

THE PROFESSIONAL DEVELOPMENT OF TEACHERS: FROM TEACHERS' PRACTICES AND BELIEFS TO NEW STRATEGIES AT THE UNIVERSITY OF PADUA

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Abstract

The paper presents the first part of PRODID (*PR*eparazione alla *pr*Ofessionalità *Docente e Innovazione Didattica*), a research project developed by the University of Padova, which aims at developing strategies to *support academic teachers* to enhance their teaching competences. In the paper, Authors show the development of a local analysis through a questionnaire investigating teachers' practices, beliefs and needs in order to promote *pedagogical thinking* and *reflection* as key vehicles for effective and meaningful teaching practices.

Introduction

Nowadays universities are faced with the challenge of continually changing and improving courses and developing better educational offers for young people.

For European countries, the Bologna process represents a cultural revolution in the field of higher education requiring changes in the structure, the approach, the responsibilities and the contents of academic courses. *The learner has a central position* in the learning process, and expected learning outcomes concern knowledge as well as skills and competences, both subject-specific and generic. In this context, teaching activity plays an important role which can significantly affect the achievements of a university; therefore, the issue of *teachers' support* is an important aspect in which the most prestigious universities in the world are investing and creating new opportunities. Over the last two decades, there has been an increase in the delivery of professional development for academics in higher education in response to the need of universities to develop teachers' competences in order to support greater numbers of students entering higher education from a diverse range of backgrounds.

Literature on teaching in higher education has developed specific research fields concerning *teacher conceptions of teaching* (Gow and Kember, 1993; Trigwell *et al.*, 1994; Kember, 1998; Samuelowicz and Bain, 2001) and teachers' *pedagogical training* (in particular with focus on teaching and learning methods) and its *effects* (Gibbs and Coffey, 2004; Postareff *et al.*, 2007; Light and Calkins, 2008).

If we consider a teacher-centred approach and a student-centred one as a continuum of teachers' orientations, we may find different and dynamic teachers' profiles, depending on the context, the subject and the cultural conception of higher education.

The study of Tigelaar *et al.*, (2004) developed a common *framework of teaching competences* that can be used for evaluation purposes.

Moreover, in literature, there is an important field concerning the *quality of teaching* from the students' perspective (SET – students' evaluations of teaching); there is wide consensus in involving students as relevant legitimated stakeholders (Franklin and Theall, 1989; Marsh and Roche, 1997) – although not the only ones - in higher education to collect information about teaching performance and effectiveness.

The University of Padua has a long teaching tradition (since its foundation in 1222) and a large number of students (around 60.000). During its history, many reforms, changes and innovations have occurred: dynamic, interactive, applied and student-centred orientations have integrated into the previous very traditional, theoretical and content-centred approaches. In this significant cultural revolution, the *role of academic teacher* becomes more complex than in the past and requires a plurality of competences (Arreola *et al.*, 2003). These are, of course, disciplinary and subject specific competences but also pedagogical ones: interactive methods, reflection on teaching practices, managing and sharing leadership responsibilities (Wilkerson and Irby, 1998), organisational and communication issues, building community partnerships for learning and international networks and participating in continuing professional development.

In the University culture it is now understood that *evaluation is a central and indispensable action for the development of teaching and training processes*; without this step, reflection risks self-referential and unproductive dynamics. Evaluation is also a complex process that requires different dimensions of research and organisation, interlacing ascendant (*bottom-up*) and descendent (*top-down*) processes.

This concept is being operationalised at the University of Padua in three main development pathways:

1. Evaluation of teaching impact on the *world of work and the labour market*;
2. *Teachers' self-evaluation* focused on some bachelor and master courses carried out through pilot self-evaluation tools;
3. *Students' evaluation of teaching* conducted by the students through on-line questionnaires for all courses attended.

The experiences realised so far confirm what the research has already declared: a qualified university teacher is the crucial factor – although not the only one - that determines the quality of the learning process.

The teaching evaluation shows the results that the teachers have acquired during the years through their autonomous professional development, this means that each critical evaluation result can refer to a possible direct intervention aimed at improving the professional areas that are required for the teaching process.

