

Conceptual Metaphors and Apprenticeship Paths as Levers for Professional Development and Learning [†]

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Abstract: This paper presents a case study that analyzes how university apprenticeship experience—that Italian students of Education Sciences are asked to do during their Bachelor’s Degree program—can be conceived as learning path to help them become aware and (begin to) question taken-for-granted and culturally assimilated assumptions about professional practice, identity and the role of the educator. A particular attention is given to the methodological implications related to the adoption of the technique of metaphor analysis to support learners in recognizing the beliefs about their own profession and, eventually, changing them. Metaphor analysis was used both as a learning activity and a heuristic to guide processes of professional development. Metaphors were used to: (a) uncover tacit ways of making meaning, (b) name experiences, and (c) imagine new possibilities. We address, finally, the main images of role emerged from groups work to describe the representations of what the educator should do, who she/he is and which are the aims of her/his work. The savior, the scientist, the farmer, the sculptor, the good Samaritan, the militant, the transgressor are some of the delineated images that our participants analyzed to understand reasons and issues behind their own practices.

Keywords: transformative learning; metaphor analysis; university apprenticeship experience; professional development; creative expression

1. Objectives and Purposes

What learning experiences do educators-in-training have during the university apprenticeship path? How to help novice educators become critically reflective on their own beliefs about their own professional practices? Which methods are particularly useful to accompany processes of professional development? How can metaphor be used to investigate implicit learner beliefs and professional learning processes?

These are the questions addressed in the paper that presents a case study analyzing how university apprenticeship experience—that Italian students of Education Sciences are asked to do during their Bachelor’s Degree program—can be conceived as learning path to help them become aware and (start to) question taken-for-granted and culturally assimilated assumptions about educator’s practices, identities and roles. The Bachelor’s Degree program in Education Sciences produces professionals who are capable of working in a wide range of institutions such as nursery schools and early childhood facilities, scholastic and extra-scholastic socio-educational services (including students with special needs), community centers, group homes, therapeutic facilities, local socio-cultural centers, workshops, and daycare centers. A particular attention is given to the methodological implications related to the adoption of the technique of metaphor analysis to

support learners to recognize the beliefs about their own profession and, eventually, to change them [1]. Metaphor analysis was used both as a learning activity and a heuristic to guide processes of professional development. Metaphors were used to: (a) uncover tacit ways of making meaning, (b) name experiences, and (c) imagine new possibilities [2].

Our interest is based on an assumption, by now shared in the European and international scientific debate: the apprenticeship represents one of the most challenging opportunities that university offers to learners to combine tacit and explicit, theoretical and practical, individual and collective knowledge in a work context under the supervision of organizational and academic tutors [3–5]. Its value is highlighted in the possibility to develop an approach sensitive to knowledge-in-action, in which work practices and disciplinary knowledge enter into dialogue, moving away from bureaucratic-technical cultures (which risk of reducing the apprenticeship to the fulfillment of an obligation contractually assumed), from decontextualized views of learning, and from those who believe, even in human and social field, that a good practice consists in the application of a good theory. The focus is on understanding which educational settings and learning conditions have to be constructed in order that the meanings associated to the apprenticeship path (learning from experience, search for professional opportunities, relationship between expectations and reality, etcetera) do not remain submerged in the singularity of specific experiences, but become objects of shared elaboration among different involved actors. The idea is to offer to students, as apprentices, the opportunity to participate in spaces of intersection where to explore the impact in their professional practice of the interaction among programmed instruction of the type found in university courses (theoretical and explicit knowledge), spontaneous questioning that arises from the interpretation of experience, taken-for-granted assumptions and theories-in-use (tacit knowledge). Theories-in-Use and Espoused Theories are two kinds of theories of action (Argyris, Schön, 1978). Theory-in-use refers to the worldviews and the values reflected in the behaviors that actually drive the actions. As Argyris & Schön (1974) pointed out, people not necessarily are aware of their theories-in-use or that these are not always coherent with the theories they espouse. Authors underlined that if adults are unaware of the theories-in-use that drive their actions, they cannot effectively manage their behaviors, which may, as a result, have unintended and undesired consequences.

