, NJ: Ablex, 173–193.
- Design-Based Research Collective 2003. Design-Based Research: An Emerging Paradigm for Educational Inquiry. *Educational Researcher*, 32 (1), 5–8.
- Dufva, H., M. Suni, M. Aro & O.-P. Salo 2011. Languages as objects of learning: language learning as a case of multilingualism. *Apples – Journal of Applied Language Studies*, 5 (1), 109–124.
- Engeström, Y. 1987. *Learning by expanding: An activity-theoretical approach to developmental research*. Helsinki: Orienta-Konsultit.
- Engeström, Y. 2001. Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, 14(1), 133–156.
- Engeström, Y. 2007. Putting Vygotsky to work: The Change Laboratory as an application of double stimulation. In H. Daniels, M. Cole & J. V. Wertsch (eds.), *The Cambridge companion to Vygotsky*. Cambridge: Cambridge University Press, 363–383.
- Engeström, Y. 2008. *From Teams to Knots: Activity-theoretical Studies of Collaboration and Learning at Work*. Cambridge: Cambridge University Press.
- Engeström Y. 2011. From design experiments to formative interventions. *Theory & Psychology*, 21, 598–628.
- Engeström, Y. & A. Sannino 2010. Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, 5, 1–24.
- Holland, D. & W. Lachicotte Jr. 2007. Vygotsky, Mead, and the new sociocultural studies of identity. In H. Daniels, M. Cole, J.W. Wertsch (eds.), *The Cambridge Companion to Vygotsky*. Cambridge: Cambridge University Press, 101–135.
- Jacobs, H. H. 2010. *Curriculum 21: essential education for a changing world*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Jalkanen, J. & H. Vaarala 2012a. Opettamisesta oppimiseen – oppimateriaaleista toimintaan [From teaching to learning - from learning material to activities]. *Kieli, koulutus ja yhteiskunta* 3 (2).
- Jalkanen, J. & H. Vaarala 2012b. From teaching to learning: hybrid spaces and emerging practices in a second language learning course. Paper presented at EuroCALL 2012 conference, Gothenburg, Sweden.
- Jalkanen, J., A. Pitkänen-Huhta & P. Taalas 2012. Changing society – changing language learning and teaching practices? In M. Bendtsen, M. Björklund, L. Forsman, & K. Sjöholm (eds.), *Global Trends Meet Local Needs*. Vaasa: Åbo Akademi Press, 219–241.
- Jalkanen, J. & H. Vaarala 2013. Opiskelijat sisällöntuottajina: tavoitteet, työkalut ja toiminta [Students as content producers: goals, tools and activity]. Unpublished keynote presentation in Suomen kielen ja kulttuurin opettajien opintopäivät [seminar for teachers in Finnish language and culture], Vaasa, Finland.