Methods

Last year the Management of the University recognised the need to develop strategies to *support academic teachers* to enhance their teaching and educational competences and to involve them in active ways in their own professional development and in the evaluation system at individual and systemic levels.

For this reason a two-year project recently started, which is a preliminary experience in the University of Padua and in Italy as well, with the aim to build an academic *Teaching and Learning Centre* (TLC) linked to the already existing structures for teaching activities in the institution.

This project, called PRODID (Felisatti and Serbati, 2014), involves professors and researchers from different departments (such as education, psychology, statistics, sociology, economics, science, forestry) in a multidisciplinary approach. It promotes dynamic and positive connections between the following areas: research on higher education (in particular on teaching and evaluation); university pedagogic training and support for the professional development of teachers; innovation in teaching excellence and competences for new academic teachers.

At the moment, there is no formalised training for teachers to increase their pedagogical skills and thinking, but many informal activities exist such as mentoring new teachers through seminars and specific subject-based workshops (i.e. teaching in English, the use of an e-learning platform, the use of specific tools).

The future *Teaching and Learning Centre* will be a permanent study and research base for teaching evaluation outcomes and problems, in order to optimise in a multidimensional form the process of data collection, to raise the quality of the achieved evaluation outcomes and to help the involvement of teachers, students and stakeholders towards the enhancement of teaching standards.

It will also be a centre for analysis of the teaching profession, based on specific research around the teacher and student relationship (methods, educational settings, interaction models, teaching tools, etc.), around curriculum structures as well as around organisational settings. This field of study will include the recent pedagogical, psychological and social research on the student-centred teaching model, on reticular qualities of knowledge, on the influence of new technologies on the teaching process, and on the relationship between the learning process, the subjects and scientific research.

PRODID will develop all activities seeking a balance between institutional (quality assurance internal bodies, university management), departmental and course (bachelor and master) levels, in connection with national and international networks.

The project addresses the need to enhance teachers' ability to teach, evaluate, collaborate with colleagues, and develop strategies to facilitate students' learning results as well as the need to enhance students' teaching evaluation in our university and the quality of teaching.

The Research Group will develop project activities through 4 *research units (RU)*:

RU 1: Methodologies for teaching and learning

RU 1 aims to design and to implement training paths and common (virtual and real) spaces in which teachers have the opportunity to enhance their competences to prepare, realise and evaluate lessons and students' learning. The RU 1 focus is on methodologies for better teaching and better learning through an exercise of reflection and transformation of the real practices in classes.

RU 2: Teaching innovation and technologies

RU 2 develops teaching innovation processes with particular attention on the use of educational technologies for online teaching and learning activities. The RU 2 aims to enhance teachers' technological competences in using a learning platform (i.e. Moodle), free access tools (i.e. Google apps), social networks, etc. as well as methodological competences to propose learning strategies to allow students to achieve expected learning outcomes using technology.

RU 3: Evaluation and evaluative research in education

RU 3 focuses on research in the field of evaluation, improving teaching performances and promoting adequate, complete and coherent evaluation systems. This unit will study literature and international best practices and develop collaborative frameworks for evaluation and accountability that integrate components such as student assessment, teacher appraisal, university evaluation, and the broader evaluation of the education system.

RU 4: Organizational models for teaching quality

RU 4 studies the context in which teaching activities are driven; it will analyse systems, processes and factors influencing teaching and lessons such as spaces, administrative procedures, softwares, links between central and departmental tasks, etc.

Each unit is composed of Research Group members and project consultants, with a multidisciplinary approach. Each unit progresses autonomously, with periodic meetings and in coordination with the other ones.

A *Scientific Committee* has been created, composed of higher education external experts with the role of supervision and quality assurance. Annual project reports will be prepared and validated by them.

During this first year, as shown in figure no. 1, the Research Group is deepening the theoretical framework of the project, according to each research unit specific field, in order to define the actual state of art of the university teachers' training as well as to identify and analyse the main *international experiences*. This first overview gives the opportunity to develop an international network of universities with the aim to guarantee the possibility of comparing different models and to learn from existing solid training experiences.

