

Pedagogical Pattern Workshop for Blended Learning Working with Methopedia: An Active Session for Educators

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Abstract:

Sometimes we need new inspiration for arranging our lectures: group work, tandem learning, open spaces, web quests, video casts or group puzzle etc. What about sharing these and other learning activities (methods) with others and learning from them? In this hands-on workshop we work in groups with an online wiki – using a didactical design pattern approach. Design patterns are a way of documenting proven solutions to reoccurring problems. Expert knowledge is thus externalized by capturing core elements of the problem and the solution, enriched with the description of context factors and specific requirements. We introduce Methopedia (www.methopedia.eu), a wiki-based repository for learning activity patterns for blended learning. It is also a social community where educators and trainers can connect and share their knowledge and experience regarding blended learning methodologies and tools. The methopedia initiative is a product of the EU project Comble (www.comble-project.org).

1 Is there a need for active learning?

Learning technologies developed in recent years have great creative potential for improving the quality of learning. However, this potential will only unfold if institutions implement suitable learning cultures and methodologies, and if instructors become able to integrate active learning by choosing activities suited to the pedagogical purposes at hand. Therefore the main objective of Methopedia is to enable teachers and trainers to describe and share their learning practices as described within the progress report "The use of ICT to support innovation and lifelong learning for all":

"New innovative pedagogical and didactical approaches are needed to take into account the future learning needs and changing skills and competences necessary for employment, self-development and participation in a knowledge-based, digital society" (European Commission 2008 p. 12).

An important step towards fulfilling the demand for pedagogical innovation and to reach these goals is the use of engaging learning activities:

"The reviewed studies showed that learner-centred guidance, group work and inquiry projects result in better skills and competencies and that interactive forms of e-learning can lead to a more reflective, deeper and participative learning, learning-by-doing, inquiry learning, problem solving, creativity, etc all play a role as competencies for innovation..." (Ibidem p. 11).

Different learning cultures result in a wide variation of learning approaches and activities across countries and organisations within Europe. As educational research like the Pisa study shows, learning institutions and educators want to benefit from the different learning cultures in Europe (Geller et al., 2007). They could potentially inspire each other and enable innovation, but how can we facilitate sharing and exchange of different practices for organising and designing learning environments and activities? One approach could be to connect educators independent of their contexts as peers by using the power of the social web. Educators could meet virtually to exchange ideas and get inspired by new pedagogical approaches and learning activities such as group work, tandem learning, open spaces, web quests, video casts or group puzzle etc.

Methopedia, is a wiki-based network of educators and trainers which has been developed within the COMBLE project and funded by the EACEA Lifelong Learning ICT Programme. The goal of the project is to improve the quality of Blended Learning in higher, continuing and business education. The Methopedia platform which will be introduced in the workshop is designed to enable a community of various stakeholders to consult, discuss, create and share blended learning methods and best practices.

2 What do we mean with Pedagogical Patterns and learning activities?

First of all, an important prerequisite is to come to a shared understanding of what is meant by 'approaches', 'pedagogical patterns' and 'learning activities' which are some of the concepts that have been discussed in relation with the development of Methopedia. It became apparent that participants in the different Methopedia workshops we have carried out had different views on what would be interesting in relation to sharing learning practices. In one workshop the participants created examples of various smaller learning activities (e.g. lasting an hour), whereas the participants in another workshop tried to describe more overarching course designs (lasting for weeks). This caused a discussion within the COMBLE project about the granularity of learning activities, i.e. should they be understood as whole course designs or smaller activities within a course, and what are the relations between different pedagogical approaches and then particular designs or sequences of activities? The following model - adapted from Berge (2006, p. 96) - could help to clarify the discussions. It distinguishes between the following 'levels' of a pedagogical design:

Overall pedagogical approach	Pedagogical Approach			
Course Templates/ Descriptions	Course Design			
Course design components	Learning activities			
Material/resources	Own Material	External material	Repurposed external material	Reification of practice

