



Teacher education is a deeply pedagogical process rooted in values, ethics, and the social purpose of schooling. Globally, it sits at the core of educational quality and fairness, as research in comparative and international education demonstrates: the training of teachers directly influences students' learning chances, social inclusion, and the democratic aims of schools. Teachers are not simply transmitters of curricula, but active professionals whose convictions, reflective skills, and ability to manage the complexities of classroom life give shape and substance to the educational experience itself.

The pedagogical dimension of teacher education frames teaching as a relational, context-aware, and ethically grounded profession rather than just a set of procedural skills. From a research perspective, this demands robust research methodologies that can critically examine the complex realities of schools and inform evidence-based policies. Equally important is the connection between theory and practice, which helps to bridge the persistent gap between universities and schools.

The contributions gathered in this volume reflect the richness and diversity of experiences showcased during the ATEE Spring Conference 2024, held at the University of Bergamo from May 29 to June 1, 2024. The volume presents 70 selected papers out of more than 300 presented by researchers representing over 40 countries.

This broad spectrum of studies highlights promising directions that can inspire renewed inquiry and concrete proposals aimed at improving contemporary educational systems.

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ATEE Spring Conference 2024

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Teacher education research in Europe: trends, challenges, practices and perspectives

May 29th – June 1st, 2024
S. Agostino, Bergamo



Edited by Nicole Bianquin and Francesco Magni





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BOOK OF PROCEEDINGS

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Emergency Remote Teaching and Teacher Training: The Role of Implicit Beliefs in Lasting Educational Change

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Abstract

This study examines teachers' beliefs and practices on formative assessment, engagement, and learning during emergency remote teaching in three omnicomprehensive schools. Data from semi-structured interviews, questionnaires, and focus groups highlight the importance of addressing both implicit and explicit aspects in teacher training. Literature suggests that effective training should consider these elements to avoid replicating outdated professional models. For sustainable change, training should be embedded in communities of practice, allowing feedback and rooted in classroom experiences, which research indicates encourages lasting adaptability in teaching. This paper presents findings from the first (qualitative) phase, based on interviews with school principals.

Keywords: formative assessment; teacher beliefs; ERT; implicit and explicit; professional development.

1. Introduction

This contribution aims to explore the topic of studying teachers' beliefs about the use of formative assessment during the pandemic emergency and their relationship with initial and in-service training. UNESCO and the Council of Europe recommended formative assessment during the initial phase of COVID-19 to support student engagement and learning paths (UNESCO, 2020b). In the most dramatic phase of the pandemic (spring 2020), governments decided to close schools and the sudden switch to distance learning (DL) as measures to combat contagion and not to completely interrupt teaching activities. Distance learning primarily relied on e-learning platforms or videoconferencing technologies (UNESCO, 2020a) with repercussions on education planning. Untrained and unprepared for this type of instruction, teachers have used ordinary methods and tools in an extraordinary context with consequences on student engagement and learning. This contribution presents findings from the first phase of a broader research project, focused specifically on semi-structured interviews with school principals during emergency remote teaching (ERT). The subsequent phases, including quantitative analyses, are not addressed in this paper. The choice to present only qualitative data from Phase 1 entails a focused analysis limited to school leadership perspectives on the topic and the school context. As such, the discussion and conclusions drawn must be interpreted as preliminary, and not yet representative of the entire research project.

2. Implicit and Explicit in the Teaching Profession: A Theoretical Framework

Teaching is frequently analysed through its implicit dimensions (such as beliefs and attitudes) and explicit practices. Numerous implicit can be ascribed to non-cognitive forms of knowledge, as van Manen (1999) suggests, emerge organically within daily classroom life, becoming explicit through reflection. In the Anglo-Saxon context, educational research with a cognitive approach has long investigated the predictive role played by these constructs on classroom teaching and assessment methods (Calderhead & Robson, 1991). The connection between beliefs and teaching practices is also supported by constructivist theories (Richardson & Placier, 2002). Implicit factors also include attitude (Sharma et al., 2017; Aiello et al., 2016; Saloviita & Schaffus, 2016) understood as an element that conditions the intention to act and determines teachers' practices, in the perspective of theoretical frameworks such as the Theory of Planned Behaviour (Ajzen, 1991) or the 3-H Theory (Florian & Rouse, 2009; Shulman, 2004).

