

Best practices of blended learning in continuing professional development

*Business Academy SouthWest, Denmark
Bremerhaven University of Applied Sciences, Germany
DOB Academy, The Netherlands*

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This article focuses on the use of blended learning in continuing professional development, like an MBA. The purpose of it is to uncover current best practices of blended learning in continuing professional development in order to benefit from the advantages and avoid the pitfalls of blended learning when designing new courses.

As learning technologies develop constantly, this article covers papers, reports and recommendations published since 2005. It covers relevant insights written in English and Danish from textbooks, reports, peer-reviewed papers, websites and guidelines on blended learning.

The paper is structured due to Hiim and Hippe's didactical model (Hiim and Hippe (1997) p. 70-78). The model is made by two Norwegian learning experts, Hilde Hiim and Else Hippe. It consists of 6 didactical categories that are interdependent and must be considered when analysing or designing teaching. The six categories are:

- **Learning objectives:** Purpose and direction of the teaching and the students' learning.
- **Content:** The modules, subjects, topics, knowledge etc. included in the course
- **Student:** Students' learning prerequisites, interests, technical skills, expectations of the course, educational level, cultural background etc.

- **Framework:** Laws and regulations, culture, the teacher, IT infrastructure, IT equipment, IT programs, number of students etc.
- **Process:** Learning activities, teaching forms etc.
- **Evaluation:** Evaluation of the students as well as of the course.

Learning Objectives

The learning objectives describe the purpose of the course. What knowledge and skills must the students require? According to Hiim and Hippe (1997), the objectives are closely connected to the other categories of the didactical model.

Both Hovis (2012) and the Centre for Digitally Supported Learning at Aalborg University highlight the connection between the goal and the process. They both recommend that learning goals are defined initially after which suitable learning activities are chosen.

Content

The content is what the teaching is about and is closely related to the learning objectives. What facts, theories, concepts, principles, ideas, skills, values etc. do you want your students to know and master?

More authors highlight the connection between content, the learning objectives and the learning process:

Smith & Keaveney (2017) argue that the design of the learning process depends on whether the content is technical or strategic. *Technical* courses focus primarily on problem-solving tools and methodologies. The overall goal of technical courses is to help students learn how to use particular tools, formulas, algorithms or methods to solve problems. Modules in a technical course should be comprised of a series of short, intensive, self-contained learning units, each with precisely articulated objectives, tasks and outcomes (Smith & Keaveney, 2017, 85-87).

Strategic courses focus primarily on teaching theories, models and frameworks. The central problem may not be well defined, relevant information may be missing and answers are neither precisely correct nor incorrect. The overall goal of strategic courses is to help students learn how to analyse, synthesize and evaluate imperfect information, make decisions under uncertainty and generate creative solutions. Strategic learning does not progress in a linear fashion. Strategic knowledge is relational rather than sequential; information is related by topic, not intrinsically prioritized. (Smith & Keaveney, 2017, 86-87)

Adams (2010 and 2014) distinguishes between first and second generation e-learning. First generation e-learning is technology-driven, the modules are presented in a specific order, the instructor is in control of the course, evaluations are based on content memorization and repetitive practice and students are engaged through eye-catching design.

Second generation e-learning is pedagogy-driven. The activities and content demand self-organization, the learner is in control of the course, evaluations are based on self-assessment and reflective practice, and students are engaged through provocation and ideas.

According to Adams first generation e-learning is ideal for developing technical skills, memory-based learning and preparation to pass information-based tests. Second generation e-learning, on the other hand, is ideal for soft-skill development, personal reflective learning, innovation and performance-based learning addressing complex issues (Adams, 2010, 50).

Student

Hiim and Hippe (1997, 77-78) highlight the importance of the students' learning prerequisites as they have a great influence on all the other didactical aspects.

