EXPLORING PROFESSIONAL IDENTITIES: A NARRATIVE ANALYSIS OF THE TEACHING ROLE THROUGH 'POSSIBLE SELVES' AND ARTIFICIAL INTELLIGENCE

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Double Blind Peer Review

Citation
Sarracino, F., & Ariemma, L. (2025). Exploring professional identities: A narrative analysis of the teaching role through 'possible selves' and artificial intelligence. *Italian Journal of Health Education, Sport and Inclusive Didactics*, *9*(2).
https://doi.org/10.32043/gsd.v9i2.1459

Doi: https://doi.org/10.32043/gsd.v9i2.1459

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renpress.it/index.php/gsdj
ISSN: 3103-5744

ABSTRACT
The article explores the process of defining teachers' professional identity through the theory of 'possible selves'. The research involved trainee teachers who were asked to define teacher profiles. These profiles were then used to generate narratives with the help of artificial intelligence. In this way, the students were able to 'see themselves' and redefine their own teacher identity by examining expectations, stereotypes, and potential challenges.

KEYWORDS
Possible selves; storytelling; teachers' training.

Received 2025-04-30
Accepted 2025-06-17
Published 2025-06-20

Introduction

Teacher professional identity can be defined as “how teachers define themselves to themselves and to others” (Lasky, 2005, p. 901): it is influenced by context, formed through relationships, is changeable, and encompasses beliefs and attitudes, life history, and personal and social narratives. Teacher identity is, therefore, situational and changes depending on the contexts in which they operate (Beijaard et al., 2004).

Considering the idea of continuous and permanent growth and evolution, teachers' professional identity is understood as a process in which they constantly re-evaluate their experiences. The analysis of the formation of a new teacher identity can be seen as a fundamental step in designing more effective teacher training programs; furthermore, the development of a teacher's identity is closely linked to the understanding of the concept of "self" (Beauchamp & Thomas, 2009).

This identity is also nurtured by a future-oriented reflection, a "reflection for action" (Urzua & Vasquez, 2008) that allows new teachers to consider their past experiences “with a view toward the future: to imagine the kind of teacher they want to become, and to use their formative years as a means to project a designated sense of self as a teacher” (p. 1944). These authors suggest that future-oriented discourse reflects the teacher identity towards which students are directing themselves and, as such, provides further information on the development process of a teacher's professional identity.

“Possible selves” theory (Markus & Nurius, 1986) offers a robust psychological framework particularly well-suited for studying identity development in new teachers. It represents a way to interpret professional identity, teacher agency, and their reactions to the pressures of educational reforms. The dimensions and categories within future-oriented and personally significant self-conceptions can influence the transition from the present to the future. The construction of identity for teachers implies an understanding of the self-concept, a crucial element for their professional growth (Beauchamp & Thomas, 2009). Furthermore, Hamacheck (1999) argues that self-knowledge is a key element for successful teaching practice, and Hamman et al. (2010) contend that “Possible selves” theory can be used to foster the development of teachers' professional identity as it provides a conceptual structure for analysing future-oriented thinking that is relevant to identity and focused on goals in the present, as well as the importance of this thinking in regulating behaviour to achieve a future state.

The theory of "possible selves" illustrates the importance and dynamics of self-concepts projected towards the future and relevant to the individual, as well as how these self-representations influence the motivation for action, both in the present and in the future. These self-concepts refer to “how individuals think about their potential and about their future” (Markus & Nurius, 1986, p. 954), and can reflect an individual's expectations, including hopes, aspirations, fears, and dangers that they anticipate in a near or distant time frame. The construction of various "possible selves" can include an unlimited and diverse range of projections of the future self, but it is essential to emphasize that this construction is closely connected to the representations of the current self. In other words, "future selves" arise from desires, hopes, reservations, and fears that have particular significance for the individual, but these aspirations and fears are in turn influenced by the specific social, cultural, and environmental experiences (present and past) of the individual. Since it is believed that "possible selves" are formed within the boundaries of a person's social context, it is likely that self-projections derive from what is considered valuable, or perceived as such, in the individual's specific social experiences.

