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CONFERENCE PROCEEDINGS



Sharing the Passion for Learning

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EDUCATIONAL LEADERSHIP FOR ACADEMIC DEVELOPMENT: PRACTICES AND REFLECTIONS AT UNIVERSITY OF TRENTO

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Abstract

Research indicates that effective and transformative academic development requires establishing structures fostering organisational change and continuous improvement.

Institutional cultures can either support or hinder teaching quality and innovation. Commonly, there is a noticeable disinterest in discussions about teaching, with innovations being isolated efforts amidst a broader resistance to change, thereby impeding the promotion and sustenance of innovative teaching practices.

This case study emphasises the role of institutional leaders, including department heads and delegates responsible for teaching and learning, as pivotal to the success of academic staff development and teaching quality processes. The centrality of middle-management figures underscores the growing need to develop educational leadership skills to promote effective actions that engage academics.

The sustainability of academic development projects is influenced by how department heads collaborate with university teachers in relation to local educational cultures, peer engagement, and legitimacy. The journey to becoming an educational leader entails change and awareness, requiring new tools and perspectives. Notably, the distinction between leaders' formal authority and informal leadership, earned through engaging colleagues, presents a significant contemporary challenge.

This case study details an initiative in educational leadership targeted at departmental delegates overseeing teaching and learning at the University of Trento, Italy. The paper presents the programme established in our institution to develop educational leaders, highlighting its main elements: detailed needs analysis, creation of a community, sharing of best practices, discussion of the most difficult challenges, brainstorming solutions, reflective teams, and mentoring programs.

Keywords: Educational Leadership; Academic Development; Higher Education.

1 INTRODUCTION AND THEORETICAL FRAMEWORK

The scope of academic development in universities is to promote individual holistic development as well as organisational change. Professional development actions are primarily oriented towards advancing and innovating teaching and learning strategies. However, as Steinert [1] reminds us, they also embrace activities that concern academic roles in general, including leadership roles, management and *scholarship*. Also in Sutherland's [2] meaning of *academic development*, the multiple aspects of the academic career are included, with a look at the entire institution, from the most junior teaching roles up to roles of responsibility and complexity, integrating disciplinary perspectives and actions of research aimed at continuous improvement, with a "holistic" vision of the teaching and learning processes inserted in the community to which they belong.

For the actions promoted to be effective and genuinely transform academic practices, it is important to promote and sustain organisational change and continuous improvement. The sustainability and benefits of the actions undertaken can, in fact, be hindered by institutional cultures that do not provide support, by the lack of involvement and by limited competence in investigation and change processes. In particular, *middle-management* figures, such as the heads of department and their delegates are essential for the success of academic staff development processes and teaching quality. Some fundamental aspects for the success of proposed changes are [3]: the partnership between academics, middle-management and heads of department; legitimacy for educational development through role assignment; and the involvement of colleagues and engagement in peers development.

The centrality of middle-management figures recalls the growing need to develop educational leadership skills to promote effective actions that truly involve the teaching staff and which, at the same time, satisfy the requirements and challenges of quality assurance in education [4].

Educational leaders often witness situations in which there is little interest and, therefore, lack of conversations and dialogues on teaching (unlike what happens for research) and, as a consequence, lack of shared conceptualisations on teaching and learning [4]. Consequently, changes and innovations appear as isolated and not interconnected actions: some changes start from the top, but most are single and not shared initiatives, which hardly impact the overall system. In fact, in higher education, there is resistance to change in contexts; as Stigler and Hiebert [5] remind us, academics tend to replicate the teaching cultures they experienced as students.

In this frame, the research question guiding this paper is: how is it possible to scaffold educational leadership that involves academics in the direction of innovation and continuous improvement of teaching?

It is, therefore, necessary for institutional leaders to participate in advanced training programs that allow them to contribute to the creation of a high-quality learning and evaluation environment. This requires a commitment from universities to consider local practices, the context and the people involved. Becoming an educational leader involves change and awareness, requiring new tools and perspectives. In particular, the actual separation between administrative tasks, formal power, and informal leadership, gained in the field by involving colleagues, represents a current challenge. Studies indicate that educational leadership in higher education is a complex task that requires vision, inspiration, drive for improvement and creativity, connecting people and organisations, and consideration of organisational culture and formal roles.

