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Use of blended learning in workplace learning

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Abstract

In 2014, a new system has been put in place for the inspection and approval of social welfare institutions in Denmark. In as little as 10 weeks, 330 new employees in five regional centres participated in an introductory course, designed as work place learning with extensive use of e-learning and IT-based teaching materials. This paper presents the experiences of this particular project, and goes on to discuss the following points:

- The blended learning design – use of IT for teaching, learning and communication
- Digital learning materials – principals of design and use
- Work place learning and learning from work – the interplay between experiences of the learner and the curriculum of the program
- The approach taken to customising the e-learning design to the needs and demands of a particular case.

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1. Introduction

In January 2014 new legislation on inspection and approval of social welfare institutions (in Danish “Socialtilsyn”) was passed by the National Danish Parliament. The political motivation for this change in legislation was to increase the uniformity in the work practices of existing inspectorates; to improve the quality of the process of approving and supervising social welfare institutions and foster families. The new legislation is described as one of the largest reforms in the social welfare area for many years. To support the intentions in the new law, five

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regional centres for the inspectorate were established, and furthermore new procedures for carrying out the inspections and supervision were developed. An introductory course was designed for the app. 330 new employees of the five inspectorate centres. The course was to take place as work place-learning, and begun at the time the new inspectorates came into function (early January 2014). Some employees had been working within this field before, and some were new to the work. The most important goals for the course were:

1. To support a national standard and common practice in the inspection work carried out
2. To facilitate national networks between the professionals
3. To create a flexible learning environment to support collaboration across local sites
4. To create a learning environment suitable for independent study.

1.1 Blended learning in adult and further education

Workplace learning is becoming an increasingly important aspect in adult and further education, both as an arena for authentic learning; as a way of organising flexible work-related training; as well as a business model for institutions offering further education. In response to the need for flexibility in education, information and communication technology (ICT) is increasingly used to support the learning designs in work place-learning. Such designs take various forms, most commonly as ‘pure’ online-courses, face-to-face teaching supported by digital learning materials, and blended learning designs with a mix of the various forms. In the introductory course for social institution inspectors, a blended learning design was chosen.

In order to fully understand the concept of blended learning, we also need a definition of e-learning. For this purpose, we draw on the definition suggested by Littlejohn and Pegler: “E-learning requires a broader range of e-activity. It is about the process of learning and teaching using computers and other associated technologies, particularly the through the use of the internet” (Littlejohn & Pegler, 2007:17). The term *blended learning* is widely used, and often it is used to describe a number of different concepts or situations. In summary, the term is used in four typical ways:

- A combination of different web based technologies to achieve a pedagogical or educational goal;
- A combination of different pedagogical approaches to achieve the optimal learning outcome (with or without the use of ICT);
- A combination of any kind of teaching technology with teacher-initiated face-to-face interaction;
- A combination of teaching technology and authentic work tasks to achieve a balance between learning and work (Georgsen, 2004 (*authors’ translation*)).

1.1.1 Definition of blended learning

In this paper, when we talk about blended learning, we understand it to be a combination of instruction, both methods and delivery media from two archetypical learning environments, the traditional face-to-face teaching and learning environment and an ICT-mediated or e-learning environment (this is similar to the summation of several definitions made by Graham and Allen, 2009).

Blended learning offers both advantages and challenges for participants. It is flexible in regards to time and space for the learning activities which suit the needs of many adult learners. This increases the availability of adult education and training, thus making learning possible for more people, e.g. in rural areas far from teaching institutions, or people in part time or even full time jobs. The use of blended learning also holds the promise of building networks between participants which can serve as important support for lifelong learning. Some challenges, on the other hand, may work as obstacles for participants. One is the increased ‘burden’ of learning that comes with

the need for basic IT-literacy and skills of online-communication, etc. Furthermore, not only learners, but also the teaching staff need training in order to facilitate online-interaction and learning, as well as production of high quality digital learning materials.

1.2 Why blended learning?

Blended learning offers both advantages and challenges for participants. It is flexible in regards to time and space for the learning activities which suit the needs of many adult learners. This type of flexibility increases the availability of adult education and training, thus making learning possible for more people, e.g. in rural areas far from teaching institutions, or people in part time or even full time jobs. The use of blended learning also holds the promise of building networks between participants which can serve as important support for lifelong learning. Some challenges, on the other hand, may work as obstacles for participants. One is the increased ‘burden’ of learning that comes with the need for basic IT-literacy and skills of online-communication, etc. Furthermore, not only learners, but also teaching staff need training in order to facilitate online-interaction and learning, as well as production of high quality digital learning materials.