It follows that the teacher's professional profile, intrinsically imperfect, presents itself as particularly suitable to be studied through this approach: in particular, the theory of "possible selves" seems particularly suitable for analyzing the development of the professional identity of novice teachers: student teachers in training, student teachers engaged in their final internship period, and newly graduated teachers during their first year of service. These "future teachers," in fact, are in different stages of the important journey from student to teacher; consequently, the theory of "possible selves" offers a theoretical model for examining future-oriented thinking, relevant to identity and aimed at achieving goals in the present, as well as the importance of this thinking in guiding behavior towards a desired future condition.

Incorporating the adjective ‘possible’ into the concept of self offers a useful perspective for analysing visions of self that include an orientation towards the future. Viewing teacher identity through the prism of possible selves has advantages, especially when addressing issues of personal development and the context surrounding professional development. The added value of this perspective lies in the fact that projecting the self in terms of possible futures also implies a goal that one anticipates and can achieve. In contrast to the current identity, the concept of the possible self provides an additional self-assessment mechanism,

capable of highlighting any discrepancies between the present self and the desired future self. Examining teachers' visions of themselves as possible selves thus provides information on both current and future identity. Knowing how people perceive themselves at the moment is certainly useful, but understanding their hopes and fears contributes to refining this understanding, as possible selves are not simply schemas applied to past experience; on the contrary, they are tools used in the ongoing construction of experience itself.

The aim of the research is to measure possible selves in terms of what future teachers expect to become and fear becoming in the near future. To achieve this goal, the following research question was formulated: what are the possible selves of pre-service teachers in relation to their representation of the teacher figure? To answer this question, future teachers were asked to define a teacher profile by choosing characters from popular culture and to narrate themselves in the guise of these characters in hypothetical school situations in order to elicit expectations and fears regarding their own future as teachers in the classroom.

1. “Possible-Selves” Theory

The theory of possible selves (Markus & Nurius, 1986) suggests that individuals have ideas and images of what they might become, what they hope to become, and what they fear becoming. These "possible selves" are cognitive representations of an individual's hopes, fears, goals, and potential threats and thus provide a conceptual link between cognition and motivation. Possible selves, therefore, give specific and relevant form, meaning, organization, and direction to the personal and professional self. Possible selves are important, first, because they function as incentives for future behavior (i.e., they are selves to be approached or avoided) and, second, because they provide an evaluative and interpretive context for the current view of self.

“Possible selves derive from representations of the self in the past and they include representations of the self in the future. They are different and separable from the current or now selves, yet are intimately connected to them. Possible future selves, for example, are not just any set of imagined roles or states of being. Instead they represent specific, individually significant hopes, fears, and fantasies. I am now a psychologist, but I could be a restaurant owner, a marathon runner, a journalist, or the parent of a handicapped child. These possible selves are individualized or

personalized, but they are also distinctly social. Many of these possible selves are the direct result of previous social comparisons in which the individual's own thoughts, feelings, characteristics, and behaviors have been contrasted to those of salient others. What others are now, I could become" (Markus, H., & Nurius, P., 1986, p. 954).

Possible selves are distinctly future-oriented, focusing on the individual's thoughts about their potential and the selves they might become. The domain of possible selves concerns how people conceive of their own potential and their future. Possible selves represent the ideal selves that we ardently desire to become. They are also the selves we could realistically become, as well as the selves we fear becoming. This form of self-knowledge refers to how individuals imagine their own abilities and their future development. Possible selves include both the perfect selves to which we aspire and the selves we have the possibility of achieving, but also those that frighten us.