The second important aspect, during this first phase, is the analysis of the local context at the University of Padua. The project wants to highlight the *needs* of teachers and their *beliefs* about the suitability of their professional actions, *identifying good practices* of teaching and learning, which may constitute a privileged context for the development of innovative teaching activities within the institution. The objective of this first phase is also to thoroughly analyse results collected from the online questionnaire for *students' evaluation of teaching*, in order to better understand bias, problems and possible solutions.

At the same time, PRODID aims to develop synergies with the University's main teaching structures such as the teaching quality commission, departments, bachelor and master programmes, schools and institutional commissions in order to establish meaningful connections able to sustain a system-wide action plan for the training of teachers.

From these elements of local and global contexts, it will be possible to design a training plan that will involve new employees of the University as well as senior teachers interested in this development.

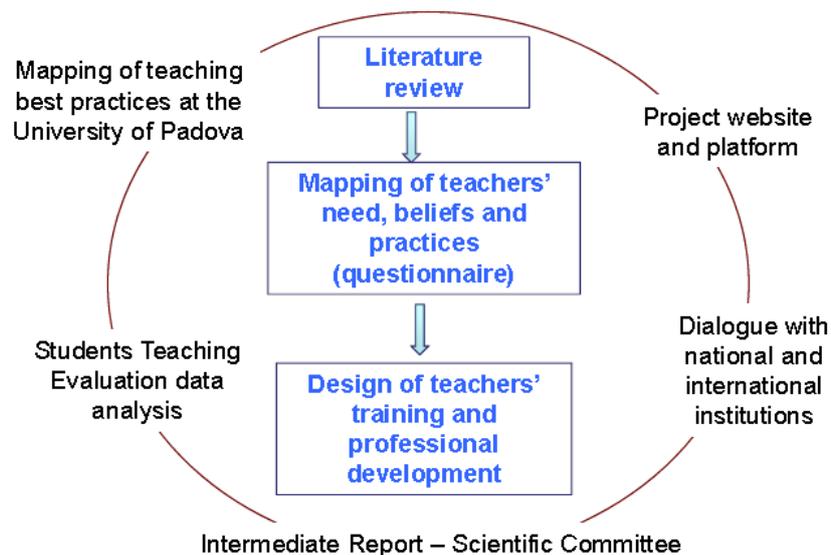


Fig. 1: Connections and circularities within the PRODID first year

During the second year, represented in figure no. 2, the training programme planned in the first phase will be implemented. It will consist of lectures held by experts, workshops, simulation activities and peer exchange, in order to build “teaching commons”, where the teachers involved, as a learning community, will *build and share a culture of research and innovation in teaching and learning processes*.

In parallel with the *training of new employees*, the project will provide a pilot establishment of a pool of experts (called *Teaching Learning Designers-TLD*) in the design and management of teaching, identified among university in-service teachers from different disciplines according to their acquired pedagogical skills and grade of innovation in their teaching activities. These people,

through a specific training course, will be prepared to be mentor, coach, scaffolder and motivator for new teachers in order to support their induction into the profession. Through some assisted pilot experiences, young teachers will be accompanied in planning, managing and evaluating their teaching, helping them to align students' expected learning outcomes with the teaching, learning and assessment activities provided. Teachers will be provided with *a self-assessment reflective tool* concerning their professional practice, together with *a handbook* that addresses the fundamental issues of teaching, focusing on methodological, management and evaluation aspects.

