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Faculty Development for Research Capacity Building in Higher Education

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ABSTRACT: *Research and Teaching often do not have equal dignity in the university world, research often being considered more important than teaching. Recruitment policies take into greater consideration the scientific profile of future professors, even though they must subsequently offer quality teaching to their students. Many Faculty Development initiatives are spreading in Italian universities and many faculty are learning new ways to plan their teaching, innovative active teaching/learning methodologies and innovative methods for valid and formative evaluation. Lecturers who are introducing these new methodologies would like to communicate their innovative teaching experiences in a scientific way but often do not know how to write a scientific paper in higher education. Teachers who are exceptional researchers in hard disciplines, find themselves unprepared to write papers in pedagogical and didactic areas that use research paradigms typical of education. The University of Genoa has considered important to propose a training course for its teachers on planning and writing a scientific paper in higher education. 10 teachers have enrolled and are involved in a longitudinal scholars program lasting half a day, monthly, for 6 months, led by an expert in higher education and adult education. Course topics are: Rationale, research question, methods, results, discussion of results, conclusions, journal selection, referee evaluation. The 10 participants write their paper, step by step, receive feedback from the instructor and peers. This paper reports the participants' satisfaction rating and quality analysis of the 10 papers produced. We believe that publishing scientific papers dedicated to university teaching experiences can contribute to enhance and value the importance of Faculty teaching skills in the future. A model of the virtuous circle that is established between innovative teaching, research about university teaching and enhancement of teaching skills is proposed.*

KEYWORDS: *Faculty Development, Educational development, Scholarship, Research, Professionalism*

Introduction

An academic teacher is not only a technician with the skills necessary to deliver a lecture, facilitate a small group or plan an exam. The academic

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teacher is also a scholar. Scholarship is often associated with research, with this demonstrated in terms of papers published in peer review journals or communicate during panels and conferences.

Canadian Association for Medical Education affirms that

Education Scholarship is an umbrella term which can encompass both research and innovation in health professions education. Quality in education scholarship is attained through work that is peer-reviewed, publicly disseminated and provides a platform that others can build on (Van Melle *et al.*, 2012)

The existence of a scholarship of teaching was highlighted thirty years ago by Boyer in 1990 (Boyer, 1990). He said that there are four types of scholarship:

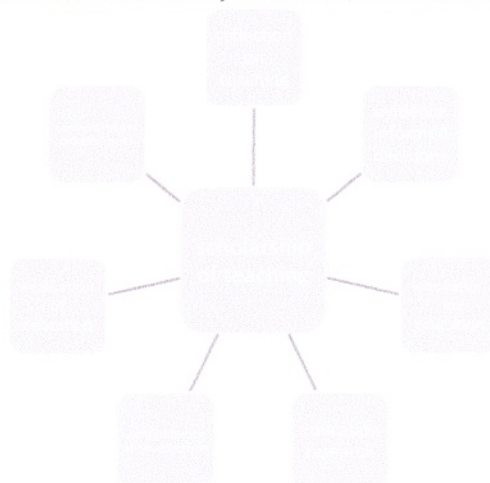
- The scholarship of discovery – the advancement of knowledge through research, including educational research;
- The scholarship of integration – making connections across disciplines and bringing new insight to bear on original research;
- The scholarship of application – the application of knowledge to problems and practice, with new intellectual understandings arising out the very art of application;
- The scholarship of teaching – a dynamic activity, building bridges between the teacher’s understanding ant the student’s learning.

Referring to the scholarship of teaching, Azikewe notes that each teacher can become a teacher-scholar when he reflects on his own teaching, makes evidences-informed decisions with regard to curriculum and teaching-learning-assessment methods, innovates and introduces new approaches based on educational principles aimed at making learning more effective and efficient, undertakes research perhaps in form of action research related to his own teaching, communicates about his experience and lessons learned to other teachers and made it public, evaluates his teaching through student and peer review and other methods, confronts broader issues in higher education such as the impact of a program on a community (Azikiwe, 2018).

A teacher-scholar is a teacher who give a scientific contribution in the field of teaching and learning.

High Level Group on the Modernisation of Higher Education, a report to the European Commission on Improving the quality of Teaching and Learning in Europe’s higher education institutions, in 2013, mentioned in recommendation n. 6 that head of institutions and institutional leaders should recognise and rewards higher education teachers who make a significant contributions to improving the quality of teaching and learning, whether through their practice, or through their research into teaching and learning(European Commission, 2013).

