Article

LINHAS CRÍTICAS

Roles performed by teachers in higher education innovative projects

Papéis desempenhados por docentes em projetos inovadores na educação superior

Roles desempeñados por los docentes en proyectos innovadores de educación superior

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Highlights

Teachers performed five roles in the innovative projects: protagonist, supporting player, hero, antagonist, and audience.

Motivation and resilience compensated for lacking factors, but required extra dedication, compromising projects' sustainability.

Objective conditions sustain innovative teaching: balanced roles, fair compensation, research support, and experimental freedom.

Abstract

This qualitative ex-post-facto research aims to understand the role of teachers in innovative projects in Brazilian higher education by applying content analysis technique to 23 reports and four semi-structured interviews. Results indicate that teachers performed five roles: protagonist, supporting player, hero, antagonist, and audience. Personal characteristics such as motivation and resilience are capable of compensating for the absence of other factors and positively influence innovative behavior. The difficulty in performing a role different from knowledge transmitter and the lack of time due to overwork hinder the involvement in innovative projects.

Resumo | Resumen

Keywords

Higher Education. Educational Innovation. Teacher's Role.

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Introduction

Innovation is a theme inextricably bound to a knowledge-based society (Thurlings et al., 2015), considered by educational researchers as a buzzword (Gilbert et al., 2021) and a hot topic (Zainal & Matore, 2019), worthy of careful and critical examination by researchers and other professionals of the field. To innovate would be an indispensable task (Zhu & Wang, 2014) on which the success, competitiveness and the very survival of organizations depends (Messmann & Mulder, 2015; Thurlings et al., 2015; Zainal & Matore, 2019; Lambriex-Schmitz et al., 2020), including educational ones (Zainal & Matore, 2019).

The realization that technological advancements have changed the way students learn (Wong, 2018) highlights the inadequacy of pedagogical models centered on content transfer in meeting the current needs (Zhu et al., 2013; Messmann & Mulder, 2015). Innovations in higher education are necessary to help students reach their full potential (Zhu et al., 2013), to improve the quality of the teaching and learning processes (Messmann & Mulder, 2015; Stasewitsch et al., 2022), and to prepare people for the workforce (Messmann & Mulder, 2015).

The implementation of innovative ideas depends on people (Thurlings et al., 2015) and, in the educational context, the willingness and actions of teachers are crucial to achieve that goal (Gilbert et al., 2021, p. 4), since they are in the privileged position to propose updates in teaching and learning methods, content, pedagogy and curricula (Wong, 2018).

Studies about teacher's participation in professional innovations are frequently based on the field of Innovative Work Behavior (IWB) (as defined by Baskaran & Rajarathinam, 2018). Such studies have investigated factors that favor or hinder innovative behavior in the professional exercise. Results have identified two large influential blocks: internal factors, related to the personal competencies and characteristics of teachers, and external factors, related to the characteristics of institutions, colleagues, students, etc.

When it comes to personal competencies, Zhu et al. (2013, p. 23) have identified that educational and technological competencies were "strongly related to innovative teaching performance." Additionally, both Thurlings et al. (2015) and Zainal and Matore (2019) studies have emphasized the role of self-efficacy as one of the most dominant factors in influencing teachers' innovative behavior. Reflection, networking, and humor are also competencies that favor the development and diffusion of innovation and professional development (Messmann & Mulder, 2015; Johari et. al., 2021; Stasewitsch et al., 2022)

Gilbert et al. (2021) have highlighted the role of teachers themselves as drivers of innovation, when they put their ideas in practice, with or without support. About the characteristics that most favor IWB, Lunde and Wilhite (1996, p. 165) have identified that teachers involved in innovative projects are persistent, risk-taking, favorable to experimentation and passionate about teaching. Messman and Mulder

(2011) attribute an important role to the teachers' characteristics in explaining why innovation happens. According to the authors, a need is perceived in the environment and it is seen as an opportunity for innovation. For this opportunity to become an innovative project, it must be recognized as such by teachers, which happens when they have certain characteristics, such as job satisfaction, self-actualization, motivation, and openness (Messman & Mulder, 2011). In a different direction, a study by Wong (2018) mapped the characteristics that hinder teachers' involvement in innovative initiatives, the main ones being lack of knowledge, skills and motivation needed to implement innovations (Wong, 2018).