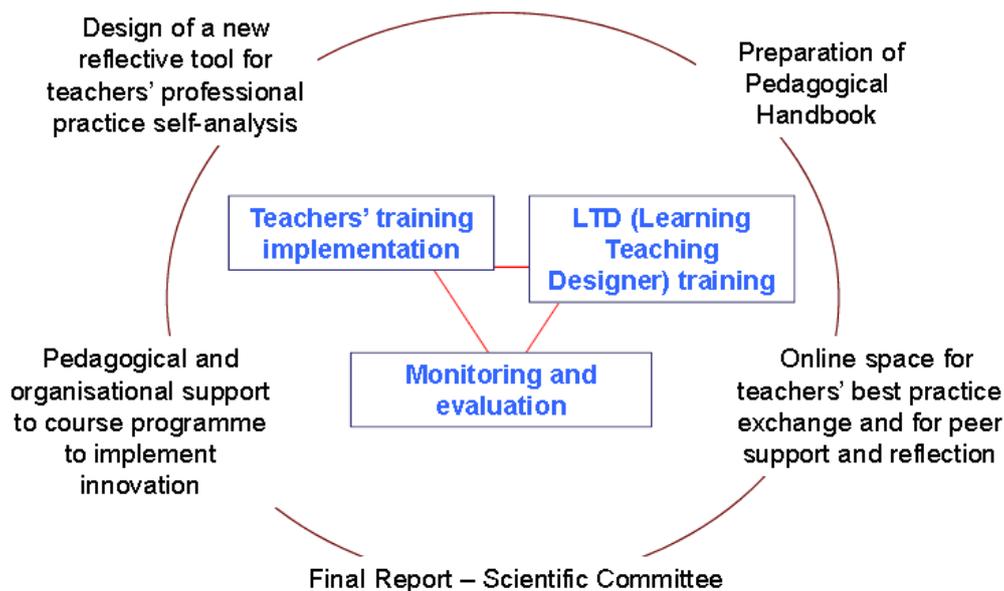


Fig. 2: Connections and circularities within the PRODID second year

Findings of the preliminary phase: the local context analysis

The project, started in October 2013, began, as expected, with a literature review and with a *local context analysis* at the University of Padua.

The aim of this local analysis is mainly to understand teachers' needs and representations, by asking them what their current practices are (i.e. in planning, choosing contents and methods, evaluating, discussing with colleagues, etc.) and what their wishes are for their future professional development.

A mixed methods approach has been chosen in this part of the study: a *questionnaire* has been drafted drawing on previous tools present in literature (Prosser and Trigwell, 1999; Gow and Kember, 1993; Kember, 1998; Tigelaar *et al.*, 2004).

In particular, the *Framework of Teaching Competencies* tested by Tigelaar *et al.* in 2004 has oriented the process of item construction. The Authors developed and validated a framework of teaching competences in higher education using a Delphi method, which involved 63 educational experts asked to indicate the level of importance of teaching competences. Competences were identified through the consensus reached among experts and were confirmed by a confirmatory factor analysis. The domains in which the authors grouped the competences considered as very important were:

1. The Person as Teacher
2. Expert on Content Knowledge
3. Facilitator of Learning Processes (developer, counsellor, evaluator)

4. Organiser
5. Scholar/Lifelong Learner.

First of all, within PRODID the Research Group agreed a definition of *competence* including an integrated set of personal resources (knowledge, skills and attitudes) to manage a set of professional situations, each defined by a key activity, that are needed to produce results (products, services) which meet the performance criteria (Le Boterf, 2004). Therefore, teachers employ teaching competences according to various teaching contexts, adapting them to the situation, with an always-new combination of personal and local resources.

In the questionnaire's drafting the researchers matched the domains identified by the framework of teaching - including personal and professional dimensions of the teaching profession - with the four research units, in order to map the entire research interests of the project. Methodologies for teaching and learning, teaching innovation and technologies, evaluation and evaluative research in education, organisational models for teaching quality were considered in defining the items.

According to the framework dimensions, the sub-dimensions developed were the following:

1. *The Person as Teacher*: passion for teaching.
2. *Expert on Content Knowledge*: updated knowledge, knowledge transmission in class.
3. *Facilitator of Learning Processes*:
 - *Developer*: teaching methods, active methods to simulate deep learning, cooperative learning; teaching in English; use of e-learning platform, use and production of multimedia, communication and interaction with students;
 - *Counsellor*: focus on students' needs, teaching personalisation.
 - *Evaluator*: multidimensional evaluation, final learning outcomes evaluation, methods of evaluation and assessment.
4. *Organiser*: involvement in teaching of external practitioners, integration with labour market; design of teaching and learning activities according to the learning outcomes.
5. *Scholar/Lifelong Learner*: reflection on student evaluation data; teacher self-assessment; desire to improve methods for teaching and assessment; interest in attending workshops and seminars for teachers, interest in exchange of practices with colleagues, interest in support to use educational technology.

