SIREMSIEL2014

Apertura e flessibilità nell'istruzione superiore: oltre l'e-learning?

Atti del convegno
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SES-C1: I MOOC COME SFIDA PER LA FORMAZIONE SUPERIORE

SES-C2: LE ICT NELL'INNOVAZIONE DELLA DIDATTICA UNIVERSITARIA

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SESSIONE PLENARIA:: OPEN ACCESS: RICERCA APERTA, DIDATTICA APERTA

The new frontiers of Digital Collaboration in the professional training of non-teaching staff:
from compulsory training for newly hired school leaders to new virtual spaces for learning and communication

Chiara GIUNTI[1], Massimo FAGGIOLI[1], Maria Chiara PETTENATI[1], Alessandra RE[2], Giancarlo CERINI[3], Vanna MONDUCCI[3], Daniele BARCA[3], Mauro BORSARINI[3]

1INDIRE, Firenze

2INDIRE, Roma

3USR Emilia Romagna

Abstract

The training experience of school leaders represented a starting point for a broader consideration about the social and generative environments for professional practices. The monitoring activities show detailed results about quality and efficiency of collaborative work and tools adopted for digital collaboration task. In addition, the intervention will focus on the spin-off experience made by USR Emilia Romagna and on the research and training laboratories currently under development on that territory. The experience of Emilia Romagna represents a good practice and an example of innovation in training of the non-teaching staff in Italian schools.

Keywords: Digital Collaboration, an e-learning, adult education, community of practice, collaborative learning

1.Introduction

With the advent of the *Knowledge Society* and with the theory known with the term "connectivism" (Siemens, 2006; Downes, 2007), knowledge is transformed into a particular dynamic model of relationship, and learning is transformed into a continuous process of new connection and creation of networks patterns. Knowledge is more and more a social act distributed through the networks. Global connectivity today facilitate Digital collaboration in virtual environments making people protagonists of joint actions and allowing new ways of social interaction (Sorrentino & Pettenati, 2014). The evolution of technological solutions facilitates the design of environments that can promote the genesis of dynamic professional community, made free from the constraints of existing training models and enabling new forms of collective intelligence (Levy , 1996; De Kerckhove, 1997).

In this framework took place the blended learning experienced led by INDIRE[1] since 2001. The INDIRE training programm is aimed at teachers, school leaders, teaching staff and students, and aims to professional development, didactic innovation and continous learning. As part of the training of non-teaching staff, training of new hired school leaders is an example of the evolution of the training model toward collaborative and situated Knowledge foms.Training and internship activities reserved to new hired school leaders, as defined in the Ministry notice of July 13, 2011, were activated during the test year and after the new professional role definitive appointment. In 2012/2013 the Ministry of Education promoted and coordinated a training and internship composed of 75 hours for 830 newly appointed school leaders. In school year 2013/2014 a second contingent of 873 newly hired school