In this particular case, the introduction course was developed in collaboration between three university colleges and the department of social affairs. The learning design, particularly the use of ICT for instruction, communication and learning, was led by VIA UC. A user oriented approach was chosen in order to accommodate the needs of the learners as well as the pedagogical preferences of the teaching staff. As part of the user centred approach, a group of so called ‘resource persons’ was put together to work with the group of developers for a period of two months before the course began. This group of around 20 experienced practitioners tested elements of the learning design, both some of the study tasks, the online-collaboration, as well as examples of the digital learning materials. The group met with the developers group a number of times, and their experiences and feedback were collected through conversations as well as through a systematic evaluation.

1.3. Challenges in customised (e-)learning design

The approach taken in this project aims at developing a customised design, meaning trying to meet as many as the specific needs and requirements of the users in the design solution. In VIA University College, the usual approach towards IT supported teaching and learning is a standard solution designed to fit the needs of the vast majority of the bachelor programmes in VIA. One learning management system (LMS) is in use in all programs. This IT-system is designed and supported by a centralised IT-unit, and all students and teachers have a personal account and email account to this system. It is used for distribution of information, teaching schedules and materials, for assignments, and for communication between teachers and students. In all of VIA’s study programmes the system looks the same, has the same functionality and user interface, and as such can be labelled a ‘standard system’. This is a common situation in many educational institutions, and has the advantages of stability, professional support/help desk, and good integration with other standard tools in the institution. In the field of further education, however, the conditions are different in a number of ways from those in bachelor or master programs. The most significant differences are:

- The extent and duration of the course or program. In short courses it is important that the use of IT does not take up unnecessary time or requires too much attention
- The need for user-oriented design is bigger in further education, as the groups of participants, the contents, the ways of teaching and studying often vary greatly across different courses
- The need for user-orientation means that the organization holds the capacity to design and support a variety of solutions/designs for learning support
- Participants in further education and workplace learning usually identify with the teachers they meet, rather than with the teaching organization itself. This means that the teachers, in addition to being professional teaching and

content experts, also need to have sufficient IT-proficiency to assist learners with the most urgent IT-problems they may encounter.

Thus, use of online and blended learning in further education and workplace learning put demands on the organisation to produce adjustments of existing designs and in some cases to develop new designs, often in short time. In order to maintain the position of the teaching staff as pedagogic and content experts, it is also important to focus on ways of integrating the pedagogical knowledge of the teachers into the design work. In this project, a user oriented methodology for learning design has been tested. Learning design is defined as the methodology that enables teachers or designers to make more informed decisions in designing learning activities and interventions, which are pedagogically informed and make effective use of appropriate resources and technologies. A key principle of learning design is making the design process more explicit and shareable. Learning design as an area of research and development combines gathering empirical evidence to understand the design process and the development of a range of learning design resources, tools and activities (Conole, 2013). In this paper, the specific learning design is described in section 2. However, a deeper analysis is not included.

1.4. Structure of the paper

This paper will describe how the issue of user oriented design has been dealt with in the case of ‘Socialtilsyn’; what measures were taken in terms of staff development and organisational support; and what the main challenges and experiences were of the learners. We conclude the paper with recommendations for use of blended learning in workplace learning. The structure of the paper is as follows: After this introduction, a more detailed presentation of the case is given (section 2), followed by a short methodology section (section 3). In section 4 we present the preliminary findings and lessons learned from the project, followed by conclusions.

2. The case of social inspection (‘Socialtilsyn’)

New legislation governing the area of social welfare institutions in Denmark was passed in the Danish Parliament in 2013, and in August 2013, an introduction course for employees in five regional inspectorates was put out to tender by the Department of Social Affairs. A consortium consisting of three university colleges won the bid, and the work started in September 2013. The task was to design, produce, run, and evaluate a part time-introduction course for app. 330 participants who would all be in jobs at the time of the course. The inspectorates came into function from January 1st 2014, and the introduction course took place from January 9th to March 27th. The aim of the course was mainly to give an introduction to both the overall principles as well as the specific content of the changes in the legislation, and the consequences these have for the future practices of social inspection. There are 5 central themes in the new legislation:

- A more professional and independent social inspection system
- A more systematic use of knowledge and research in the inspection process
- Putting the citizen first
- All social welfare institutions, foster families, and outpatient drug rehabilitation are all to be approved by the new inspectorates
- A stronger focus on economical stability in the welfare institutions

