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The collaborative research: Formative effects on educational sciences students’ learning

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Abstract

The scientific faculties have developed, for a long time, profitable partnerships of research with the economic and productive world. On the contrary, cooperation and examples of dialogue between humanities and the economical world are really few. This study is concentrated on the students working on their degree on a project of cooperation between humanistic courses and business organizations. The contribute describes inquiry steps and instruments adopted to promote a reflective attitude for the students during the research process and it highlights the effects of the collaborative research on educational sciences students’ learning and on their professors, directors of thesis.

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1. Introduction

Since its origins, University has started a rich and complex debate with the outside world where its relationships have been marked by different experiences and contributions suggested by many ideas of University (Newman, 1852).

Exactly during the history of these ideas of universities, the various ideas of them have sometimes allowed or hindered a different relationship to the research and, precisely, to the centres where the activity of research could identify the subjects to work on, or where the same process could be applied to. Along with this evolution, the scientific faculties have developed, for a long time, profitable partnerships of research with the economical and productive world. On the contrary, cooperation and examples of dialogue between humanities and the economical world are really few as it is evident by a recent mapping of these projects about the University-Business Dialogue (CEC, 2009), whom the European Funds has promoted. These experiences have led the researchers’ activities to ask if the cooperation between university and business realities, and in particular, between humanistic faculties and the business world, could be formative for educational sciences students learning and how it could be good.

PARIMUN Project – Active Partnership of Research between University and Business-Enterprise, promoted by the Department of Philosophy, Sociology, Education and Applied Psychology of the University of Padova, has set up a privileged context of analysis to investigate the formative effects of a collaborative research in the specific course of educational sciences. Precisely, in 2008 PARIMUN started with the desire to support graduate students on the planning and realization of intervention-research in territorial organizations. The activities of research are

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managed by “junior researchers”, as they are called, considering demands and requests pointed out by the organizations themselves, on the subject of lifelong learning, adult education, instruction, education, etc.

2. Methodology

Intervention-research was chosen as a larger methodological approach that focused on research as a “reflective practice” and on relationships between researcher and stakeholders (Lewin, 1946; Gilardi & Bruno, 2006).

This study based its inspiration on the theoretical roots of the intervention-research and on its methods as well as on the Reflective Practice of Donald Schön (1983) and his “epistemology of practice”; on the essay Operative Epistemology of Donata Fabbri and Alberto Munari (2005/1984) and their “epistemology of knowledge”, a methodological approach inspired by the historico-critical-clinical method of Piaget.

The two theoretical guides have strongly determined the production of instruments and methods of investigation which were able to foster a reflective attitude (Munari, 2010) on the junior researcher. Similarly, the project has given the team of research the possibility to prepare a sort of “reflective guideline” so that it could lead the student during all the period of the collaborative research.

We have adopted three instruments in order to promote a “reflective guideline”:

- an online research-diary, encouraged by periodical questions about: the relationship with the organisation; its agreement and understanding about the subject of research and questions about it; the construction of a research design and its coherence with the students’ personal project and the organisation interest; theoretical framework; methodology and instruments; findings. The writing of the diary has involved students during all their work, in order to promote a reflection on the events happening during the activity and its practice;
- a chapter of the thesis (defined the “PARIMUN chapter”) dedicated to the experience of the research, starting from the research-diary, the first one written at the end of the work. The aim of the “PARIMUN chapter” was to improve meta-reflection;
- a final interview based on the interactive drawing method (Fabbri, Cavara Medioli & Vanelli, 1986) was proposed to the students a month later, after their degree, in order to further a second level of reflection. The same interview was proposed to the professors, the directors of thesis, too.

The first level of meditation whom the student was invited to, was that one of a reflection-in-action (Schön, 1983), that is to say a reflection during the activities required to make the project work on.

The second level consisted on a reflection-on-action, which had just ended (Schön, 1983): a reflection that was not based on immediate feedbacks and so, for this reason, a reflection that was more free from the pressure of “the feedback itself”.

On this subject, Luigina Mortari refers about a sort of studied action, defined as “to be meditative present in front of the experience” (2003, p. 13).

Finally, the third level of reflection is that of “a reflection on itself”, an attitude of meta-reflection, the attitude of thinking about thoughts of Mortari (2003). This last meditative step consists on being focused on the processes of thoughts. The result is that of leading the actor towards the epistemic awareness of Munari: “the awareness of your own ability to speculate on reality in a critical and substantiated way, using the theoretical resources and those ones of method which are proper, as well as observing those rules that are admitted by the scientific community” (2010, p. 46).

3. Findings

People attending the project were: 18 educational sciences graduating students, 9 professors - directors of thesis (University) - and 15 organization managers, all of them being actors of intervention-research developed within the PARIMUN Project. In this article our attention is only addressed to the students and the professors involved in the project.
The empirical data for the study were drawn from students’ texts (diaries and “PARIMUN chapters”) and from individual interviews. A combination of text analysis (Lancia, 2004) and qualitative content analysis (Cicognani, 2002) was used. The three categories of formative effects emerged from the analysis are described in the following lines.