2. Conceptual Framework

Every year, Education Sciences Bachelor's Degree programs in Italy graduate students with the expectation that the latter know how to situate themselves in the field of Education; how to foster and assess learning and development processes in individuals (of different ages, classes, ethnicities, and life experiences), groups, communities, and organizations; how to use the theories encountered during their university path; and how such theories inform their profession, helping them gain awareness of their own practice. Despite this intent, little is known about whether the students' graduate educational experience significantly influences their practice and how it helps them become aware of the more or less implicit beliefs about their professional identity and role. The empirical literature on the subject [6–9] emphasizes that such belief systems are developed (also) before and beyond what they learn during the university paths. The case study presented in this paper proposes a reflection on the methods and devices can be used to surface beliefs that are tacit and embedded in working practices by examining what students, as apprentices, actually do and their reasoning about the actions that they take.

For the purposes of this study, beliefs are conceptualized within the theoretical framework of transformative learning, as articulated by Cranton (2006) [10], Marsick & Watkins (1999) [11], Mezirow (2000, 2003) [12,13], and Taylor (2006) [14]. This conceptual perspective sees the process of making meaning shaped by an established belief system, much of which is uncritically assimilated. Beliefs are part of *meaning schemes* which are sets of immediate specific expectations, feelings, attitudes and judgments that tacitly direct and shape a specific interpretation and determine how we judge, typify objects and attribute causality [13]. A collection of meaning schemes forms a *frame of*

reference, a worldview, and a lens through which an individual interprets and makes sense of his or her world.

Transformative learning refers to the process by which we transform our taken-for-granted frames of reference to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action [12]. This process may not be linear or sequential or appear at the time to be logical, but it is essentially a rational process of seeing that our previously-held views no longer fit—they are too narrow, too limiting, and do not explain the new experiences [15]. This process usually requires assisting learners in participating effectively in *discourse*: ideas and evidence from others help us to consider our own views in a new light [16]. Discourse is necessary to validate what and how one understands, or to arrive at a best judgment regarding a belief. In this sense, learning is a social process, and discourse becomes central to making meaning [12]. Transformative learning takes place when this process leads us to open up our frame of reference, discard a habit of mind, see alternatives, and act differently in the world. When educators are led to examine their practice critically and thereby acquire alternative ways of understanding what they do, transformative learning can take place. It seems that this must be a goal of professional development [17].

In light of this scenario, we tried to create an *expanded structure of learning* capable to make the university apprenticeship a vehicle to professional development for novice educators [18,19]. The experience of apprenticeship was structured into two activity systems: the first engaged learners in a sort of artificial process of collaborative research and put them in different contexts as educators under the supervision of organizational tutors; the other one requested to participate in laboratory spaces facilitated by university tutors where to reflect on the practices in which they were immersed.

The organization of the apprenticeship path as expanded structure of learning is based on two conceptual perspectives: the situated approach and the reflective approach. The first implies that apprenticeship can be considered as a particular trajectory of participation of the student, who is involved in the real practice of one or more experts but in a partial manner and with limited responsibility respect to the overall goals that the organization pursues [20]. The challenge does not lie in letting the student experience unimportant and meaningless forms of participation (making copies and coffees, dealing with administrative matters, managing stationery orders) but in the possibility to provide him/her with tools to intercept working practices that surround him/her, to assume more and more central positions in organizational life, to understand the most promising professional development trajectories within host contexts. This elicits questions about the legitimacy conditions through which the apprentice defines the possibilities of his/her own learning and about the educational supports that enable him/her to grasp the meaning of his/her experience. The apprenticeship is a learning opportunity if the novice (1) can legitimately participate in relevant, central, and community-based work practices; (2) is supervised by one or more experts; (3) can gradually enter into the complexity of the experience and at the same time find formative spaces to reflect on the practices in which he/she is immersed.