The inclusion of the perception of what is possible within the self-concept makes it dynamic. Some possible selves stand as symbols of hope, while others represent reminders of bleak, sad, or tragic futures that are to be avoided. However, all these ideas about what is possible for us to be, think, feel, or experience provide a direction and stimulus for action, change, and development. Possible selves give specific cognitive form to our desires for mastery, power, or affiliation, and to our diffuse fears of failure and incompetence. The integration of the awareness of potential within the self-image makes the latter dynamic. Some possible selves are configured as emblems of aspiration, while others evoke negative, painful, or dramatic future perspectives, from which one wants to move away. In any case, these representations of what we can become, think, feel, or experience offer a guide and a drive for action, change, and personal growth. Possible selves concretize at a cognitive level our aspirations for competence, authority, or belonging, as well as our vague fears of inadequacy and failure (Markus, H., & Nurius, P., 1986, p. 960).

Possible selves, therefore, actively influence motivation. They function as incentives for future behaviour, pushing individuals to work towards desired selves and to avoid undesired selves. The theory acknowledges that the self-concept is not static. Possible selves play a role in the dynamic properties of the self-concept, influencing self-evaluation and changes in behaviour both in the short and long term. Some possible selves are configured as symbols of hope and aspiration, while others evoke negative, painful, or tragic future scenarios, from which one wants to

distance oneself. However, all these representations of what we can become, think, feel, or experience, provide a direction and a stimulus for action, change, and personal growth. In this sense, "possible selves" are the driving force behind our actions: the integration of the perception of what is achievable within the self-image gives dynamism to the latter. Some possible selves are presented as emblems of hope and desire, while others act as a warning against negative, unhappy, or dramatic futures, which one tries to avoid. In any case, these ideas about what we can be, think, feel, or experience offer a guide and a push for action, change, and personal development. Possible selves translate into cognitive terms our aspirations for mastery, authority, or affiliation, and our vague fears of inadequacy and failure. The development of possible selves is shaped by various factors, including social comparisons, sociocultural contexts, and the models and images available to the individual. Each person can conceive of a wide range of possible selves, but the set of these selves is influenced by the categories that emerge in their particular sociocultural and historical environment, as well as by the models, images, and symbols proposed by the media and by direct social interactions. Consequently, possible selves can highlight the inventive and constructive capacity of the self, but also highlight the degree to which the self is conditioned and constrained by society. “There are a number of selves embodied in an individual related to past, present, and future. One constructs one’s own development through selecting or refusing possible selves” (Erdem, 2020).

2. Teacher Professional Identity and the Theory of "Possible Selves”

The theory of possible selves (Markus & Nurius, 1986) refers to the representations that individuals have of what they might become in the future, crucial elements for defining their goals and for motivation. It is recognized as a useful theoretical construct, adopted by some teacher educators to actively involve pre-service teachers in the construction of their professional identity (Hamman et al., 2010; Hamman et al., 2013; Erdem, 2020; Tabak et al., 2021; Jiménez Raya, 2021). The theory of possible selves explains how thought projected into the future can provide relevant information for identity and the drive to pursue personally important goals.

In the context of constructing the identity of pre-service teachers, the theory of possible selves proves particularly suitable for supporting the structuring of future-

oriented thinking and the study of its contribution to the development of teacher identity. Furthermore, this construct allows for the analysis of the influence of context, self-regulation processes, and the motivations that guide the thoughts and teaching behaviors of pre-service teachers in achieving significant goals for their professional identity. This challenge implies supporting pre-service teachers in the construction of their professional identity, offering them the opportunity to actively participate in this process. However, the simple definition of a possible self does not guarantee the production of the constant effort and behavioral change necessary. For this to happen, possible selves must be linked to specific strategies (Jiménez Raya, 2021). Our future may lie in our "shared willingness to experiment with possible selves and worlds, and to redesign ourselves and our worlds" (Markus, 2006). Like identity, possible selves, understood as mental representations of the self in a future time, are not permanent entities. Consequently, our possible selves can undergo changes rather easily as the individual acquires new knowledge and experiences. The application of the theory of possible selves to teacher identity offers the possibility of investigating the relationship between identity, agency, and emotion. The theory of possible selves possesses discursive characteristics, as new teachers inevitably express their hopes, expectations, and fears. Pre-service teachers often struggle to imagine themselves in the role of teachers; it can therefore be argued that they encounter difficulties, if not outright resistance, in the development of their professional identity, for a number of reasons. One reason for this resistance is the belief that they already know what it means to be a good teacher and how they will behave when they start teaching. Another reason is the reassurance that comes from the awareness that, once they start teaching, they can rely on a textbook to follow and reproduce the teaching methods they experienced firsthand as students. A further reason can be attributed to the tenacious persistence of beliefs rooted in previous learning experiences. Finally, an important reason is related to the uncertainty that new methodological proposals arouse in them (Jiménez Raya, 2021). Davies (2000) defines agency in terms of authority, as "the perception of oneself as someone able to overcome the meaning attributed to a particular discourse and to forge something new, through the combination of previously unrelated discourses... through the imagination not of what is, but of what might be" (p. 67). This implies that teacher training can and must transform into a space for imagining and bringing about change. Therefore, teaching is considered a space of possibility in which "bridges" are created between the current reality and the desired ideal