In regard to external factors, having institutional support, as well as an innovation-oriented leadership, positively influences the innovative behavior of teachers (Thurlings et al., 2015; Zainal & Matore, 2019; Lambriex-Schmitz et al., 2020; Gilbert et al., 2021). Exposure to innovations (Lambriex-Schmitz et al., 2020) and support from colleagues and students (Thurlings et al., 2015; Gilbert et al., 2021) are also facilitating factors. As summarized by Thurlings et al. (2015, p. 33):

> […] in order to innovate, teachers need support, guidance, and feedback from others and need to share and talk with these others. Colleagues seem to be the greatest influence; however, managers, school leaders, students, and external agents also need to provide support by sharing and talking with teachers.

Additionally, particular characteristics of the content to be taught were outlined by Sadler (2012) as especially challenging for teachers who were at the beginning of their careers and were trying to adopt a teaching approach focused on students and their learning. Another difficulty identified was turning theory into practice (Sadler, 2012).

The context described above cites internal and external factors that favor or hinder their involvement in innovative behavior. In order to advance theoretical contributions to this field, this research aims to understand how teachers in the Brazilian higher education context have acted on the creation and implementation of innovative educational projects and to attest if this performance corroborates or not the information contained in the literature about this topic.

In order to do that, 23 reports on innovative educational projects implemented in Brazilian higher education institutions were analyzed in regard to teachers' performance. The empirical corpus used in this research is less usual in comparison to other identified studies, while most studies use data from literature (Thurlings et al., 2015; Zainal & Matore, 2019) or teachers' perception of their practices (Lunde & Wilhite, 1996; Messmann & Mulder, 2011; Sadler, 2012; Zhu et al., 2013; Wong, 2018; Hashim et al., 2019; Lambriex-Schmitz et al., 2020; Gilbert et al., 2021; Stasewitsch et al., 2022), this research has analyzed reports about innovative projects and has sought to understand, through practice, the role played by teachers.

Furthermore, the research gains importance for addressing the gap identified by Zainal and Matore (2019, p. 2869) as a lack of comprehensive identification of

factors that can influence a teacher's innovative behavior, and for highlighting individual contributions that are underrepresented in existing research about educational innovation, according to Messmann and Mulder (2011). Finally, it also dialogs with the work from Gimenez et al. (2020), since, working with the same educational projects that form the corpus of this research, those authors concluded that innovative initiatives, aligned with the required 21st century competencies, involve, in their creation and execution, effective teacher participation.

Innovative teaching

Although educational innovation is a topic addressed and encouraged by numerous research studies (Zainal & Matore, 2019; Gilbert et al., 2021), its nature is polysemic and its meaning disputed by different narratives ranging from those that present legitimate needs for changes motivated by social and technological transformations, to those motivated by the cult of the new. The term "new" is commonly used in defining innovation, and its application in education goes beyond original or unprecedented concepts. Instead, it encompasses any idea or approach that did not previously exist within a particular context. (Campana, 2020). Educational innovations have different types, focuses, and scopes, they can be incremental, when implemented to improve what is already known - for example, a strategy planned to engage students in an expository class; or disruptive, when they break current patterns, for example, a general assembly to collectively define the use of a common area when such actions are not customary in that context (Campana, 2020).

Based on case studies from the Brazilian context, Ghanem (2018) and Ghanem et al. (2022) make distinctions between innovation, reform and changes in the educational field. According to the author, innovations originate at the bottom of educational systems and are specific, experiential, and voluntary. Because they demand so much effort from local agents, they tend not to be sustainable or scalable. Educational reforms, on the other hand, are imposed from the top and implemented on a large scale, while changes tend to be systemic alterations (Ghanem, 2018).

Also, Ghanem et al. (2022, p. 226) noticed that educational innovation is not necessarily linked to originality or being unprecedented, but to "locally conceived educational practices that, although not entirely new, seek to contradict the usual practices in a particular place or social group." Zhu et al. (2013, p. 13) emphasize this same characteristic in relation to innovative behavior by teachers, highlighting creativity when stating that the "concept of innovative teaching is not equivalent to 'new' teaching." Teachers are innovative when promoting creative learning, improving learning and fostering creative potential in students. Gilbert et al. (2021) assert that, in order to be considered innovative, pedagogical design needs to have intentional planning, be different from what was there before and have the intent to improve student learning.