The reflective approach urges to focus on the study of the processes through which the learner constructs meanings to attribute to his/her professional experience. This lens depicts a tutorship function capable to: (1) promote reflective practices by creating discussion spaces where sharing the respective paths; (2) catalyze the identification of assumptions that guide the action of the students involved, using intervention methods that help them become aware of the meanings through which they interpret the organizational contexts in which they move. This implies operating breaks and suspensions that allow taking a reflective distance from the action [21,22].

3. Methodological Framework: The Technique of Metaphor Analysis

This section examines some methodological implications related to the adoption, during the laboratories in which students had to take part while they were carrying out their six-months apprenticeship in different contexts, of the technique of *metaphor analysis* to support them to recognize the beliefs about their own profession and, eventually, to change them [1,2]. The laboratories are structured in three-hours encounters twice a week. More than one hundred learners,

divided into groups of twenty persons, took part in the academic year 2015–2016. A set of tools and devices was adopted including ethnographic surveys and techniques of self-narrative data collection, facilitation sessions, supervision groups and evaluation methods.

Here we analyze the application of a method based on the process of metaphorical creating and headed to support groups of students in the assumption of transformative actions. We solicited participants to work on real-life problems and actual projects in a question-driven approach for learning *through* and *from* the experience. The effort was to support novices, who were experiencing their first professional experience within apprenticeship path, to unpack and reflect on what they were doing with the help of peer groups in similar situations. The challenge consisted in supporting learners to develop collective reflection processes *in*, *on*, and *through* action able to activate their heuristic and imaginative thinking in relation to the possibility to validate their own meaning perspectives regarding educators' practices, identities and roles. The interest towards the technique of *metaphor analysis* is motivated by the attempt to access to assumptions and worldviews otherwise hidden [23]. The importance for future educators to acknowledge the role of their own social and life experience backgrounds in emerging beliefs, dispositions and practices about profession is well-recognized, especially because their influence could determine reproductive tendencies and distortions about possible trajectories of professional development [24,25].

Metaphor is a way to construct analogies, make connections among contradictory ideas, translate abstract and nebulous concepts in words or find indirect but powerful modes of conveying feelings, attitudes and conceptualizations. It is used whenever we attempt to understand one element of experience in terms of another, and proceeds through assertions, implicit or explicit, that subject A is, or is like B [26]. For example, a student said: *my teacher is a lion*. Invited to fathom the meanings attributed to the image of the lion, he focused on specific dimensions, such as strength—*he is not willing to negotiate anything*—and ferocity—*he has no mercy for anyone*—and rejected other possible implications that such image could generate. The example shows how the metaphor may represent, through a set of evocative images, an access point to schemes and perspectives of meaning. Metaphors are, at least in some occasions, the outcome of reflections on a perceived similarity, a process that Schön (1983) [21] defines seeing-as. It's not about finding the right content to a given image, but of understanding what an image connected to an object on which you invest, such as career, means for an individual and a group. Professionals construct repertoires of examples, images, understandings and actions that extend across design domains. Such repertoires include the places they have seen, people who have known, the problems they have encountered and the solutions that they have found for them. They include the types of stories they have heard and psychodynamic patterns associated with them, the interventions that they have tried and the responses that the involved actors have given. A practitioner's repertoire includes the whole of his experience insofar as it is accessible to him for understanding and action [22].

The idea of reflection on seeing-as suggests a direction of investigation that considers the process of metaphorical creating a central element to explain worldviews. Metaphor invokes a dual focusing: on the one hand, it indicates a certain type of product—that is, a perspective or a frame of reference, a way of looking at the environments in which we move—from the other hand, a certain kind of process through which new perspectives on the world can be created. The metaphors created by the involved students represented symptomatic elements of specific ways of considering their own apprenticeship paths in reference to other things and allowed to participants to transfer their own frames of reference from a field of experience to another. Metaphors analysis is a "method particularly suited to study the meanings people invest in their actions and the interpretations they make out of them" [27] (p. 307). As such, the metaphor has been seen as an appropriate heuristic for investigating issues of belief.