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[1] www.indire.it

leaders executives with effect from September 1, 2013, attended the same course of training and internship (Fig. 1).
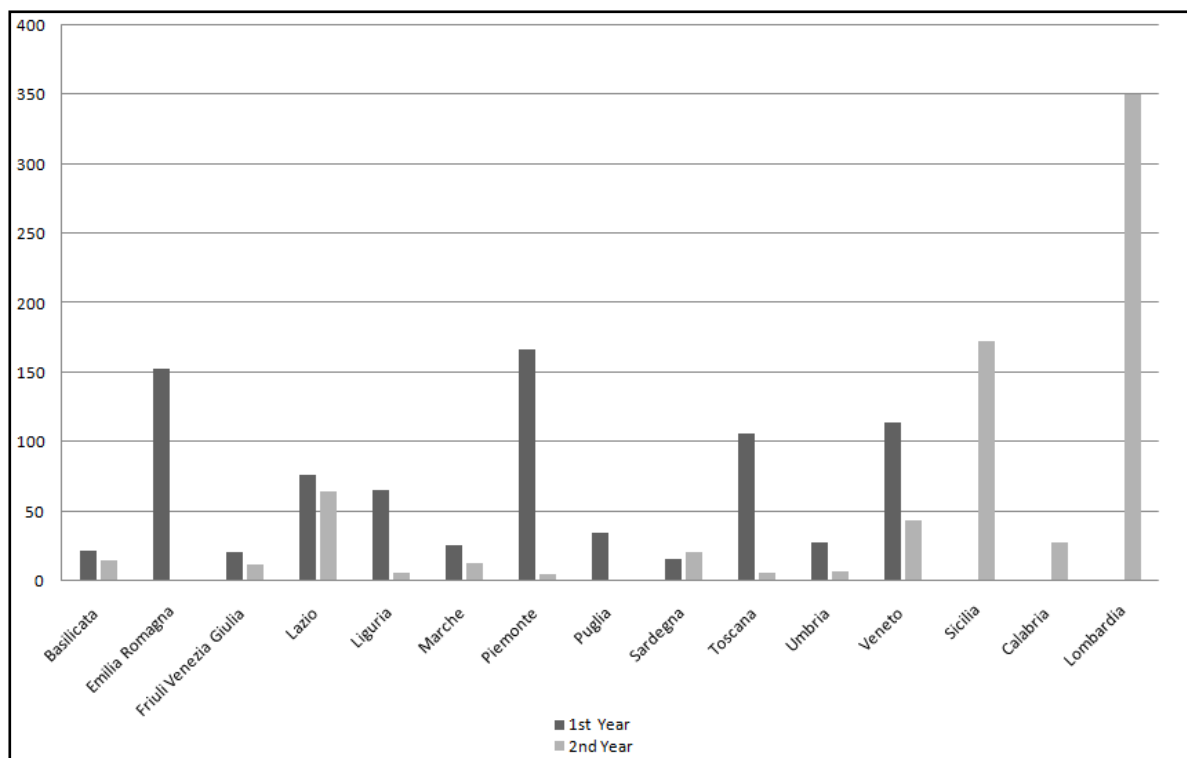
Figure 1 - Global framework of new hired school leaders during two years of training divided by Italian regions

The training realized a process of professional support to new executives. The objective of the training was, in fact, to provide concrete support to the development of management functions and to the resolution of new professional role issues. Finally, the model was studied by INDIRE researches that investigated in detail the quality and effectiveness of the collaborative work done in the virtual classroom also in order to facilitate at local level autogenesis phenomena of embryos of professional practice communities of school leaders.

2. Methodology
2.1 Training model and involved subjects

The training activities promoted by the Ministry of Education adopted a blended model that integrated attendance training opportunities, a period of online learning and a period of internship:

1) *Face to face* meeting, lasting 35 hours. In edition 2012/2013 it took place in three phases (National phase, interregional and regional phase) and it was an opportunity to provide to all the new hired school leaders common guidelines throughout national and regional levels. In the second edition (as 2013-2014) training in attendance has been made during the training initiatives promoted at regional level in order to bring out the specificity of the local context and enhance the relationship between the Regional School Office and school leaders;

2) *Online learning*, lasting 20 hours, was managed by INDIRE through an online e-learning platform managed by e-tutors. In school years 2012/2013, the 30 virtual classes activities were conducted from April to July 2013. In school years 2013/2014, due to logistical and organizational difficulties, online training in 30 classes was concentrated in the months of June

and July 2014.Within the virtual classes two case studies were presented to the students; the first required as output the development of an Improvement plan, the second required the development of a project for the introduction of the ICT in the school. The final work (project work) was a group activity, negotiated and agreed with the help of chat, forums, wikis and blogs.The debate, confrontation, negotiation made learning a cooperative and social process. Crucial in this context, the figure of the e-tutor: animator, guidance and support to the work in the virtual classroom.

3) The *Internship*, lasting 20 hours, actualized in mentoring and was aimed at consolidating the skills related to the management function in the reference area.

2.2 The role of INDIRE and the online environment

The role of INDIRE within the project was to provide the connection point between the initiatives put in place in the various training sessions (training in attendance at regional level, online activities carried out with the support of e-tutors and the internship made with mentoring) thus ensuring the overall readability of the training.For this purpose, the e-learning platform designed and implemented by INDIRE provided to all the actors involved in the educational process (students, e-tutor, mentor and referents USR[2]), a control panel to monitor all online activities.

The training environment designed by INDIRE wanted to promote:

1) *self-employment* and self-training of the students through a library of digital content distributed on five thematic areas (Legitimacy and management, Safety, Quality and effectiveness of education and training, Equity, Social cohesion and active citizenship, Transforming the learning environment);
2) moments of *interaction* and discussion between students and experts through thematic forums;
3) *collaborative work* in virtual classes moderated from e-tutor.