Table 1: Pedagogical design levels

An overall pedagogical approach for a course or an educational unit could be a constructivist approach like Problem Based Learning (PBL), Problem Oriented Learning (POL), Problem Oriented Project Pedagogy (POPP) or Action Learning (AL). Choosing a particular pedagogical approach will affect the roles of the learner and the teacher, the collaboration between them, the learning motivation (engaging and challenging) as well as the type of assessment. The theory and the main ideas of an approach will influence the educators on the next level in designing their courses, which could be learner- and/or teacher-centred, or provoke questions such as: Are there projects within a course the learners have to deal with? Are companies invited for real case studies? Is the course design open to the needs of the learners or will the educator pre-assign everything? These questions belong at the level of course design.

On a more detailed level, educators can use specific learning activities as a part of a learning unit, such as Brainwriting¹, Circuit Training² or WebQuests³. These learning activities can have different objectives, like fostering social learning, reflection, collaboration or more elaboration. An interesting perspective on learning activities is collaboration scripts. "A collaboration script" (O'Donnell & Dansereau 1992) is a set of instructions relating to how group members should interact, how they should collaborate and how they should solve a problem. When a teacher engages students in collaborative learning, he or she usually provides them with global instructions such as "do this task in groups of three". These instructions usually come with implicit expectations with respect to the way students should work together. The teacher's way of grading collaborative work strengthens this implicit contract. A script is a more detailed and more explicit pedagogical contract between the teacher and the group of students regarding to their mode of collaboration (Dillenbourg 2002). Returning to the model above, we finally have the materials educators provide and which the learners are working with as part of the learning activities.

At the pedagogical level, educators and trainers coming from a traditional teaching background often find it difficult to integrate ICT and expand their methodological repertoire to meaningfully combine different pedagogical methods and learning activities from face-to-face settings with e-learning or self-paced learning. This suggests that there is a need for educators to share concrete learning designs and activities or 'best practices' for blended learning. Britain (2004) states with regard to the importance of learning activities and learning design:

- *The first general idea behind learning design is that people learn better when actively involved in doing something (i.e. are engaged in a learning activity).*
- *The second idea is that learning activities may be sequenced or otherwise structured carefully and deliberately in a learning workflow to promote more effective learning.*
- *The third idea is that it would be useful to be able to record 'learning designs' for sharing and re-use in the future. (Britain 2004, p. 2)*

One way of sharing solutions to educational problems are pedagogical patterns, which capture the essence of best practice and expert knowledge in a specific domain in a compact form that can be easily communicated. Below is an example of a pedagogical pattern or template for describing learning activities, as it has been developed within the Comble project so far:

¹ <http://en.methopedia.eu/Brainwriting>

² <http://en.methopedia.eu/Circuit%20Training>

³ <http://en.methopedia.eu/WebQuests>

Short description

Please describe the activity in about 20 words.

Process description

Explain the process as detailed as possible. Use also graphics or videos.

Required resources

Which materials (pens, paper, cards) or technologies (computers, e-learning platforms, forums) are used?

Examples

Do you have some examples, small changes or interesting contexts?

Comments

Please add additional information, practical advice or limitations here.

Figure 1: Learning activity pattern

The description will be enriched with pedagogical metadata such as target groups or settings:

Number of learners	Target Groups	Timeline	Settings	Subjects
<input type="checkbox"/> Single	<input checked="" type="checkbox"/> University	<input type="checkbox"/> Beginning	<input checked="" type="checkbox"/> Face to face	<input type="checkbox"/> Biology
<input type="checkbox"/> Partner	<input checked="" type="checkbox"/> Business	<input checked="" type="checkbox"/> Main learning phase	<input type="checkbox"/> Online	<input type="checkbox"/> Psychology
<input checked="" type="checkbox"/> Group	<input checked="" type="checkbox"/> Further education	<input type="checkbox"/> End	<input type="checkbox"/> Synchronous	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Large group	<input checked="" type="checkbox"/> Vocational education		<input type="checkbox"/> Asynchronous	<input checked="" type="checkbox"/> Other

Tags

Figure 2: learning activity metadata

Learning activities and approaches within Methopedia can be seen as documented solutions for existing learning and development problems. This is related to the design pattern approach. Mor and Winters (2007) argue that design patterns (Alexander et al., 1977) "hold a powerful promise for recording, calibrating and collaboratively refining expert knowledge. Patterns are flexible enough to address a very broad spectrum of practices, from in-depth technical development to deployment issues in classrooms. In addition, they are rigid enough to oblige the pattern writer to focus on and concisely capture their own best practice".