In the words of Department of Social Affairs, the main purpose of the legislation is to establish competent, professional, systematic, homogenous and independent units to handle the responsibility of the inspection. One of the main goals was to establish new work practices founded on the new legislation. One of the ways to obtain a better quality in the area was through education. The new inspectors were to be trained in order to secure that the political intentions were carried out in practice and implemented into new ways of carrying out inspections. It was

decided that the approximately 330 inspectors should participate in an introductory course across five regional centres to support implementation of a national standard in the new inspectorates. In the past, the inspection practices were found to be too locally adjusted, which was seen as a threat to the security of the citizens and users of the social welfare institutions. The government wishes to secure the same measures of quality across the country, as well as provide transparency into the inspection process and criteria for approval.

2.1. Learning goals

The overall learning goals for the participants were:

- Solid knowledge of the so called Quality Model, which describes quality in social welfare institutions
- Knowledge about the background for the reform and the values embedded in the new legislation
- To be able to carry out data-based evaluations of social welfare institutions
- To establish national networks between the inspectors (partly as a counter measure against establishment of (new) regional practices)

2.2. Learning design

The content of the introduction course was designed to mirror the progress in the inspection process. As mentioned above, the course was designed as blended learning, and consisted of four face-to-face seminars and three online periods in which the 30 participants were divided into 31 study groups across the 5 regional centres. This meant that on the first seminar, participants were divided into study groups of around ten people, and that study groups consisted of people who had met only once before the work began. The participants worked in the same groups throughout the entire course. The fact that group members were new to each other turned out to be quite a challenge to the online collaboration on the assignments in the course.

The four one day-seminars which took place face-to-face contained instruction and training within the new legislation and its implementation into the inspection practice. There were two national seminars, where everyone participated (kick off and closing seminars), and two regional seminars which took place at each of the five regional centres (see figure 1 below for an illustration of the course structure). The role of the teachers were to deliver appropriate presentations and training exercises in order to build a foundation for the participants upon which they were to develop new inspection routines and practices. The teachers were experts within their field and therefore the introduction course operated with a set of different content experts, e.g. the new legislation, finances, methodology for data collection, etc. The different experts matched the demands of the leaning objectives of the introduction course.

To meet the general learning objectives, several subsidiary objectives were identified. One important consideration was to reflect the progression in the inspection process in the themes dealt with in the seminars, and the order in which themes were introduced. The structure of the course is illustrated in figure 1 below.

Kick off seminar Welcome Introduction to legislation Introduction of assignment 1 Workshop in groups Networking	On line period 1 Case work 1 Group work Independent study Assignment 1	Face-2-face day 1 Presentations by teachers Discussions Question & answers Group work	On line period 2 Feedback on assignment 1 Independent study, reflections Case work 2 Assignment 2 Exercises	Face-2-face day 2 Presentations by teachers Discussions Question & answers Group work	On line period 3 Feedback on assignment 2 Independent study, reflections Case work 3 Assignment 3 Exercises	Closing seminar Presentations by experts and teachers Workshop in groups Networking
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Fig. 1. Overview of the introduction course

2.3. The virtual learning environment

During the course, participants worked both individually and collaboratively (in their study groups). Teaching took place both as lectures at the face-2-face seminars and as group supervision/tutoring online. In the lectures, content experts gave presentations within their areas of expertise. In the kick off seminar, lectures were given to all participants at once, while the regional face-2-face days were attended by app. 30 participants at a time. The online study work was supported by an online facilitator (a person from the group of teachers; each facilitator would work with 3-5 groups), whose job it was to make sure the study groups carried out the tasks of the online activity in question. The facilitator's job was also to encourage to equal contribution of the work in the groups, and to help the group with any content related questions they may come across. Teaching materials, reading materials and other resources for the participants were made available on the online learning environment "StudyNet". The interface and functionalities of StudyNet were designed specifically for this course, and the system performs a number of functions:

- Distribution of information and teaching materials
- Communication between participants (learners as well as learners and tutors)
- Access to teaching and learning resources
- Repository for assignments, reading materials, etc.

Materials were presented as text, audio, video, and links to external websites. StudyNet was organised with a front page which would contain information relevant to all participants, and three thematic areas, matching the three main working areas for the inspectors ("Adults"; Children and Youth"; and "Foster Families"). In each thematic area were a number of sub-pages with working spaces for each of the study groups. In each working space was an on line forum for discussion within the group (and with the facilitator), a shared file space for exchanging and sharing all types of files, the current assignment, and a space for handing in assignments. Support for use of the e-learning system was offered in the form of video- and audio-based instructions, and a hotline was set up for the participants which could be accessed via any email as well as from within the e-learning system. StudyNet is a web-based system which can be accessed from any computer connected to the Internet. Participants were expected to work on the course during the day from their offices; however, the learning materials were available to them at any time.