- Kankaanranta, M. & E. Puhakka 2008. *Kohti innovatiivista tietotekniikan opetuskäyttöä. Kansainvälisen SITES 2006 -tutkimuksen tuloksia.* [Towards innovative uses of learning technologies. Results from the international SITES 2006 study.] Jyväskylän yliopisto: Koulutuksen tutkimuslaitos.
- Koper, R. & B. Olivier 2004. Representing the learning design of units of learning. *Educational Technology & Society*, 7(3), 97-111.
- Kuutti, K. 1996. Activity theory as a potential framework for human-computer interaction research. In B.A. Nardi (ed.), *Context and Consciousness: Activity Theory and Human-computer Interaction*. Cambridge, MA: The MIT Press, 17-44.
- Laakkonen, I. 2011. Personal learning environments in higher education language courses: an informal and learner-centred approach. In S. Thouésny & L. Bradley (eds.), *Second language teaching and learning with technology: views of emergent researchers*. Dublin: Research-publishing.net.
- Laurillard, D. 2012. *Teaching as a design science. Building Pedagogical Patterns for Learning and Technology*. New York: Routledge.
- Leontiev, A.N. 1978. *Activity, Consciousness and Personality*. Englewood Cliffs, NJ: Prentice Hall.
- Ludvigsen, S., A. Lund, I. Rasmussen & R. Säljö (eds.) 2011. *Learning across sites: New tools, infrastructures and practices*. Abingdon: Routledge.
- Luukka, M-R., S. Pöyhönen, A. Huhta, Taalas, M. Tarnanen & A. Keränen 2008. *Maaailma muuttuu - mitä tekee koulu? Äidinkielen ja vieraiden kielten tekstikäytänteet koulussa ja vapaa-ajalla.* [The world changes - how does the school respond? Mother tongue and foreign language literacy practices in school and in free-time.] Jyväskylän yliopisto: Soveltavan kielentutkimuksen keskus.
- Lund, A. & T. E. Hauge 2011. Designs for teaching and learning in technology-rich learning environments. *Nordic Journal of Digital Literacy*, 6 (4), 258-272.
- McLoughlin, C. & M. Lee 2008. Mapping the digital terrain: New media and social software as catalysts for pedagogical change. In R. Atkinson & C. McBeath (eds.), *Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008*. Geelong, Vic. : Deakin University, 641-652. Available from <http://www.ascilite.org.au/conferences/melbourne08/procs/mcloughlin.html>
- Pennycook, A. 2010. *Language as a local practice*. New York: Routledge.
- Pietikäinen, S., R. Alanen, H. Dufva, P. Kalaja, S. Leppänen & A. Pitkänen-Huhta 2008. Languaging in Ultima Thule: Multilingualism in the life of a Sami boy. *International Journal of Multilingualism*, 5 (2), 79-99.
- Roebuck, R. 2000. Subjects speak out: How learners position themselves in a psycholinguistic task. In J. P. Lantolf (ed.), *Sociocultural Theory and Second Language Learning*. Oxford: Oxford University Press, 79-95.
- Roth, W.-M. 2004. Introduction: "Activity Theory and Education: An Introduction". *Mind, Culture, and Activity*, 11(1), 1-8.
- Sitthisak, O. & L. Gilbert 2009. Improving the pedagogical expressiveness of IMS LD. Paper presented at the TELearn 2009 Conference, 6-8 October 2009, Taipei, Taiwan. Available from: <http://eprints.soton.ac.uk/268228/> (Accessed 1 September 2013).
- Swain, M., S. Lapkin, I. Knouzi, W. Suzuki & L. Brooks 2009. Languaging: University students learn the grammatical concept of voice in French. *The Modern Language Journal*, 93(1), 5-29.
- Swain, M. 2006. Languaging, agency and collaboration in advanced second language proficiency. In H. Byrnes (ed.), *Advanced Language Learning: The contribution of Halliday and Vygotsky*. London: Continuum, 95-108.
- Taalas, P. 2005. *Change in the making: Strategic and pedagogical challenges of technology integration in language teaching*. Centre for Applied Language Studies. Jyväskylä: University of Jyväskylä.
- van Lier, L. 2007. Action-based teaching, autonomy and identity. *Innovation in Language Learning and Teaching*, 1(1), 46-65.

- van Lier, L. 2000. From input to affordance: social-interactive learning from an ecological perspective. In J. P. Lantolf (ed.) *Sociocultural theory and second language learning*. Oxford: Oxford University Press.
- Vygotsky, L. S. 1978. *Mind in society*. Cambridge: Harvard University Press.
- Wenger, E., N. White & J. D. Smith 2009. *Digital habitats: Stewarding technology for communities*. Portland: CPsquare
- Wiggins, G. & J. McTighe 2005. *Understanding by design*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Zheng, D. & K. Newgarden 2012. Rethinking language learning: virtual worlds as a catalyst for change. *International Journal of Learning and Media*, 3(2), 13-36.

Received October 7, 2012

Revision received October 9, 2013

Accepted December 12, 2013