3.1. Formative effects: first, epistemological effects.

The repercussions on the student’s epistemological attitude can be summarized in some crucial operations (Munari, 1992; Sangiovanni, 2010) exercised by the junior researchers during the activity of research together with the University and the Business world. These critical operations have been traced by a qualitative content analysis.

The first crucial operation consists on: to negotiate. The cooperative research is indeed a sort of continuous “negotium” (Fabbri & Munari, 2006). In detail, the junior researcher has to “concretely hold talks with the organizations” and to manage well in “the negotiation between the business world and the academic institution” - quoting the very researchers in support of it.

The second crucial operation consists on: to decide. With reference to the activity of taking decisions, the researchers talk about actions as “to take the initiative”, “to choose”, “to circumscribe”, “to assess”. The active role of the student with the organization obliges him to take up a position, acting in a studied action and, we could add, in a “determined action”.

The third crucial operation consists on: to establish links/to set connections. By means of practice in the empirical activity, the junior researcher comes across complexity. In this way he explores the systemic framework of university and business world, both marked by a thick network of internal links whom he has to face with. The text analysis has underlined different moments of interrogation by the researcher about the links between the different lessons and the theoretical requests which were typical of the subject of research; the links between theory and experience in the same research, and finally, the links between the field of investigation and the selected instruments and materials to work on.

The last crucial operation consists on: to give meaning. To give sense to the cooperative experience and to its inductive events (Fabbri, 2011). According to Donata Fabbri, the inductive events lead the “individual to make clear to himself and to the others the mental process, the reflections, the activities (of methods, cognitive, etc) which are employed in a specific situation or context” (Fabbri, 2011, p. 163).

The cooperative research, in this case promoted by PARIMUN project, triggers off an “irreversible process of amplification” that obliges the graduating student to understand and to connect inside a frame of sense his negotiations, his positions and his actions (Munari, 2010).

3.2. Formative effects: second, methodological effects.

Methodological repercussions are about the attitude of the students on the research and on theoretical and methodological framework.

Once again, this second group of formative repercussions is to refer to the process of definition and negotiation of the problems of research that the University and the Organization have to work out. This process will produce a shared literature of new knowledge and will urge the finalization of new models of methods or the reassessment of models already experimented.

The cooperative research promotes a change of status of the different branches of knowledge and in this way it ends their stillness. When you are in the project, every theory or method requires to adjust the aim according to the needs of the context. In an epistemological view, the junior researcher has the opportunity to explore the different opinions of the people he speaks to and the reasons they support them, adding – in so doing – an anthropological dimension to his work.

3.3. Formative effects: academic and educational effects.
These effects mainly concern the professor, that is the director of thesis, as representative of the academic institution. The role of the teacher shifts from that of being “a very competent professor” to “an active guide of method”.

The different subjects of the cooperative research as well as their peculiarity and requests of the organizations ask the professor to explore new areas of learning, often connected to his studies but which are not always necessarily within his theoretical competence.

The intervention of the professor comes out to be a support in the method of work and is aimed to assure the graduating student a good direction following the thoroughness and precision of the research. At the same time, during this practice, the choice, the realization, the use of proper instruments of investigation and the analysis of data are defended.

Thanks to the experiences of new business situations, the redefinition of the role required to a “PARIMUN teacher” implies a widening of his specific knowledge of competition and an interaction of knowledge, too.

The result is a change of the professor’s competitions as a consequence of the experience of the active practice of the cooperative research. A knowledge which becomes contextualized and improves more and more thanks to the experiences it has in new contexts, changing the source of its origin. Moreover, it is a kind of knowledge which is constantly being enriched by new practical dimensions acquired outside the classroom, where the teacher is not the first person involved in the organization. Similarly, the student is not alone in front of the professor but he is accompanied by the business institutions, its workers, both interested and looking for the results of cooperative researches.

4. Conclusion

The formative repercussions we have underlined help to a reconsideration of the relationship teacher-student. This relation, in fact, moves towards a direction of mutual cooperation and involves all the actors of the project: the academic leader, the business leader and, in particular, the student. The adult becomes a learning individual, authorized and recognized as the main actor in his process of learning and as the first person in charge of the managing of the relationship between the academic institution and the business world.

Quoting Munari “To know is to decide, to learn is to choose” (2002, p. 59). This is the main formative goal for the students involved in a cooperative research project. The aim is to promote the individual training to strategic decision taking (ibidem): that very strategic attitude that every student has to reach during a cooperative research experience, making right and responsible choices to face the different needs of his referents – university and business world.

To be more precise, the junior researcher is mainly supported by the awareness of his actions, of the instruments he uses, and the consequences of his decisions. Only in this way he is helped “among the different doubts and uncertainties about the problems he has in a definite context” (Munari, 2002, p. 59).

A PARIMUN researcher can experience these doubts only during a “real” practice in a “real” activity of research (Munari, 2010), which obliges him to take responsible decisions in front of both the academic community and the professional one.

References