3. Mentoring phases and results

The two editions of the training program were monitored with mixed method (quantitative and qualitative). The research used various survey tools: students satisfaction questionnaires, e-tutor addressed questionnaires relating to their activity in the virtual classroom, intermediate and final e-tutor reports, tracking of the activities in virtual classroom.

3.1 Step One: the training

A first phase of monitoring, common to the two years of the project, was conducted with the help of satisfaction questionnaires completed anonymously by the students during the last month of online training (July 2013 for the first edition, July 2014 for the second edition). The questionnaire was constructed by grouping the 44 closed-ended questions in the seven areas of inquiry so as to touch each phase of training. The rating scale was a 4 steps Likert (1 low - 4 high). In addition, a spare field within each area allowed the participants to freely express personal observations.The questionnaires completed by the students during 2012/2013 were 611 (73.6% of total students), while those compiled in the year 2013-2014 were 640 (89.3% of total students).The quantitative data obtained from the questionnaires were analyzed using statistical techniques while the content analysis of free fields has been carried out through a grid with indicators. Participants were allowed to bring forward an impact analysis for the entire training process.

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[2] Ufficio Scolastico Regionale

The students have expressed particular appreciation for the relationship established with the two figures supporting the training course: e-tutor and mentor.

In both the editions the availability, the support and the expertise of the e-tutors proven to be essential. In particular in the free fields emerged the importance of its role as facilitator and emotional support in a training program containing many critical issues related to timing and way of performing. An analysis of the satisfaction questionnaires showed that the most appreciated aspect of his activity was the "Support in enabling openness, respectful, collaborative environment" with a high percentage of the response "Totally" both in the first year (56%) than in the second year of the project (64%).

Even more appreciated was the mentoring. High satisfaction percentages concern to "Ability to establish a relationship of trust" ("totally": 85% in the first year, 71% in the second), the "Emotional support in conflict management, in taking charge of risk and responsibility of the role "("totally": 71% in the first year, 59% in the second), the" stimulus for the creation of networks between managers and networks between schools "("totally ": 59% in the first year, 48% in the second). Numerous comments in the free field describe the relationship with the mentor as the more positive experience, effective and profitable throughout the educational path. In particular, the new hired school leaders described the availability and timely help offered in every step of the way:

> "The mentor has been by my side during the whole training process with availability, openness, professionalism and spirit of cooperation. Its action has been extremely useful for my training . I am sure that the established relationship will continue also in the future. "

Moreover, in the free fields are reported collegial meetings with mentor and new hired school leaders of neighboring schools made with dynamics very close to those of the communities of professional practices.

