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# The role of mentoring in facilitating the process of repurposing OER

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## 1. Abstract

This paper presents the initial data analysis of a research that is work in progress. It discusses the role of mentoring and peer support in facilitating the process of repurposing open educational resources (OER). It also reports on the lessons so far learned from the analysis of two distinct but related case studies on working with learners to use and disseminate OER.

The first case study is based on the 2009 presentation of the distance learning Masters' course of the Institute of Educational Technology of the Open University UK (from now on OU) entitled "Technology Enhanced Learning: Practices and Debates". In this course the registered students were guided through the repurposing of content within the OER repository of the OU, OpenLearn, as part of their course activities. The aim was to provide the students with substantial information about and knowledge of finding, using and repurposing OER.

The second case study relates to the activities of the online community COLEARN, an initiative of the Knowledge Media Institute of the OU which started in 2006. COLEARN is an online community hosted within the OpenLearn platform, bringing together researchers and practitioners from Brazil, Portugal and Spain mostly. The aim of COLEARN is to offer a community-supported environment in which research and ideas about the use of collaborative technologies for learning can be shared. All the activities in COLEARN are available to the world as OER, as well as all the resources shared the by participants.

Mentoring in these two cases happen in different ways. In the first case we term it 'formal mentoring' because the mentoring is part of the course activities of registered students in the course. The students are guided step by step on how to find OER, assess its relevance and how to make use of web 2.0 technologies to modify the content to fit specific purposes. In particular, they are prompted to use an *in situ editing* tool offered by OpenLearn to modify and re-publish content. The mentoring in this case is offered through the task design of the course material and through the tutoring available.

In the case of COLEARN, the mentoring process happens through peer and tutor support from the community to the community. This is why we term it 'informal mentoring', although at a times the user performing the mentor's role is a tutor of another learning setting (e.g. a tutor associated with a higher education institution). By means of pre-booked learning sessions (e.g. brainstorming sessions based on a web-videoconference tool such as Flashmeeting<sup>1</sup>), workshops and discussion forums the participants of this community get substantial support and guidance on how to use OER and technologies that facilitate OER repurposing.

By analysing the activities of the mentors and participants in the two case studies, we aim to explore how both forms of mentoring seem to address the needs of the practitioners/students in terms of learning how to work with OER.

## 2. Formal & Informal Mentoring and Learning Using OER

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<sup>1</sup> Flashmeeting, also known as FM, is a web-videoconference system developed by the Open University, which will be mentioned in further sections of this paper.

In recent years several researches have been focusing on adult education, continued professional development and lifelong learning. They have been raising important issues around the use of technology to support informal, non-formal or self-directed learning. However, most work on development and evaluation of online tools has been done in higher education, mainly in formal education contexts and there is still not enough evidence of how to use technology effectively outside this context (Thorpe, 1999). How could technology be used to facilitate online informal learning? What is the role of mentoring in this context? With the emergence of communities of practice and social networks, one of the greatest challenges is to understand what factors influence informal learning and participation of active learners in these voluntary contexts Gray (2004).

Some scholars (Livingstone, 2001; McGivney, 1999, Jeffs and Smith, 1990) define informal learning as any activity outside the pre-established curricula which involves the pursuit of understanding knowledge or skill whose content and process are determined by the learners, individuals or groups who choose to engage in it. Jeffs and Smith (1990) emphasize that while formal education is curriculum-driven, informal education is largely driven by conversation. Leadbeater (2000) points out the importance of informal learning going beyond the traditional education, by focusing on developing skills, not only literacy, numeracy, creativity and collaborative work; but also the ability and yearning to carry on learning. Different contexts should be used to apply knowledge in order to solve problems and add value to people's lives; and in this sense, we included also online environments.

Eraut (2000:12), however, argues that it is not easy to investigate non-formal learning because the outcomes are difficult to detect, people are unaccustomed to talking about their learning and it is hard for them recognize non-formal learning contexts. In order to understand the levels of intention implicit and explicit in the process of learning, he describes a typology of non-formal learning based on three categories: implicit learning, reactive learning and deliberative learning.

