

## Training and Research: Interdisciplinary Proposal and Professional Development at the University

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### Abstract

**Background:** This work focuses on teachers-researchers, interns and teaching assistants training processes which are part of ongoing lines of research accredited projects by national agencies connected to the field of didactics and curricular integration -under an interdisciplinary model- in two universities, one Argentinian and one Chilean.

**Materials and Methods:** From the didactic point of view, the proposal is organized under the interdisciplinary criterion, combines general and specific contexts since 2019, including the changes caused by COVID19. From the research field, it focuses on the qualitative research. The research team is made up of university professors (Senior Lecturers, Associate lecturers, Assistants) and teaching assistants from the areas of social sciences and health sciences

To inquire into and describe the training processes of interns and teaching assistants and the professional development of research professors at the university.

**As regards the results,** it is important to identify the ways of appropriation of the subjects related to the field of provenance, to acknowledge that this training area promotes professional development and generates learning opportunities connected to the qualitative research, thus strengthening collective work.

**Conclusion:** training and professional development processes are reconfigured through interdisciplinary and collective production proposals which are assumed from a political perspective in training.

**Keywords:** Research. Interdisciplinarity. Training- Integrated curriculum. Professional development

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### I. Introduction

#### TRAINING AND RESEARCH: A BIDIRECTIONAL/MUTUAL RELATION IN RESEARCH TEAMS

Training in research according to Gebera and Cols (2020) is produced in contexts of intense relation with the research dynamics and of a generation of a research culture. According to Bolivar (2013) knowledge and development of specific skills are required.

In these training processes, a pedagogic relation is built, in which as an appropriate learning and teaching environment for the research practice, their rules, values and attitudes are acquired and an area oriented to inquiry, problematization, reflection and initiation in research is created.

Research is understood as a type of knowledge which is characterized by the construction of empirical evidence- supported in a theoretical framework- based on the implementation of rigorous, explicit procedural rules (Sautu, 1997:180 in Di Virgilio). It is a process of uncertainty in the pursuit of answers to inquiries with twists and turns, the challenges of training in research in terms of understanding what the production of knowledge implies, begin to emerge, to acknowledge the place from where to investigate and how to do it. To Achilli (2002), research implies the task of thinking in a dialectical way, that is to say, analyze the group of processes in its mutual relations and transformations which are involved when inquiring into a socio-educational problem.

Furthermore, to inquire in the educational field implies to assume the complexity of the object in such a way, that when getting closer to it, it is transformed not only into a technical activity but it also requires to understand the object of study.

It is about a bidirectional/mutual relation between training and research since training contributes to the focus and organization of the research teams regarding the training topics, the possibilities of knowledge appropriation and the way objects and subjects interact. Meanwhile, research enriches the training work due to the fact that it promotes an attitude of inquiry and problematization towards knowledge, since the incorporation of a work dynamics is allowed.

In this context, training and research activities are developed as part of the responsibility of our work as university professors. The research teams involved in this proposal are located in two universities (private and public universities) in Province of Córdoba, Argentina and a third one in Chile.

The research team, made up of professors, graduate and postgraduate researchers from a private university, at the Faculty of Education, through approved and accredited projects in a call from the Research Secretariat, has been working for more than ten years in experiences which became deeper and extended over the professional teacher training, the curricular and the didactic integration.

The public university team, with nine years of experience, consists of professionals from the areas of social and health sciences, who work as professors (Senior Lecturers, Associate lecturers, Assistants) from different subjects and teaching assistants from the Medical School who are now working on three articulated lines of research, one of them linked to graduate and postgraduate students' academic trajectories, the second one oriented towards the graduate and postgraduate evaluation system and a third one, related to the connection between disciplinary-pedagogical training and teaching assistant training as well as its connection to teaching and evaluation.

As to the Chilean research team, involved with projects related to mental health and inclusion in community areas, three members of this group will be working on the public university proposal to tackle the issues about teaching and evaluation in health science careers and to analyze common aspects such as the students' trajectories in graduate careers and the connection between pedagogical and disciplinary-specific training.

### ***Interdisciplinary proposal and professional development***

As regards the organization of contents, it is an interdisciplinary proposal in which research and didactic topics are articulated, thus merging into an integration coming from a process of analysis of information from interviews, open questionnaires and focus groups which are tackled from a qualitative-critical approach. As regards interdisciplinarity, it is about interactions, exchanges and specific relations among disciplines which have an object in common from different perspectives (Castro, 2000).

To maintain an interdisciplinary proposal at the university, according to Didrikson (2010), implies complementarity and conjunction of disciplinary knowledge, and at the same time it contributes to university teaching since it is made up of professors and researchers from different academic areas, therefore this facilitates an interdisciplinary dialogue from the disciplinary logic.