The design patterns approach was originally developed as a form of design language within architecture with the explicit aim of externalizing knowledge to allow accumulation and generalization of solutions which can be shared and discussed by the members of a design community. A design pattern "describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice" (Alexander et al., 1977). The idea has been embraced in several other disciplines, including software engineering (Gamma et al., 1995), hypermedia (German & Cowan, 2000) and interaction design (Erickson, 2000; Borchert, 2001) as well as in educational domains including e-learning systems (Dernl & Motschnig-Pitrik, 2004).

Coming back to the model of pedagogical design levels, we also wanted to explore the relationships between different pedagogical approaches and particular designs or sequences of activities. We were interested in how to describe possible connections between activities, courses and pedagogical approaches without necessarily forcing such relationships? One option for the visualisation of possible interconnections is the Methopedia Learning Design Planner (M-LD Planner), a web-based add-on of Methopedia. The M-LD Planner provides graphical tools for designing entire courses as well as small learning units based on the learning approaches and activities described within Methopedia.

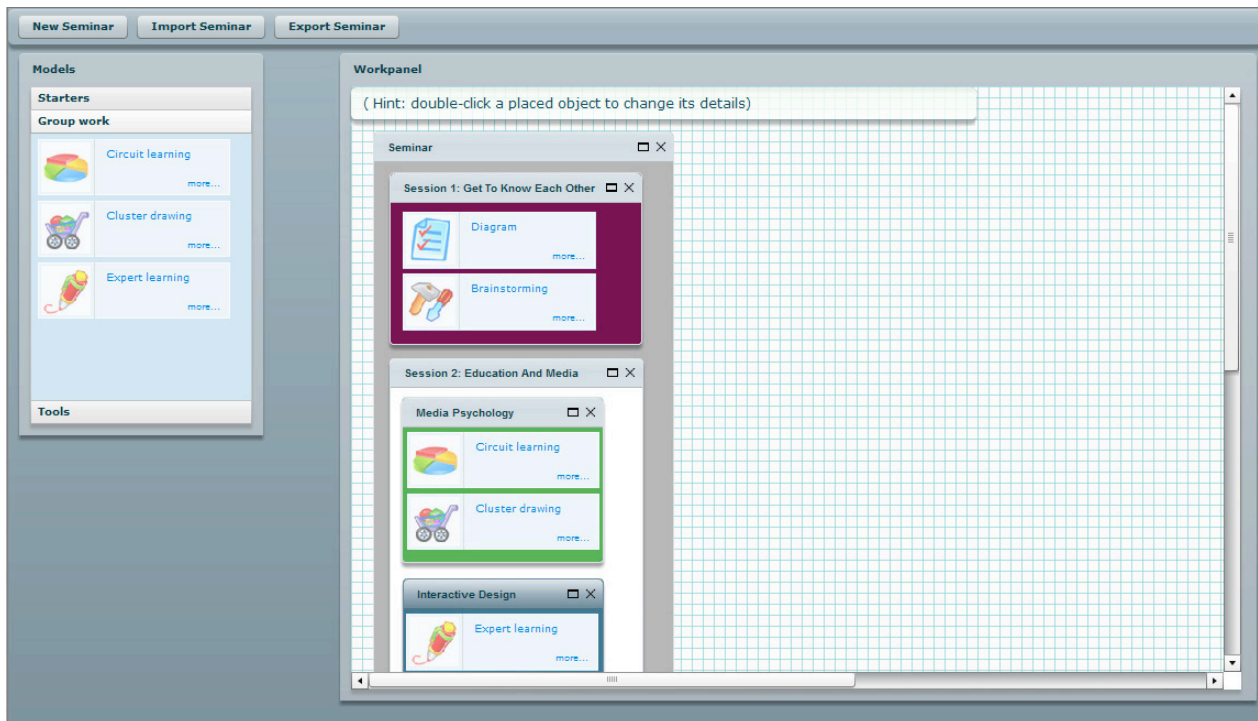


Figure 3: M-LD Planner

3 A brief look at Methopedia

The target group of Methopedia are instructors and trainers who use blended learning methods in face-to-face or online learning settings. The initial pool of methods is a contribution of partners in the COMBLE-project and connected networks. For the development of methopedia, we first needed to choose a suitable technology. For that purpose we first created a requirement profile based on the features of similar projects and different wiki engines. For the design of the structure, we looked at existing e-learning and blended learning resources and web-based collections of methods and activities. Our general impression was that many of the collections were quite static, without the possibility to rate, discuss, change or add new activities. From the outset we wanted Methopedia to be an active network for creating learning solutions and sharing them.