Teachers are not always clear about the link between beliefs and practices (Sbaragli et al., 2011); the former turn into misconceptions when they are based eminently on the latter (Novak & Gowin, 1989). The identification of beliefs can therefore activate processes aimed at influencing practices and promoting innovation. Understood as mental constructs of an individual, beliefs are built on previous knowledge and new experiences (Charlier, 1998); they remain unchanged in the person and can be rebuilt into new conceptions (Tyson et al., 1997) when "the old ones prove to be unproductive and the new ones are perceived as intelligible, plausible and advantageous for their repercussions on the people's experience" (Giganti & Viganò, 2023, p. 196). In this regard, for V. Richardson (1996) it is essential to study in depth the beliefs of teachers which interact with practices. Some studies (Lodini & Vannini, 2006) detect the influence of the latter on the change of the former; others are aimed at understanding their construction and change to improve teaching (Gregoire, 2003). Some studies investigate the link between attitudes, beliefs and practices (Guskey, 2002) of teachers and study any changes in the direction of a broader trust of teachers in the power of teaching. Among these are those oriented towards the use of formative assessment (Black & Wiliam, 1998).

The literature indicates two approaches for the analysis of convictions and beliefs, one referring to the influence of individual factors, the other to organizational factors. According to V. Richardson and P. Placier (2002), it is appropriate to integrate them because they support the researcher in the study of the modes of action of personal experiences on the acquisition of teacher knowledge during initial and in-service training.

To this purpose, the analysis is extended to studies related to teacher change (Floden, 2002) to understand whether changes in beliefs precede or follow changes in practices, or whether beliefs and

practices are interacting and synergic (Peterman, 1993). As R. Chin and K. D. Benne (1969) state, on the one hand there are empirical-rational approaches aimed at showing teachers the existence of effective practices, promoting new awareness and therefore new beliefs; on the other hand, there are normative-re-educational approaches that make explicit socio-cultural and pedagogical norms and values to encourage collegial reflection by teachers and guide their beliefs and choices of action.

3. Method

The study presented in this paper aims to describe and analyse beliefs and statements of practice of teachers referring to four elements: formative assessment (FA), students' engagement, constructivist learning and emergency remote teaching (ERT, Hodges et al., 2020). The study employed a multiple-case approach to explore school contexts and the identified variables. In the initial phase, interviews with school principals and document analysis (Three-Year Plan, Self-Evaluation Report, Circulars, etc.) provided foundational insights. Teachers completed a questionnaire addressing socio-demographic characteristics and ERT-related practices, supplemented by eight scales on beliefs and practice statements; a focus group was conducted for each institute with privileged witnesses on the data collected and analysed, during which a discussion was started to interpret them and investigate the relationship between context, beliefs and practices.

3.1. Context

The research was carried out in Lombardy (Italy) and involved, through reasoned sampling (Viganò, 1995), three omnicomprehensive schools (from primary school to secondary school, from first to thirteenth grade). The first is located in two provincial towns and has 147 teachers, the second is a state boarding school in the city centre and has 62 teachers, the third is a Catholic institute also located in the city centre and has 69 teachers. The study examines teachers' context, beliefs and practice statements in two specific periods, both part of the broader emergency distance learning (ERT) period: March-June 2020 (so-called DAD) and September 2020-June 2021 (so-called DDI). Three research questions were formulated who led the study:

- RQ1: What are the characteristics of the school context in which teachers might have employed FA during the ERT?
- RQ2: Is there a relationship between teachers' beliefs and practice statements about FA in the ERT context? What kind?
- RQ3: How does school context relate to teachers' beliefs and statements of practice?