We work articulating reading, analysis, discussion and production as a workshop like in an interactive space, centered in analysis and objectification in which concepts and categories are given new interpretations (Achilli, 1986) and as situated activity since the knowledge produced has a contextual character and involves the subjects. According to Perkins, Salomon y Rogoff: to get to know about something, is a situated and distributed action (Litwin, 1997) and it is considered that one "learns" to investigate by "investigating" (Achilli, 2009) since learning is acquired as apprenticeships are learned. That's why the activities in this training stage are oriented to the development of interpretation, comprehension, analysis, reflection, writing and evaluation of the process, which implies a bidirectional/mutual relationship between training and research.

The workshop format is acknowledged as an opportunity of professional development which allows the linkage between thinking and action as well as the retrieval of knowledge drawn-up in the professional trajectory (Alliaud, 2018). This proposal considers the approach based on the teacher training as a long-lasting process which fosters the autonomous and reflective development, taking into account that theory and practice are articulated and according to Vezub, knowledge is generated when professors are capable of considering their work as research spaces and at the same time it nourishes from the contributions of other researchers to develop research questions and connect their work, having already found other meanings to their own training process.

In this COVID 19 context, new decisions have been made different from the original ones, like the virtual training context, through a specific platform which facilitated the continuation of meetings and the training process.

## **II. Results**

In this training proposal, two university professors are involved (Senior teachers, Associates, Assistants) teaching assistants and interns from the social and health areas, 25 people in all)

According to Sirvent (2006), the methodological process facilitates the confrontation between theoretical- conceptual material and empirical material, from this perspective it was possible to move forward towards the development of the proposal. We have worked on theoretical themes related to qualitative and didactic research, on data collection methods, on the implementation of data collection and information analysis, in exchanges and reflections in group production. In this way, the AA and interns learn from the teacher experience as trained researchers and an environment is created in which assumed decisions are shown in

research, as long as the why and wherefore of such decisions and the implications in the research work are made explicit.

In this training path, partial or imprecise conceptualizations from the AA and interns are visualized, which imply they have to be revised to move forward in new conceptualizations. In this sense, approaches to these training themes are acknowledged and the participants express they articulate theoretical aspects with practice and begin to understand the logic of a research team.

The design of the data collection methods (interviews and questionnaires with open questions) implied a continual elaboration process, tensioning knowledge, to analyze the questions in terms of theoretical grounds, to go beyond the binary answer to make a major inquiry, to analyze the whys and wherefores of the questions. Each meeting constituted a constant revision and it became a new learning process in terms of no repetition of what it is known, but of analysis and argumentation which is constructed as part of the research. We were also interested in acquiring information about what was inquired, on the part of the AA and the interns, so as to use knowledge in a flexible way as well.

As regards the interviews and open questionnaires analysis, going back to Achilli (2009) (who cites Rockwell) a step forward was made towards interpretation, reconstruction, contextualization, contrast and explicitation. The acquisition of these abilities was not the same in all participants, due to their specific trajectories. The members of the research team identified the work scenarios for the implementation of the interviews as well as the open questionnaires and addressed the ethical aspect to guarantee anonymity.

The reconstruction and revision path of the research activity continues in the communicability of the research, that is to say, in event and congress presentations in the educational area and in text production typical of the training areas. In this way, when learning about a publication, the academic publication styles and the rules that regulate them are acknowledged (Fernández Fastuca, 2016), aspects which are considered essential in the training process to communicate results.

As regards the relation with knowledge, Edwards (1985) says it may be a relationship of exteriority and interiority; in this training transition instances are acknowledged from a situation of exteriority and interiority, from a problematic and incomprehensive beginning for the AA and the interns to a connection which allowed them to establish a relationship more significant with knowledge, which was generated and transformed as time passed.

As regards the difficulties, they make reference to the tension which is generated between the previous ideas of the participants and the research procedures, in the usage of knowledge in new situations and the accomplishment of a reflective thinking.

On the other hand, in addition to specific processes within the teams, these are articulated among each other to mainstream educational research concerning the common and shared topic, thus an interdisciplinary group was constituted by diverse professional training, professors, teaching assistants, interns and specific areas.

As regards teaching, it was observed a professional development from teaching as well as from research, that under this COVID 19 context, implied the revision of the training process and at the same time, to meet the research objectives, which fosters the autonomous and reflective development of professors, in a situated and collaborative work.

### III. Conclusions

The training work carried out was interesting since it allowed to acknowledge the AA and interns approach in the academic production spaces, its possibilities and difficulties on the one hand, and on the other, the teaching proposal revision from the training area. Therefore, a path which orientates to constructive processes is built, showing that professional training and development as work strategy are reconfigured through interdisciplinary and of collective production proposals that are possible as long as a political position is envisioned.

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