FIG. 1. *Seven features of the scholarly teacher (Azikewe, 2018, 229)*



The traditional way for communicate research is publishing into scientific journals and, at general levels and at the disciplinary level, there are many journals dedicated to research in innovative teaching in specific fields where education articles can be disseminated.

Despite many opportunities for publishing into international educational journals and a flourishing amount of initiatives dedicated to Faculty Development., in Italy there are only few scholars who publish in Journals dedicated to Teaching and Learning in Higher Education. Why do scholars not publish about their research in teaching and learning? One potential reason is that scholars in many disciplines don't feel prepared to write a scientific paper in the field of education.

The challenge of being a disciplinary scholar has been argued in the literature. For example, Miller-Young, Yeo, and Manarin (2018) argue that

coming to Scholarship in Teaching and Learning causes a type of epistemological dissonance that is problematic and troublesome for faculty/academics from a range of discipline who «experiences a disruption in their sense of identity, causing them to question themselves as a teacher, researcher and colleague» (Miller-Young et al., 2018).

Many scholars of teaching and learning do not have a formal training in writing *in or for* the field. Many are published writers in their disciplines, but when they enter in Scholarship of Teaching and Learning they feel uncomfortable because they don't know, in the educational field, the different approaches to research which could be qualitative, quantitative and mixed-method. Scholars often don't know qualitative approaches such as ethnography, grounded theory, narrative methods, design based research.

They feel dual citizens, part of two discourse communities, each with distinct customs and cultural norms, although both privilege writing as a form of esteem and communication (Healey *et al.*, 2019).

Although there are at least four genres of articles in Scholarship in Teaching and Learning (SoTL), according to Healey *et al.*, some scholars find difficult to write a paper about their experience on teaching.

These four genres are:

- Empirical research articles, which usually offer evidence for a particular aim or response to a research question, and are articulated with an introduction, a literature review, sections dedicated to methods, findings, discussion, implications, and conclusions.
- Conceptual articles which typically don't involve the collection of data, but explore theories or approaches or methods for the conceptual analysis.
- Reflective essays which are dedicated to unfinished and personal work of SoTL. These papers are usually written in the first person and present learnings rather than empirical findings.
- Opinion pieces which offer the opportunity to write a personal point of view regarding a value judgement about teaching and learning.

Scholars sometimes find writing about teaching and learning in higher education a hard task, and this could diminish their personal identity as researchers in higher education. Some authors argue that writing is an integral part of, not separate from, developing an identity as a scholar of teaching and learning (Healey *et al.*, 2019).

So the University of Genoa proposed a course dedicated to scientific writing to build research capacity of its Faculty Members. The purpose of this paper is to describe the development and implementation of scholarship of teaching and learning program, and to verify if it could be a useful method to help scholars to communicate their innovative practices and research to others.

1. Course description

Description of a longitudinal course about scientific writing (How to write a paper dedicated to research into teaching and learning), held at Genoa University, A.Y. 2021/22

At December 2020 University of Genoa proposed a 4-hours introductory workshop about getting published in higher education. This workshop was open to 20 participants just to explain them how to write a scientific paper in education. It was led by two international experts with experience as peer reviewers and editor in chief of well-known journals

At the end of this workshop it was proposed a longitudinal course open only to 10 participants who could engage in learning and writing their scientific paper under the supervision of one international expert. This course was entitled Anatomy of a scientific paper, run between January

and June 2021, scheduled as 2 hours monthly meeting online synchronously, led by one of Scholarship in Teaching and Learning.

The Overall Program objectives were:

- Gain an understanding of the main sections that constitute an educational research paper
- Recognize critical elements of each section of an education paper
- Develop an initial outline of an education paper on a topic of choice
- Identify the main sections of the results and discussion of a research paper
- Recognize key elements and challenges of the results and discussion sections

The program's content was :

1. Introduction of a paper (state of art, gap, hook, research question);
2. Methods (Study population and setting, study design, data collection, data measurement, outcomes, data analysis)
3. Results
4. Discussion of results.

Each month meeting was dedicated to a topic, which constituted a sequential phase of their work. Each participant had the opportunity of writing step by step his/her own paper under the expert's and peer's supervision.