3.2. In-depth on the qualitative part of the study

Three semi-structured interviews were conducted in person at the Institutes, one for each school principal and/or deputy, recorded and transcribed verbatim. The focus groups were aimed at sharing the analysis carried out by the researcher and, starting from it, carrying out further in-depth analysis and reflections with the interested parties.

The interviews, focus groups and documents were analysed using the MaxQDA software, using a system of codes structured *ex ante* for reference to the variables identified for the questionnaire and *ex post* based on the recurrence of some important themes for the study of the context and the situations that emerged

3.3. The questionnaire for teachers: structure, participants and procedure

The questionnaire is divided into three blocks and aims to collect personal and professional data of teachers (16 questions) and, according to their perspective, of the school context during the ERT period (9 questions). Furthermore, teachers' beliefs and statements of practice regarding the constructs and variables in question are collected through eight scientifically validated and specially constructed Likert-type scales (on four levels) (whose validation is not carried out) accompanied by four requests for examples. A first version of the questionnaire was drafted and subjected to a tryout

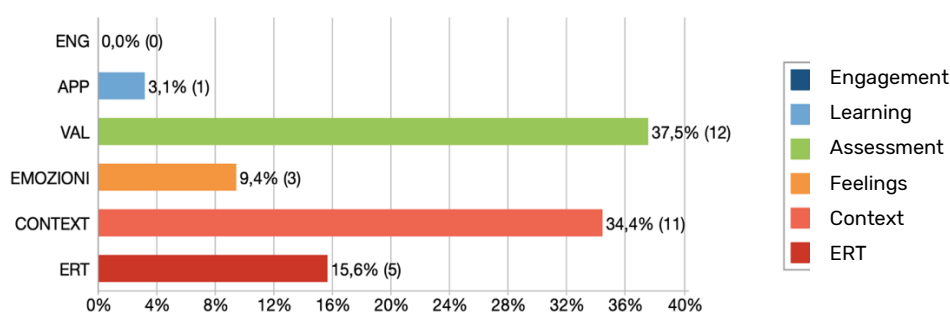
phase with eleven teachers from different types of institutes and school levels who provided observations and suggestions. The questionnaire was administered online by sending a cover letter and using the Qualtrics software, initially for a period of two weeks, then extended for another; it was sent to schools 1 and 3 in winter 2022 and to school 2 in spring 2023. The analysis of the collected data is quantitative, carried out with the aid of SPSS-IBM software, and qualitative.

4. Some qualitative results

In this section the results of phase 1 of the research are presented with attention to the investigation of implicit in relation to teacher training.

4.1. Semi structured interview: school 1

The semi-structured interview conducted with the deputy headmaster was coded as follows (1):



Graphic 1: Code system of the semi-structured interview with the deputy HM.

In the interview, the percentage of segments related to assessment (37.5%) was coded more, while the percentage of segments related to context (34.4%) and ERT (15.6%) were coded less.

The institute is a state boarding school, and its governance is different from that of other state schools: it does not have a school board, but a commissioner and a board of directors appointed by the Ministry of Education. In addition to the teachers, there are some educational figures responsible for managing extracurricular activities; most are employed on a permanent basis. The facility is equipped with all the digital devices and connections for media and digital teaching, but there are few teachers with IT certification.

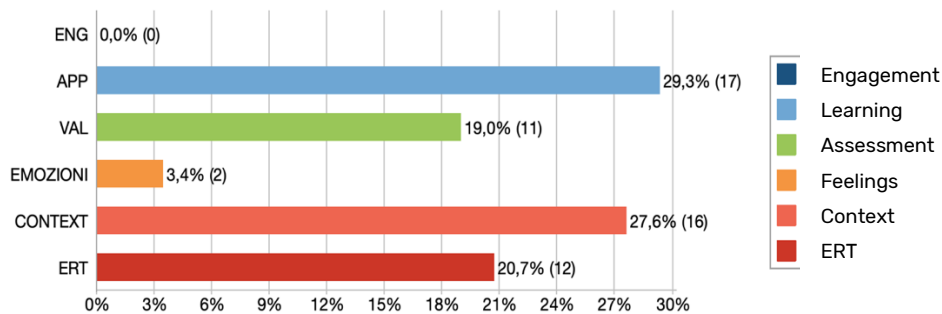
During the interview, the deputy rector states that the school context has a size such that comparison is possible between all professional figures, including service staff; he describes it as very dedicated to the educational care of all students who are in lower numbers than in other institutes. The interviewee states that he delivers a training course on assessment for newly appointed teachers.