The literature also underlines the importance of support in the peer community, creating spaces for informal discussion to exchange ideas and experiences, gain inspiration and develop new possibilities to apply practices [4]. Strategies such as peer coaching and mentoring, logbooks, discussions and interviews [6] appear, together with communities of practice [7], to be the most widespread for supporting the professional development of middle management figures.

2 EDUCATIONAL LEADERSHIP FOR DEPARTMENTAL TEACHING DELEGATES: A CASE STUDY

The paper presents a case study of educational leadership for academic development at the University of Trento, in Italy.

In the context of the Teaching Learning Center, to ensure that academic development initiatives were tailored to academics' specific needs, it was necessary to gather relevant contextual factors. As such, a training needs analysis was conducted as part of the preliminary planning stages [8].

Teaching delegates in each department, namely professors that the heads of Department delegate to manage teaching and learning (both for what concerns administrative issues such as documentation, class timetable, etc. and for what regards teaching innovation), were identified as key testimonials. In total, 15 interviews were carried out with the teaching delegates to gather information and opinions regarding most used teaching and learning methodologies and technologies, assessment methods, challenges, training needs, facilities and equipment, and to collect their experiences. Through this process, it became clear that the role of teaching delegates is pivotal to the quality of teaching within departments. However, it was also evident that so far there has been no formal training or support for them to carry out their role effectively. Instead, it became clear that teaching delegates require specific organisational, managerial, and pedagogical knowledge to drive innovation and quality in their own departments and scaffold a culture of teaching excellence.

After analysing the interviews [9], it became clear that there was a need to not only collect the training needs for academics across various departments, but also to create a dedicated professional development path for teaching delegates. This path would aim to alleviate the isolation that comes with their roles, foster a sense of community, and provide opportunities to reflect on specific issues related to teaching development. To kick off this process, a semi-residential workshop was organised. 18 teaching delegates - 3 departments have teaching innovation delegates too, working together with teaching delegates - attended the event.

The workshop aimed at implementing a shared reflection on problems, strategies and continuous improvement of teaching quality. The idea was to offer participants an opportunity to share good practices of teaching development actions and offer an in-depth analysis of the quality of teaching, then building a common idea of *educational leadership* while respecting the different departmental cultures. This path represents a first step towards building the skills of educational leaders who can encourage the innovation process of the higher education institutions they belong to.

The table below summarises the main themes addressed during the workshop.

Table 1. Workshop themes and activities

<i>Theme</i>	<i>Activity</i>
Quality Assurance (QA) actors and the role of the teaching delegate	Presentation of the new QA requirements, actors and the role of the teaching delegate in this framework
The role of the teaching delegate in the Department: activities hindering factors and practices	Group reflective activity on the practices implemented by the delegates in their own departments to scaffold a culture of teaching excellence and on the critical issues encountered Analysis of the approaches emerging from research on educational leadership
Leading change for the development of teaching	Reflective activity in groups on factors, values and elements of quality and processes for improving teaching
Educational leadership and mentoring experiences: methodological indications and lessons learned	Insight into educational leadership and mentoring from literature and international experiences
Strategies for creating a teaching culture: possible actions and the connection with the Teaching Learning Center	Identification of possible actions for building a community to support the continuous improvement of teaching in departments

The workshop represented a first step to create educational leadership and to support teaching delegates in their complex role of scaffolding innovation and continuous improvement of teaching. To evaluate the workshop, a satisfaction questionnaire was developed in order to collect data that would allow continuous improvement. To develop the instrument, the model proposed by Pineda [10] for training evaluation was used and adapted. The questionnaire opens with questions related to their role as delegates (timing and previous possible roles), followed by 23 items (1-5 Likert scale, 1= completely disagree and 5= completely agree) investigating participants' perception of instructors, process, organisation, outcomes in terms of learning developed and intention to transfer. The questionnaire was completed at the end of the workshop. In the next session data collected will be described and discussed.

3 PARTICIPANTS' SATISFACTION OF THE EDUCATIONAL LEADERSHIP WORKSHOP

Out of 18 participants, 14 responded to the questionnaire that was proposed to them. From the data collected regarding their role, it emerges that half of the respondents were recently appointed, i.e. in the year 2021 or 2022; 4 were appointed in 2018, 5 in 2021, 3 in 2022 and 1 in 2015; 1 did not respond. This, knowing that the role of teaching delegate or teaching innovation delegate has a duration of 3 years, means that 5 were reappointed in this role.