situation. The theory of possible selves provides a valuable framework for understanding the development of teacher identity, and narrative practices offer powerful tools to facilitate this process. By incorporating narrative methodologies into teacher training, we can enable teachers to explore their potential, build meaningful professional identities, and thrive in their challenging and rewarding profession.

3. Methodology: Narration as a Device for Teacher Professionalization

Narrating means "telling a story." In the narrative process, a selection, a reorganization, an elimination, and a revision of elements are constantly carried out, until both the story and the lived or imagined experience acquire a defined form. The act of narrating represents a fundamental cognitive operation common to all individuals (Jedlowski, 2000) and implies the possibility of establishing connections and relationships. Narrative thought can be considered a highly specialized cognitive modality through which experience is organized and interaction with the social world is constructed.

In this study, narration plays a dual role: it is both a tool and a methodology. As a tool, I suggest that the act of sharing one's story can allow participants to embark on a path of "self-understanding" or identification, thus revealing aspects of their sense of self or their identity. In line with what Benwell & Stokoe (2006) stated, "it is through the act of narrating that we construct identities: selves acquire coherence and meaning thanks to the narrative or 'biographical' work that is carried out" (p. 42). Narration is also the methodology employed in this research, as I recognize the singular potential of narrative data in exploring identity and in offering insights into the participants' perceptions of their own professionalism. Narration plays a key role for the individual as a "tool" that facilitates the process of identification. Denzin & Salvo (2023) argue that self-narratives constitute a kind of map that allows the individual to orient themselves from a starting point to an arrival point: the activation of prospective reflection during the construction of the narrated story supports the individual in exploring their "possible selves" by retracing their existence; that is, to interpret their life through different perspectives, to imagine alternative scenarios, and to actively shape their own history (Connelly & Clandinin, 2006).

Identity, both personal and professional, is not a static entity, but rather a dynamic process that is constructed through discourse and narration. Authors such as Benwell and Stokoe (2006) highlight that identity is formed in language and communication, both oral and written, and does not pre-exist them, shifting the focus from an essentialist to a performative conception: the act of expressing oneself and telling one's story is fundamental to defining who we are. In this perspective, narratives are the device through which individuals give sense and meaning to their self, define their aspirations, and build their future: identity is "performed" and actively constructed through discourse and narratives. In this perspective, identity is understood as a social and fluid construction, which is modulated according to the context and the audience, and which can be multiple. Narratives, therefore, are not only tools for storytelling, but real performative acts that shape identity. Through stories, individuals and groups give sense and meaning to their actions and define themselves; they tell what they are or what they wish to be, and as they tell, they transform and become their stories (Bruner, 1986). We become the stories we tell. “Telling stories configures the 'self-I-might-be'" (Riesmann, 2008). Adopting a performative view of identity, as constructed within narrative discourse, we should consider these stories first and foremost as socially constructed, therefore nuanced depending on the audience, and, secondly, multiple, as each of us could construct our own identities differently for different audiences and purposes. Stories and identities have authors and recipients, are shaped collectively even if told individually, and can change depending on the perceptions and needs of the authors and recipients.

