

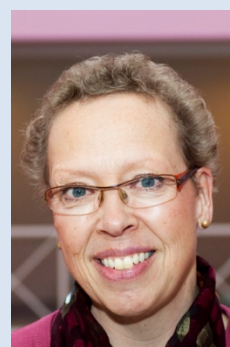
# Tools for Teaching the “Digital Natives”<sup>1</sup>

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<sup>1</sup> We are aware that the concepts ‘digital natives’ and ‘digital immigrants’ are subject to much debate, cf. Sternberg 2011.

<sup>2</sup> UFOgroup is a CBS research team where we focus on Education Research (In Danish: UddannelsesFOrskning). We are particularly focussing on the advantages and challenges of using web 2.0 solutions (social media) in university and pre-university educational settings with a view to enhancing and professionalizing students' capacity to collaborate, navigate and communicate in the globalized, intercultural business community. In our research we cooperate with Danish and foreign universities and corporate partners.

## Abstract

*University educators and researchers face new generations of “digitally native” students, who approach academic disciplines in novel ways, thus creating a changed university-learning environment that demands new ways of building knowledge in a bottom-up process. A case in point is the area of corporate communication where we need new methods of approaching adult cultural/communicative learning<sup>1</sup> since these integrated competences are much asked for in the business community. One way of approaching university pedagogy within these fields is asking whether social software could provide better tools that support social, collaborative processes that are fun, motivating and better support learning<sup>3</sup>. The article therefore discusses collaborative and individualized learning processes and how social software platforms may better harness collective and personal knowledge in order to enhance learning outcome. The theoretical foundations of the article have been established at the crossroads between general learning theory, cultural/communicative learning theory and social media applications that facilitate collaborative, synchronous and interactive learning platforms. Data evaluation and comparisons in regard to learning outcomes are based on empirical data from two cases applying different learning platforms used in CBS programme courses involving culture and communication learning elements.*

*Keywords: social media, cultural/communicative competence, learning outcomes.*

## Introduction

This article discusses the use of social-media enhanced learning in a university context. It focuses on two cases and the teacher and student experiences related to the two sets of platforms used in cultural/communicative learning. The article discusses the merits of

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<sup>3</sup> For the purpose of this article, the authors define adult cultural/communicative competence as follows: The culturally/communicatively competent adult language user commands lexical and grammatical, pragmatic, strategic and reflective skills that enable him/her to make informed choices about the intercultural context and to carry out goal-oriented context accommodation on the basis of a linguistic and cultural analysis of the situation at hand.

student collaboration facilitated through social-media platforms, the use of learning logs and implications for future practices.

University educators and researchers face new generations of “digitally native” students, who approach academic disciplines in novel ways, thus creating a changed university learning environment that demands new ways of building knowledge. Simultaneously, students, who are not academically minded and their future employers challenge university programmes that focus on languages and communication, as traditional teaching methods often fall short both in regard to student results and to employers’ expectations. Politically, the aim is to take increased numbers of students through at least undergraduate studies in order to harness the population’s ability to withstand increasing international competition. This means that university didactics need rethinking and innovation, especially with a view to facilitating effective and smooth learning processes that will enable future students to complete their studies within limited time, with economic sustainability for the university and with as high a degree of personal and societal benefit as possible.

Studies (Verstraete and The Confederation of Danish Industry (CDI), 2007 and 2008) show that 80 per cent of major Danish enterprises employ staff who communicate in a non-native language every day without having any language study background. Furthermore, the Danish Confederation of Industry supports the idea that professional staff needs a ‘double-competence’ i.e. professional knowledge within a certain field of expertise – engineering, medicine, the law – plus a high English communicative competence. The latter is, however, not seen as a competence in itself, and only a very limited number of company staff is language professionals *per se*. This is yet another challenge for university programmes that focus on culture and communication, as candidates’ academic competences must be adapted to a flexible and dynamic business community where collaborative and integrative competences are key to cooperation with other professionals, knowledge sharing and knowledge intake. The communication professional must be able to cooperate with the vast number of non-language professionals who communicate in a foreign language. The EU (HLGM 2007; ELAN 2007) and Copenhagen Business School (CBS) have addressed these issues and documented that Danish university graduates, enterprises and employees need sufficient cultural and communicative competencies to manage in an increasingly globalized world.

Today’s undergraduate students are often strangers to taking in cultural and communicative knowledge as a business community competence, they have very limited knowledge of the business community as such, but on the other hand, they are ‘digital natives’ (Bennet et al, 2008). The interplay between these three factors poses a series of challenges for university

teachers in that it is their task to provide the students with an opportunity to acquire the high-level skills and competences required in order to function professionally in the business community upon graduation.

This article addresses these challenges from a social media perspective and raises the question of the usefulness of social media and more ludic forms of learning in today's university programmes. It introduces a number of underlying principles of culture and communication learning and some factors affecting learning processes based on the use of social media. Social software/Web 2.0 popularity suggests that "digitally native" students' learning might be accomplished under circumstances different from those currently used in universities (Dirckinck-Holmfeld, 2010; Sternberg, 2011). Students are familiar with interactive platforms like Twitter, Facebook, YouTube and LinkedIn, and according to Mondahl et al (2009a) "...recent studies suggest that the digital generation of students learn differently from the previous generations" and "they are dependent on the Web for accessing information and interacting with others (Benson & Avery, 2008; Sternberg, 2011)". Knowledge is constructed rather than reproduced in social media enhanced platforms, reflection is enabled via retention of input and processes, and this means that the "digital learner" is provided with new means of internalizing knowledge.