This phenomenon is confirmed by answers to the question concerning the "stimulus for the growth of a community of professional practices." The comparison of the two years shows that the percentage of the response "Enough" has remained unchanged (54%) but the options and "Not at all" and "Few " decreased (from 3% to 1% and 20% to 11%) while increased the percentage of the "Totally" (from 23% to 34%) (Fig. 2). Finally, explanatories are the answers to the questions concerning "degree of satisfaction about reached results at the end of work in the virtual classroom." The percentage of responses "Totally" has seen an increase from one edition to another. It increased from 18% to 32% from the first edition tothe second. Note the decreasing of the "Few" (from 22% to 11%) (Fig. 2).
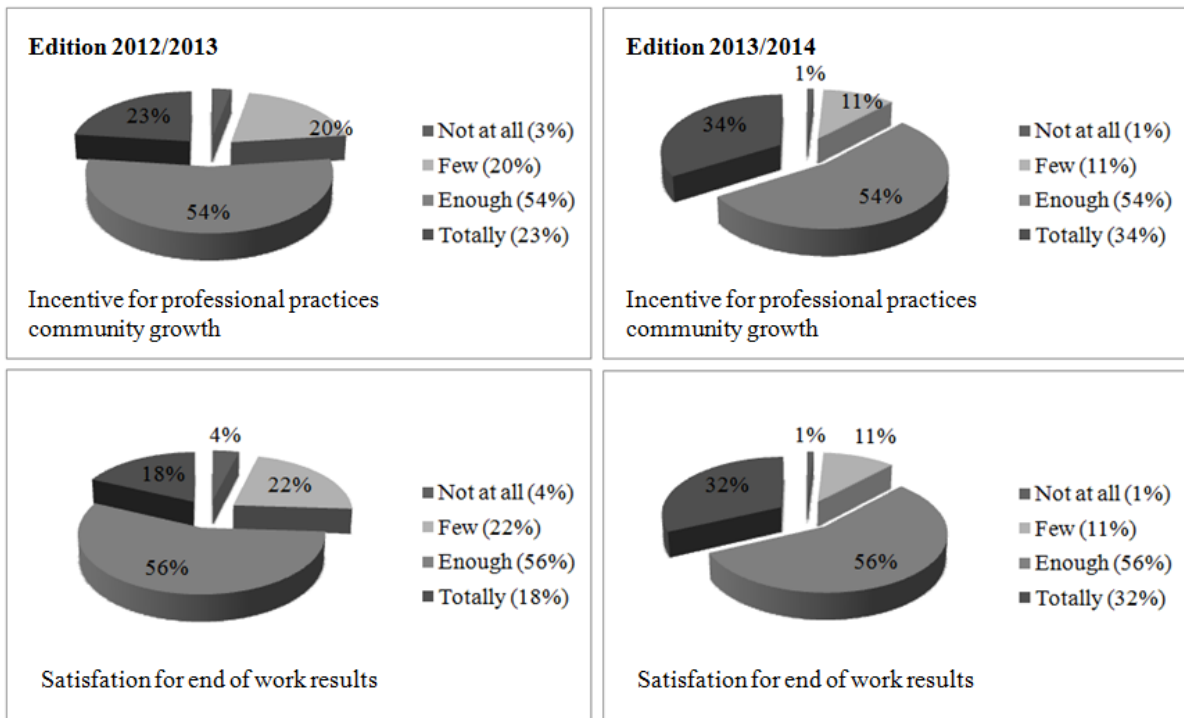
Figure 2 - Analysis of students questionnaire questions