In relation to the ERT, the interviewee states that in the first pandemic period, numerous meetings were called via the Microsoft Teams platform aimed at managing the emergency; this made it possible to activate emergency remote teaching a week after the generalized closures. The Deputy states that he noticed that teachers were struggling to adapt to the ministerial indications on DAD/DDI and that he managed it by adapting and contextualizing them, in compliance with the rules on school autonomy.

The largest number of coded segments pertains to the assessment. It has a specific instrumental function composed of three teachers and is supported by internal and external training offered by the Territorial Area; in this regard, the self-evaluation report mentions a specific course for the assessment in DAD/DDI. There are many beliefs in this regard that emerged from the interview: a) teachers gradually abandoned grading as a mere mathematical average; b) the assessment is the result of metacognitive, self-assessing, evolutionary processes and must deal with cheating attitudes. The Deputy believes that the ERT has accelerated the processes already started and allowed teachers to experiment with alternative solutions.

4.2. Semi structured interview: school 2

Semi-structured interviews conducted with the Rector's deputy and the principals of secondary schools were codified in the following way (2):



Graphic 2: Code system of the semi-structured interview with the vice-rector and the principals of secondary schools.

Unlike the previous one, in this interview, more segments related to learning (29.3%) were coded, less to context (27.6.4%) and assessment (19%).

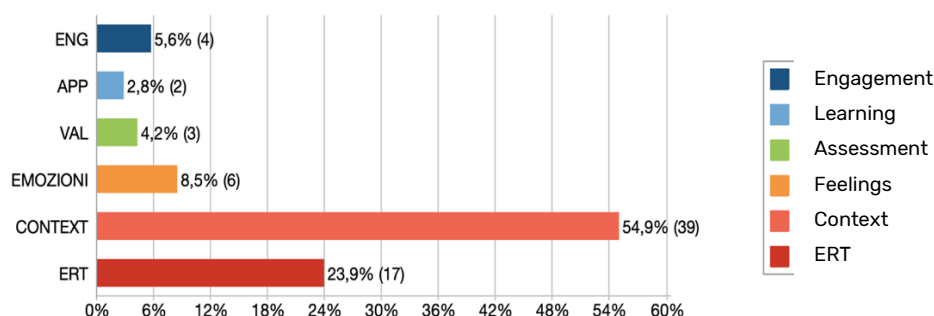
The institute is private and of Christian-Catholic inspiration. Most of the teachers are hired on a permanent basis following a rigorous selection process by the Management; the average age is forty-five and, in addition to basic training, many have certifications for teaching in the language and for the use of innovative digital methods and tools.

The Rector in charge during the Covid period states that no one was prepared to design and manage the ERT but that the management decided to immediately offer training in the use of digital tools. He adds that he notes that his teachers are better prepared than those in public state schools and justifies this by the average age. The Rector is convinced that the ERT can be considered a period of digital education for students and teachers, that the latter have progressively developed active teaching and that students have gradually welcomed these changes and innovations. These occurred following a settling-in phase due to the freedom granted to each teacher to use the platform of his or her preference and subsequently to the transition from DAD to DDI.

The documents do not codify specific segments in reference to training on assessment; instead, there are many segments around beliefs and practices. The Rector said that the ERT has highlighted the opportunity for an assessment focused not only on content but also on skills; furthermore, he stated that during the ERT period, students had to acquire greater autonomy, and teachers increased the use of formative assessment tools already in use in the pre-pandemic era (portfolio, teacher diary, assessment rubric, systematic observations, etc.). The documents analysed reveal an evolutionary process of practices: from the initial confusion and replication of traditional methods and tools to a coherent and functional approach to the application of assessment with a predominantly formative function.