Gilbert et al. (2021) also emphasize the need to understand innovative behavior from the perspective of some markers, among them its cyclical nature, in the sense

that something considered innovative at a certain time period will probably be considered outdated in the future. For the authors, it is “most useful to consider pedagogical innovation as a process rather than an outcome and innovative teachers as people who engage in that process” (Gilbert et al., 2021, p. 2). The impressions of Lunde and Wilhite (1996, p. 156), more than 25 years ago, are similar, since the authors find useful to define innovating teacher as a construct “comprised of a cluster of qualities, including effective interaction with learners, openness to change, persistence, reflective practice, specificity of approach, and discipline-embedded pedagogy” and teachers as agents that “are alert to new ideas, forge them into something uniquely their own, test them, and persist until their students are engaged and their teaching is transformed.”

Thurlings et al. (2015) point to reasons that justify the need to encourage innovative behavior among teachers. According to the authors, innovative behavior is indispensable so that teachers remain updated on societal changes, mostly driven by new digital communication and information technology. Also, they recognize that teachers have the potential to be an example, an inspiration and a starting point for the promotion of innovative behavior in society as a whole.

The idea that teachers need to urgently renew their teaching methods and enrich them with the use of new technologies is endorsed by several authors (Laurillard et al., 2018; van Ginkel et al., 2019; Kai et al., 2020). Kai et al. (2020), for example, emphasize the fear that teachers will lose their jobs in private colleges and universities if they don’t remain updated on technical and methodological developments during their careers. Therefore, taking on new roles in order to keep up with these transformations is seen as a necessity for professional survival as well as a personal responsibility; this kind of statement can reinforce the emergence of a prescriptive literature that can reduce the teacher to a specialized technician, a kind of producer of routines (Reich, 1994) subjugated by educational goals established by experts. This contributes to cheapen the work of teachers and undermines the idea of the teacher as a transformative intellectual (Giroux, 1997).

The role of teachers in higher education

The requirements, functions and transformations in teaching constitute the professional identity understood by Blasco et al. (2021) as a dynamic and continuous process mediated by culture, society, and subjects. Different authors use different theoretical constructs to discuss the professional performance of teachers, basing it on concepts such as positioning (Blasco et al., 2021), pedagogical concepts (Mesny et al., 2021), and roles (Kolb et al., 2014).

In this research the term “role” will be used, as a “declaration of rights and duties linked to a specific social situation” (Goffman, 2014, p. 28), allowing and prohibiting players from performing certain actions related to behavior, functions, responsibilities and competencies, but without losing sight of the fact that a person can play different roles in different circumstances, and that the same role can be played by several different people. Although the concept of “role” has been chosen to support the analysis made in this paper, some other forms of teachers’

performance based on different concepts, but with similarities in certain points, will be presented subsequently.

Based on the positioning theory, Blasco et al. (2021) stated that teachers can perform in different positions, which come with specific narratives, rights, and duties. Even though teachers can choose a priority position, the dynamism of the teaching identity makes it possible to roam through “sub” identities, which require “sub” behaviors, functions, responsibilities, and competencies. The research conducted by the authors identified three positions routinely held by business schoolteachers: content specialist, learning facilitator and supportive caregiver (Blasco et al., 2021).

Mesny et al. (2021), while investigating changes in the way higher education teachers do their jobs, focused on how teachers adopt certain pedagogical concepts. These changes, often linked to the adoption of a different pedagogical concept, were recognized by the authors as professional growth triggered by conflicts perceived by teachers between their performance and the primary objectives that they monitored in order to assess the quality of their work. The results of the research indicate the existence of four pedagogical approaches used by teachers, all strongly linked to the main objective monitored: student satisfaction, teacher satisfaction, short-term learning, and long-term learning.

Two decades after the formulation of the experiential learning theory, Kolb et al. (2014) described four roles that teachers can play in order to incorporate their performance into the experiential learning cycle. These are: facilitator, specialist, evaluator, and coach (Kolb et al., 2014). Although using the construct “roles,” which for Blasco et al. (2021) represents more stability than “position,” the authors also encourage flexibility and fluidity between roles.