The overall design principles for StudyNet were to focus on the tasks and needs of the participants, thus making information and materials accessible to them in a way most fitting to the tasks they had to carry out. The 'easy-at-hand' principle also applied to the on line-support, the content of which was contextualised in such a way that information was always relevant to the specific page where it could be accessed. The fairly simplistic design, the consistent use of colours on buttons and (sub-) pages, the multimodal communication, and the easy access to support were all factors contributing to ease-of-use for the participants. As part of the design process, eight future participants in the course were invited in to test the design, and their feedback was taken into consideration in the final version of the design.

3. Methodology for case study

The main research question in our study is: ***What are the most important factors for successful use of blended learning in workplace learning?***

In our study, we look at a number of issues, among these are: The experiences of the participants; the ways in which work and learning has been balanced by themselves and by their managers; the collaboration between participants; and the role of digital materials in the learning process. For the purpose of studying the case of 'Socialtilsyn' and the use of blended learning in the course, collection of data has been planned and is currently going on. We have four main sources of data:

1. Evaluation survey collected from all participants at the end of the course (on March 27th at the closing seminar)
2. Interviews with 6-8 small groups of participants (to be carried out in April 2014)
3. Interaction data from StudyNet, e.g. dialogues in the work spaces, communication with the on line-support, etc.
4. Documents, e.g. assignments, study materials, etc.

At the introduction course ended only one week ago, the data has not yet been analysed. We have carried out a preliminary analysis of some of the interaction data from StudyNet, which indicate that 50% of the groups were active on line, whereas the other 50% were passive. At this point, we have no data which can explain this difference in on line-activity. The remaining part of the data collection and analysis will be designed to further exploring this question. We will report on the findings in a later paper, planned for journal publication. From the study, we aim to learn more about the importance of user-oriented design in blended learning overall.

4. Preliminary findings

- During the course, a number of observations were made by teachers and by ourselves through our interaction with the participants.
- After securing that everyone could access the digital learning environment (StudyNet), a fairly low number of emails to the on line support indicates that participants in general found StudyNet easy to use and navigate.
- It turned out that a huge challenge to the entire learning design came from the context and situation of the participants. Members of the study groups had very limited if any at all personal knowledge of other group members. This meant that participants in many cases demonstrated what looks like a rather low sense of commitment to the group work. As a result of this, we observed very little online activities in some groups. Preliminary analyses show that some study groups with very little on line activity handed in poorly prepared assignments or none at all, and others gave up along the way. In the study groups which completed the online activities, did so due to the commitment of the group leader, who managed to keep up the spirit of the other team members.
- Furthermore, we realised that the day-to-day reality of work in the five regional inspectorates got the upper hand compared to the on line activities of the course. In the inspectorates, the inspection work began from day one, which led to a full work load with ongoing cases. For some participants this meant there was little or no time left to participate in the online activities.

5. Conclusions

Based on our preliminary analyses and observations, we recommend that more time is dedicated to informal interaction (preferably face-2-face) at the beginning of a blended learning course. This will create a better foundation for the on line collaboration during the course. Furthermore, the experiences from this course seem to confirm previous findings that workplace learning requires a suitable balance between learning and work; one which management need to create. The use of an easy-to-use virtual learning environment has supported the establishment of a national network between the inspectors. From the interaction between inspectors across the country, attention was drawn to areas in the new legislation which need further clarification and operationalisation. We see this as an example of the value of creating a national network of inspectors.

References

- Conole, G. (2013). *Designing for learning in an open world*. New York: Springer.
- Georgsen, M. (2004). Quality and flexibility in netbased learning: An introduction. In: Georgsen, M. and Bennedsen, J. (eds.): *Flexible learning and teaching: Experiences, consequences and possibilities with ICT* (in Danish: *Fleksibel læring og undervisning. Erfaringer, konsekvenser og muligheder med IKT* (pp. 9-23). Aalborg University Press.
- Graham, C.R., & Allen, S. (2009). Designing blended learning environments. *IGI Global*, 562-570.
- Littlejohn, A. & Pegler, C. (2007). *Preparing for blended elearning*. London: Routledge.
- www.retsinformation.dk (Legislation, in Danish)
- www.socialstyrelsen.dk (On line resources for inspectorates, in Danish)