Web 2.0 applications therefore look promising for use in an educational setting, "but more considerations and evaluation studies are needed in order for "pedagogy 2.0" to be established" (Benson, 2008). Different perspectives may be applied on social software from being a tool that facilitates new forms of interaction and knowledge sharing (Kirchner et al., 2008) via a tool that facilitates personal and collective knowledge to a tool that facilitates interaction and social processes as required in cultural and communication learning. The demand for new means to facilitate learning is very obvious in a globalized world where information retrieval, information sharing and high communicative skills are key to many business and organizational processes, but the means by which these goals may be reached are constantly undergoing change due to the recognition by educators and researchers that individual needs and personal learning styles play an increasing role in learning processes. Collective learning processes are one prerequisite for knowledge intake, but individual use of knowledge already taken in as basis for new knowledge (Hermansen 2005; Illeris 2007) must be facilitated as well.

The needs of the business community in a globalized world provide the benchmarks students have to match, and as part of that professionalization both cultural and communicative competencies are in high demand (Verstraete, 2008). A high communicative competence is part and parcel of a high cultural competence. For university researchers and educators this may be evident, but very few private companies or public organisations are

willing to focus exclusively on these competencies in their employees. It has often been argued by for instance the Danish Confederation of Industry (Dansk Industri, 2007) that professional employees must be culturally and communicatively competent, but the willingness to pay for this as a single competence is hard to locate. In a Danish context, double-competencies are often identified as one solution to companies' communication needs, meaning that the professional employee – the lawyer, engineer or accountant – must command not only his field but must also be proficient in at least English, able to negotiate, perform crisis management and diagnose intercultural bumps and potential conflicts. The assumption that the professional employee has the cultural/communicative competence as an add-on makes huge demands on the quality and organisation of communication classes at university level and it calls for the integration of communication learning in realistic case-based scenarios. Furthermore, the need for high quality upper secondary school culture/communication learning is underscored, as university programmes generally offer very limited hours of instruction. On this basis, it seems mandatory that new ways of taking in the knowledge required must be provided in university as well as in other learning settings. Social media challenge and support individual and group-wise creativity as there are no fixed limits to how problems may be solved – new applications may be created, new means of knowledge sharing are invented in the learning process, and thus the students may become their own educators. The convergence of theories with constituents of learning is illustrated in figure 1.

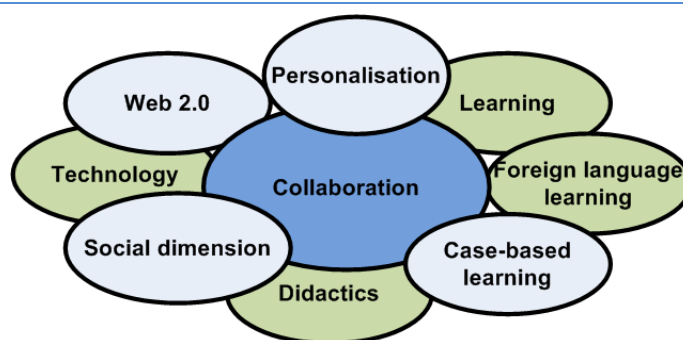


Figure 1. *Constituents of cultural/communicative learning*  
(Source: Educational Research Group, CBS, 2010)

### **Blended learning as a way ahead?**

Integrating blended learning strategies, including case-based teaching, digital media and in particular social software is aimed at supporting and enhancing collaborative learning processes for adult learners and a number of platforms are already in use. The approach becomes particularly interesting for educators who interact with students that are faced with the two-fold task of acquiring cultural/communicative competencies

(particularly in English). The double demand for simultaneously adding on new knowledge through hypothesis-formation and hypothesis-testing, through feed-back and feed-forward, and with as little toil and as much exuberance as possible (Hermansen, 2005) within two separate fields of expertise means that educators must be particularly conscious of enabling student learning strategies that are at the same time individual and collaborative. Blended learning strategies may be an answer to this, if they are presented to the students in an intuitive and user-friendly form. In the electronic environment, students may develop individually through testing their hypotheses and collectively through knowledge sharing and collective problem-solving with their study group that requires argumentation and substantiation, as well as in the physical environment where results may be presented and discussed by the whole class. The processes facilitated may further enhance learners' intake of new knowledge and harness already acquired knowledge thus leading to positive learning outcomes that result in knowledge being available for application in novel situations.

### Two cases

In the following, we will describe two cases where students were encouraged to collaborate in an electronic study environment; the cases played out at CBS in the period 2007-2009, and they illustrate the development that has taken place in terms of both the electronic aspect and the dimension that reflects our insight into what is actually required for an electronic learning environment to be an attractive and effective tool towards reaching the objectives outlined in the introduction.

It should be mentioned that at the point in time, CBS had been using SiteScape as its electronic document-sharing forum for a number of years, which means that the students have a basis for comparison when they are asked to evaluate the attractiveness and effectiveness of the ICT environments tested in the two cases. CBS has a formulated policy of 'engaged studentship' based on a CBS platform where all information from the administration to students as well as knowledge sharing and knowledge dissemination is supposed to take place; this of course puts limitations on the choice of platforms and the range of functionalities available to teachers. The students involved in case 1, however, were 1<sup>st</sup> semester students, who were using SiteScape as their platform in one course and Moodle as their platform in our course; this means that in a CBS context, the two platforms were equally new to the students.

### Case 1 – Moodle vs. SiteScape

For many years, SiteScape has been the e-learning platform of CBS; however, due to various circumstances it was decided in 2009 to replace SiteScape with another e-learning platform, and Moodle was selected as a possible replacement for SiteScape. Two courses were selected by CBS Learning Lab for a pilot test of Moodle, one of which was a course in

Intercultural Corporate Communication (ICC) in the B.Sc. International Business programme, which would be taught in English by two UFO members; the other course was a Danish-language computer science course. The students in ICC course were at the same time studying another, parallel course where SiteScape was the platform used, which means that the students were able to make direct comparisons between the two platforms and assess after the courses, which features of which platform would best serve their needs; after the Moodle test course, the students were asked to evaluate the platform through a questionnaire.