In the present work, the use of the term “teacher” was chosen in order to follow the international literature on higher education and because the performed roles that are being analyzed in the empirical corpus of the research are related to the responsibility of teaching and learning. It must be recognized, however, that, for most professionals, being a faculty member in higher education demands numerous responsibilities other than teaching (and innovative teaching), such as research and publishing, and academic management (Lima et al., 2020). To fulfill all these responsibilities requires intellectual sophistication, emotional intelligence, and a systematic approach (Lima et al., 2020). Added to these day-to-day attributions is the pressure for engagement in projects that aim to transform teaching and learning motivated by the technological advances that have changed the way information is handled (Wong, 2018), with the risk of promoting even greater ruptures in the already fragile educational fabric (Iizuka, 2017). Although teachers seem open to developing their skills, some elements must be present to facilitate this process: professional education initiatives, support for didactic resources that value practical applications, a closer relationship with students, and society as a whole (Lima et al., 2020).

Method

This article consolidates the results of an investigation that aims to understand the role of teachers on the creation and implementation of innovative projects, and to attest if its role corroborates or not the information contained in the literature about this topic.

It is an exploratory ex-post-facto research (Gil, 2008), since the educational projects that are objects of the investigation are from 2018. Considering that the exploratory research is subordinated to the qualitative approach, and trying to reach some depth of understanding, as well as advance findings, the investigation combined methodological resources, including bibliographical, documental and field research, justifying a triangulation effort for data collection techniques (Creswell, 2021). This choice is due to the possibility of using multiple threads while weaving the interpretative text (Carrilho, 1995).

The bibliographical material formed the foundation for the construction of categories of analysis (Bardin, 2011), and served as theoretical lenses through which the gathered documental material and interview transcripts were interpreted – an appropriate collection technique when the main objective is to understand the meaning attributed by respondents to the topics involved in the problem that motivated the investigation.

The present research used 23 reports about innovative educational projects developed by teams associated with business administration courses from higher education institutions located in all different regions of Brazil. These projects were submitted for an Innovation in Business Teaching-Learning Award and were chosen as finalists in the 2018 edition of the prize.

The prize's regulation did not provide a definition for the concept of innovation, but specified that its focus was on teaching and learning practices that have achieved substantive results and have been in operation for at least two years. In an interview, the prize organizer clarified that the evaluation committee was instructed to adopt a more "open" and "democratic" concept of innovation, based on the proposer's perception that those activities would be innovative in that context, considering the diversity of Brazilian regions. Despite the importance of conceptual rigor in defining such a mobilizing term, this work does not aim to judge the merit of the initiatives, but assumes that the proponents of the projects judged them to be innovative and aims to understand the role of teachers in implementing the described projects.

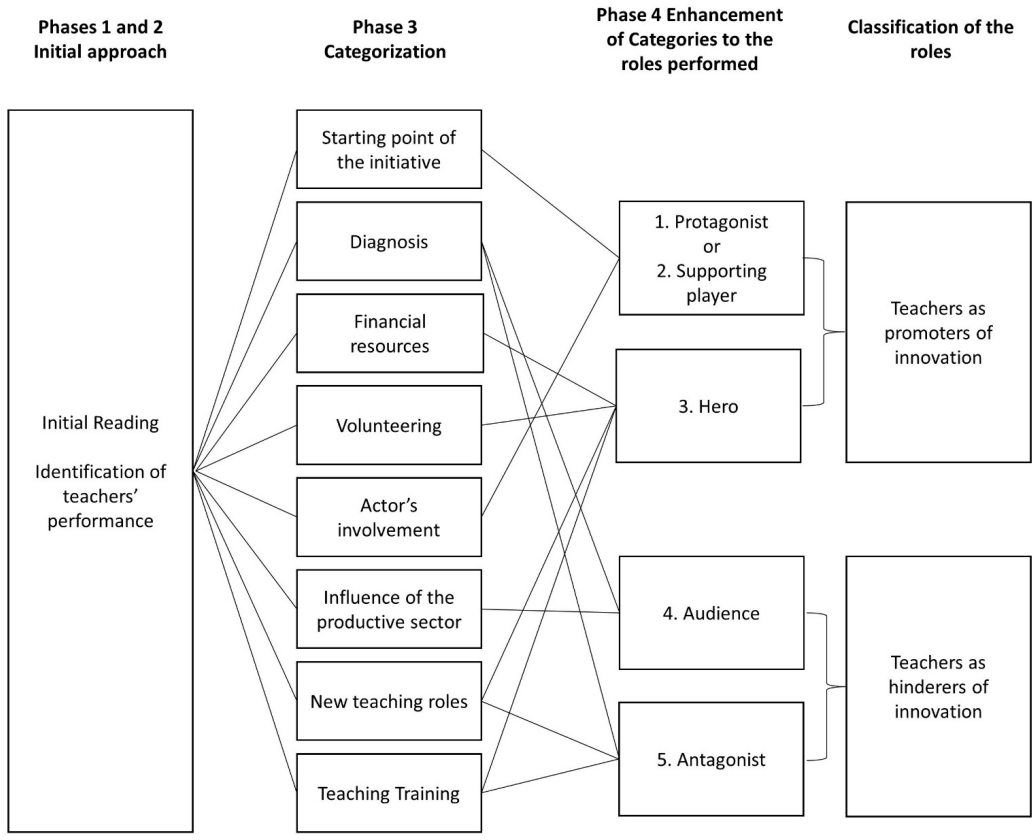
The reports came from the submission forms filled by the institutions in order to be considered for the prize. Therefore, they all have a standard format, comprised of title of the project, summary, diagnosis, objectives, description of the innovative experience, methodology, involvement of players and results. The documental material totaled 274 pages.