The importance of taking students' learning prerequisites into account is also pointed out by Fahmy et al. (2012) who describe a Danish business school and its experiences of exporting a blended learning MBA program designed in Denmark to Asia and the Middle East. They experienced not only language barriers but also complicated cross-cultural barriers. For instance, when it came to educational traditions. Scandinavian teaching pedagogy may seem strange to foreign students and students may consider it an insult. Furthermore, in some countries, online education is perceived to be non-equivalent to face-to-face education and less effective (Fahmy et al. 2012, 280).

Also, Bignoux and Sund emphasize language difficulties and differences in cultural backgrounds as possible pitfalls in online executive MBA programs. Especially in written online discussions, as some students have difficulties expressing their thoughts correctly (Bignoux and Sund, 2018, 709)

Fahmy et al. recommend that the following aspects should be considered when designing cross-country courses: The degree of formality of interaction in the synchronous e-learning setup, the acceptable level of conflict in group debates, the teachers' role as facilitators or gurus, the perception of online education in each country, gender roles in teaching and IT-infrastructure problems (Fahmy et al. 2012, 280).

Koch (2017) argues that the context in which the new knowledge will be used should be considered when designing the course. Knowledge must be incorporated into the students' work life. (Koch 2017, 85). She also points out that we must be aware of students' perception of online learning as it can be a challenge if the students are not used to digital education (Koch 2017, 32).

Framework

The framework describes the given aspects which limit learning or make learning possible. The literature on blended learning in continuing professional development often describes the following aspects of the framework: IT, communication, the teacher and the social community.

According to Danmarks Evalueringsinstitut (2019, 8) successful digital courses are characterized by taking place in institutions that have a strategic focus on the digitalization of continuing

professional development and invest in creating good digital learning environments, learning materials and learning activities. The institutions should create good frameworks for technical and IT didactic support for and competence development of teachers.

IT

Getting to know new technologies is time-consuming (Christensen et al., 2012, 17) and therefore, a thorough introduction to the used software makes a good start of the course, e.g., how-to-guides, videos and introductory courses. According to the Centre for Digitally Supported Learning at Aalborg University, students should be encouraged to test video and audio before the course starts. In addition, it is a good idea to provide technical support to students. (Aalborg University).

Technical issues are inevitable in an online classroom, but the teacher should handle these cases calmly. Make a backup plan that can be used if something goes wrong. Any instructions should be clear from the start and available in written form (Aalborg University. Goodson, 2020. University of Copenhagen, 2020).

Koch mentions a number of IT technical aspects that must be considered when planning a blended learning course: What should the Learning Management System (LMS) be able to do? How are students enrolled? How are results measured and reported? Should the content be accessible both online and offline? What computer, smartphone, headphones, etc. should students have? (Koch, 2017, 99-103). According to Bentley et al. (2012) it is also important to ensure a consistent use of the LMS across classes.

Learning management systems (LMS) play a key role in online learning activities, and Danmarks Evalueringsinstitut (2019, 31) has identified the following characteristics of a good LMS and good practice for use of LMS:

- Reliability and support for teachers and participants
- User-friendliness and consistency in the structure
- Support of different learning activities and of sharing different formats
- Clear guidelines for use of the LMS
- A good introduction of students and teachers
- Evaluation of user experience of the LMS

Communications

The importance of clear and distinct communication is highlighted in several books and papers: For instance, Koch (2017, 99-103) writes that it should be as easy as possible to participate: Make a plan for how and when to communicate to the students. Send e-mails to the students with clear instructions. Make follow-up e-mails personal and not auto-generated and follow up if students do not participate.

Law & Law (2017) describes how a clear and concise line of communication between student and instructor is essential in the online environment. The pre-semester correspondence gives students crucial information and also sets ground rules and expectations, and most importantly opens the

line of communication between instructor and student early on. Also, Hovis (2012) states, that everyone involved in the program should know the goals, program requirements and prerequisites.

Evans (2015) compares a face-to-face and an online MBA course and concludes that online students express a need for better communication in courses. They request more details in courses in order to know what is needed to excel in that class. Communications also need to be increased and improved between students and other parties including teachers, faculty, administrators and other students. Instruction quality is enhanced when teachers and faculty are educated on current teaching methods.