3. 2 Step Two: collaborative work in the virtual classroom

A second phase of monitoring, limited to the first year of the project, wanted to investigate aspects of the educational model related to the collaborative work done in the 30 virtual classrooms. For the selection of the objectives of the survey were used Engström's triangles (CNIPA, 2007) used to find relationships a) Subject -Community-Roles b) Subject-Community-Content. Very interesting results have emerged regarding the ways of interaction between learners and between learners and the teacher, and the cognitive processes activated by the participants during the activities. In particular, the way of interaction between learners and between learners and the teacher was investigated with sociometric analysis that allowed us to reconstruct the 'interaction network' activated between the participants in the virtual classroom. The analysis has considered the number of communication exchanges between different participants and took advantage both of platform tracking data both of the tutor's questionnaire. The seven questions making up the tutor's questionnaire have been built on the following indicators: amplitude participatory, proactivity, shared knowledge, social grounding, membership, equity participatory, cognitive and metacognitive awareness. The collected data have been analyzed using statistical techniques. These data have provided a first image of interactional dynamics that have been activated in 30 virtual classrooms (Fig. 3).
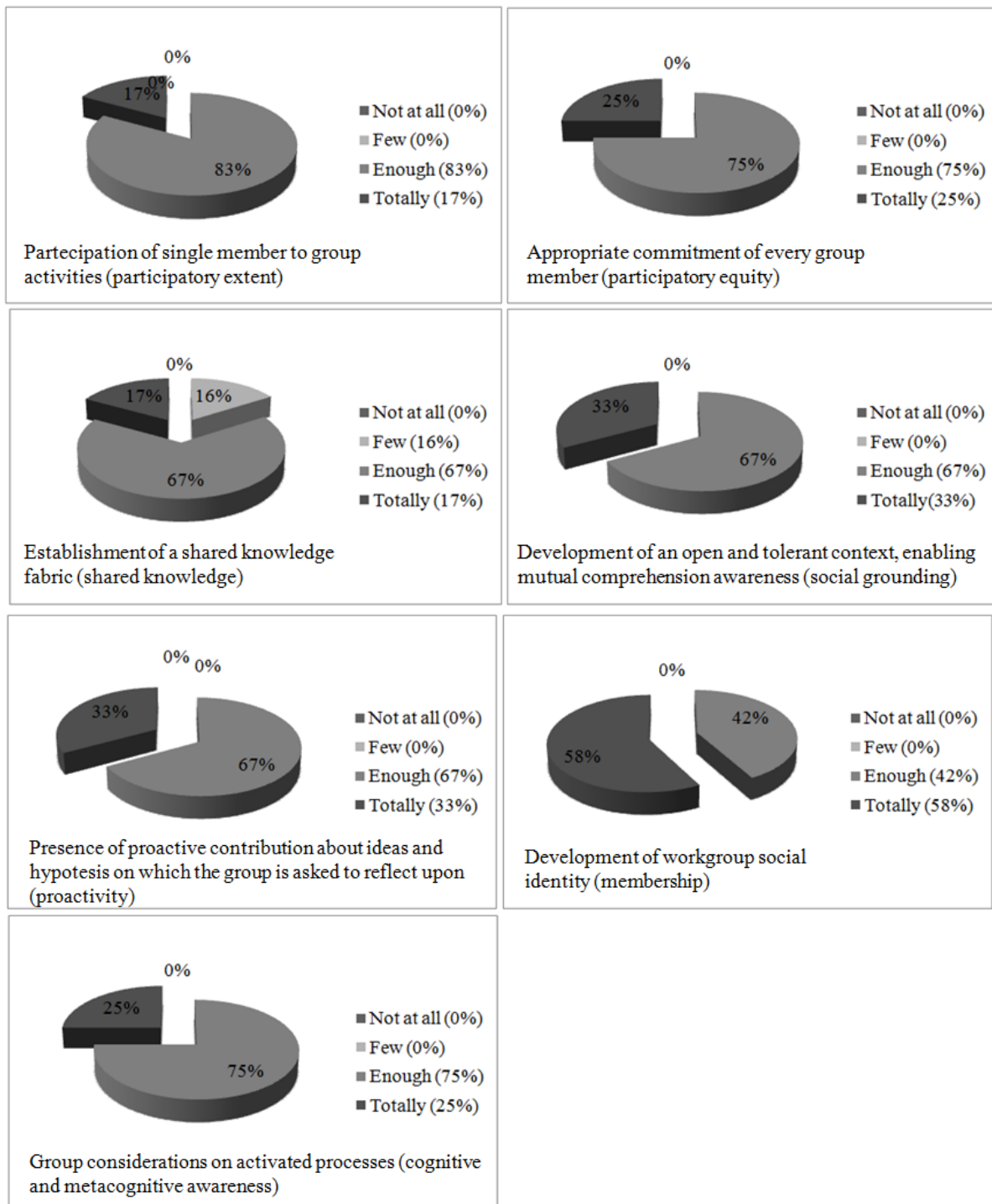
Figure 3 - Analysis of e-tutors questionnaire questions (2012/2013)

The results of the e-tutor questionnaire were confirmed by a qualitative analysis of a virtual classroom behavior through the study of the post of e-tutors and learners and through synchronous meeting recordings. By identifying dialogic symbols (thinking type), to each post is assigned a label describing the function in the context of the discussion and therefore the cognitive dimension. The framework outlined a clear picture of the cognitive processes activated by the participants during the activities in the virtual classroom, in the group dynamics and in the socialization process. In particular, it has been