This content was considered pertinent to the research because it compiled qualitative materials about the creation and implementation of 23 projects that were evaluated and recognized by a selected committee of experts. Also, four semi-structured interviews were conducted with the people responsible for the top three initiatives, as well as the organizer of the prize, totaling 181 minutes of audio and 67 pages of transcripts.

The research was approved by the Research Ethics Committee of the Faculty of Education of the University of São Paulo (132/2020). The reports were provided for use in this research by formal authorization from the association that promoted the prize, the intellectual property owner. All information that could identify educational institutions and persons has been omitted. Direct citations from the project reports have been identified with the letter P (for project), and direct citations from the interviews have been identified with the letter I (for interviewee), both followed by the corresponding number.

The process of data analysis demanded the combination of the content analysis technique (Bardin, 2011) and the use of the software ATLAS.ti. The work was conducted in four phases, as illustrated in Figure 1.

Figure 1
Phases of the analysis process



Source: prepared by the author

Phase 1 – Initial Reading: The reports were read and excerpts related to the research objectives were identified.

Phase 2 – Identification of teachers' performance: Further reading was done to locate and highlight sections that mentioned teachers and the actions performed by them.

Phase 3 – Categorization: The highlighted sections were categorized according to their meanings, serving as the foundation for a preliminary solution for the motivating research question. This phase resulted in the organization of the material into eight preliminary categories to which the excerpts referring to the teachers' performance converged.

Phase 4 – Enhancement of Categories: Finally, the emerging meanings were organized and reorganized several times, in order to meet the research's objective through a comprehensible narrative. The interpretative work carried out – based on the preliminary categories – allowed the emergence of the five roles played by the teachers and their classification as promoters or hinderers of educational innovation.

This research identified that teachers performed five different possible roles in the innovative projects: protagonist, supporting player, hero, antagonist, and audience. It also identified that factors mapped in the literature were present in the reports, but these previous studies were not capable of accommodating all the complexity of the issue, leaving room for new theoretical contributions.

Results and discussion

Although projects from the Southeast region predominated, there were representatives from all regions of Brazil, including University Centers (10), Universities (6), and Colleges (7). Regarding the proponents, 10 were based on the initiative of an individual or a small group, nine were institutional initiatives, and in four cases, it was not possible to determine. During the conception and design phase of the initiatives, the existence of representativeness of diverse actors (such as students, teachers, staff, and managers) was verified in only three cases; in 14 cases, there was no diversity among the actors involved; and in six, it was not possible to determine. The innovations proposed were of an academic and incremental nature. Changes in teaching and learning were the kinds of projects most frequently proposed.

Moran (2014) warns that education is like a kaleidoscope in which, according to the identity of the viewer and the perspective through which they look, different realities can be perceived. The involvement of teachers in innovative projects is an example of this metaphor: they can be seen both as agents of change and the main source of resistance to it. The data shows that teachers have acted by both promoting and hindering innovation, as well as remaining at the sidelines. As promoters, they have played leading roles, being active in the creation and implementation of innovative projects; in supporting roles, collaborating with protagonists; and as heroes in

overcoming adverse conditions to promote innovation. When hindering innovation, they have been antagonists when, in some way, their actions became obstacles in the implementation of innovative projects. Finally, they have been the audience, performing the passive role of spectators of the innovation being implemented by others.

As promoters of innovation, teachers proposed most of the analyzed projects, whether through specific initiatives by individuals and groups, or through the exercise of management positions, as well as by being members of centers, committees, organizations, leaderships etc. This complies with Gilbert's thesis (2021, p. 4) that "'teachers' dispositions and actions were central to the implementation of pedagogical innovation."