On their webpage for online blended learning the University of Copenhagen stresses how teachers should be clear about (1) teaching form and teaching plan, (2) learning outcomes, (3) acknowledging the students' participation and (4) group formation and technological infrastructure. Prioritize setting up a way of communicating that students understand, which is appropriate to the teaching situation, and which allows students time to get used to confidently using the technology (University of Copenhagen).

Online learning is often appreciated due to its flexibility, but often students are worried that they will be isolated through web-based education and that they must show a high level of self-discipline. Some students are of the opinion that online courses mean lower academic quality, higher dropout rates and a sense of loneliness. Therefore, Christensen et al. (2012, 13-15) recommend that the term "flexible" learning" is used instead of "blended learning" when marketing the course.

Teacher

According to Hiim and Hippe (1997, 78), the teacher is considered a part of the framework as he plays an important role in the students' learning.

Bignoux and Sund (2018) explore perceptions of the quality of tutoring in the context of an online executive MBA program. Their analysis shows that four behaviours in particular are associated with good tutoring. Firstly, students expressed appreciation for a tutor who understands how to encourage students and who can create interest in discussions and activities. Secondly, a good online tutor is helpful and is willing to assist students outside the strict boundaries of the course materials. A third behaviour that the respondents found useful was the willingness of their tutor to challenge them, and finally, respondents found it useful when a tutor was vigilant. Students need to know that there is someone watching.

Their study also showed that the more the tutor engaged with students, the more the students engaged with all aspects of the program.

According to Danmarks Evalueringsinstitut (2019, 14), good relations between teachers and students are crucial for a good learning environment. The teacher should have a personal approach to the students and an informal and positive way of communicating with them. The teacher should show interest in the students' learning process and learning outcome and provide useful feedback to the students.

Danmarks Evalueringsinstitut (2019, 16-17) also emphasizes that teaching in digital courses is different from face-to-face teaching as it requires special skills. Therefore, many teachers need special training on online teaching including training on how the LMS works and on how to develop online learning activities that support the learning goals of the course.

Social community

According to Christensen et al. (2012, 13), it is a myth that online learning necessarily is a non-social activity. Digital learning can be organized using social media and focusing on facilitating students' dialogue and collaboration. In this way, online teaching can become a social form of study.

Also, Koch (2017) and Evans (2015) emphasize the importance of creating a social learning environment.

Danmarks Evalueringsinstitut (2019 b) states, that some students are interested in creating social relations with other students while others are not. Therefore, it is important to understand the target group before planning the course.

Informal conversations can facilitate the exchange of personal experiences and perspectives, but in online learning informal conversations often make a lot of noise. If students' experiences and perspectives are to be actively involved in teaching, it is necessary to create teaching activities that support this.

Good social relations between students can enhance engagement as well as learning. Social relations can, for instance, support the exchange of experiences and perspectives and the expansion of the professional network.

Social relations can be enhanced through activities such as presentations of the students, discussions, group work, peer-to-peer feedback and study groups. (Danmarks Evalueringsinstitut, 2019 b, 15-16).