The screenshot shows the Methopedia website interface. At the top, there is a search bar and navigation buttons for 'Titles' and 'Text'. The main header reads 'Methopedia - Brainwriting'. On the left, there are two sections: 'Explore' with links for 'Homepage', 'Search', 'Sorted titles', 'Most visited', and 'Brainwriting'; and 'Contribute' with a 'Login' link. The main content area is titled 'Short description' and features a photograph of two people sitting at a table, writing on notepads. Below the photo, there is a text description of brainwriting, followed by a 'Process description' section with a numbered list of six steps.

Short description

Brainwriting is also called the „6-3-5 method“: 6 people, 3 ideas each, and 5 rounds. Basically, the same rules apply as in brainstorming. The difference is that in brainwriting the creative phase consists of writing instead of talking. Everybody first writes down their own ideas and then amends the ideas of all other participants in turn. Finally, possible solutions are discussed with regard to their fit to the problem at hand.

Process description

1. The problem is defined.
2. 6 participants generate 3 new ideas each.
3. Notepads are passed around in a circle to the next person.
4. Each person complements or amends the ideas of his neighbor.
5. The cycle is continued 5 times.
6. Conclusions and solutions are being created.

Figure 4: The description of *Brainwriting*

Every page within the wiki can be changed via a GUI editor and the learning activity descriptions can be enriched with metadata and tags for better search results. The meta-data are still under development and will be enriched through the tags the users choose.

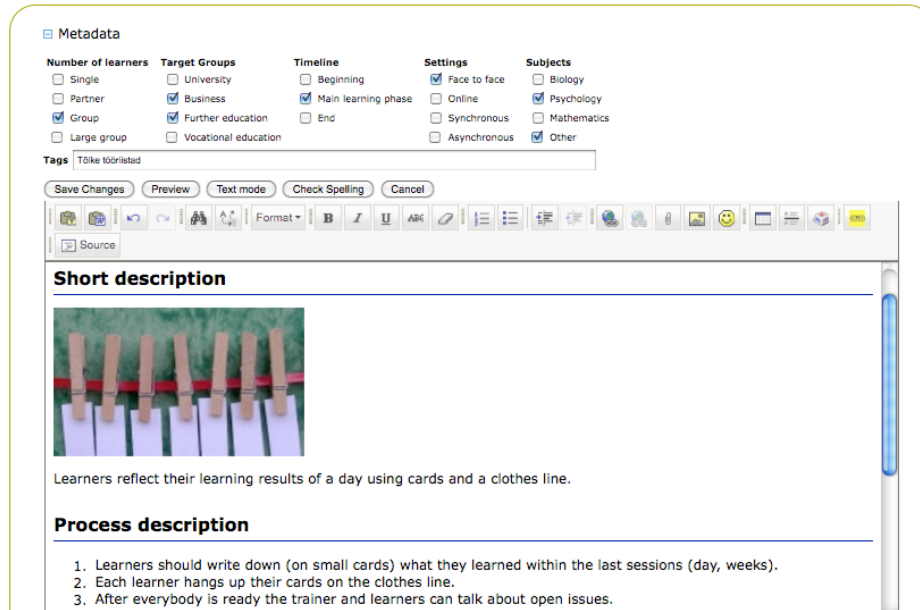


Figure 5: GUI editor, metadata and tags

Methopedia also contains more media and functions like: discussions, videos to explain learning activities and approaches, revision histories, favorites and different views like sorted titles, most visited or a word index.