In the conceptual framework of transformative learning, several authors addressing metaphors have focused on their power to promote intuitive ways of knowing, crediting them with four specific mechanisms: (a) give voice to life experiences, (b) uncover tacit assumptions, (c) facilitate expression of emotional states and experiences that may otherwise be difficult to convey, and (d) facilitate the creation of new ways of making meaning [28,23]. Similarly, Campbell, Parr, and Richardson (2010)

described the role of metaphor in educators' professional identity formation as a powerful tool to capture, make explicit, and thus transform tacit understandings of self. According to the current approach of post-qualitative research, expressive art-based methods, such as the metaphor analysis, are offering the tools to overcoming beyond the limiting constraints of discursive communication-based approaches in order to express meanings that would otherwise be ineffable [29].

Here following there's the description of the steps of the analysis of the metaphors.

This technique was applied from time to time to different aspects of professional identity and role, such as the relationship with colleagues, their own leadership, the intergenerational conflicts, the career expectations, and so on. Metaphor analysis allowed to explore the methodological boundary between: (1) a constructivist lens on how adults learn, interested in supporting learning processes through the conscious use of reflection and critical reflection, and (2) a sociocultural lens that sees learning as a trajectory of participation occurring in a less consciously way and whose meanings can be caught through metaphors. This last lens includes all the implicit relations, tacit conventions, subtle cues, recognizable intuitions, specific perceptions, embodied understandings.

4. Farmers, Sculptors and Good Samaritans. How Metaphor Analysis Worked

Metaphors used by students to describe their role within the organizations where they were conducting the apprenticeship in terms of activities, responsibilities, expectations, and functions are heterogeneous and consist of perceiving themselves as sculptors, farmers, good Samaritans, lion tamers, scientists, etcetera. For example, a student who worked in a Residential Child Care Service utilized the metaphor of the saviors: *my role as educator is to save my boys and girls. I don't want to look like a megalomaniac with fantasies of omnipotence, but I believe my mission is to give a better life to my adolescents. They suffered all kinds of abuse and injustice. I work with twelve-year-old girls who were forced by their parents to prostitution and fifteen guys who were beaten by their fathers before being removed from the families.* When other members of the group asked her to unpack the sense of the metaphor, she said that *I would like to force them to build a satisfying future and to get a rid of a fate of marginality that seems to be attributed to them by all. I am willing to manipulate them, to affectively blackmail them, to punish them, to control them, as long as they listen to me: I know what is best for them. It seems to me that they only think about destroying themselves and I feel so angry that sometimes I think that they deserve all this suffering and that they go looking for it.* The student, invited to analyze how those meanings influence her professional practice, told that she had always wanted to help people. *I want disadvantaged people to have access to goals from which they are usually excluded. I convinced a very smart girl to enroll in humanistic high school, but she has quite after two months. She said that her comrades were unpleasant, that place was not a place for her, who was the only one who came from a family of poor people. This bothered me, I treated her very badly, I did not speak to her for a month. I feel like I have failed.* The participant, elicited to find a metaphor describing the feelings that the episode aroused her, after some hesitation said to feel like a lover betrayed. *I feel that all my efforts have been useless. The afternoons spent to convince her that it was the best choice. The discussions to persuade her that she was a smart person. I took her to shopping and gave her clothes that made her feel comfortable, obviously hiding it from my colleagues and other teenagers who would have been jealous. Wasted energy. It's as if she was saying: I do not want you to save me. A colleague told me she is helping F. [the adolescent] to enroll in a hairdressing course. She added that her father before becoming cocaine-addicted had a fairly famous store in Milan and that perhaps this is a way to regain her story. A colleague who is older than me made me a preaching. It was useful. She told me that the educator has to listen more rather than to impose and control. She rebuked me because all my emotional transport and involvement is unprofessional. For her, it is as if the educator was a fatalist and should develop an attitude of resigned passivity.* The facilitator and the other members of the group supported her in fathoming the sense implications of the two metaphors, pushing her in creating another one that encapsulated the potentialities of both, and summarized the actions that were wishable to characterize their professional practice. The participant noted: *I need to learn to let go. I cannot claim to exercise any control over the lives of others. I will never be fatalistic, but my colleague's vision helped me to understand that the educator is a professional who must learn to move away from his/her desires, however noble they may be. What comes to my mind is the roads constructor's image. I would like to learn how to become a professional who*

