Abstract: The CALICO research network, which includes four research laboratories and six teacher training institutes, is devoted to the study of forums in postgraduate education. Among the numerous studies the research network has been performed, the case of preservice school librarian teachers is notable. Since 2002, two training institutes (Caen and Rouen) have shared an e-learning platform which fosters hybrid formation situations based on exchange, mutualisation and collective work. For the past 5 years, significant research has been undertaken in order to better understand the organization of such forums, the activity of participants and groups, and the evolution of discourse and so on, involving very different tools and methods. This text provides a guided tour of these research efforts, explaining their importance and putting the main results obtained into perspective. It is a step towards a better characterisation of the role and nature of the various forums used during training sessions.

Introduction

International research on forum in education is very active and many debates are currently open. In the following text, we have decided to skip general references due to space limitations and focus on the presentation of a five year research effort. This research work, part of the CALICO network, focuses on collaborative activities, specifically discussion forums as a part of general training. We study a very specific kind of forum: that which takes place in a hybrid organization. In our work, we use an open forum in the framework of case studies, inspired by Casenet (Baron et al., 2001), now called Casenex. A narrative of a professional problem, met at school, is given online. This narrative is analysed and discussed during a three-week period between the trainees from Caen and Rouen via a forum.

In his review of asynchronous discussions in higher education, Hammond (2005) distinguishes several types of forums. A forum is a mere technical device that is given meaning by the context at large in which it is used. Since each forum has its own characteristics, it is not wise to derive general results without paying great attention to specific features (Bruillard, 2007). For example, the forums we study include no question/answering posts and are mainly focussed on collective discussion and collaborative exploration of issues.

The forums we study have several common features: a short time (3 weeks), between 20 and 30 trainees from two different training centres, and between 40 and 124 messages per forum. The collective exploration of a professional problem allows the comparison of the personal trainees’ experiences and personal views. During the forum, the trainees’ language level is similar to the language level when they are physically together at the training centre: standard French, a proper, accurate and respectful language style. Humour and irony sometimes occur, and within the general topic digressions are rare. Their discourse is a professional training discourse. The trainers rarely interfere in the discussion. Their messages are mere suggestions for reflection, requests calling for reformulation, or regulation messages.

Five forums held between 2002 and 2006 were analysed according to different research points of view. One forum in particular was studied by different researchers. This study ran from 2002 to 2008 and addressed the participation, production context, dynamics of the text, or discourse analysis. We use automatic, semi-automatic or manual methods. When adopting a research perspective, combining these analyses can help to better understand the overall dynamics of exchanges and the way a collective reflection is elaborated. When adopting a trainer’s point of view, we also tried to identify the elements of this collective reflection and how the trainees assess their professional development. To put the results we obtained and the research methods we adopted into perspective, we used a chronological order.

Step 1: The participants’ engagements; counting and visualising, interviews

The aim of the first research work was to understand the trainees’ activities, participation modalities, engagements, and difficulties (Fluckiger, 2005). The number of messages gives a first characterization. The observation of individual variations of participation, of inter-individual variations, and of chronological variations participation features has revealed strong differences in the temporal and inter-individual order and shows a heterogeneous and irregular participation. In order to understand the reasons underlying such behaviours, training assessments and interviews with researchers (Harrari and Rinaudo see Baron & Bruillard,
2006) reveal the trainees face three main obstacles: readability problems (to understand the exchanges’ structure was difficult and has been an obstacle for participation), technical and material constraints (computer or internet connection access), and a neglect of exchanges via forums due to lack of time or multiplicity of activities.

The chronological presentation below (fig.1), which includes dates and threads, allows us to observe individual participation without losing a global view of the forum. A phenomenon is therefore underlined: those who have posted two or more messages dispatched them on several threads over a very short period of time.

The users tend to optimize their time, posting several messages the same day in several discussion threads, returning to the forum only later. Fouénard (2004) called it punctual pluri-participations and Fluckiger (2005) a blast mode. Among the 38 messages of this forum, 17 were posted in a blast.