The roles played here are of protagonist or supporting player. The protagonists conceived, executed, and recruited supporters. In Project 2, teacher participation expanded, since "when the project started, only three teachers participated. Slowly, the others began to understand the importance of the activity and agreed to participate" (P2). In other projects, however, it was possible to observe the personal importance of only one teacher, such as in Project 3, which "was developed by the teacher [name], an administrator from the institution and business course professor" (P3), or in Project 5: its report states that "teacher [name] was responsible for the idea of the whole project."

As supporting players, teachers implemented or supported the implementation of projects in several ways, performing different tasks, including: planning, promoting, developing relationships, executing (classes, lectures, follow-ups, consultations, supervision, mentorships, evaluations, operational procedures), and assessing results.

The promotion of innovation, however, did not occur without obstacles, and before teachers were sometimes seen as heroes for taking on complex responsibilities, other than those expected from them, often without having enough pedagogical education, whether basic or advanced. Many were engaged in innovative projects voluntarily, without any financial compensation and even using personal resources, as in Project 18, in which "teachers and students would arrive earlier and leave later, all motivated by the challenge at hand" (P18).

Even though it was specifically asked in the submission form, only seven projects declared having some kind of financial resource; the others did not mention the subject or made it clear that their initiatives did not have specific financial backing. In certain sections there were statements that suggested that the implementation processes depended on people's goodwill, especially of teachers, in regard to longer hours and cost reductions. Interviewee 2 reports that the cost of one system is covered by him personally:

> The system is attached to an overseas database that is paid for by me monthly. […] We have to renew licenses for websites, every month we have to pay to keep data there, so that's why we tend to have difficulties expanding […] we have that limitation. (E2)

Lambriex-Schmitz et al. (2020) warn about the positive correlation between resources provided by administrations and the occurrence of innovative behavior. Beyond ideas, innovation requires investments in prototypes, talent training, equipment acquisition, hours of dedication, etc. Most of the innovation projects submitted for the award do not have such resources.

Facing all these difficulties puts teachers in the role of heroes, the personal characteristics discussed in the literature as promoters of innovative behavior – such as persistence, motivation, openness and a certain devotion to the profession (Lunde & Wilhite, 1996; Messmann & Mulder, 2011; Wong, 2018) – were the most crucial, even when other competencies were lacking (Zhu et al., 2013; Thurlings et al., 2015; Zainal & Matore, 2019), and there wasn't enough support, whether institutional, from the leadership, from colleagues or students (Thurlings et al., 2015; Zainal & Matore, 2019; Lambriex-Schmitz et al., 2020; Gilbert et al., 2021). Also, it should be noted that teachers who have played protagonist or hero roles have shown resilience as well: they faced difficulties for at least two years, since that was the minimal duration for a project to be considered for the award.

Whether as protagonists, supporting players or heroes, teachers' performance was coherent with the logic of innovation proposed by Ghanem (2018), that separates it from reform (imposed on a large scale) and from change (systemic alteration). According to the author, innovative initiatives often originate at the bottom of educational systems and are specific, experimental, and voluntary. Because they demand a great deal of effort from local agents, they tend not to be sustainable nor scalable. Therefore, even if there is a group of teachers willing to engage in the promotion of innovation, it comes, most of the time, with considerable personal cost that makes continuity and consolidation impossible, in the sense of systemic and lasting changes to educational processes.

In other projects, teachers were perceived as hinderers of innovation. According to Interviewee 3, "Teachers like to talk, but not to listen," which makes them less inclined to get involved in projects that promote active student participation, as it is frequently expected in innovative arrangements. Therefore, it can be observed that teachers have also acted as antagonists, with characteristics that have negatively influenced the results of innovative projects. Two of these characteristics have already been mapped in the literature: lack of motivation to play roles not associated with education by transfer of knowledge, and lack of skills (Wong, 2018) and/or education to develop them. A third point, not mentioned in previous studies, is also noted in the analyzed data: lack of availability due to overwork, a prevalent characteristic in the Brazilian context (Lima et al., 2020).