Moreover, according to this framework, the researchers chose to articulate the questionnaire in three sections, in order to guide the teachers' reflection in answering the questions.

The first section focuses on "*practices*" developed in teaching activities in the previous academic year; professors will be asked to reply to the questions referring to those real activities carried out previously. This choice has the objective of re-enacting for each teacher the situation in class, giving him/her the opportunity to "re-live" that situation and therefore to collect all the information needed (Vermersch, 2005). Within the online format of the questionnaire every teacher will in fact find his/her own subjects taught in the previous academic year with the possibility to differentiate the answers for each of them. This allows the analysis of consistency or disjunction between teachers' practices considering different contextual variables such as academic discipline, type of programme (bachelor or master), number of credits, year of teaching, number of students, and personal characteristic of the teachers like previous teaching experience, gender, exposure to formal training (Norton *et al.*, 2005).

The second section deepens teachers' "*beliefs*" about teaching in higher education: according to Samuelowicz and Bain (1992), there is sometimes disjunction between the ideal conception of teaching and educational practices. Murray and Macdonald (1997) explained this inconsistency with three possible reasons:

- teachers might be frustrated in their true aims by contextual constraints;
- teachers' true beliefs about teaching might be more accurately reflected in their actual practices rather than in their espoused conceptions;
- teachers might not have participated in sufficient training to enable them to coherently operationalise their beliefs in appropriate teaching strategies.

In the questionnaire, the PRODIG Research Group chose first to pose questions on teaching practices and secondly on beliefs, in order to better highlight possible inconsistencies around the same elements such as teaching and evaluation methods, interaction with students, use of technology, etc.

The third section of the questionnaire focuses on teachers' "*desires and needs*"; considering that PRODIG aims, in the second year, to design and test a training programme for teachers' professional development, it seems crucial to understand the real needs of teachers in order to provide the best support possible for them and for the improvement of pedagogical competences. Following a *participatory action research process* (Kemmis, 2006), the questionnaire is being pre-tested with all teachers who manage a bachelor or master degree in university, in order to test clarity and usefulness of the questionnaire general structure and of single items and to directly involve them in this process, fostering in them a primary reflection on this topic. Moreover, the tool will be double tested with a random sample of 10% of the total sample of teachers.

After those two pre-tests, researchers will administer the questionnaire to the approximately 1900 teachers with permanent positions at the University of Padua.

If we pay attention to the dimension of lifelong learner in the framework of competences proposed by Tigelaar *et al.* (2004) which seems to be less frequently analysed in literature, we need to consider teachers expectations and needs in the context in which they work and mature their teaching experience. The answers to these sessions will orient the decision to be taken for the professional development structure (i.e. balance between face-to-face activities and online ones, level of interactivity among peers, type of technical and methodological support, use of e-learning repositories, etc.).

As in previous tools in literature, for instance the Approaches to Teaching Inventory (ATI) developed by Prosser and Trigwell (1993), questions are posed in the *continuum between teacher-focused approaches* aimed at the transmission of knowledge to the students, *and student-focused ones*, devoted to bringing about conceptual changes in the students. There is no consensus among researchers about the stability of approaches to teaching: for example, while Kember (1997) argues that enormous efforts are needed in order to change teachers' underlying beliefs, Prosser and Trigwell (Trigwell & Prosser, 1996; Prosser & Trigwell, 1999) emphasise the contextual and dynamic nature of approaches to teaching. In this second framework, the same teacher may sometimes use a student-centred teaching, and other times a teacher-centred teaching, depending on the teaching context.

This point will be one of the key elements investigated by the questionnaire: the match of results with contextual variables will deepen, as in previous studies (Lueddeke, 2003; Lindblom-Ylänne *et al.*, 2006), the variation in teaching approaches across disciplines and across teaching contexts.

Finally, in drafting the questionnaire, three final open questions have been proposed, asking teachers to explain their own excellences and innovation, difficulties and desired support.