There are several ways to interpret this phenomenon. The forum system used for the case study is BSCW. It is a very good product for distant collaboration however it is not well suited to forum discussions. There is no possibility to access directly to the whole arborescence of messages, only the title of each thread is directly readable. So, students had to open all the threads to be informed of the different messages. Another explanation is the opportunity to participate as little as possible to eliminate an imposed exercise.

**Participants’ engagement: perceived activity**

To understand the trainees’ activity, we must also consider the actors’ feeling. This information is not available in forum contents. Therefore, several interviews have been organized with the participants (Fluckiger, 2005), (Harrari and Rinaudo in Bruillard et al., 2006). They give interesting hints about the way the trainees organize their work.

Their discourses indicate very different practices oscillating between two extreme positions. Some declare little participation and confess they read the messages only near the end of the activity period. Others claim they are more engaged and contribute throughout the forum activity, sometimes in the evening or during the week-end. Beyond these opposite attitudes, to use forums with a group that has the opportunity to discuss regularly face to face does not seem obvious, even if they admit it is a good way for brainstorming. According to the trainees’ interviews, forums are considered a scholarly activity. Interviews also revealed a strange result or an apparent paradox. Forums seemed to be useful to those who had the opportunity to meet every week (a means for additional exchanges), but less useful to distant group (Caen and Rouen). Distant communication via forums (more generally an e-platform) seems to reinforce group cohesion, excluding the other group. This fact has been confirmed by the interviews.

**Step 2. What happens during forum time?**

Distant work via forums can appear to be a constraint for the trainees, and they do not immediately perceive the purpose of the activity. However, trainers consider forums to be a key element in their students’ educational strategy, because they provide a good material for later face to face work. So we have to find elements inside the content of the texts to understand their running better.

**The exchange dynamics**

A chronological reading of the forum messages shows interferences between the exchanges because of the blast effects: their thematic unity does not exactly fit the discussion threads. A lexical analysis (Clouet, 2005), when counting the occurrences in the same lexical fields, points out that the role of forums is to mobilize ideas and
filter them. The most technical subjects are progressively dropped out for more reflective exchanges. The forums seem to achieve a progressive sorting out among the proposed ideas. The overall discussion seems to produce a kind of maturing of exchanges and a progressive appropriation of the proposed issues by the group, allowed by a sufficient time given to forums.

This evolution of contents indicating the cognitive aspect of the forums is demonstrated by a discursive analysis using Themagora software, which shows the hierarchy of thematic units. Considering a forum as a whole account, the study (Lucas, 2005) has investigated the different levels of organisation in order to point out their structure. Several periods can be distinguished and divided into "moments" (fig.2), each of them marked by different intervention modes: short impersonal interventions, longer interventions with more accurate position taking, and personal experience stories. These moments are named "exploration", "discussion", "dramatisation", "comparison" and "enclosure". They organize the macro-structure of the whole text. Some particular messages seem to have a structuring discursive role, bringing dynamics and depth. The forum is thus a collaborative story, the arguably unconscious product of a harmonisation of monophonic voices aiming at a collective discourse.

A typology of messages
If some posts seem to play a specific role, providing depth and dynamics to collective discourse, it is important to identify their characteristics. A graphical representation of three threads (Bruillard et al., 2006) derived from different forums held in 2003 helps to spot each message and identify the interlocutors. In correlation to the interviews run by Harrari and Rinaudo (2006), another feature appears: the existence of subgroups exchanging together in a privileged manner and expressing themselves at specific moments. The characterisation of the messages coming from these different groups has been achieved through their content, structuration, lexicon, and enunciation. It leads to a typology including three kinds of messages.

Arising during the first half of the thread, most often at the beginning and seldom at the end, short messages (3-8 lines) promote the sharing of experiences and mainly describe attitudes, ways of doing things, specific practices limited to the school in which they work.