In reports and interviews, there was mention of difficulties in project execution related to teachers. This perception is justified by the affirmation that some teachers resist proposing or taking part in innovative initiatives because they do not wish or do not feel capable of performing other functions beyond their usual ones. In three projects where teacher's resistance was explicitly verbalized, the initiatives were conceived by superior levels of authority, without the participation of teachers, who should implement them. Although the data was not sufficient to support a

conclusion on this matter, literature supports this argument, Ghanem and Torquato (2018), for example, point out that resistance may occur when there is dissonance between the ideas about education of those who promote educational reforms and the ideas of teachers.

A difficulty to work as a team and to establish more horizontal relationships with students was also mentioned. Interviewee 1 stated that teachers "need to review their own social and relational competencies, their own consciousness, and decide how to foster relationships with others, and […] they need to improve their listening" (E1). In Project 20, paradigm shifts were a central issue:

> The question of [teacher] involvement was, without a doubt, the most emblematic part, because it involved breaking long-held paradigms, in which the teacher holds all knowledge and the students, sitting quietly, listen and assimilate the knowledge that is being transmitted to them. (P20)

Within the context of pedagogical experiences centered on transmitting information, the teacher is the protagonist since he or she is responsible for planning, executing what was planned and evaluating the results. This means recognizing knowledge as a product that can be transmitted, assuming the role of transmitting content, establishing and applying rules, disciplining students, verifying the memorization of the content, making decisions about retention and approval processes.

An alternative approach recognizes teachers and students as protagonists of the educational process. Therefore, it understands the construction of knowledge as a process, although the teacher is responsible for planning educational activities, their execution is an open work that can be adjusted to improve learning. The creation of pedagogical experiences that contribute to the promotion of learning is encouraged, guiding the choice of methodology, strategies, techniques, and tools to face challenges created by learning goals and by student profiles; diversifying support materials; adopting dynamics that strengthen collaborative relationships; evaluating the process in order to foster better teaching and learning; and encouraging self-regulation by students (Lima et al., 2020).

About this, interviewee 3 suggests that there is a lack of self-perception by some teachers, who don't know yet about the steps involved in developing the necessary skills to perform these functions. According to him:

> Teachers don't know what they can't do, so it's difficult to deal with these situations where one doesn't know what they don't know, because it's a blind spot. And when they start to explore these blind spots and realize the amount of work involved, and everything they will have to do […] they withdraw from the process, because they have other, more conventional opportunities, for which their current skills are more than enough. (E3)

As suggested by the interviewee, in order to accept much more complex and distinctive responsibilities, teachers would need to have time to dedicate themselves to pedagogical education activities, since the competencies acquired in this type of education have proven to be promoters of innovative behavior (Zhu et al., 2013; Thurlings et al., 2015; Zainal & Matore, 2019). Time, however, is in short

supply for most teachers, since they are encouraged to combine multiple activities – teaching and learning, research and publishing, and management (Nóvoa, 2019; Lima et al., 2020).

It is also possible to identify references to professional development in the material studied. About basic professional education, two projects and two interviewees emphasized its insufficiency to prepare teachers for the job, especially in issues related to pedagogy. Extension courses are cited in nine projects, but they are mainly instrumental in scope. Only in two projects there are indications of reflexive elements related to professional development, despite the fact that Messmann and Mulder (2015) have warned about the importance of reflection in the adoption of innovative behavior by teachers.

In accordance with the literature, when there is no support from the institution, from colleagues and students (Thurlings et al., 2015; Zainal & Matore, 2019; Lambriex-Schmitz et al., 2020; Gilbert et al., 2021), when teachers don't have the motivation to implement innovative projects, and don't receive the education they need to develop skills and competencies (Wong, 2018), they remain on the sidelines of the innovation process, as audience members.

The fact that most projects were proposed by a teacher or a small group of them doesn't mean that there has been, necessarily, collective participation in the respective implementation process. In general, institutions based their initiatives in the perception of their creators, which were not shared with other players or confirmed by any structured diagnostic process. Only two institutions claim to have consulted teachers, while others chose to collect information from other sources, such as businesspeople and students.

Emphasis must be given to the close relationship with representatives from the market, which transversely permeates most projects, proving that these representatives were, in the studied projects, the main stakeholders, often more valued than teachers or government officials. The following excerpt indicates the status given to market representatives, called upon, in this case, to contribute with changes in the course curriculum.