4 Workshop based Community building

The success and the benefits of Methopedia depend on the activity of the educators. This will be reflected in the number and quality of shared learning activities and approaches, the frequency and intensity of visits, as well as the creative application of the knowledge in seminars and workshops. How does such a community develop and how can we support this process as moderators and developers? First of all, Methopedia is a Community of Practice, more precisely a Community of Interest (CoI). Arthur Armstrong and John Hagel III (2000) define CoI, as follows: they "... bring together participants who interact extensively about specific topics of interest ... their transaction is generally focused on a specific topic area" (p. 85). A general development-model of online communities describes five phases (Moisseeva et al. 2002):

Phase 1: Pre-Implementation

Phase 2: Implementation - activate interested people

Phase 3: Establishment of the participation

Phase 4: Continuous development and loyalty

Phase 5: Sustainability (possible value creation for community members)

The Methopedia community development is currently in Phase 2, and workshops are a suitable method to activate potential users. There are three reasons for conducting workshops: it is important to know each other and to build trust. Secondly, it is a way to identify motivated early adopters in order to create a core team and also to define existing problems as a starting point for the work.

Finally, the aim of the workshops is not to invent new solutions but to be aware of already existing ones (Niegemann, Domagk & Hessel, 2004). As we have mentioned, there are a lot of learning activity collections for different learning designs. But educators have to understand what the problem is in order to be motivated to search for and apply alternative solutions.

Therefore, the workshop design is based on collaboration: Following a brief introduction of the Methopedia platform

- the workshop participants will be introduced to the pedagogical pattern concepts
- and then asked to brainstorm a list of learning design problems
- The participants will then work in small groups on discussing and describing various methodological learning activity solutions to these problems using a picture language.
- each group will explain the picture of a further group
- In a final step, the descriptions, the picture as well the metadata will be entered into Methopedia for re-use and refinement by other practitioners.

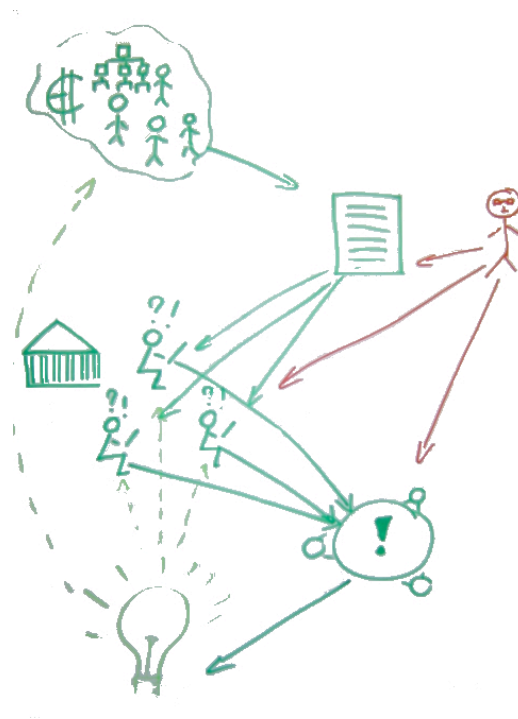


Figure 6: Describing learning activities as a picture (here: *Case Study*)

The next step for integrating more visual content is to record movies of learning activities in action, e.g. within a classroom training, to make other pedagogical approaches more understandable. In order to develop the Methopedia community, we will arrange regular workshops with trainers and educators to get face to face feedback for the development and the workshop design. Furthermore, we are connecting to existing networks (like Eduspaces: www.eduspaces.net or Facebook: www.facebook.com).

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