Another group of trainees give their preference to a different kind of message which appears during the second half of the forum. The length of these messages varies from 6-20 lines and their content is varied: professional positions taken in opposition to previous messages, a synthesis of the preceding messages, proposals at a generic level, messages with didactical intentions or explorations of different facets of an issue. These messages include conclusion paragraphs. Accounts of experiences are followed by a professional comment. The students’ discourse gives evidence of their capacity to hold their practise at a distance. The strong presence of the "I" pronoun shows the authors are actively involved in their assessments. These messages are said to indicate a deepening of reflection and help the structure of the forums evolve. The new orientation they give to the discussion promotes messages of the same type or messages of type 3. These messages appear in the second half of the forums and are of medium length. They approve or back a type-2 message with an example from their lived-experience. Unlike the type-1 messages, these messages are not limited to testimony. The accounts are ended by an opening (the exposition of a similar problem), a question, or a counter argument.

Step 3. How to account for what is learned?
Since the overall dynamics of forums speak to their cognitive function, it is important to recognize their learning gains and discuss how these gains are made. Through the rhetorical dimension of speech, forum contents can indicate how novice teachers express their professional situation and can give an image of their current professional identity. Therefore, on three other forums (2004-2005), we studied how discussions foster the construction of professional identity, individually and collectively, and how they display this process at the same time. We were interested in determining how the trainees express, through discourse, their relationships to the institution, their place in the educational system or in schools, their present evolutions, and their professional positions (Clouet & Roué, 2007). Our general theoretical framework refers to textual and discursive linguistics, an "extremely polymorph", multi-dimensional and "eclectic" approach (Kerbrat-Orecchioni, 2005).

A lexical approach
The lexicon shows how the process of professional affiliation takes place and what social representations novice teachers have on their profession. Two kinds of lexicons are studied: a professional technical terminology (corresponding to their speciality as librarian teachers) and a standard educational vocabulary.

The trainees’ technical vocabulary has been compared to a reference lexicon which was elaborated by extracts from texts written by professionals of the domain. The number of professional utterances amount to 5% of the online discussions. These words mainly refer to the technical aspect of the work. The trainees use a general vocabulary that is relevant to the topic and corresponds with objects, tasks, or precise concepts. The lack of requests for word clarification demonstrates an in depth-understanding of this professional terminology.
If the technical vocabulary is rather steady and relevant, the standard words shared by the educational community are polysemous and subject to different interpretations. This lexicon seems to be of greater interest. This terminology covers several varied fields, related to pedagogy or ethics. It belongs to the usual vocabulary used to exchange experiences and name actors, context, and action.

To study this vocabulary, we made a systematic inventory of the words used, mainly nouns, nominal collocations, and verbal collocations. The comparison of synonyms (or terms of close meaning) referring to a same piece of reality is significant of different points of view. The variations, for example in the use of synonyms to call the pupils ("pupil, child, reader"...), reveal changes in the positions adopted by the trainees. At times they act as teachers, while at other times they act as educators, school librarians, even parents. The way the novice teachers designate themselves ("documentalistes" or "professeurs-documentalistes") and others ("colleagues, teachers") reveals the challenge to find their place in the educational institution, define boundaries, and position themselves in various communities.

On another hand, the comparison of verbal and nominal collocations shows that common references are stated by the group and never discussed. Although it is difficult to evaluate to what extent these references are internalized, one can list a considerable amount of shared values ("respect", "laïcité") and professional ethics. By the means of online discussions, young teachers legitimize themselves and build a positive image of themselves and their profession, an ideal image ("responsibility", "work in team"). On the other hand, shortcomings and approximations of the topics discussed can be evident. A discussion forum underlines what is "already there", the knowledge young teachers have acquired through previous experiences, and fosters its formalization through exchanges, allowing individual implicit knowledge to merge into conscious shared knowledge.

**Enunciation**

Enunciation refers to the relations the speaker weaves between himself and the discursive context, between himself and reality. Through linguistic units such as modalizing terms, evaluating items, and shifters, the speaker inserts himself in the message and evaluates its content.

The trainees, especially at the beginning of the year, rarely use the possessive adjectives “my/our” when speaking of people. They mainly use generic expressions such as “the students/ the colleagues” referring to abstract and undifferentiated individuals, indicating their weak integration in the school context. The interpersonal relation is slowly constructed and eventually, the geographical background is incorporated ("my secondary school").