> In 2004 and 2005, the [name of institution] promoted a series of meetings with human resources executives from important companies from the region […] with the goal of collecting information about the desired characteristics of students/interns and/or former students/professionals. These meetings revealed a growing dissatisfaction by the companies that hired our students as interns, trainees etc. (P14)

Teachers comprise a large portion of individuals that, to different degrees, may be directly or indirectly affected by innovation projects implemented by educational institutions. Also, as a group, they are indispensable to the educational process, and are in a privileged position to argue about improvement opportunities and the development of the teaching and learning process. Still, while two institutions seemed willing to listen to them, others valued the input of other players. A possible explanation for this is that teachers are characterized as averse to change, settled

in their ways and excessively busy to face the challenges inherent to innovation, as the data shows. About this, there is no correlation in the literature consulted, since those studies prioritized investigating teachers' perceptions over individual performance, and they did not look at the teachers as a whole.

Conclusion

This research aimed to understand the teachers' role in the creation and implementation of innovative projects, and to verify if these roles do or do not corroborate the information contained in the literature about the topic. As for the first objective, teachers can both promote and hinder the occurrence of innovation, as well as be mere observers on the sidelines. As promoters, they can be protagonists, when actively creating and implementing innovative projects, supporting players, when collaborating with the protagonists, and heroes, when overcoming difficulties to promote innovation. As hinderers, they are antagonists, when creating obstacles to the implementation of innovative projects. Finally, they can be audience members, watching the innovation created by others.

Although these roles seem contradictory, a detailed examination has revealed that more than opposing positions in a dispute, teachers are equally exposed to pressured situations that cause stress, to which they react with they own personal and professional resources. The discussion showed the need to establish objective conditions that can sustain the complexity of the teaching profession and support it in the task of responding to the social changes of our time, such as: quality education; balance between the functions performed; adequate salaries and hiring practices; balance between teaching, research, and service; resources and freedom to experiment, etc. Outlining these types of performance has shown that the results of studies based on individual perception lack details that consider the group in the implementation of innovation in the educational field and are critical of the fact that there isn't a conducive environment for teachers to develop competencies and characteristics that promote innovation.

All the factors mapped by literature were reflected in the analyzed reports. However, personal characteristics that positively influence innovative behavior – motivation and resilience, for instance – were capable of compensating for the absence of other factors, such as specific competencies, leadership, institutional or peer support, but demanded extra dedication from teachers, which compromised the sustainability of the projects. It became clear that teachers are important agents of change and that, when motivated, they can promote innovation, even at a high cost. So much so that the consideration of resilience as a promoter of innovative behavior is proposed.

Additionally, the research adds two more factors: Internally, it is clear that the difficulty of teachers to assume a role other than of transmitter of knowledge is a factor that hinders the involvement of teachers in innovative projects. Externally, there is lack of time due to overwork. Finally, this research also points to a gap in literature, emphasizing the need to consider the influence of teachers as a

collective body in the promotion of educational innovation, since other studies tend to prioritize the individual point of view.

Two main limitations of this research need to be pointed out. One is the use of secondary data, that although proven valuable for the established objective, could be complemented, in future studies, by primary data. The second one is the restriction of the investigation to a single higher education program.

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Resumo

Esta pesquisa qualitativa ex-post-facto objetiva compreender o papel de docentes em projetos inovadores na educação superior brasileira, aplicando a técnica da análise de conteúdo a 23 relatos e quatro entrevistas semiestruturadas. Os resultados indicam que docentes desempenharam cinco papéis: protagonista, coadjuvante, herói, antagonista e público. Características pessoais como motivação e resiliência são capazes de compensar a ausência de outros fatores e influenciar positivamente o comportamento inovador. A dificuldade para desempenhar um papel diferente de transmissor de conhecimento e a falta de tempo devido ao excesso de trabalho dificultam o envolvimento em projetos inovadores.

Palavras-chave: Educação Superior. Inovação Educacional. Papel do Docente.

Resumen

Esta investigación cualitativa ex-post-facto objetiva comprender el papel de los profesores en proyectos innovadores en la educación superior brasileña, aplicando la técnica de análisis de contenido a 23 informes y cuatro entrevistas semiestructuradas. Resultados indican que docentes desempeñaron cinco roles: protagonista, actor secundario, héroe, antagonista y audiencia. Características personales como motivación y resiliencia son capaces de compensar la ausencia de otros factores e influir positivamente en el comportamiento innovador. La dificultad para desempeñar un papel diferente al de transmisor de conocimiento y lo exceso de trabajo dificulta la implicación en proyectos innovadores.

Palabras clave: Educación Superior. Innovación Educativa. Papel del Maestro.

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