The Moodle version to be tested was a basic one – CBS Learning Lab decided on using the basic version in order not to pre-define which additional features and applications the test groups could possibly want to use, just as CBS Learning Lab maintained a dialogue with the teachers during the test phase to keep track of their questions. Since the test run of Moodle was advertised a relatively short time before the beginning of the course, the teachers focused their hypothesis formation on those functions that they hoped would be present in Moodle.

The didactic/pedagogical aim of the teachers was to supplement classroom activity with active collaborative learning activities, focussing on facilitating student knowledge sharing, problem solving and ultimately project writing; the functionalities chosen to support this were wikis, blogs, chat, learning logs etc. As shown in figure 2 below, this aim was not met.

The first challenge for the teachers was to decide on the format of the Moodle interface. As opposed to SiteScape, which has only one interface, Moodle offered a range of different formats, of which the teachers could choose to use the format, which seemed to meet the demands for their particular course best.

Seen from the teachers' perspective, the differences between SiteScape and Moodle when it comes to the possibility of uploading reading materials for the students in designated folders are negligible – they both primarily serve as file-sharing systems; however, in a range of other aspects the two systems differ, each offering specific advantages over the other. A very general comment in regard to the differences between Moodle and SiteScape from students and teachers alike is that neither platform is particularly intuitive to work with and that both platforms require quite a few mouse clicks back and forth in order to locate a specific document or assignment; in other words it can be a time-consuming experience to use the platforms. Another drawback from the students' point of view is that the forums are designed by the teachers, so it will be the teacher's logic that prevails and not the students', which might be different and give priority to other features.

SiteScape offers two significant advantages over Moodle, the first that it is possible for a teacher as administrator to email the entire class from within the platform and the second that the students are able to set up their own team workspaces inside the platform; both these functions were absent in the test version of Moodle and would have been useful.

On the other hand, the teachers found that Moodle offered a number of advantages over SiteScape: Moodle has a 'latest news' area on the front page so that students may easily find relevant news items, just as it is possible to advertise upcoming events and subscribe to RSS feeds from the platform. Another interesting feature for the teachers was the possibility to grade uploaded papers online – this feature functioned well for the teachers, even if the default grading system was not one that fit perfectly into a Danish university context; however, this very function held the limitation that only the group member who did the actual uploading of the file would be able to see the grade awarded for the assignment – the other group members would not be able to see their grade – this affects motivation and discourages collaboration.

Still, in regard to the hypothesis that Moodle would facilitate collaborative learning processes through wikis, chats, logs etc., it turned out that these functions did not apparently seem logical to the students, and the teachers believe that these functions would have to be given much more attention from the platform developers in order to serve as a well-functioning collaborative learning tool. In addition, the test run clearly showed that – at least for a course that aims to promote collaborative learning – an essential feature would be synchronous functions for real-time, on-line collaboration, the chat function and the wiki function need to be updated, just as a learning log function to register learning experiences would be required. Learning logs were introduced by the teachers in order to increase student awareness of own learning processes and successful approaches to personal as well as collaborative learning, but the facilitation of this central feature does not seem ideal as it needs to be linked to assignment completion in order to appear meaningful for the students.

### **The teacher perspective**

Seen from the course planners'/teachers' point of view, it is clear that the Moodle platform offers a wide range of possibilities for primarily asynchronous knowledge sharing, where teacher initiated activities may be accessed by students and student assignments may be uploaded for grading and commenting by teachers. The online, synchronous functions of collaborative writing, however, appear less intuitive to the students: blogs and chat functions are available for comments, but are not really used by these students. In other words, online, interactive knowledge sharing seems not to be accommodated and students seem to revert to traditional case-based work where discussions are face-to-face during class hours



rather than before class in an online environment as part of their preparation for classes.

Summing up the teachers' experience from the test, the fact that students are not allowed to set up their own forums (cf. above) is a serious drawback, as the advantages of collaborative elements of learning have been clearly documented by a.o. Hermansen (2005) and Razmerita et al. (2005). The problem may, however, be met through alternative platforms such as Second Life or Mahara, but these platforms have not been at our disposal during the Moodle test procedure. The overall conclusion of the Moodle test seen from a teacher point of view is that in order to facilitate and support language learning, a platform that supports interactivity, collaboration and student control of how e.g. group forums should be designed is vital. So far, our experience shows that the version of Moodle tested in the case course did not live up to these criteria.

Furthermore, it seems as if the students use the platform for retrieving documents, keeping up to date with assignment and exam hand-in deadlines. Reasons for this may be that communication lines and teaching methods have not been successfully adapted to the platform and that the types of assignment work used are not fully integrated in the platform.

### **The student perspective**

An English-language questionnaire was sent out by CBS Learning Lab on 10 December 2009 to the ICC students; the students in the computer science course had a Danish-language questionnaire. Two reminders were sent out during the data collection period. 164 invitations were sent out to the computer science students, but only 30 responded (= 18%). A number of the invitees have reported back that Moodle was not used in their classes, so there is some uncertainty about the actual computer science target group in terms of who they are and how many they are. Still, the responses from these students will be cited as a control group to the ICC students; all 139 ICC students were invited to participate, and 60 (= 43%) responded, which is a more 'normal' response rate for this type of questionnaires that focus on student experiences in class.

As shown in the below summary table, the students' perception of what they were able to use the Moodle platform for falls very much in line with the teachers' impression of the level and nature of the activities that went on at the platform, just as it supports the impression of the teachers that the students were passive users of the platform rather than active participants in the exchange and building of knowledge and ideas.