- *Implicit learning* refers to “the acquisition of knowledge independently of conscious attempts to learn and the absence of explicit knowledge about what was learned’ (Reber 1993 quoted by Eraut 2000: 12);
- *Reactive learning* refers to spontaneous and unplanned situations where the learning is explicit and occurs in response to current situations;
- *Deliberative learning* is when the level of intentionality is more explicit, and learning is more reflective, systematic and planned.

Mentoring is considered an important strategy in informal learning scenarios that combine the traditional mentoring with collaborative communities of practice. This type of mentoring is often called ‘e-mentoring’, but for the purpose of this paper we refer to it as simply *mentoring*. Mentoring is rapidly becoming a learning method of choice, especially in virtual learning environments and social networks. With time becoming a scarce commodity, mentoring through diverse interfaces such as e-mail, Internet chat rooms, electronic bulletin boards, graphical environments for mapping information, web videoconferencing or instant messaging systems provide opportunities for virtual meetings when face-to-face sessions may not be possible (Rothwell, Jackson, Knight, & Lindholm, 2005).

Brown and Lent (2005) highlight that mentors can be academics, professionals, older peers, or volunteers from the community who can provide guidance and support during the process of learning. Rothwell, Jackson, Knight, & Lindholm (2005) point out the following list of the roles a mentor must perform in an effective mentoring relationship:

- Facilitating and fostering the development of skills through teaching, counselling, and guidance;
- Offering technical support and suggestions of diverse sources of relevant information;

- Coaching via comments, support, encouragement, and even criticism about the skills, talents, behaviour, and career;
- Counselling with advice on how to confront difficult situations, ways to advance, and approaches to improving skills.

### 3. Case study 1: *In situ* editing in OpenLearn

In this paper we look at the week 10b of the 2009 presentation of the Open University master's course 'Technology Enhanced Learning: practices and debates' (course code H800). This course is a compulsory 60-point course in the masters in open and distance education program (MAODE) of the Open University, and is offered over a period of 9 months. In week 10b of the course the students were introduced to the concept of open educational resources. They were asked to explore the websites of a given three OER initiatives worldwide, and also to perform some editing in existing courses offered in the LabSpace of the Open University OER initiative, *OpenLearn* (labspace.open.ac.uk). There were about 100 students registered in this course in 2009, who were divided into seven different tutor groups<sup>2</sup>. So far we have analysed the data of three out of the six tutor groups who were carried out in the 2009 presentation of the course. These correspond to an average of 20 students out of 100.