It therefore seems evident how the narrative device can support the development of professional identity, particularly in training contexts such as teacher education. Narration in its various forms (autobiographical, cinematographic, photographic, storytelling, etc.) becomes a possibility for recognizing and appreciating one's personal biography and constitutes an innovative approach in social empowerment pathways as well as in training processes oriented towards professionalization.

4. Activities, Findings and Discussion

The research was conducted with students from the Introduction to Digital Humanities course offered by the Digital Humanities degree program (Literary Studies curriculum) at the Suor Orsola Benincasa University of Naples. The sample

consisted of 35 students (only 3 of whom were male), aged between 23 and 25. The process went through various stages of implementation:

Phase 1: Defining characters of “impossible” teaches
Phase 2: Writing the story with AI and collecting students’ feedback
Phase 3: Rewriting the narrative and re-defining our possible selves

4.1 Phase 1. Defining characters of "impossible" teachers

The students were given the following assignment:

Outline a teacher profile by referring to a fictional character from a novel, a short story, a fable, a comic book, a film (including animation), a series (including animation). The character must not be a teacher in the fiction (for example, you cannot choose Professor Keating from "Dead Poets Society" or Koro-Sensei from "Assassination Classroom").

Steps to follow:

a. definition of the character;

b. profile of the character as a teacher (select a quote that defines the character in their role as a teacher);

c. strengths of the character (in their role as a teacher);

d. weaknesses (in their role as a teacher);

e. alignment (or divergence) of the profile with their own way of seeing themselves as teachers in the future.

Suggestions. To define the profile, think about how your character acts when planning, when implementing the intervention, and when evaluating the outcomes of the intervention. Furthermore, you can refer to the following framework of competencies to explore their profile by asking yourself if and how the character acts according to these competencies:

- communicating, in the broadest sense of knowing how to relate, with all its pragmatic implications (therefore, also, leadership and group management skills);
- reading, in a broad sense (analyzing, inferring, decoding, interpreting correctly, etc.);
- selecting (observing, perceiving, delimiting the field of investigation, choosing relevant data, etc.);

- generalizing (synthesizing, abstracting, moving from information to concept, and so on);
- structuring (relating, comparing, falsifying hypotheses, structuring a model consistent with the selected data and aware of the social use of knowledge, representing in space and time, developing products, etc.);
- designing (organizing a path starting from the available resources);
- evaluating (being able to assign the correct 'weight' to each element: therefore, not only knowing how to give a judgment);
- documenting (in the broadest sense of producing documents, collecting information, describing it, even in an original way);
- reflecting (on one's own experience) and evolving (being aware of one's own "imperfection" and being open to change).

The students thus produced their imaginary teacher profiles by choosing characters from the narrative imagination that was most familiar and congenial to them. The decision to guide the selection of alternative possible selves based on popular culture characters known and congenial to them was specifically made to give them the opportunity to identify with figures whose various characteristics, both in personal and professional dimensions, they could clearly envision.

The choice of characters made by students was very varied: from Hermione Granger, a character from the Harry Potter saga, to Rocky Balboa, the protagonist of the film series of the same name, from Homer's Ulysses to Mion Sonozaki, a character from the anime and visual novel series "Higurashi no Naku Koro ni," from Kratos, a warrior from the video game saga titled "God of War," to Sam Porter Bridges, the protagonist of the video game "Death Stranding," from Lisa Simpson to Puss in Boots, and so on.

For each character, as per the assignment, the students defined their characteristics in the role of a teacher, applying some aspects of their narrative profile in a didactic key. Sometimes the choices appeared "forced" (as in the case of Ace Ventura, defined as a "disorganized and tardy teacher but who excels at finding 'other' solutions, also making use of improvisation, thus showing strong problem-solving skills"), but each character was consistent in their definition as a teacher. The profiles were not necessarily positive: another example is the choice of the quote selected to identify the teacher-character Sheldon Cooper (protagonist of the television series "The Big Bang Theory"), "I always listen to myself when I talk, it's one of the pleasures of my life...", representing a self-

referential and self-centered teacher profile, not very open to listening and dialogue with their students.
In relation to possible future selves (point e. of the assignment), all the students projected into the definition of their characters, on the one hand, the representations they have of teachers, and on the other hand, both the professionals they wish to be (expectations) and those they do not wish to be (concerns). The students' perceptions of their possible future selves are influenced by their past school experiences, the social context in which they live, and the individual and shared values that influence their current identities and motivations.