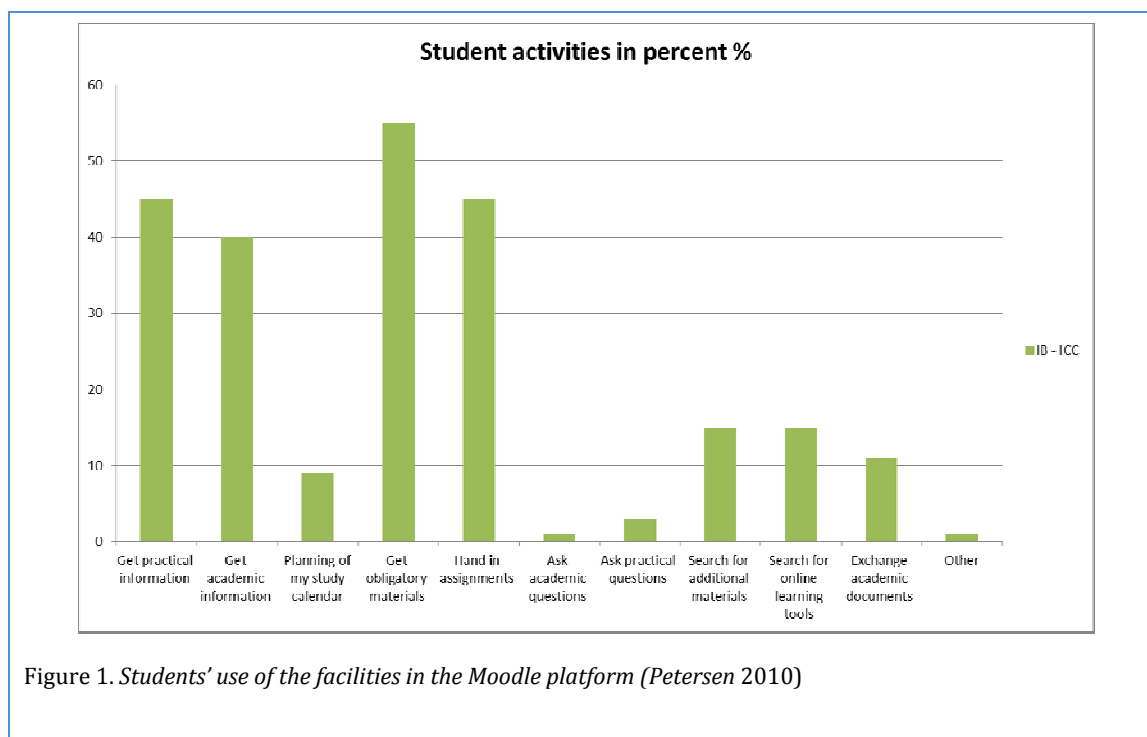


Figure 1. Students' use of the facilities in the Moodle platform (Petersen 2010)

As can be seen in figure 2, the students primarily used the Moodle platform for retrieving practical information and news about the lectures (76 pc), for getting academic information about lectures (67 pc), to retrieve required materials (93 pc) and to hand in projects or assignments (76 pc).

The rate of students who used the platform to enter into an academic dialogue with the teachers or other students was merely 2 pc, and the rate of students who asked practical questions was just 5 pc. From the teachers' point of view, these two latter responses are particularly critical, since they clearly suggest that the underlying considerations behind the course design, which put a great deal of emphasis on facilitating collaborative learning with a view to supporting the learning processes of both non-language related content and language learning, were not supported by the Moodle platform, and that again leaves room for discussions as to whether it is expedient to use this type of platform for this type of courses, or whether other types of electronic learning environment would have to be put to use in order to facilitate the synchronous and collaborative dimensions of the learning processes aimed for. However, it could be that in the case in question, students were unable to see the advantages of using online dialog to communicate with teachers because the course format and learning design were not convincing enough to encourage and motivate active online student participation.

The questionnaire offered the participating students the possibility to add comments beyond the questions, and a few of the comments suggest that

the students are not particularly taken by the possible change from SiteScape to Moodle:

*(Question: What would you be looking for on the opening page of Moodle?)  
“And nothing else! There is no need for all those non-core functions. We as students are not stupid, we know how to use our own calendars and other resources which work a lot better already.”*

*(Question: Please write any additional comments to Moodle here) “No need for Moodle! too messy”, “I still think that SiteScape is better so far - but if the necessary changes are made, Moodle can become a very good intranet for the students at CBS”, “As I previously mentioned, I do not care much about Moodle. I think that SiteScape is perfectly adequate as a learning platform”, “it is much easier to learn than SiteScape and it seems more structured”.*

The responses suggest that an alternative platform to SiteScape would have to be much more than ‘merely’ another document sharing forum in order to truly appeal to the students and the students would have to get detailed information on the ways in which the interactive platform may enhance and harness learning outcomes.

A very different challenge is posed by the student comments in regard to questions that focus on Moodle as a learning facilitating platform – here student comments suggest that learning processes are not a concept that the students seem to care much about even though they were in fact introduced to learning processes in the course: “Getting access to video recordings or simply sound recordings (in MP3) is certainly the best way to enhance students' learning experience. Having sound recordings available for download would be very straightforward to implement”, “Relevant jobs that match course/education level??”, “The idea behind Moodle is not that you should learn anything. Moodle needs to be simple and effective so you have more time to study”.

Comments of this kind seem to suggest that in order for an electronic platform to function as an ‘active ingredient’ in the learning process, very different requirements should be placed in the design, facilities and applications offered in the platform.

## Case 2 - StudyBook

Learning platform experiments such as the StudyBook experiment (Mondahl et al. 2009b) show that platforms may be designed that support interaction based functions of collaborate writing from the early stages of assignment work where peer evaluation and learning log functions serve the purpose of enhancing learning outcomes.

In the StudyBook platform, which has been designed to facilitate case-based foreign language learning, the key to student activity and motivation

is an integrated part of the platform design. A flow is created in which the students fill in learning logs as an obligatory part of uploading group and individual assignments and wiki features are easy to operate and track. Further analyses need to be carried out on this platform as well and learning outcomes need to be measured both quantitatively and qualitatively, but preliminary test results from the Autumn 2009 semester show that students who engage in learning via an online, synchronous, collaborative platform perceive their learning potential differently from the students who were exposed to the Moodle platform.