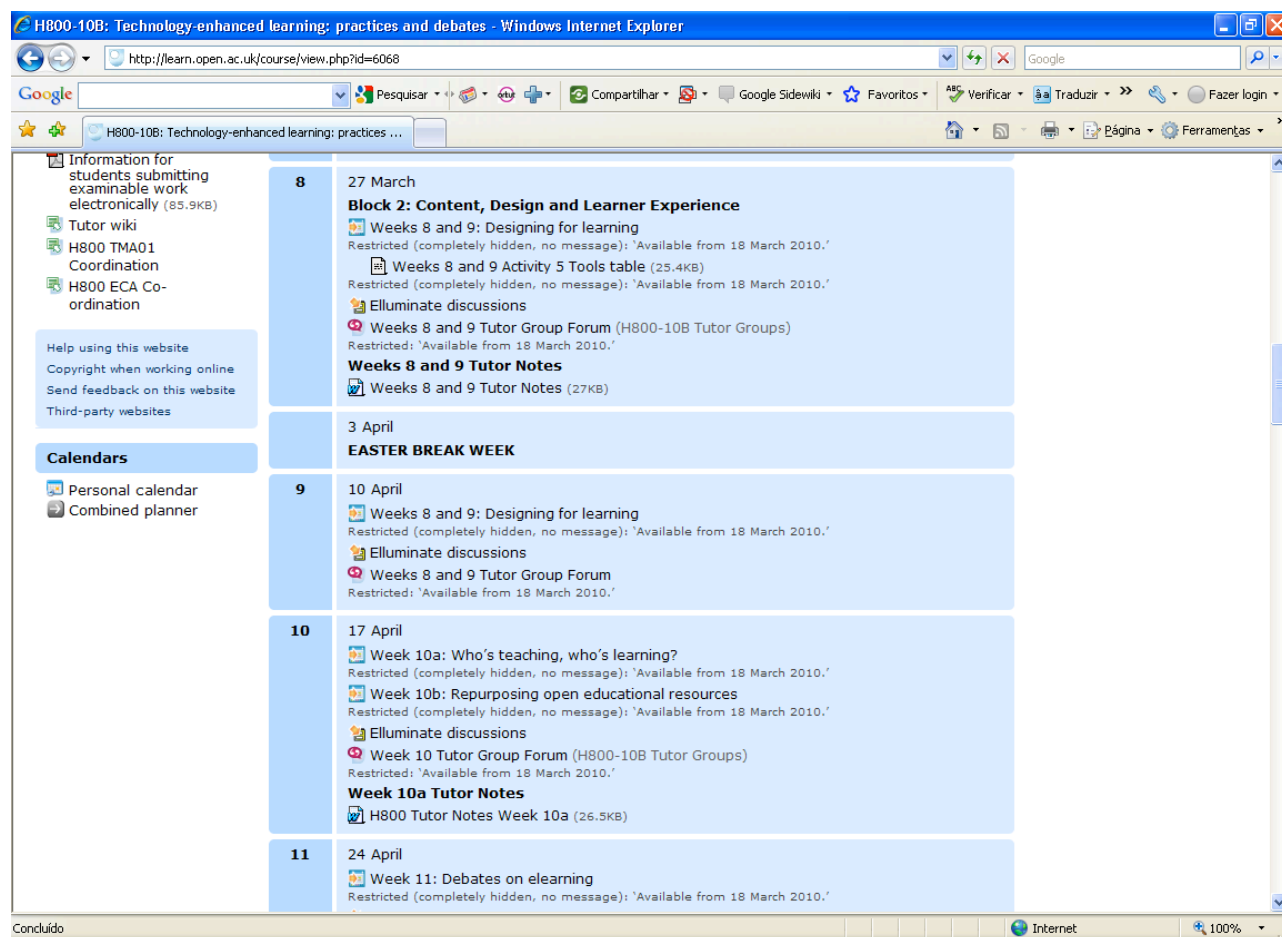
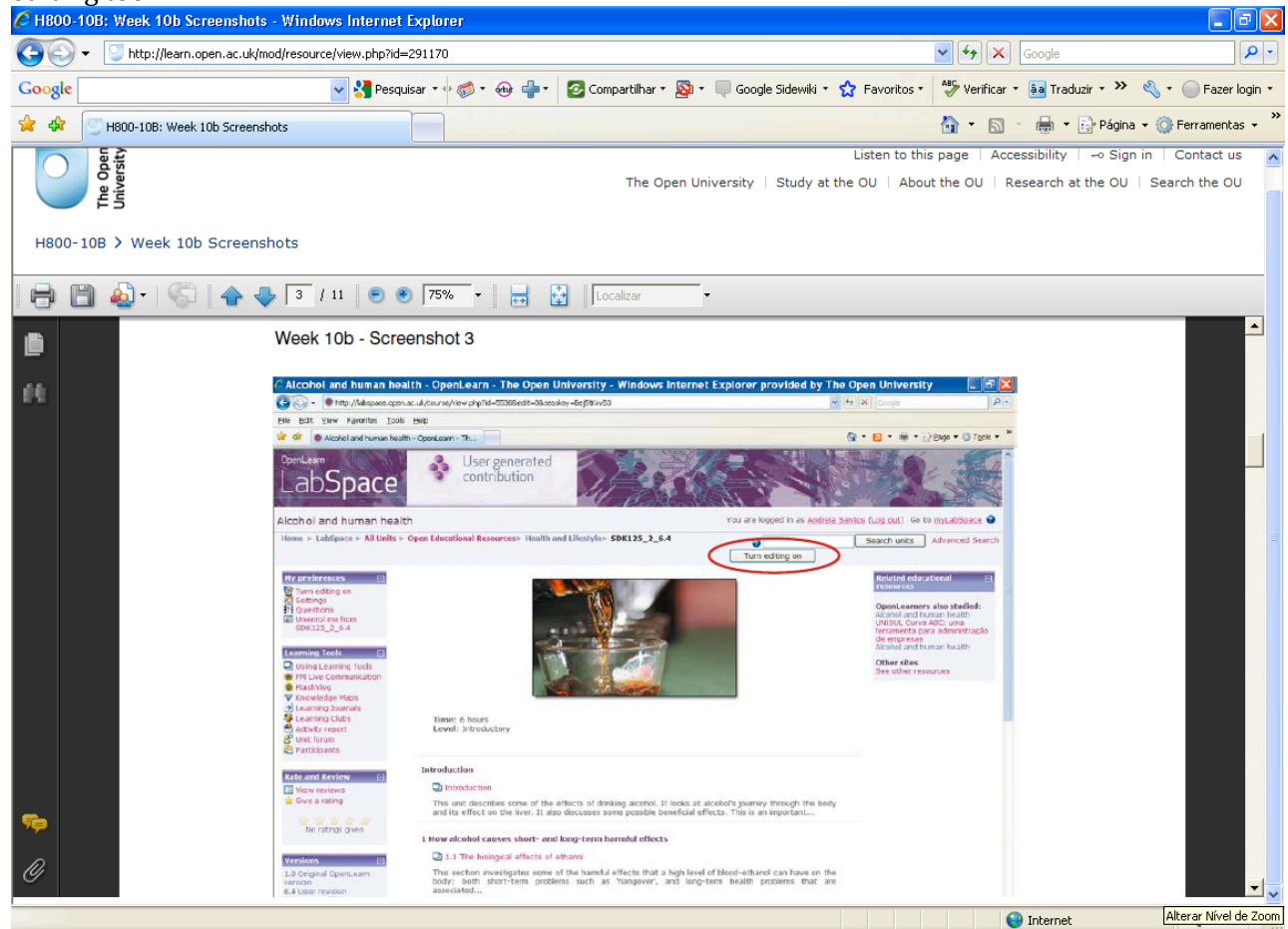