4.2. Phase 2. Writing the story with AI and collecting students' feedback

The characters, as defined by the course participants, were fed to artificial intelligence, which was given the following prompt:
Write a story featuring teacher XX, the protagonist of the attached file. The story must be set in a class of a hypothetical Italian high school. The story must present a teaching situation that reveals the professional habitus of the teacher in managing a complex class, in which there are boys and girls with different needs, some more special than others. Once the narration of the first event is finished, continue the story by imagining that in the following days other teaching situations arise to which the teacher will have to try to respond.
For each character, two narratives were "written": the first using Chat GPT-4.o by OpenAI, the second by submitting the prompt to Gemini by Google. Both Generative Artificial Intelligence models responded to the assignment by producing stories that were sometimes very different from each other.
The narratives were examined by the students, who were asked to verify if and how much the AI had been able to respond to the assignment while remaining faithful to the definition of the characters.
From the analysis of student feedback on the narratives, it emerged that on average, while responding to the assignment, the stories created by the AI were perceived by the students as excessively simple, linear, and not very responsive to the complexity of the class they had imagined by reading the prompt.
For both narratives produced for each character, the fundamental traits and skills that the students had assigned to them emerged, but the narrative approach was too simplistic and unstimulating.

4.3 Phase 3. Rewriting the narrative and re-defining our possible selves

The students were asked to imagine themselves in the narrative situations imagined in the stories written by the AIs and to rewrite the narratives imagining themselves as teachers. What strategies will be adopted? How will they be consistent with or diverge from those imagined by the AI for their characters?
Through this step, the students were asked to imagine themselves as future teachers in action and to explicitly state, in this way, their expectations, their stereotypes, their models, their fears, their sense of inadequacy, etc.
The need to re-narrate the teaching situations imagined by the AIs with their own character as the protagonist, placing themselves, their possible selves, at the center of the narratives, fostered a process of definition and explication of their own identity. Seeing themselves firsthand in the narratives previously populated by the characters they had chosen highlighted the points of contact and those of distance, and fostered the development of a more mature and conscious profile.
In most of the narratives, in fact, the students completely reformulated the profiles of the teacher protagonists in the stories: they redefined the actions, reflected more deeply on what their own actions could have been and the complexity of the situations they might have found themselves in.
In doing so, they became aware that the definition of their own identity is not a process independent of the contexts of action, but that their personal and professional profile, their being teachers, is defined in situation. Their own "teacher self," therefore, manifests itself in the specific teaching situation (Durand & Poizat, 2017) depending on how they relate to what is happening and what they are observing.

4.4. Discussion

The analysis of students' projections about their possible future selves revealed a complex interaction between expectations, fears, and influences derived from past experiences, social context, and personal values. Students defined their future teacher personas by drawing on both the representations of teachers they encountered in their own experience as students and the models of professionals they aspire to become, on the one hand, and those they wish to avoid, on the other. This perception of the future is deeply rooted in their past school experiences, in

the social context in which they are immersed, and in the individual and collective values that shape their current identity and motivations.

A significant aspect that emerged was the feedback from students regarding the narratives generated by artificial intelligence (AI). The AI-generated stories were perceived as overly simple, linear, and inadequate to capture the complexity of the learning situations that students had imagined. Although the AI narratives were able to capture the fundamental traits and skills attributed to the characters by the students, they lacked, in the students' evaluation, a stimulating narrative approach, resulting in them being superficial and sometimes inadequate to represent “real” situations.

In this phase of the task, the request to students to imagine themselves as future teachers in action acted as a powerful catalyst for the explication of their expectations, stereotypes, role models, fears and feelings of inadequacy. The subsequent need to re-narrate the teaching situations imagined by the AI, placing themselves and their possible selves at the center of the narration, favoured a deep process of definition and explication of their own identity. Recognizing themselves in the first person in the stories allowed students to identify points of contact and distance, contributing to the development of a more mature and aware professional profile.