This may be preparatory for the following qualitative analysis. In fact, considering the questionnaire's results, a *qualitative analysis of best practices* will follow, based on interviews and focus groups for a small sample of teachers. The scope of this second part of the research will be a deep understanding of some elements across disciplines and programme levels (bachelor and master); a focus group and individual interviews will deepen teachers' excellences and innovation, but also resistances as well as best practices developed to be disseminated within the institution.

In the meantime, the Research Group is planning to analyse the SET teaching evaluation data (students' opinion of teaching activities), which is not described in the present paper.

Literature has reached consensus in considering students as relevant stakeholders to involve in the teaching quality evaluation, although they should not be the single source of information (Benton e Cashin, 2012).

Considering teaching dimensions present in many tools in literature (Marsh, 1987; Kember & Leung, 2008; Mortelmans and Spooren, 2009), the three general dimensions investigated by the SET online questionnaire used at the University of Padua - general satisfaction, organisational

aspects and teaching action - will be matched with other dimensions concerning student, teacher and course such as: students' attendance, final grades, gender, motivation; teachers' gender, age, year of experience, role, personal characteristics; course dimension, number of students in class, discipline, workload, level (BA or MA).

Quantitative and qualitative data collected from teachers together with quantitative data from students will be triangulated to design and justify development strategies to be proposed in the second year and to enhance teachers' reflections.

This context-sensitive and collaborative approach will provide relevant evidence to support teaching development ideas.

Discussion and practical implications

At the end of the current academic year (September 2014) the Research Group expects to have a full picture of the practices, beliefs and needs of academic teachers at the University of Padua as well as a more in-depth understanding of possible key actions towards enhancing innovation and teacher professionalism.

The intention will be to match the questionnaire's findings with the results of students' opinion on teaching activities in order to have a broad and deep comprehension of the teaching phenomenon from a systemic and integrated point of view.

According to Biggs (2001), *quality feasibility* is a matter of providing affordances that encourage the development of good practice for continuous improvement: in fact, the systemic approach has the scope to develop reflective practitioners (Schön 1983) as well as reflective organisation. On the one hand, the project will support single teachers in their own process of growth and enhancement; on the other hand, it will help the institution in progressing organisational culture, policy and procedure with an efficient system of recognition and support for excellence.

As Anderson *et al.* (2011) argue, staff members are often employed based upon their research areas alone and without a culture of excellence or specific training in learning and teaching, therefore they do not have a shared educational language and a shared and agreed idea of learning and teaching quality. PRODID is in line with many organisations all over the world which are encouraging new academics to engage in professional development and programmes such as graduate certificates in higher education (Ginns *et al.* 2008; Longden 2010).

In this integrated frame, all decision-makers will be involved in the design of the Teaching and Learning Centre - TLC, since it needs to take into account many elements: piloting results of activities; strengths and weaknesses; possibilities for improvement; administrative issues, etc. Educational results and organisational aspects should be integrated in order to identify structures, resources and key roles to establish this *permanent service of educational innovation*. The use of educational technology to support innovative teaching and learning strategies allows the development of a more international perspective through virtual mobility and the enhancement of e-literacies or e-skills.

According to the best practices analysed and to the identified needs of teachers, the activities provided by the centre will be progressively improved, offering for example:

- general seminars and webinars on teaching and learning in higher education, development of teaching, planning and assessment of learning practices;
- specific workshops on: syllabus creation, classroom teaching techniques, classroom assessment techniques, writing of learning outcomes, using educational technology, academic supervising;
- scholarship on teaching and learning: support to faculty who are interested in conducting research into their teaching;
- consultations with teaching learning designers;
- online teaching models and resources and spaces for sharing practices.

By widening the analysis of the strengths and challenges for teachers in multiple perspectives (Drew and Klopper, 2014), PRODID constitutes an opportunity for the University of Padua to develop new *pedagogical thinking* and *reflection* as key vehicles for the construction of more permanent teacher knowledge and effective and meaningful teaching practices as well as a *transferable model* for teaching innovation in other Italian institutions.

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