4.3. Semi structured interview: school 3

The semi-structured interview conducted with the headmaster and his deputy was coded as follows (3):



Graphic 3: Semi-structured interview code system with HM

More than half (54.9%) of the segments coded in the document pertain to the school context, approximately a quarter (23.9) to the ERT, only three (4.2%) to the assessment.

In general, the HM outlines two different types of socioeconomic background corresponding to the two municipalities in which the institute operates: on one hand medium-high, on the other medium-low with a high number of students belonging to families of foreign origin (these considerations are confirmed in the three-year plan of educational offer and in the self-evaluation report).

He describes his institute as “a village school resistant to innovation” and states that “especially in the first cycle there was a strong [...] resistance to technological innovation”. The secondary school teachers were asked to reduce the number of teaching hours because they were teaching a lot of them.

As for the ERT, the HM states that it was not possible to offer a widespread training proposed by the Institute and that teachers used that offered by large publishing houses. At the time, digital skills were possessed mainly by teachers in secondary schools, on average in lower secondary schools and less so in primary schools.

Practices have gradually changed: from an initial difficulty due to the laborious distinction between synchronous and asynchronous work and the unchanged transfer of traditional practices to the new medium, teachers have understood the need for greater interaction through specific applications and guided research paths.

4. Discussion

Although to a modest extent, it is significant to observe that teachers' age and experience influence their beliefs and practices, as do the order of teaching and emergency. More experienced teachers seem to have no need to use summative assessment to control of the class and to gain respect from students. Similarly, primary school proved to be the most suitable context to implement formative assessment and constructivist learning. These practices appeared to involve students more actively than at other school levels. According to teachers, this can be attributed to the different training received, and the assessment reform introduced during the pandemic. The school context also played a role in shaping teachers' beliefs about formative assessment and learning. Managing ERT was complex but considered an opportunity to innovate or improve some teaching practices and to stimulate professionalism (Giganti & Viganò, 2023).

From different perspectives it emerges that beliefs and practices are difficult to change, “especially if conditioned by the experience lived by teachers when they were students” and due to short times and emergency situations. Training is considered useful for this purpose but is often distant from the daily practice, weak in its didactic applicability and not very suitable for a profound transformation. Teachers report a lack of initial and in-service training on the topics of assessment, except for those in primary school with the specific degree.

5. Conclusions

Theoretical reflections, supported by empirical findings, yield several key insights. In the three cases examined, an evolution of assessment was observed, also influenced by the pandemic; the necessary changes introduced by the ERT led to a redesign of teaching oriented towards greater quality and less quantity. As stated, the implicit aspects of the teaching profession are crucial to guide its practices and, in the cases examined, the investigation has revealed some discrepancies between beliefs on formative assessment, on the ERT and the respective practices, with differences between institutes and school levels. This raises questions about the effectiveness of some models of teacher change.

In general terms, the literature suggests that, in order to design and implement effective teacher training, research should address not only explicit but also implicit aspects; if not properly considered, it is likely that traditional models of professional development will be proposed that have no effect on teaching practice. The changes induced in teachers by contingent situations such as the pandemic are not enough to lead to lasting change. It is necessary to develop courses in line with the training

needs and implicit and explicit beliefs of teachers, prolonged over time, in a context of a community of practice in which feedback can be given and received from colleagues and experts, and based on concrete experiences lived in the classroom, to observe the impact on practice. As highlighted by research, only in this way are teachers willing to undertake a path of effective and lasting change, and therefore to be ready to face future emergencies (Giganti & Viganò, 2023, p. 204). A synthetic consideration is that the key to dealing with emergency situations lies in structuring daily school activity through solid teaching and educational skills. Emergencies, by their nature, involve a high degree of unpredictability and require timely responses from those in decision-making roles, inevitably generating confusion among those who operate in the education system. However, adequately trained teachers with strong pedagogical skills represent the fundamental resource to ensure that, both in normal and extraordinary conditions, the school continues to have its fundamental social role.

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