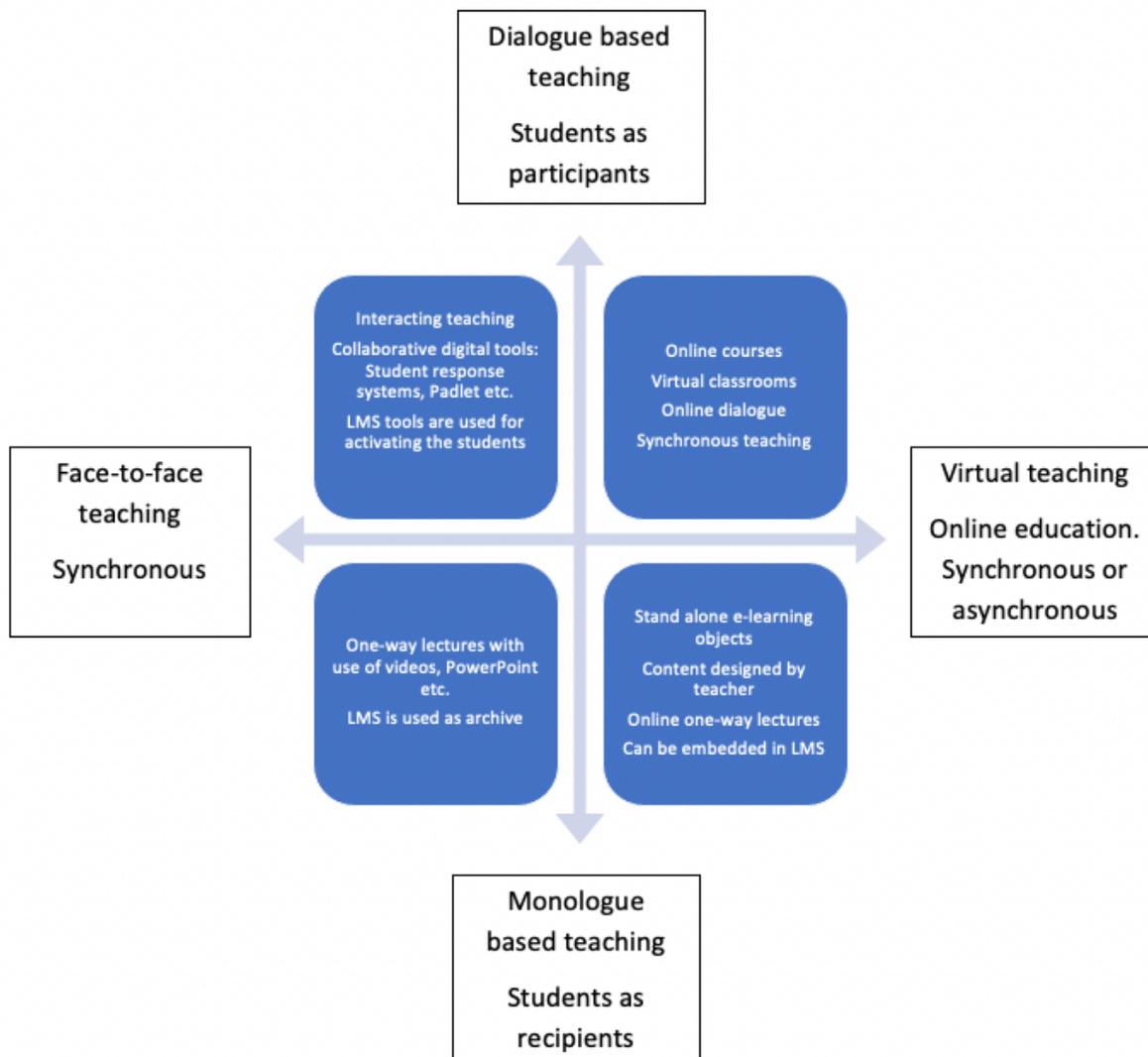
Centre for Digitally Supported Learning at Aalborg University gives the following advice on how to create a social online environment: Make students feel welcome and as members of a community. Say "Hello" and "Welcome" when they log into the online forum. Build relations with the students by showing commitment, support and clear expectations. Smiles and laughter can be felt through the screen. Begin the online session by letting students introduce themselves – this makes online communication easier afterwards. The more the teacher invites to a dialogue, the more the students are likely to participate.

By letting students work together, you can help them feel that they are part of a real (online) community. A clear framework showing who is working with whom, what they need to do, why and for how long is helpful for successful group work. (University of Copenhagen).