Figure 1: H800 course homepage

<sup>2</sup> At the Open University, a tutor group is a group of learners of no more than 25 learners, in which a specialist tutor is assigned to facilitate the discussion forums and the learning process overall.

The *in situ* editing activity took place in the LabSpace environment of the OpenLearn. This is an experimental area in which users and learners can ‘play’ with the resources available in the website, and modify them live in the Moodle environment of OpenLearn by using the *in situ* editing tool.



**Figure 2: *In situ* editing tool based in the LabSpace**

The students were asked to repurpose a section of a course of their own choice in the LabSpace. The tutors of each tutor group opened a discussion forum in which, according to the task design of the activity, the learners were expected to discuss their experiences in repurposing the content. It is in these discussions forums that we carried out our analysis, aiming to identify how mentoring takes place.

Overall, 2 trends were identified in the forum messages:

- The learners considered the experience of repurposing daunting but worthwhile;
- The learners found it challenging to get used to the idea of repurposing someone else's work, particularly when it was already considered high-quality learning material;

Examples of how these trends appear on the forum messages follow below:

[...] The idea of redesigning something offered by OU is a little daunting, even if they do have publishing/editing control. I'll probably limit myself to some key skills modules where I can do less damage.

H800 learner A

Hi A,

You cannot actually do any damage because you work on a copy of the original.

Regards, B.

H800 learner B

And in response learner C writes:

Hi A and B,  
You may not do damage to the original but it is still daunting all the same. I think most of us have respect for other people's text and feel quite shy to meddle with it. Perhaps a younger generation will feel less inhibited?  
C  
H800 learner C

The examples above illustrate the concern and fear of repurposing of most students in the three tutor groups analysed. What interests us the most for the purpose of this paper, however, is how the students mentor each other in this repurposing process and what role the tutor plays in it.