Regarding the question on previous teaching support roles carried out in the department, it can be seen that the majority were coordinators of study programs (6 people), 1 was a member of teacher-student commission, 1 was delegated to innovative teaching, 1 was delegated to internships, 1 was support teacher, 2 had no previous roles, 2 did not respond. From this, it can be seen that the two roles of study program coordinator and teaching delegate are considered integrated: the experience a coordinator might inform the role of teaching delegate.

The questionnaire, then, investigated participants' satisfaction regarding the workshop, starting from their opinions regarding instructors. Feedback collected was very positive, as shown in Table 2.

Table 2. Action of instructors (scale 1-5)

<i>ITEM</i>	<i>M</i>	<i>SD</i>
Effectiveness of the instructors' presentation	5	0
Instructors' competence	5	0
High quality content	4.93	0.25
Effectiveness of teaching activities and methodologies	4.71	0.44
Constructive and stimulating interaction with instructors	4.64	1.24
Educational resources used	4.07	1.24

The event had the goal of fostering a community, which instructors successfully achieved through their efforts. This aspect was taken into account in the questionnaire, and all participants agreed that there was a collaborative atmosphere, facilitating exchanges and discussions, and ultimately bringing colleagues together to form a community.

Table 3. Process aspects (scale 1-5)

<i>ITEM</i>	<i>M</i>	<i>SD</i>
Creating a collaborative climate	5	0
Creation of opportunities for exchange and discussion between participants	5	0
Building a community among colleagues	5	0

Still positive results concern the organisational aspects, although with less satisfaction than previous dimensions. In fact, it is difficult to find dates and times that satisfy all the different needs. Compared to the location, although the context was very pleasant, the classroom in which the workshop took place was probably too small to carry out group activities compared to the number of participants.

Table 4. Organisational aspects (scale 1-5)

<i>ITEM</i>	<i>M</i>	<i>SD</i>
Adequacy of agenda and timing	4.36	0.59
Sustainability of training times	4.29	0.68
Adequacy of spaces and equipment	3.93	1.06

The questionnaire also aimed to investigate transfer intentions, satisfaction of expectations and training outcomes (Table 5). As regards the participants' intention to transfer what they learned in the training to their work context, it appears that there is high motivation to integrate and improve their practices as teaching delegates and desire to collaborate with colleagues for shared leadership. Finally, there was a positive response regarding the possibility of using what has been learned to improve their practice.

We also attempted to investigate the possible outcomes of the training, asking their level of agreement on the fact that the workshop stimulated in them a new reflection: a) on the processes towards creating a teaching culture, b) on the exercise of own role as teaching delegate, c) and on the improvement of theories, information and concepts on *educational leadership*.

The last area of evaluation concerns the general satisfaction with the proposed workshop: the levels of satisfaction are high with respect to both the interest and answer to participants' expectations and learning needs.

Table 5. Intention to transfer, outcomes and satisfaction (scale 1-5)

<i>ITEM</i>	<i>M</i>	<i>SD</i>
Motivation to integrate and improve practices as teaching delegate	4.86	0.34
Motivation to collaborate/coordinate with colleagues for shared leadership	4.50	0.61
Possibility of using what has been learned to improve action as a delegate	4.36	0.59
The workshop stimulated new reflection on the processes for creating a teaching culture	4.86	0.34
The workshop stimulated a new reflection on the role of teaching delegate	4.71	0.44
The workshop improved theories, information and concepts on educational leadership	4.57	0.48
I would recommend this workshop to other teachers	4.93	0.25
The workshop was interesting	4.86	0.34
The workshop in general was satisfying	4.86	0.34
The workshop met expectations	4.79	0.40
The workshop was relevant to the learning needs	4.64	0.46

Following the event, participants were asked to share their thoughts on the most valuable aspects. It was clear from their feedback that the concept of educational leadership was really appreciated, as well as the opportunity to connect and collaborate with peers. When asked for suggestions on future training proposals, many expressed interest in more frequent delegate meetings to discuss the content covered and share experiences in a structured setting.