The trainees use impersonal structures and verbs in the infinitive (70% of the listed verbal collocations), which conceals the speakers’ presence (Clouet & Roué, 2007). These structures express strong beliefs, virtual potentialities, desires, and evident truths not to be discussed or negotiated. The world seems to be presented straight away and objectified: the text of the forums appears as a « multiple voice », that of an abstract, undefined and polyphonic speaker voicing good sense and shared knowledge (Vion, 2001).

At the beginning of the year, the trainees’ discourse is a general one, unlinked to the school context. Later in the year, however, general opinions and principles tend to fade away to the benefit of precise observations of reality and more personal statements in the first person singular. The texts of the forums are ready snapshots of the technical knowledge internalized, the shortcomings and inaccuracies, and the skills being developed (interpersonal relations and the progressive account of the reality of the school context). The young trainees’ discourse speaks for a gradual affiliation to a status, subject, and corporation.

Table 1: Three ways of developing a discussion and constructing shared reference

<table>
<thead>
<tr>
<th>A joint construction by juxtaposition or agreeing collaboration</th>
<th>A co-construction through adjustments</th>
<th>Construction by direct confrontation</th>
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<tbody>
<tr>
<td>Building up, step by step, by expanding with consecutive sequences without cancelling the previous ones</td>
<td>An exploratory approach</td>
<td></td>
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<tr>
<td>No logical or hierarchical relation</td>
<td>Looking for a mutual solution without any antagonism or disagreement</td>
<td></td>
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<tr>
<td>Each message controls and reinforces the previous one</td>
<td>Thinking goes on without any interruption, through regular and consecutive adjustments</td>
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<tr>
<td>Evidence becomes a mutually shared and acquired reference</td>
<td>Requests which call for clarification</td>
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<td></td>
<td>Assertions with modal variations which express doubts or uncertainty</td>
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<td></td>
<td>Argumentative sequences in a more polemical and rhetorical way</td>
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<tr>
<td></td>
<td>Aims at convincing, persuading and getting the others’ agreement</td>
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<td></td>
<td>A definite personal point of view</td>
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<tr>
<td></td>
<td>Claims with arguments, counter-arguments, guarantees and backing</td>
<td></td>
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<td></td>
<td>Parts of forums, sometimes mere threads</td>
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</table>
Three ways of developing a discussion and constructing shared reference

During discussions, young teachers construct a mutual reference through discursive sequences: they investigate professional problems, state viewpoints, debate, test solutions, express values... So how do forums evolve? We have highlighted three processes.

In the three cases we have examined, the discussion threads are not closed and could seem incomplete. Nevertheless, it is clear that in the first two cases (construction by juxtaposition or by adjustments), the forum reaches an explicit consensus. Once negotiation is concluded either by exhaustion of the topic or by mutual agreement, its issue becomes acquired knowledge which will not be discussed again. Alternatively, in the third case, a consensus is not reached. The discussion is not finished; the opposite claims are still competing.

As long as the forum continues, the pieces of the newly constructed knowledge are scattered through the messages. Professional knowledge is neither formalized nor synthesized, which is one of the limits of this type of discussion. Therefore it has to be given a name, developed, formalized which will be one of the activities when the teachers are face-to-face at the training centre afterwards.

Perspectives

Forums play a double role: (1) they offer a rich material to explore, giving snapshots of the situation at a given moment in the professionalisation process; (2) they help to construct a collective professional identity through collective discussion. During the preservice teacher development, forums can provide useful information to trainers. The results and research tools giving indicators and visualisations are of great importance (Bratitsis & Dimitracopoulou, 2006; 2007). Moreover, as our forums are very specific, it appears that new indicators may be given.

Moving forward, we will try to confirm the existence of invariants on other forums and to enrich the different analyses we have done until now. As the Calico research network provides tools available on the web, we will use them. It is therefore necessary to expand the reference lexicon, and to design an organization of this lexicon. To give feedback to the participants, as many researches do, will be initiated and we will analyse its impact on the debates to come. Finally, we will put our results into perspective with what has been observed in other forums, in order to obtain a sort of taxonomy of forums and associate invariants to ideal types of each category (Bruillard, 2007).

References