possible to identify the cognitive quality of e-tutors interventions and its contribution in the realization of the final product (Fig. 4)
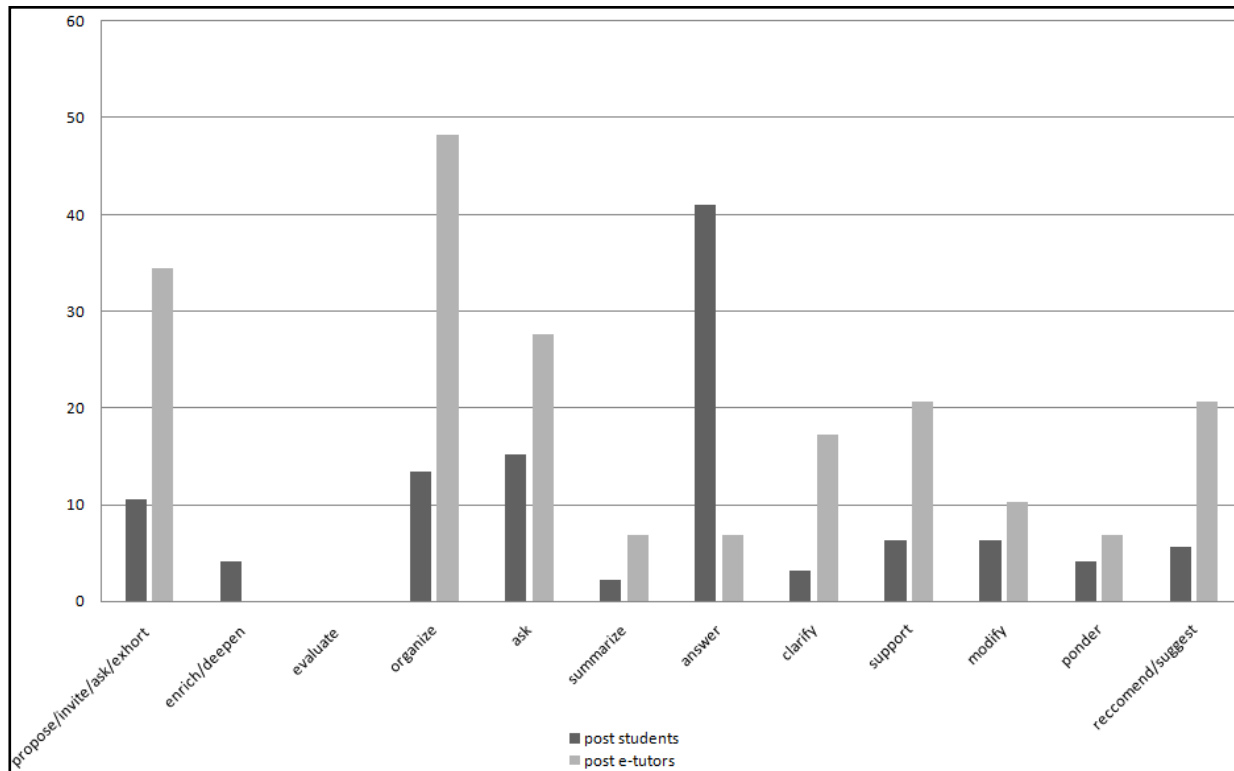
Figure 4 - Analysis of forum e-tutors and students occurrences

4. The experience of USR Emilia Romagna: retrieving the local community of practice

USR Emilia Romagna, 5th office, in the context of 2012/2013 edition of the training project, developed a spin-off experience proving to be a good practice and a model to be adapted and disseminated to other Italian regions. Emilia Romagna choose to privilege the system and network logic promoting collaborative dynamics in a professional community comparing on the profile of the school leaders, starting from the analysis of real and concrete issues, seeking solutions and models to be applied, adapted, tested, evaluated. Within the training project, USR role was to organize training in attendance, select the mentors and coordinate their activities in the area. Many USR chosen to distribute 20 hours in semi-residential or residential training seminars. Otherwise, USR Emilia Romagna has organized half-day seminars, held on a monthly basis. The number of hours offered with this schedule was superior{ to the ministerial guidelines (36 hours vs. 20 expected) allowing to the 152 Emilia Romagna newly hired school leaders in training to investigate on many topics of interest and, at the same time, the attainment of the total hours required even in the case of absences at some of the scheduled meetings. The definition of the program, as well as that of the contents, has been carefully planned by a project team constituted by USR representatives for the training of school leaders, school leaders of proven experience, representatives of the mentor and of newly hired school leaders. In addition, the training offer was made through a survey of needs by structured questionnaire. The topics covered during the meetings characterized for the variety of subjects addressed: from school self-audit to the development of an Improvement plan, from the Digital Agenda to the activity of negotiation, from school safety to management control and social budget.The program has sought a balance between "contents" and managerial functions with the aim of forming a high and strategic leadership

profile. For this purpose, has been fundamental the evidence of good practices of school leaders shown in the program of the meetings.

Particular attention has been paid to the mentoring activities. The 38 Emilia Romagna's mentors have been involved in operational meetings at the regional level and have been invited to some of the training sessions aimed at new school leaders in order to avoid mismatches in the information and in the conceptual plant proposed for new hires.The mentoring activities, which was carried out both locally and remotely, followed common operational directions.The questions of new hired school leaders, related to daily emergencies, have been translated into emblematic cases in order to carry on shared considerations useful for identify transferable intervention protocols, adaptable in context and used in self-help. The final part of the meetings was dedicated to on-demand support("question time") on contingent issues and emergencies. The activity of remote mentoring is realized by individual and group e-mail continuous contact about cases and emergencies. At the end of the activity, has been requested to mentors a report on the course, based on some common indicators prepared by the regional staff. In particular, besides the reporting of meetings and hours done and the list of analysed cases, the report has provided an evaluation phase shared by new hired school leaders and mentor about application of models developed in relation to the chosen themes.