Process

The process covers the learning activities. How does teaching take place? What is the role of the teacher and the students? How active must students be? etc. (Hiim and Hippe, 1997. 80)

Online learning can be viewed from two dimensions: The form of teaching (dialogue or monologue) and the location of teaching (face-to-face or virtual). The IT didactical reflection model can be used for reflection on how IT should be included in teaching. It illustrates four different types of teaching, each in its own way integrating IT. The purpose of the specific session determines which teaching method should be chosen. (Gerdes et al., 2017, 24).



The IT didactical reflection model (Gerdes et al., 2017, 24)

Structure of the course

According to Christensen et al. (2012), there is no unambiguous model for a blended learning concept that determines how much of the course should be face-to-face learning and how much

should be online learning. Similarly, there are no rules for when in the course face-to-face teaching should be placed.

The choice of educational design depends on three factors:

1. The students' need for flexibility.
2. The academic content of the course: Some skills and competencies can only be gained by physical attendance and some exam forms require students to be present.
3. The educational culture, including the teachers' motivation and competencies for web-based teaching.

(Christensen et al. 2012, 17-18)

Klotz and Wright highlight a best practice approach for transforming a traditional classroom-taught executive MBA program into a blended learning course. Deciding what content should be converted from classroom delivery to online delivery is crucial to the success of blended learning. According to Klotz and Wright, one should consider transferring classroom content into online learning if face-to-face delivery results in at least one of the following outcomes:

1. Students are passive participants
2. There is minimal student interaction
3. Delivery can be effectively replicated online
4. The intensive nature of the schedule makes it difficult for students to absorb information and for instructors to effectively deliver material

(Klotz and Wright, 2017, 29).

Structure of online sessions

According to Christensen et al. (2012, 17), two important design aspects must be considered when transforming a course into blended learning:

1. The level of flexibility and the placement of face-to-face sessions and online sessions (time, days, weeks, months)
2. The basic pedagogical principles

Christensen et al. describe how two completely different approaches that are grounded in different basic pedagogical principles can be observed in the literature:

The individual-oriented model draws on cognitive learning theories and focuses on maximum flexibility for the individual student. This approach focuses on access to a varied range of assignments and resources, which exactly suits the individual student's preferred "learning style".

The collaborative model draws on constructivist and activity theory-inspired learning theory. Web-based learning environments are designed with a focus on the students' collaboration. E.g., through collaborative writing processes in small groups or team assignments supported by blogs, wikis or online discussions.

Blended learning in itself does not determine a specific pedagogical approach but must be designed to match the pedagogical profile of the course provider. (Christensen et al., 2012, 20)

The individual-oriented model is found in Klotz and Wrights (2017) approach to blended learning: Klotz and Wright recommend that online materials are divided into learning modules. Learning modules are discrete, self-contained learning experiences. They make course creation easier, simplify course updates and give consistency to the user. Modules can be mixed and matched based on client needs and should not entail more than 2–4 hours of online engagement (Klotz and Wright, 2017, 32-33).

The collaborative model is for instance seen in Koch's (2017) recommendations for a blended learning course: According to Koch, teachers should play the role of facilitators who set the framework, create a good atmosphere and support social learning. Varying learning activities are preferable in digital learning.

The collaborative model can also be found in the guidelines from Centre for Digitally Supported Learning at Aalborg University. They recommend that one-way lectures are minimized and that students are involved through group-based reflection and interaction (CDUL).

Online learning activities

According to Danmarks Evalueringsinstitut (2019, 58-59), it is crucial that the learning environment is activating and well-structured. Different types of learning activities must be developed and used; hence the students actively relate to, work with and reflect on the course content. The clear structure gives students an overview of the course, content and deadlines and helps them manage their time.

Henderson et al argue that "The different dynamics of teaching and learning within virtual classrooms versus physical classrooms may require instructors to reconsider appropriate pedagogical tools for cyberspace. Simply transferring traditional classroom learning tools to cyber classrooms may not be the most appropriate for online student learning" (Henderson et al., 2018, 49).