TAB. 1. Overall Program Schedule

<i>Date</i>	<i>Topic</i>	<i>Instruction</i>	<i>Self work</i>
January	Introduction	Didactic/application Q&A	X
February	Methods	Group Review of Introduction Didactic/application Q&A	X
March	Results	Group Review of Introduction/Methods Didactic/application Q&A	X
April	Discussion	Group Review of Introduction/Methods/Results Didactic/application Q&A	X
May	Overall outline	Group Review of outline Presentation of outline Q&A Closing remarks/next steps	

The teaching methods were very active and participatory: the teacher sent to each participant a paper or chapter to read before each meeting, for independent study as in flipped classroom, and during the meeting gave a very short presentation. Then participants worked in small groups discussing their papers, sharing ideas with their colleagues. At the end of the session, they presented their work to the whole group. In the period of time between the monthly meetings, participants wrote their new section of paper and sent it to the teacher who would read and provided

written comments and then additional feedback to each of them in the following meeting. In five meetings it was possible to know each other, to start writing a paper identifying the state of art, gap, hook, research question, methods, results, discussion of results and conclusion and submit to a journal.

2. Method

A quantitative approach was chosen and a questionnaire was created to investigate the research questions. A questionnaire was sent to the ten participants attending the University of Genoa workshop at the end of the longitudinal course dedicated to scientific writing in teaching and learning via email.

Since it was the first time that in Italy a Faculty Development initiative was dedicated to scientific writing in teaching and learning in higher education, it was considered useful to ask some research questions.

1. Which are the motivations of teachers attending a longitudinal course in research on academic teaching?
2. Do participants feel dual citizens?
3. Are there major differences between research papers in hard disciplines and in educational sciences?
4. Which are the main topics investigated by participants?
5. Could it be possible to introduce scientific writing groups on academic teaching ?

The questionnaire was composed by twenty-eight questions (twenty-four closed questions and four open questions) and explored five areas:

- A. Participants' motivations and expectations
- B. Previous experiences of Faculty Development
- C. Previous experiences of academic writing on teaching and learning in HE
- D. Difficulties linked to different epistemologies
- E. Future perspectives

A content analysis of participants' papers was done to identify topics, research approach and methods.

Participants

Participants were ten academic teachers enrolled to a long course on writing a paper on university teaching and learning.

They were heterogenous for academic role and position: n. 1 full of professor, n. 3 associate professors, n. 2 assistant professors or senior lecturers, n. 4 non-tenure track.

They came from different Schools: n. 5 from School of Natural, Mathematical, Physical and Chemical Sciences, n. 3 from School of Engineering and Architecture, n. 2 from School of Humanities.

TAB. 2. *Academic role of participants*

<i>Role</i>	<i>N. of participants</i>
Full Professor	1
Associate Professor	3
Researcher, assistant professor, senior lecturer	2
Non-tenure track	4

TAB. 3. *Schools or Department of affiliation*

<i>Schools</i>	<i>N. of participants</i>
School of Natural, Physical, Chemical and Mathematical Sciences	5
School of Engineering and Architecture	3
School of Humanities	2

3. Results

All ten participants filled the questionnaire.

3.1. Experiences and expectations before the course

Before enrolling to the course dedicated to scientific writing in teaching and learning in higher education, all participants had already attended a Faculty Development formal initiative about teaching and learning in higher education.

TAB. 4. *Participation to a Faculty Development formal group initiative organized at Genoa University*

<i>Faculty Development approach</i>	<i>N. participants</i>
Seminars	6
Workshops	8
Longitudinal course	5
Community of Practice	7
Other	3
None	0

9 participants had introduced innovative teaching methods in their course and programs, and 5 participants had introduced innovative assessment methods. Half participants had already written a paper concerning their teaching and assessment in higher education, but only 2 published a paper. All participants had the clear expectation to learn structuring and writing a scientific paper about teaching and learning in HE and 6 persons wanted to identify which international journals were dedicated to scholarship in HE. Half of participants didn't know at all the international journals dedicated to HE.

3.2. During the course

There is the idea that some scholars do not write about their teaching experiences because they feel not prepared for writing in the educational domain. They feel like dual citizens: they are excellent scholars in their own disciplinary field and are able to write scientific papers accepted by

the most important journals, but they feel unprepared for writing in pedagogical field. They consider themselves dual citizens.

3 participants found main differences in writing a scientific paper in teaching and learning in HE, 6 participants found some differences and one said there are no difference. At the direct question if they felt dual citizen, 6 replied that they didn't feel dual citizens, 2 replied that yes they felt a difference and 2 partially. Participants appreciated to work in a small group of ten participants.