In continuity with initiatives started for the new hired school leaders, USR Emilia Romagna developed a training plan for the school year 2013/2014, aimed at 441 school leaders servicing in that area.The training plan, currently underway, will be completed in December 2014. The training plan, modeled on the training of the new school leaders, includes 25 hours of training with a certificate of attendance: 10 hours locally (regional /provincial seminars), 10 hours online (groups/laboratories for research-training) and 5 hours for the production of materials.Interesting is the experience of the 15 research-training laboratories associating schools and leaders in research, training and documentation, thereby promoting network culture.The identification of research topics were chosen on the basis of a map of themes developed by qualified region representatives of school leaders, integrated by representatives and professional associations. Each research-training group consists of 10-20 participants working in self-management. In each group a school leader is appointed as coordinator and is responsible for ensuring the application of a protocol for the regular development of training activities.In addition, coordinators remain in constant connection with each other and with the regional staff for ongoing reporting of the activities. Each group has a budget for expertise acquisition (consulting) and to enrich the educational offer; for this purpose, USR has activated relation agreements with universities, foundations, professional associations (Department of Education Science, University of Bologna, Emilia-Romagna AICQ, Fondazione Compagnia S. Paolo, Politecnico di Milano).Laboratories' working methodology provided an turnover between moments of meeting in attendance, online job done with services offered by google drive "homework" and final processing of materials. A system of referees allowed the final validation of the produced materials in view of their public dissemination for also the purpose of their use in subsequent training initiatives.

5. Recommendations and future developments

International studies (Association TreeLLLe, 2013) confirmed the deep interdependence between the professional quality of the school leaders and the school quality. Effectiveness and efficiency of a school are, in fact, deeply linked to the figure of the leadership and to the influence it exercise indirectly on learning and on professional development of teachers.That of the school leaders, then, is a professionality on which you need to invest with appropriate initial and in-service training courses.

Unlike in other European countries, the period of testing and initial training of the new manager is little more than a formality and is carried out in the ways we have described, during the full exercise of the management functions.The new school leader is not, therefore, put in a position to learn the profession in a protected situation, as a trainee or vicar of an effective school leader. In addition, the period of the mentoring, considered by new hired school leader as the most important phase of their training, runs out at the end of the test year.

In the context of the training of new hired school leaders and new employees over the years 2012/2013 and 2013/2014, the e-learning environment created by INDIRE attempted to activate within the virtual classes moments of research and experimentation on real issues extrapolated from the professional practice of school leaders in order to activate dynamics of *problem-based learning* that could have a positive impact within their work context.

The monitoring results highlighted, however, that the work in the virtual classroom, although appreciated, was seen as an experience not integrated into the learning path and concentrated in a temporal space insufficient to complete the formal expected tasks. Moreover, in the questionnaires free fields, the participants complained about the lack of real meetings as support to the work in the virtual classroom and stated that they spontaneously met when neighbours.

In response to these needs, the initiative of USR Emilia Romagna is trying to give continuity to the training of the new hired school leaders by associating schools and leaders in research, training and documentation.The experimented training model can be easily replicable in other regions also in view of the third year of the project for new hired school leaders. For this purpose It will be necessary to support the research-training laboratories with a new online social environment characterized by openness and flexibility.

On the model of informal social networks such as facebook and similar, which in recent years hosted groups of newly hired school leaders engaged with the new professional role, our research will approach on the testing of new virtual spaces for learning and communication allowing users to interact and collaborate, activating forms of *informal networking* (Ranieri, Manca 2013).

The experimentation will be directed towards models allowing the distribution of a dynamic, mutant, decentralized, circular knowledge, free from time and space concepts. Moreover, and especially in view of a permanent dimension of the school leaders training, the model will encourage the creation of new connections and it will be generative of communities of professional practices

This will be, in the coming years, a priority for all the stakeholders (Ministry of Education, INDIRE, USR) involved in the process of supporting the new profession of school leaders towards La Buona Scuola vision.

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