creates possible paths to take, who provides all the indications not to get lost, but who does not feel like a failure when someone decides to take other roads It's so strange. My teacher of Principles of teaching and learning has insisted so much on the importance of becoming aware of our blind spots that usually are intensified when emotional factors come into play. I did not succeed. I let my anxiety win.

Another participant used the transgressor's metaphor to define his professional role. I do the apprenticeship in a Day Support Center for adults with disabilities in Monza. It consists in doing socio-cultural activities. It is funny. We cultivate the vegetable garden; make theater; paper-masks and cake design courses. I chose this metaphor because I do not respect institutional rules, especially when I do not share them and I find them repressive. I'm anarcho-punk and I cannot just follow the decisions of my bigoted colleagues. I work with a group of disabled people but with all the impulses and sexual desires that an adult can have. It happens that they engage each other, they close themselves in the bathroom to practice autoeroticism, and they try to show off to the passers-by during the evening outings. I realized that the only thing my colleagues want to do about it is to bring the boys and the girls to talk with the gynecologist. This makes me angry because the sexuality of a disabled person is not a medical thing to make aseptic. I ignore them and about this I hate them. In my working turn I do as I want, if the users who are involved want to kiss, with respect and decorum, they can do it as well. I think it's something to be encouraged. I feel like they do not listen to me. I'm not taken into account because I'm just an apprentice, but I've studied more than them [the colleagues] and I know that showing a disabled person how to put a condom will not help him figure out how to handle his sexuality. Participants began to wonder what studies, theories and research they met during their university course that could support them in solving the problems that the transgressor's metaphor brought with it. The group acknowledged that the sexuality of people with disabilities is a complex issue and that there is no a generally accepted guide that supports educators in the development of interventions and repertoires of practice about this topic. At the same time, the students involved emphasized how the soft skills that they acquired more or less incidentally in (and out) the university could help them construct socially shared knowledge and possible projects aimed at overcoming the barriers orienting individual and societal responses to sexual access and expression regarding persons with disabilities. A particular attention was paid to the need to develop skills of problem solving, decision making, critical thinking, team working, and emotional management useful to solve the problems that the involved students inevitably will meet in groups, teamwork and organizations in which they will work. The facilitator invited the learner who used the transgressor's metaphor to create a new one that contained the reflections shared with the group. I remain a transgressor because I like to subvert the established order, but I need to learn and to understand how to promote change at the organizational level. How can I create discussion spaces with colleagues about how to address the issues related to the sexuality of our disabled people? How can I manage a discussion groups on this topic? How can I build and share a project on this? There are problems that do not have a unique solution, but as educators we must have the skills to handle the processes that can help solve them. The metaphor that comes to my mind is that of the visionary.

A student used the metaphor of refuge to define the context in which she was doing the apprenticeship. When asked to specify the meanings of the metaphor, she cited the fears associated with the economic crisis, the dangers lurking in the streets of the city, and the deep sense of security that her colleagues had given her with respect to a society she thought as into the ruin. The participant, invited to analyze how these meanings could influence her professional choices, claimed that she was overly cautious, timid and devoid of any sense of adventure. The student was asked whether the refuge metaphor enclosed what she hoped would become her workplace in the near future. After dwelling on the features she would like to keep and what to change, she identified a new metaphor: the beach. It indicated the possibility of being open to the beauty, uncertainty and ambiguity of the world.