The students, who were involved in this study, were first year BA-students in the English and Organizational Communication programme (EOK). The particular course selected for the study was an oral communication course, whose written element focused on the production of presentation slides. Presentations were made group-wise and the students had to agree on procedures, selection of information, content relevance, levels of formality, etc. This means that focus was on preparatory discussions, the exchange of information and problem-solving techniques in peer groups.

### **The teacher perspective**

In order to facilitate deep learning (Biggs 2003), it was essential that the students were given a platform that focused on collaboration, written interaction and knowledge sharing. Additionally, it was essential that they were given an individual forum for group work, as the course consisted of obligatory presentations to be carried out in groups of five, for which reason they needed a place to discuss individual issues related to the assignments.

The platform was structured on two levels, whereby all students were granted access to two forums. The first forum was based on teacher input and dialogue with students and among students. The second forum consisted of individual group forums, which the teacher could also look at and provide individual feedback when necessary. This ensured more focus on the students' individual learning processes, strengthening the overall learning outcome. This result of this was also shown in the students' evaluation of the course.

In terms of facilitation foreign language learning processes, a number of Web 2.0 applications were used in order to expose the students to as many types of communication as possible, out of which the blog and wiki applications were the most successful with regards to facilitating collaboration across time and place. Moreover, even though the course focused on oral communication, a number of students actually used the wiki-application without any instructions, showing that we are now dealing with 'digital natives' that are used to working with Web 2.0 tools, e.g. when using Facebook, LinkedIn, etc.

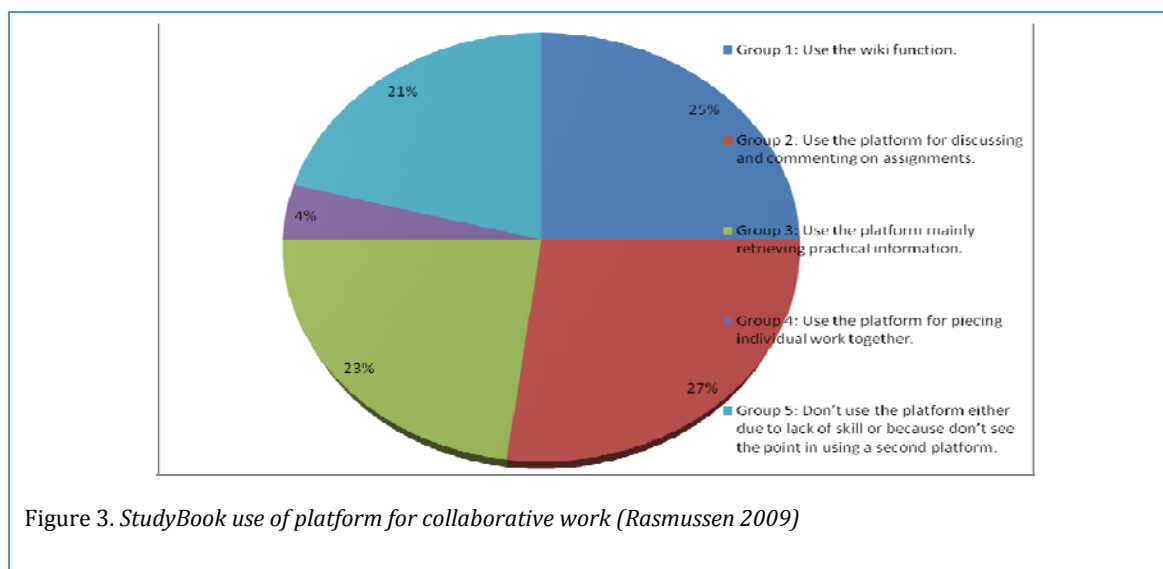
Another aspect worth mentioning was the close contact the teacher had with the students during the course. By means of the blog, a number of students asked questions after class, potentially strengthening the learning outcome for the group of students that might otherwise belong to the 'silent majority'. It became obvious during the course that an increasing number of students approached the teacher online with questions relating to the course, thus minimizing the teacher-student distance.

Ultimately, the learning platform provides students with a possibility to interact in new and exciting ways, whereby it becomes a ludic form of learning that seeks to increase student motivation. Additionally, students are forced to work with a set of Web 2.0 tools that are also present in the business environment thus enabling them to enter a flexible and dynamic labour market with enhanced IT- and interpersonal communication skills.

### The student perspective

The study focused on the students' perception of the platform, their use of its collaborative elements and this was documented through a questionnaire which was distributed to the students at the end of the course. This data was supplemented by general course evaluation carried out by CBS and with exam grades in order to obtain both qualitative and quantitative data. The total number of respondents was 65.

Figure 3 shows that approximately 50 pc of the respondents have used the platform for collaboration and discussion and comments to assignments, but also that a large group of the respondents have only used the platform for retrieval of information and that one fourth of the respondents have not used the platform at all. This may be due to the fact that the platform was an add-on platform to the mandatory platform – SiteScape – used by the students and that some of the students were potentially less 'digitally native' than assumed.



In regard to the question of which issues in assignment work the students have focused on, it is clear from figure 4 that a discussion of the final solution together with content issues have been the major areas of knowledge exchange, whereas language problems per se have been at the centre of information sharing and problem-solving in 13 pc of the work. This indicates that focus is on discussing the final solution to the assignment. It is not clear how many versions the students have worked with in order to reach the final solution, but the 32 pc figure relating to the discussion of content together with 6 pc related directly to vocabulary may indicate that pragmatics and discourse issues have been part of the students' problem-solving approach. The data is not clear in regard to the order in which these discussions have taken place and further research into the students' wikis is necessary in order to highlight this.