This process led most of the students to completely reformulate the profiles of the teachers who were the protagonists of the stories, redefining their actions and reflecting more deeply on the complexity of the situations in which they could have found themselves. In this way, they became aware that the definition of their identity is not a process independent of the contexts of action. On the contrary, their personal and professional profile, their "being teachers", is outlined and manifested specifically in the teaching situation, based on how they relate to what happens and what they observe. This underlines how professional identity is dynamic and closely linked to practical experience and reflection on actions in specific contexts.

4.5. Limitations and potential bias

The research path, from a methodological point of view, presents some critical issues. The choice of using artificial intelligence to generate the narratives, although innovative, produced stories perceived by students as "excessively simple, linear and not very responsive to the complexity of the class they had imagined": although

the AI maintained the fundamental traits and skills assigned to the characters, the narrative approach was judged "too simplistic and not stimulating". This consideration by students indicates a bias in the AI output towards simplification and lack of nuance, which may not capture the complexity of real teaching dynamics or the emotional and relational challenges that a teacher must face. If the AI tends to generate idealized or conflict-free scenarios, the interpretation of such scenarios could lead to a superficial or distorted understanding of the "potential challenges" that a future teacher may encounter.

Furthermore, the fact that "the core traits and skills that students had assigned" to the characters emerged in the AI narratives, but the narrative approach was "too simplistic and uninspiring," suggests that the AI may not be able to adequately process or represent the more subtle, nuanced and complex aspects of professional identity, such as emotion, deep motivation, or interpersonal nuances. The interpretation of such content may therefore lead to an incomplete or mechanistic understanding of teacher identity, focusing on the more explicit and measurable aspects at the expense of the more implicit and qualitative ones.

Another criticality emerges from the phase of defining the "impossible" characters. Although the selection of figures from popular culture was aimed at encouraging students' identification, some choices appeared "forced". This may have limited the depth of the exploration of professional identities, since students based themselves on pre-existing figures and not directly linked to the educational field, potentially not allowing a full expression of their "aspirations and fears".

Finally, the process of “rewriting” the narratives by the students, although useful for defining identity, was a reaction to the shortcomings of the AI. This suggests that the role of the AI in this study, while a starting point, did not fully meet expectations, requiring significant revision by the participants themselves to achieve the research objectives.

A potential bias may arise from the fact that the narratives were generated by the students themselves or rewritten by them, reflecting their "representations that they have of teachers" and their "expectations" and "concerns". This process, although the aim of the research, could lead to a social desirability bias, where students may tend to present themselves (and therefore their "possible selves") in a more favorable light or in line with academic expectations, rather than revealing deeper fears or uncertainties or "their sense of inadequacy". Furthermore, their perception of future selves is "influenced by their past school experiences, the social context in which they live and individual and shared values", which could limit

the range of "possible selves" explored or orient them towards pre-existing stereotypes rather than truly innovative reflection.
Finally, another bias may be that "identity is understood as a social and fluid construction, which modulates according to context and audience." Since students know that their narratives will be read by the teacher, they may unconsciously adapt their stories to meet his implicit expectations, rather than expressing an authentic and unfiltered representation of their professional identity: the way they choose to narrate their experience may be influenced by the desire to present a specific image.