In all three tutor groups the tutors did not take part in most of the discussions and very occasionally came in with a comment. The learners themselves mostly did the mentoring, in a process that is commonly known as 'peer-mentoring'. The actual course material also had some guidance to learners on how to repurpose material in the LabSpace using the *in situ* editing tool, and presented screen shots step by step, so the need for the tutors' intervention was reduced to a minimum.

The mentoring was initially considered 'formal' because it was expected to be a task performed mostly by the tutor (alongside the guidance of the course material), and the H800 course is a course that provides accreditation in a formal learning environment. However, as the course goes by, it appears that the guidance provided by the course material on how to repurpose using the *in situ* editing tool and by the 'web guide' of the website were enough to allow the learners to do the work themselves, and afterwards discuss their successes and frustrations. The role of the tutor in mentoring was therefore automatically reduced to a minimum. As a result, one may suggest that, in the context of this case study: a) formal mentoring becomes informal in the sense that it comes mostly from peer-to-peer and happens out of a *discussion forum etiquette* in which learners respond to and encourage each other in the learning process; b) web guidance such as videos and 'how to sections', alongside step-by-step written guides and screen shots seem to be essential elements in making the repurposing process happen. The learners, however, also support each other in the use of the *in situ* editing tool and of other websites that they consider relevant for the task, by means of messages exchange in the discussion forum of the course.

Out of the four roles of mentors described by Rothwell, Jackson, Knight, & Lindholm (2005) presented in section two of this paper, the students perform the four of them: facilitating, technical support, coaching and counselling.

#### **4. Case study 2: COLEARN – Collaborative Open Learning Community**

The second case study relates to the activities of the online community COLEARN (Collaborative Open Learning Community), an initiative of the Knowledge Media Institute of the OU which started in 2006. COLEARN is an online community hosted within the OpenLearn platform,

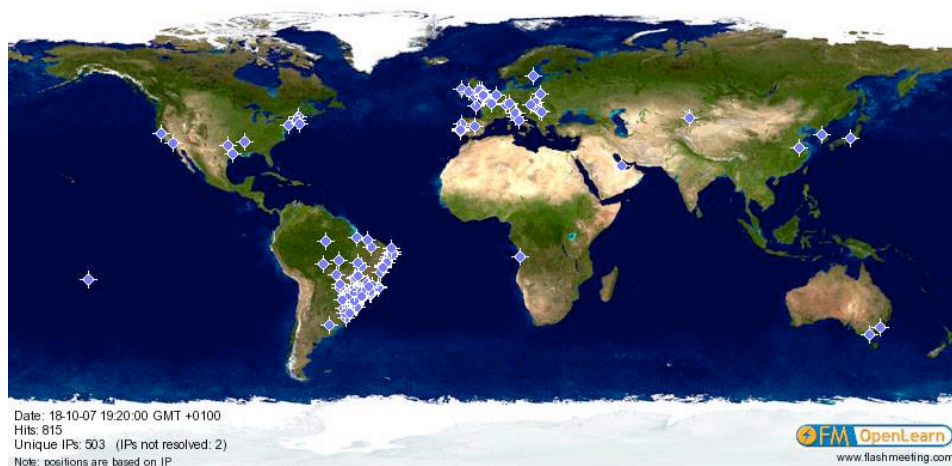
bringing together researchers and practitioners from Brazil, Portugal and Spain mostly, whose interests focus on exploring knowledge media tools to facilitate collaborative informal learning. The aim of COLEARN is to offer a community-supported environment in which research and ideas about the use of collaborative technologies for learning can be shared. All the activities in COLEARN are available to the world as OER, as well as all the resources shared the by participants.

Based in several universities located in different countries, COLEARN community members often use FlashMeeting (a web video conference tool; Scott, Tomadaki & Quick, 2007) to meet online, learn together and create new educational resources. Their discussions are focused on diverse open learning issues such as game based environments, knowledge media and social software. Compendium Knowledge Maps are created on diverse topics, for instance, e-democracy, thinking skills and information literacy. Community members also use Compendium (a software tool for representing and connecting ideas, concepts, arguments, websites and documents; Buckingham Shum and Okada, 2007) to map learning material, share references, add new information from the web and include their own comments. Some of their Compendium maps show web videoconferences and their reflections about what they are studying and doing with the resources.