More papers, books and university websites give recommendations for online learning activities:

Goodson states that "each class session should be carefully crafted to include key learning lessons, activities, and reading assignments that meet the course outcomes" (Goodson, 2019, 91).

Duncan et al. argue that students' examination performance can be enhanced through engagement in online forums. They suggest a three-tier structure for online learning environments: A 'Frequently Asked Questions' page that deals with basic declarative knowledge issues; an asynchronous discussion board that promotes application and analysis and allows learner-to-learner discussion and support; and synchronous learner-to-instructor forums to focus on higher level learning (Duncan et al., 2012, 446).

Koch (2017) recommends, that each learning session starts with a presentation of the theory and ends with group work. As much text as possible should be converted into interactive elements, such as videos, sound and animation. She claims that it increases students' motivation, when they

influence the learning process, for example, by deciding the order of activities through menus and overviews (Koch, 2017, 99). The teaching should be structured in a motivating way. For example, through frequent shifts between different learning activities and a clear structure (Koch, 2017, 24-28). The optimal length of an online learning session is 1-2 hours, and the maximum duration of each activity is 45 minutes. The activities should be separated by 10-minute breaks and the students should be encouraged to get some fresh air. The body must stay awake. (Koch, 2017, 120). The structure should be clear to the student.

Both the Centre for Digitally Supported Learning at Aalborg University and the Centre for Online and Blended Learning at the University of Copenhagen recommend that the students are activated through different activities during the session and that each activity has a duration of 10-15 minutes.

Evaluation

The last aspect of Hiim and Hippe's didactical model (1997) regards the evaluation of students as well as of the teaching and the course. Not much of the found literature deals with exams and evaluations in an online learning environment. However, more universities provide good advice on their websites about online exams.

AU Educate describes how an online exam must, as always, test the extent to which the students have met the academic objectives. It is important to ensure that the students are familiar with the IT tools as well as the exam format, and that the online learning activities have given the students the opportunity to practice what they are being tested on.

Centre for Digitally Supported Learning at Aalborg University recommends, that teachers use the same routines in the online exam situation as the students know from online tutoring and online teaching. They also suggest that a test exam is held with colleagues or students.

Conclusion

This literature review has shown relevant aspects that must be taken into consideration when using blended learning in continuing professional development.

Firstly, there must be a clear connection between the learning objective, course content and course activities. The best suitable use of IT in learning situations depends on what kind of skills and knowledge the students must acquire. Therefore, learning objectives should be defined initially after which appropriate content and learning activities are chosen.

Secondly, students' learning prerequisites must be taken into consideration. Will there be any language or cultural barriers and what are the students' attitudes towards online learning activities? Furthermore, the content must be adapted so that it becomes relevant to the students' working life.

The literature mentions a number of IT aspects that must be considered when planning a course based on digital learning. These aspects include digital learning environments, introduction to the

software and technical support for teachers and students, functions of the LMS system, necessary equipment and consistent use of the LMS across classes.

The importance of clear and distinct communication is highlighted in several books and papers. Online students often express a need for better communication in courses, both before and during the course.

Good relations between teachers and students are significant for a good learning environment. This also applies in an online learning environment, and the digital format often requires teachers to be trained in online teaching.

Students are often interested in creating social relationships with other students, and this can also be the case in online learning. When organized in the right way, online learning can facilitate students' dialogue and collaboration, for example through discussions, group work, peer-to-peer feedback and study groups.

Learning sessions can be structured in many ways and with varying use of digital tools. This literature review has shown that there is no clear model that determines how a course should be structured between face-to-face and online learning. This depends on several factors, including the purpose and the academic content of the specific session or course, the students' need for flexibility, and the basic pedagogical principles of the teacher and learning institution.

Furthermore, learning activities cannot simply be copied from the physical classrooms and implemented directly in the online learning environment. Instead, they need to be rethought to fit the digital environment.

Finally, the article states that there is a lack of literature describing how to perform exams and evaluations in online learning environments, but advice can be found on more university websites.

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