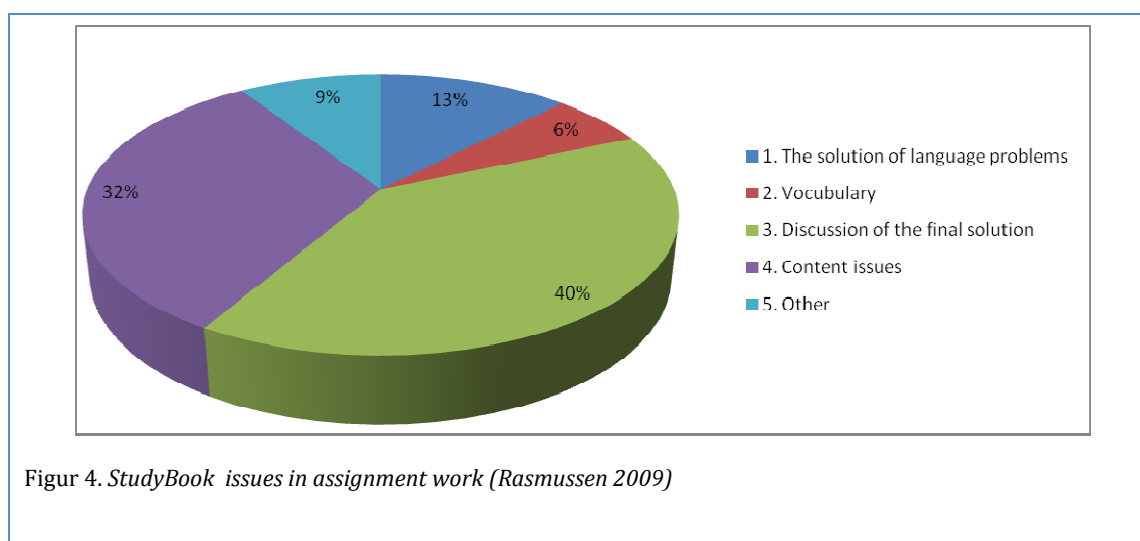
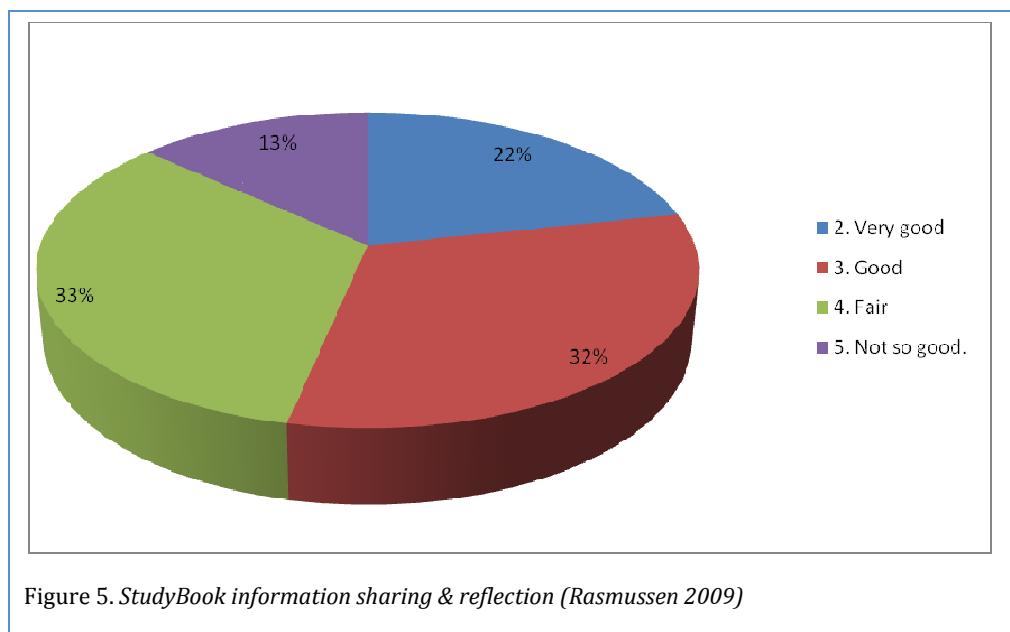


Figure 5 shows the degree to which students believe that the platform has enabled them to provide room for reflection and sharing of information with fellow students. Here it is interesting to note that no students consider the platform 'excellent' but 54 pc of the students rate it as 'good' or very good' and 46 pc are not quite happy with it. Again, it seems as if students are looking for easy options; collaboration requires preparation, the willingness to participate in a process and also the knowledge that learning is facilitated in this way and may be acquired efficiently and with long-term effects. This part of university pedagogy needs to be part and parcel of learning strategies and is clearly an element of instruction that has not been sufficiently stressed.



## Towards a 'pedagogy 2.0'

If we take another look at the students' comments in regard to the learning process put forward in the Moodle questionnaire (Case 1), they lead to the essential question of how universities may counter this 'customer attitude' towards learning and university studies that is revealed here and in other programme evaluations at CBS.

CBS in 2009 decided to make Moodle the official CBS Learn platform; however, as demonstrated in this article, Moodle has a number of limitations in that "E-learning er et emne som har lige så mange fortolkninger som installationer, hvorfor Moodle ikke må forstås som et E-learning system. Deres definition går da også på Learning Management System, som dækker over kursus-administration. LMS kan på den måde fortolkes som et CMS for kurser, som tilbyder virksomheder og universiteter en nem måde at strukturere deres kurser og disses indhold" (Henrik Thorn, IT-Kartellet ApS).

One answer to this could be the development of a 'pedagogy 2.0' to interact with the many possibilities offered by the many existing electronic platforms and those under development in combination with didactic practices that support insight, collaboration, individual development and learning. The following will address both the web 2.0/social media dimension and offer suggestions for relevant didactic practices.