The period of data collection in this study took place from July 2007 to July 2010. During three years this open learning community with 1243 members published 87 maps in Compendium and 53 web conferences in FlashMeeting.

*Compendium* <<http://www.compendiuminstitute.org>> can be used as a learning tool to link, interpret and annotate any other resource on the web. OpenLearn users can navigate, download, edit and re-upload maps.

*FlashMeeting* ([fm-openlearn.open.ac.uk](http://fm-openlearn.open.ac.uk)) is a web video conferencing tool (Scott, Tomadaki & Quick, 2007), where OpenLearn users can book an online meeting and select the time, date, duration and number of attendees. The application generates a URL, which can then be sent to the meeting attendees. By clicking on the link, they gain access to the videoconference. The meeting can be edited and its URL can be shared within the community or on the Internet. The number of attendees varies from 2 to 13 people, but the number of users in the COLEARN community and outside who replayed the event is higher. The most popular events in COLEARN are the seminar “Integrating Knowledge Media Technologies in Moodle” with 815 replays and the “Discussion of Knowledge Mapping” with 779 replays.



**Figure 3: Visualisation of COLEARN users in the world**

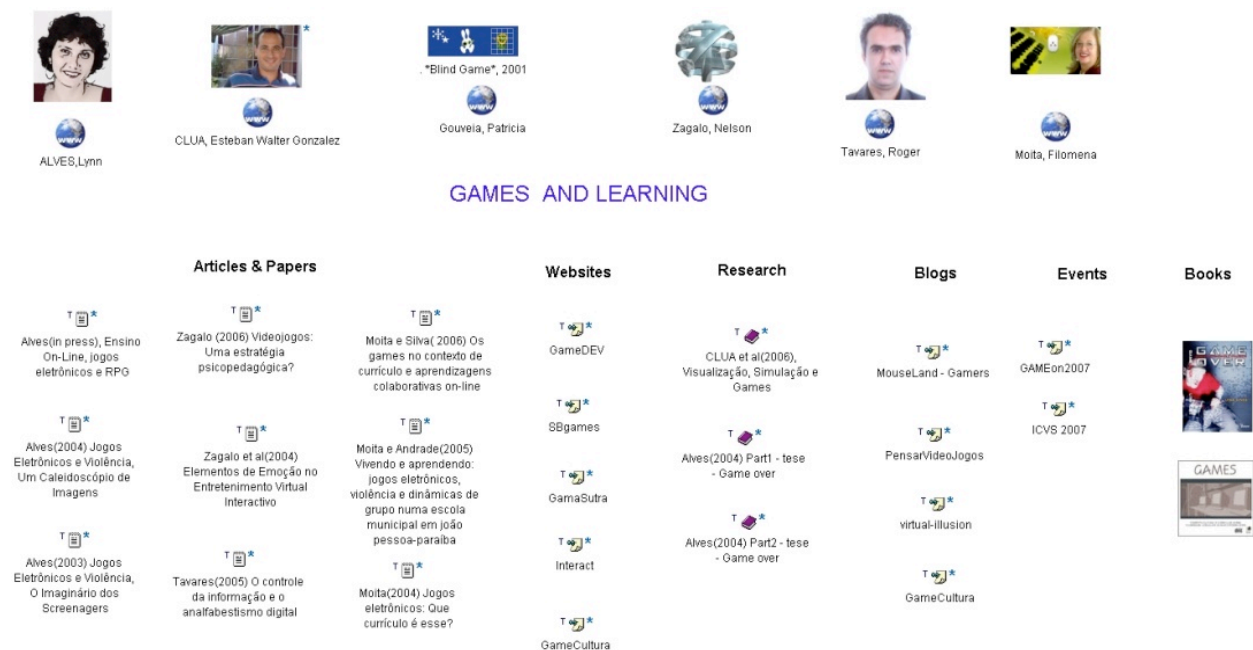
#### **4.1 Mentoring in the informal learning context of the COLEARN Community**



After analysing the maps and discussion forums based on the three categories of informal learning described by Eraut (2000), and the four roles that mentors perform (Rothwell, Jackson, Knight, & Lindholm 2005), both presented in section 2 of this paper, three main categories emerged from the data collected: i) organising learning references; ii) planning learning goals; and iii) developing systematic reflections.