3.3. Participants' papers

Nine participants decided to write a collective paper. Six papers were research papers, three were case studies, and only one a reflective essay. Six papers are dedicated to innovative teaching methods such as Team Based Learning, Project-based learning, collaborative learning and online learning. Only one paper is dedicated to assessment method, and specifically to formative evaluation: peer review. And another one is a theoretical paper on students' misconceptions in sciences as a barrier to learning.

3.4. Participants satisfaction

Participants considered that the length of the course was correct, and they say that they would like to continue to work as a university writing group, meeting on their own regularly, during the year just to write together. All participants believe that Genoa University should propose the same course each year for new participants. Some participants defined a course with the metaphor of a diamond and of an ugly duckling who will become a swan.

3.5. Course's output

Seven participants said that their identity as scholars and as teachers has been reinforced during this course: writing a scientific paper helped the reflection on one's teaching practice. The majority of participants consider writing a scientific paper in this field a very engaging experience, also emotionally, and they are worried that their papers could be refused by an international or national journal.

4. Discussion

All participants had attended previous workshop, seminars or longitudinal course on Teaching/Learning/Assessment in Higher Education and had introduced teaching and learning innovations in their teaching activities. Only few participants had introduced assessment innovations.

Writing a scientific paper is linked to scholars' knowledge and competence in teaching and learning in Higher Education. We could find a linkage between learning new teaching and assessment methods, and

introducing some innovative methods in own's course. We could say that teachers who try to introduce new teaching methods usually have been trained in a formal or informal way about didactics in academia. Once that they experimented some approaches or methods, perceived as innovative, they reflect and write on their experiences, transforming this experience in research to be communicated.

It seems that there is a link between learning, teaching and research.

Faculty Development and Scholarship of teaching and learning are linked, and directors of Teaching and Learning Centers should be aware that, if they plan initiatives about innovative teaching, learning and assessment methods, they have to plan also a course about academic writing because their faculty members could need it to be encouraged and supported in their research activity in education.

The cycle of scholar in Teaching and learning seems to be an iterative path:

1. a faculty member participates to Faculty Development initiatives, proposed by his/her University or other institutions and learns new principles, new teaching methods, new ways for facilitating learning or for evaluating learners;
2. he/she decides to introduce a new teaching or assessment method in his program during his/her teaching activity;
3. he/she reflects on his own or with others colleagues about his/her innovative teaching experience and could decide to write his/her experience according to principles of writing an academic paper in higher education;
4. he/she sends his/her paper to a journal or communicates it during a panel or a conference;
5. his/her publication or scientific communication could reinforce his/her identity as scholar.

This cycle could be beneficial for the teacher's formation of identity, but on the other side, could be useful to produce a product which could be counted for awards or academic career progression.

In the Paris Communiqué in 2018 ministers of education of recognized that academic career progression should be built on successful research and quality teaching.

Some participants had already written a paper on Teaching/Learning/Assessment in Higher Education but they didn't published it because, in some case, journals had rejected their papers, and this refuse was the motivation for participating to a dedicated course on scientific writing.

Participants feel dual citizens and consider that there are some differences among a paper devoted to hard sciences research and educational sciences research.

Research in educational sciences could use different approaches to educational research, such as qualitative research, mixed-methods and design-based research.

It seems enriching to equip faculty members with skills in qualitative approaches.

Participants appreciate their writing group and propose to institutionalize this kind of activity, as it happens in some university abroad, where scholars meet regularly for some hours just to write and share with colleagues their research papers dedicated to Teaching/Learning/Assessment in Higher Education.

FIG. 2. *The cycle of scholar in Teaching and Learning in Higher Education*



There are many ways of planning and delivering faculty development activities for research capacity building: short workshops, modular programs, longitudinal fellowships and scholars programs, full-time research fellowship programs, master degrees, doctoral degrees, and also mentors and facilitators. Faculty development for research capacity building is a complex undertaking activity (Hodges, 2014) but it is essential to develop teachers' competences and transform them from simple teachers to scholars in teaching and learning in higher education.

Conclusion

A longitudinal course on academic writing on Teaching and Learning in Higher Education could be a good way to build research capacity in higher education. We propose the cycle of scholar in teaching and learning in higher education. This cycle links together learning, teaching and research.

Aware that such small-scale investigation could not be generalized, this paper highlights some points about the importance that the publication of a paper in a recognized journal is a key activity for the teacher-scholar.

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