Analyzing the metaphors used by a group of professionals-in-training allowed to get insights into the ways in which they may understand themselves and their role(s) within the contexts in which they will one day work [30,31]. Indeed, the metaphor analysis made possible a gradual

approach to explicit and implicit models subtended to the ways in which adults involved perceive, understand and interpret their own professional experiences. Through a recursive process of expressing-observing-analyzing-reflecting, students were lead to unpack the assumptions and the meanings that underlay their metaphors, and to reformulate them. We tried to: (1) help learners gain insight into their life and professional experiences; (2) engage them in critical reflection on fundamental assumptions, values, beliefs and world views; (3) support dialogue within themselves and with others; (4) hold a holistic orientation to learning that engages affective, relational and presentational “knowing” along with cognitive “knowing” [32,33]; (5) help learners become aware of the role that context plays in their thinking and action [34–36].

According to Kress (2010) [37], the multimodality expression of students’ ideas and perspectives through the metaphors offered the conditions to identify their epistemological perspectives on the role of the educator. Our suggestion is that educators aspiring to promote transformative learning may want to add techniques that incorporate conceptual metaphors to their (metaphorical) toolbox of pedagogical resources. The facilitators of the laboratories and the participants discussed the developing metaphors throughout the steps indicated in the Table 1, examined commonalities and differences among educators’ metaphors, and aligned interpretation with participants’ intent so as to establish a shared understanding of the metaphors and their underlying conceptualizations.

Table 1. The Method of the Analysis of the Metaphor (Deshler, 1990).

1	Think of your apprenticeship experience. Take a moment to visualize it and reflect on it.
2	Scan your memories and images, looking for metaphors that are automatically and preconsciously embedded in your definitions and understandings of those institutions and your work.
3	Choose one metaphor and unpack it by describing in detail its meanings and implications. Ask yourself which characteristics of the metaphor correspond to your workplace and to the professional role that you play in such context, and what examples from your memory best illustrate each characteristic.
4	With a group of two or three people, reflect on the values, beliefs, and assumptions that are embedded in the meanings of the metaphors.
5	Question the validity of each of the metaphor’s meanings by comparing these with your experiences, knowledge, information, and values or belief systems that confirm or conflict with the meanings derived from metaphors.
6	Try creating one or more new metaphors that express the meanings and aspects that you feel are important to emphasize. Share these meanings with the group and listen to what others are creating and expressing.
7	Consider the implications for action that derive from the new metaphor.

5. Conclusions

Organizing the university apprenticeship path as an *expanded structure of learning* represented an opportunity for professional development and for cultivating the conditions for supporting students in the construction of new goals, reflecting on what they did in their practice, and how they thought about their work. Rather than assuming uncritically their roles as usual, the educators-in-training began to look at their habits of mind and worked with new questions, insight, and promise.

Case study presented shows how the technique of metaphor analysis can: (1) be conducive to deeper levels of understanding and learning, involving simultaneously critical and creative thinking; (2) be used to communicate symbolically, and thus convey new ideas in ways that can avoid the awkwardness of explanatory language; (3) reveal hidden images and assumptions, thus promoting and hiding introspection; (4) engage learners to imagine new possibilities [23].

In all these ways it can promote opportunities for activating imaginal and presentational knowing, for unpacking the meanings and the perspectives behind the metaphorical images, and thus for promoting transformative learning. Moreover, metaphor analysis can act as powerful catalyzer device to provide motivation, inspiration, or an example for learners aspiring to new possibilities. Our suggestion is that educators aspiring to elicit precognitive, prelinguistic experiential knowing, over the conceptual, rational or analytical knowing, and to challenge habitual

ways of thinking and being in learners, may want to add techniques that incorporate conceptual metaphors to their (metaphorical) toolbox of pedagogical resources.

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