4 DISCUSSION AND CONCLUSIONS

The paper presents a case study carried out at the University of Trento to understand how it is possible to scaffold educational leadership that involves academics towards innovation and continuous improvement of teaching. It presents the programme established in the institution to develop educational leaders, highlighting its main elements: detailed needs analysis, creation of a community, sharing of best practices, discussion of the most difficult challenges, brainstorming solutions.

This case study emphasises the role of institutional leaders, including department heads and delegates responsible for teaching and learning, as pivotal to the success of academic staff development and teaching quality processes. The centrality of middle-management figures underscores the growing need to develop educational leadership skills to promote effective actions that engage academics.

The experience carried out and results collected show that there is a strong need for academics in middle-management positions in university to reflect on the concept of educational leadership, and think about possible ways to implement their own actions to foster teaching innovation and continuous improvement of strategies to implement a student centred approach. It appears effective to help teaching delegates to share their best actions and experiences and create a community of practice [11].

The legitimacy of their role needs also to be integrated with their capacity to engage colleagues in conversations about teaching and learning as well as peer engagement towards the development of local educational cultures. The journey to becoming an educational leader entails change and awareness, requiring new tools and perspectives. Notably, the distinction between leaders' formal authority and informal leadership, earned through engaging colleagues, presents a significant contemporary challenge.

For academic development to be sustainable [4] is also important for teaching delegates to learn strategies and tools (such as reflective teams, and mentoring programs) to engage colleagues in effective teaching conversations and create links and connections between teaching improvements, avoiding innovations to be isolated actions.

Finally, a scholarly approach is also relevant to scaffold educational leadership: helping academics to conduct research and scholarship on learning and teaching [12] appears to be an important strategy to collect evidence and engage colleagues.

REFERENCES

- [1] Y. Steinert, "Commentary: Faculty development: The road less travelled", *Academic Medicine*, 86(4), 409-411, 2011.
- [2] K. A. Sutherland, "Holistic academic development: Is it time to think more broadly about the academic development project?," *International Journal for Academic Development*, 23:4, 261-273, 2018, DOI: 10.1080/1360144X.2018.1524571.
- [3] K. Bolander Laksov, K., "In partnership with heads of department for sustainable educational development," *International Journal for Academic Development*, 26(2), 136-147, 2021, <https://doi.org/10.1080/1360144X.2021.2016414>
- [4] K. Bolander Laksov, and T. Tomson, T. "Becoming an educational leader – exploring leadership in medical education," *International Journal of Leadership in Education*, 20(4), 506-516, 2016, <https://doi.org/10.1080/13603124.2015.1114152>.
- [5] J.W. Stigler, and J. Hiebert, "Closing the teaching gap," *Phi Delta Kappan*, 91(3), 32-37, 2009.
- [6] E.F. Goldman, M. Wesner, O. Karnchanomai, and Y. Haywood, "Implementing the leadership development plans of faculty education fellows: A structured approach," *Academic Medicine*, 87(9), 1177-1184, 2012.

- [7] L. Wilkerson, and D.M. Irby, "Strategies for improving teaching practices: a comprehensive approach to faculty development," *Academic Medicine* 73(4), 387-396, 1998.
- [8] G. Wisker, "Carrying out a needs analysis: from intuition to rigour," In *A Guide to Staff & Educational Development* (P. Kahn, and D. Baume, eds.), pp. 20-32, London and Sterling, VA: Kogan Page, 2003.
- [9] S. Maniero, A. Serbati, F. Picasso, P. Venuti, "Analysis of university academics' training needs: qualitative research at the University of Trento to tailor professional development processes". *Italian Journal of Educational Research*, 31, 2023 86- 99 <https://doi.org/10.7346/sird-022023-p86>
- [10] P. Pineda, "Evaluation of training in organisations: a proposal for an integrated model," *Journal of European Industrial Training*, 673-693, 2010.
- [11] E. Wenger. "Communities of practice and social learning systems". *Organization*, 7, 225–246, 2000.
- [12] M. Harvey, M., & S. Jones. "Enabling leadership capacity for higher education scholarship in learning and teaching (SOTL) through action research". *Educational Action Research*, 29 (2), 173–190, 2021. <https://doi.org/10.1080/09650792.2020.1803941>.