Conclusions

The present article discusses teacher professional identity, defining it as how teachers perceive themselves and are perceived by others. It emphasizes that this identity is fluid, shaped by context, relationships, and personal experiences, and that it evolves as teachers reflect on their practice. The development of teacher identity is linked to self-concept and is aided by future-oriented thinking, with the "possible selves" theory being a useful framework for understanding this process.
The "possible selves" theory posits that individuals have ideas about who they might become, influencing their goals and motivations. These "possible selves" are shaped by both personal aspirations and social contexts. This theory can support the process of teacher professionalization and can be particularly relevant for novice teachers as they navigate the transition from student to teacher.
By examining their "possible selves," future teachers can better understand their current and future identities, identify discrepancies, and work towards their desired professional selves.
The research aimed to explore the "possible selves" of future teachers by asking them to create teacher profiles and envision themselves in teaching scenarios. Firstly, the students were asked to produced their imaginary teacher profiles by choosing characters from the narrative imagination that was most familiar and congenial to them. The decision to guide the selection of alternative possible selves based on popular culture characters known and congenial to them was specifically made to give them the opportunity to identify with figures whose various characteristics, both in personal and professional dimensions, they could clearly envision. Secondly, the AIs produced stories starting from these profiles. Finally, the

students provided feedback on the stories and rewrote them to make them more coherent with their professional identities.
In relation to possible future selves, all the students projected into the definition of their characters, on the one hand, the representations they have of teachers, and on the other hand, both the professionals they wish to be (expectations) and those they do not wish to be (concerns). The students' perceptions of their possible future selves are influenced by their past school experiences, the social context in which they live, and the individual and shared values that influence their current identities and motivations.
In the end, the act of rewriting AI-generated teaching scenarios with themselves as the main character helped students define and clarify their own teacher identities. By comparing themselves to the AI's portrayal, they recognized similarities and differences, leading to a more developed and self-aware understanding of their professional selves. In the process, students significantly revised the teacher profiles, demonstrating a deeper reflection on their potential actions and the complexities of teaching situations. This exercise highlighted that teacher identity is shaped by context and emerges from how teachers interact within specific teaching situations.

Pedagogical implications and possible future developments

The methodology proposed in this study has significant pedagogical implications for teacher education, offering a practical and reflective approach to the development of professional identity. The central point lies in the use of the theory of "possible selves" and narrative, integrated with artificial intelligence, to allow future teachers to explore and redefine their identity.
The process can be replicated or adapted in other teacher training contexts through the following steps:

- Definition of "impossible teacher profiles", asking trainees to outline the profile of a teacher based on fictional characters (novels, films, comics, etc.) who are not already teachers. This phase encourages prospective teachers to project their own representations of teachers, expectations and concerns onto the chosen characters. To replicate, it is essential that the characters are familiar and "congenial" to the students, so that they can clearly identify with their personal and professional characteristics. It is essential that the definition include strengths,

weaknesses and an analysis of alignment or divergence with one's own vision of a future teacher.

- AI narrative generation. Student-defined profiles are used as input for an AI to create stories set in hypothetical school contexts. These narratives should present complex teaching situations to stimulate reflection on classroom management and responses to diverse student needs. Replicability requires access to AI tools and the formulation of clear prompts that guide the generation of realistic and challenging teaching scenarios.
- Feedback and rewriting of narratives. Students, analyzing the stories generated by the AI, evaluate how faithful they are to the definition of the characters and the complexity of the imagined situation. They are then asked to rewrite the narratives, imagining themselves as teachers protagonists of these scenarios. This phase is crucial for self-reflection, as it allows students to "define and make explicit their own identity", comparing their strategies with those imagined by the AI and recognizing points of contact and distance. Adaptation in other contexts may involve varying the types of teaching scenarios based on the specificities of the curriculum or the cultural context of the students.

This method supports the “professional identity construction” of student teachers and allows them to “imagine the kind of teacher they want to become”. Storytelling, as a “fundamental cognitive operation”, allows students to “explore their ‘possible selves’” and to “redefine their identity as teachers by examining expectations, stereotypes and potential challenges”. The awareness that one’s personal and professional profile is defined in the situation is a key pedagogical implication, as it highlights the dynamic and contextual nature of teacher identity. The use of AI in this process provides a “mirror” for reflection, although it requires careful supervision to ensure that the content generated is sufficiently complex to stimulate deep reflection. Replicating or adapting this method will help create more effective teacher education programmes, as it can encourage “reflection for action” and the ability to imagine and implement change.

Author contributions

Sarracino F., Ariemma L.: Introduction & Conclusions
Ariemma L.: § 1, 3.
Sarracino F.: § 2, 4.

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