### The strong case for social media

Social media could be said to have entered the university environment through the back door in the sense that students' high degree of familiarity with these media turn them into a relevant choice for university teachers in

their search for tools that offer the students something that they may relate to. Features such as wiki-based collaborative working and editing environments and group focus are natural elements of learning for today's learners and therefore make a strong case for using social media interaction as the starting point of building online learning platforms. Furthermore, blogs may serve the purpose of learning logs, which support learning and reflection. However, in order to design new learning platforms that enhance the learning experience, it is essential that educators plan and conceptualize the pedagogical principles, associated tools and strategies that enable them to test their assumptions according to specific learning objectives. Preliminary studies have emphasized the need for a collaborative platform that supports and enhances foreign language learning processes, which are inherently social and individual at the same time (Ingstad & Mondahl, 2009). Results from preliminary studies also indicate that learners who are exposed to digital platform collaborative processes focus more on ensuring information transfer and on discursive and pragmatic conventions in a foreign language assignment than students who do not collaborate early on in a problem-solving task.

Web 2.0 based/social media applications that could be used for university teaching purposes include online chat forums, wikis, blogs, social networking sites that make knowledge sharing easy and unobtrusive for the individual. These types of applications facilitate communication, sharing of information and online socialization. Web 2.0 social applications may be a facilitator for the exchange of items of interest such as: bookmarks, business contacts, music, videos, photos, articles, views etc. Using Web 2.0, users may easily express or share their opinions, 'think by writing', seek others' opinions and feedback and be connected with the others. Web 2.0 applications facilitate social processes, communication, online interaction and eventually enable social learning where emphasis is on collaboration, debate, critique and peer review.

According to Geyer et al., 2008, contextual collaboration seamlessly integrates content sharing, communication channels and collaboration tools into a unified user experience that enables new levels of productivity. Web 2.0 applications integrated in learning platforms may be used to develop innovative techniques for collaborative working processes and learning. Additionally, empirical research has already emphasised that collaborative learning is beneficial, as it leads to engagement in productive processes of knowledge construction. However, it should be remembered that at the end of the day individual student perception of a platform determines the success or failure of implementing social media enhanced learning.

Ultimately, personal knowledge management becomes possible and thus individualization together with collaboration, whenever this is called for,



becomes a motivating factor that enhances knowledge acquisition, deep learning and student performance. It enables learners to optimize their management of knowledge, as they are able to reflect upon their knowledge during the creative process. Finally, it is particularly interesting in terms of foreign language learning, as the acquisition of effective problem-solving, self-directed learning and team skills is probably more important than the content learned (Barrows, 1998:631).

**Cultural/communicative learning and social media – another strong case**  
Cultural/communicative learning has been the subject of study for decades and much knowledge exists in relation to the acquisition of foreign languages by children, teenagers and emigrants. However, studies of the acquisition communicative competencies by adults are often not subject to intense study. The progress that may be measured in research projects, the learning outcomes that fall between purely linguistic learning and knowledge of a particular subject, are difficult to identify as they are characterized by the double-competence nature of the learning. Research projects may address the reshaping and restructuring of communicative knowledge and test interactional hypotheses (Gass, 2007), but the search for ‘the unknown’ and the isolation of key elements in adult (foreign language) communicative learning for professional purposes remains relatively unknown. One means of getting closer to ‘the unknown’ is the monitoring and tracking possibilities offered by social media – tag clouds may reveal students’ mental picture of what they are dealing with and digital learning logs with questions that focus on communicative and non-communicative knowledge acquisition may highlight processes in learning and routes taken by students towards new insights. Social media therefore contribute not only to student learning, but also facilitate research.

### **Collaborative learning**

As stated above, it is assumed that collaboration supports learning as well as foreign language learning processes as it requires intake, verbalization, argumentation and monitoring of output. Cultural/communicative learning is inherently coupled with interaction with learning taking place as a result of problem solving being carried out via hypothesis formation and testing. If this is done at group level, students may feel confident to phrase their doubts, their knowledge and enhance their proficiency through discussions with peers. Educators may function as facilitators to these processes, provide feedback and monitor group progress and they may assess assignment quality at both written and oral levels. If collaborative learning is based on multimedia formats this will enable a variety of teaching materials to be uploaded by teachers and students and if student activities are centred on case work, motivation and involvement will lead to students’ taking in new knowledge.

One way of establishing collaborative scenarios is through designing Web 2.0 applications. Even though these applications are promising for use in the educational setting, more considerations and evaluation studies are needed in order for a 'pedagogy 2.0' to be established (Benson, 2008). Web 2.0 social software may be approached from different perspectives: as a new social media tool, a facilitator of new forms of interaction and knowledge sharing (Kirchner et al, 2008), enabler of personal information and knowledge management tools and new didactic tools that facilitate interaction and social processes. Initially, the different functionalities of a collaborative learning platform, e.g. wikis, blogs and the associated assignments that the students will complete seek to strengthen the analytical intelligence of the students as learners are fostered to engage in processes that focus on abstract thinking and logical reasoning, referring more specifically to the common core of intellectual processing skills to solve problems (creating declarative knowledge). Additionally, this will strengthen their abilities to monitor language use and allocate attentional resources, which are central elements of adult foreign language learning.

### **From Blogs to Learning Logs**

Traditionally, blogs are textual, but they vary widely in content. They can be devoted to politics, sharing opinions, news, or technical issues, whereby students can demonstrate critical thinking, take creative risks and make sophisticated use of communication skills (Duffy, 2007). The hypothesis behind the introduction of learning logs is that this activity supports verbalization of retrieved knowledge, it allows educator feedback and it facilitates student retrospection for learning enhancement. It is a tool for meta cognition – for understanding and monitoring personal intake of knowledge and it may facilitate restructuring of unsuccessful problem solving strategies. It is a close-up of recent learning processes – or the lack of the same – and correlates well with our general perception of the creative construction processes as one of the central features of successful adult cultural/communicative learning.