#### 4.1.2 Organising learning references

Figure1 shows a reference map to support a discussion in FlashMeeting. Some participants interested in games and learning, guided by two experts who provided assistance during the process, selected twenty five references using Compendium and classified in articles (9), websites (5), research (3), blogs(4), events(2) and books(2). They shared the map below in the OpenLearn Community COLEARN and booked a FlashMeeting to discuss the uses of Games for Learning:



**Figure 4: Compendium Map about games and learning**

The assistance provided by these two experts included:

- Technical support for using Compendium and FlashMeeting;
- Guidance for searching significant references on the web (papers and interesting links);
- Suggestions to present the content in a clear structure for everybody to collaborate.

#### 4.1.3 Planning learning goals

Figure 3 presents the replay of a FlashMeeting discussion in which participants developed a brainstorm about information literacy guided by a facilitator. The facilitator was a lecturer who engaged participants to discuss the meaning of information literacy in FlashMeeting. Each participant wrote a keyword related to Information literacy, and the group then started to organise connections developing a mind map in the FlashMeeting whiteboard (called FlashBoard). This mind map of relevant topics was very useful for sharing ideas, and also topics of interests in order to identify their interests for next discussions and possible learning goals.



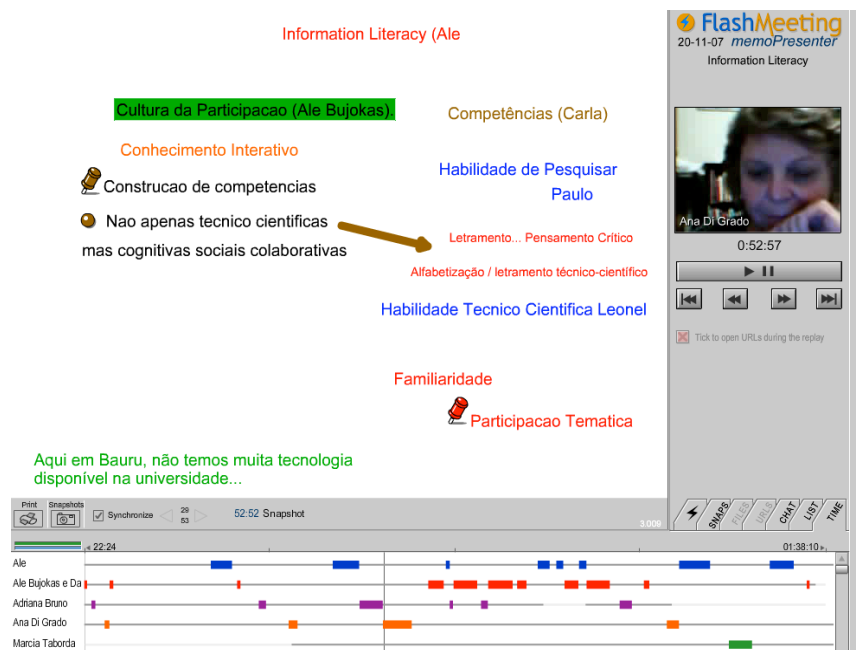


Figure 3: FlashMeeting about Information Literacy

The coaching process developed by the facilitator included:

- Asking participants to share their initial understanding
- Encouraging participants to make connection between their own ideas and their colleagues.
- Supporting participants to reflect about their connections and inviting them to make questions and comments

#### 4.1.4 Developing systematic reflections and critical thinking

Figure 5 below shows a Concept Map created in Compendium by a tutor whose image (jpg file) was shared in the FlashMeeting. This concept map presents fifteen keywords about e-democracy. This map was used by the tutor to discuss the subject and to engage participants in systematic reflections and critical thinking. When learners structure relevant knowledge through concept maps during the discussion, they may recall and apply what they understood easily. The graphical representations also help them create new connections with new concepts:

The screenshot displays a FlashMeeting session. The main content is a mind map titled "E-democracy" with the subtitle "uso de tecnologias da informacao e comunicacao, como internet, para propiciar processos democraticos e participacao politica". The mind map branches into several questions and topics:

- Quais são os níveis de e-democracy?** (Information, Services)
- Quais habilidades são necessárias para o engajamento coerente?** (Participation)
- Como a informação online pode incentivar a participação nas consultas?** (Requisitos?)
  - Produção de uma política pública
  - Níveis de informação de qualidade
  - Consultas regulares e sistematizadas
- De que forma?** (Forums, Petitions, Consultations, Votes)
- Em que medida?** (Anarchy, Social Capital)

The interface includes a video feed of a participant named "Ale Bujokas e Danilo" at 1:13:47. Below the video are playback controls and a "Tick to open URLs during the replay" checkbox. At the bottom, there is a participant list with a timeline for each person: Ale, Ale Bujokas e Da, Adriana Bruno, Ana Di Grado, Marcia Taborda, and Paulo.

**Figure 4: FlashMeeting about E-democracy and map created using Compendium**

The debate promoted by the tutor to develop systematic reflections and critical thinking skills included:

- Inviting participants to extend the map with new questions and comments
- Giving feedback about their questions and comments
- Encouraging participants to give further contributions by downloading, editing and sharing the map

In this case there is formal mentoring in an informal context. The tutor, by directing the learners to a website based on OER and by using the tools available in this website, is tapping on a form mentoring of which the use of technology goes beyond the resources supported by his institution. It is the availability of open learning environments and free web resources and tools that seem to make it possible for formal mentoring to move away from institutional boundaries.

## 5. Conclusion

Mentoring takes place in a variety of ways and is performed by different subjects in the context of using and repurposing OER. First, one needs to consider the technological environment in which the OER is offered. In both case studies presented the use and reuse of OER took place in the LabSpace of the OpenLearn, which is the OER initiative of the Open University UK, and is considered a 'informal learning environment' because there is no accreditation attached to any of the courses offered in the website.

The first case study is an OER repurposing experience carried out in a formal learning situation because it was an activity of a masters' degree course offered by the University. The second case study presented three learning situations which were carried out as informal learning situations

but the mentoring happened in a much more formal way. In this instance at all the three learning situations the mentors assumed a leadership role in guiding the participants through the learning task.

What the data of these case studies suggest is that there are no boundaries for what is considered formal and informal mentoring, or for 'who' should be performing the mentoring. In the first case study there was informal mentoring in a formal learning situation whereas in the second case study there was formal mentoring taking place in an informal learning environment.

Mentoring in the first case study happened in a 'peer-mentoring' style. Peer mentoring is often a learning technique supported by constructivist teaching approaches, such as collaborative learning. The H800 course was designed to encourage collaborative learning, so the informal mentoring taking place seems to be in line with the teaching approach.

In the context of the second case study, an interesting aspect of repurposing of OER is that *repurposing* was not the main goal, unlike case study 1. The repurposed content was an indirect product of a learning activity that was based on open tools and content. The content produced and repurposed as a result of the learning activity taking place in the environment were open to public access because they were hosted within an OER environment, the LabSpace. This shows how OER can be repurposed and used even when the goal is not necessarily the one of creating resources. Repurposing OER in the context of an informal learning environment such as the LabSpace means that there is an intrinsic informal ecology in the OER environment itself that turns out to be systematically organised by the formal mentoring taking place within it. This formal mentoring aids the use of the learning resources in the environment by different cohorts of learners and interested parties.

By analysing the activities of the mentors and participants in the two case studies, this papers starts to explore how both forms of mentoring (formal and informal) seem to address the needs of the practitioners/students in terms of using OER and learning how to repurpose them. We argue that these two forms of mentoring, although different in principle, seemed to have convergent outcomes.

The process of analysing data in case study research is iterative. We aim to continue this research by applying the case study method more systematically in the analysis of the data (Yin, 2009), therefore focusing on the methodological aspects of this research. We also plan to refine our research questions on the role of mentoring in both formal and informal learning situations, informed by the outcomes of our initial analysis.

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