In the StudyBook context, blogs are used to reinforce communicative processes and create a forum for students to reflect on what and how they learn. In order to know more about efficient learning, *learning logs* that track progress, obstacles, successes or lack thereof are very useful tools both for the learner, for the educator and for the researcher. The purpose of the learning log is twofold: giving the learner an insight into his/her own processes and own problem solving strategies, difficulties overcome and new challenges that must be met and giving researchers and lecturers insights and new data on learners' processing of a foreign language in a multifaceted process that involves both foreign language acquisition and the intake of non-communicative information. This information is of the utmost importance for the learner who is given access to own learning and thinking style characteristics, reflection on own cognitive processes and to

the researcher/educator who is provided with valuable insights into what works and what does not work for the individual learner and for a group of learners. The learning log is designed as part of a flow which is built into the learning platform; this means that the student cannot progress beyond a certain problem solving task – e.g. an assignment – that must be completed and handed in for evaluation.

Reflection is only possible based on declarative or semi-declarative knowledge as the processes behind the application of procedural knowledge will not surface during task completion. In other words: the researcher and the student are able to track the types of knowledge brought into play and the successes and failures of the application of these types of knowledge. Furthermore, the learning logs will reveal the students thinking styles as verbalization on methods chosen will be available for both user groups.

### **Case-based language learning and foreign language learning**

Following the argumentation above on the relevance of collaborative processes, knowledge sharing during task completion and foreign language learning theory, there is a need for establishing an environment that encourages these processes. One answer to this is to utilize the case format, although this format has not traditionally been used in language learning per se, but rather as a means to solve interpersonal and business oriented problems. ([www.hbsp.harvard.edu](http://www.hbsp.harvard.edu))

Traditionally, business cases have been used to highlight and discuss decision making processes, to address problem solving procedures and discuss issues in leadership and management. Didactic platforms that utilise case-based material are well-documented success stories that enable students to learn through inductive reasoning that may be compared with expert solutions, as in Harvard Business Cases<sup>4</sup>.

Research has shown that if students work with communication problems in an electronic case environment, they become more motivated for collaboration, resulting in successful planning of communication (Ingstad & Mondahl, 2009; Mondahl et al., 2009). In more traditional learning environments where case work is limited to the simulation scenario and where no collaborative services are offered early on, process-oriented information sharing and learning are very limited. This suggests that learning may be efficient, if the students' attention is focused on communication oriented problem-solving in collaborative environments. Thinking and learning styles as proposed by i.a. Sternberg are key elements in this process.

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<sup>4</sup> [http://www.hbsp.harvard.edu/hbsp/case\\_studies.jsp](http://www.hbsp.harvard.edu/hbsp/case_studies.jsp)

Cultural/communicative learning with cases means that focus in the case is on decoding messages, constructing and producing new texts and on successful communication and dissemination of information – activities that all call for know-how types of knowledge. For these elements to be featured in a case, problem solving and the establishment of new language related knowledge is key to success. The case needs to concentrate on competences related to cultural/communicative strategies that will assist the learner in understanding and producing the best communication possible – either in written or spoken text form.

## Conclusions and perspectives

Initial hypotheses related to creating a learning platform for university students in the 21st century with a special focus on knowledge construction within the areas of international corporate communication and foreign language competencies were that the “digitally native” students will be motivated and thus educationally challenged and inspired to take in new knowledge through the use of social media or Web 2.0 based learning platforms. Research has documented that collaborative learning is efficient, that case-based problem solving tasks foster deep learning rather than surface learning, that knowledge sharing and knowing when and how successful solutions may be reached enhance successful learning outcomes, i.e. students are enabled to perform better and learning is harnessed in environments that support these activities. Such environments are offered by learning platforms that are adapted to course specific needs.

Still, the two cases discussed in this article do not necessarily indicate that technological solutions are the answer to all students’ prayers and to all learning in the 21<sup>st</sup> century. A host of other factors may influence student motivation, e.g. exams, future career perspectives, the perceived relevance of the university course in question and the use of a platform in the given situation. One factor influencing student motivation may be individualization, which seems attractive to most students as a contrast to the ‘one-size-fits-all’ model of earlier times, and which is facilitated through social media enhanced learning platform. This would be a topic for further research.

Today the situation is one of a number of platforms that are more or less generic – the more generic, the more adaptation to individual learning objectives and course requirements is needed. This is where the Moodle platform seems to fall short as it does not seem to facilitate synchronous, online interaction but rather seems to facilitate document sharing and more asynchronous activities such as case download and course materials sharing, thus supporting the perspective of the student as ‘customer’ rather than as a learner. Moodle “should not be seen as an E-learning system, but rather a Learning Management System, which covers course

administration. That way LMS may be seen as a CMS for courses, which offers business organizations and universities an easy way to structure their courses and the contents." (Thorn, 2011). The StudyBook platform, on the other hand, has been tailor-made to suit cultural learning in combination with corporate communication and therefore suits the learning processes better. Its adaptability to other courses is high, and so each course planner may start from scratch with designing his or her own course to suit his or her specific requirements, just as students/student groups may add or design their own spaces and apps.

The other challenge that needs to be addressed is that of establishing a 'pedagogy 2.0', which will first of all be able to use the many dimensions offered by web 2.0 based teaching and learning platforms and which will also be able to motivate students to contributing actively to their own and their fellow students' learning process by making use of didactic practices and blended learning strategies that support these very strategies and aims, e.g. by means of case-based or problem-based learning, knowledge sharing and collaborative learning. These didactic practices may be supported by using a variety of the features offered in today's social networks and platforms, e.g. wikis, blogs, learning logs and uploading to links, video clips, sound bites etc. The ultimate aim of working in a 'pedagogy 2.0' environment would thus be to facilitate the students' development of deep learning and competence development.

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