

REVIEW ARTICLE

The Teacher as a Multifaceted Entity in the 21st Century: Navigating Complexity, Technology and Human Connection

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ABSTRACT

The 21st century has precipitated a paradigm shift in the role and identity of the teacher, moving far beyond the traditional model of a knowledge disseminator. This review article synthesizes existing literature to conceptualize the modern teacher as a complex, multifaceted entity operating at the intersection of pedagogical expertise, technological fluency, and socio-emotional intelligence. It begins by outlining the historical evolution of the teacher's role before delving into the specific forces—globalization, the digital revolution, and shifting societal needs—that have redefined it. The article identifies and elaborates on the key dimensions of this multifaceted identity, including the teacher as a facilitator of learning, a designer of authentic experiences, a pastoral guide, a lifelong learner, a collaborative partner, and a critical user of technology. A significant portion of the review is dedicated to analyzing how these roles align with and are essential for the successful implementation of Education 4.0, which emphasizes digital skills and the Fourth Industrial Revolution, and the emerging concept of Education 5.0, which focuses on human-centricity, sustainability, and societal well-being. The analysis reveals that while technological proficiency is non-negotiable, the fundamentally human aspects of teaching—empathy, mentorship, and ethical leadership—are becoming increasingly valuable. The article concludes by acknowledging limitations in the current research, suggesting directions for future inquiry, and affirming that the 21st-century teacher's strength lies in their adaptive, integrated, and deeply human capacity to navigate an ever-changing educational landscape.

KEYWORDS

- 21st-century teacher • Multifaceted teacher • Education 4.0 • Education 5.0
- Pedagogical facilitator • Technological integration • Socio-emotional learning
- Lifelong learning • Critical thinking • Personalized learning

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INTRODUCTION

The role of the teacher is one of the oldest and most constant in human civilization, yet it is also one of the most dynamically evolving. For centuries, the dominant image of the teacher was that of the “sage on the stage,” a primary source of knowledge and authority whose primary function was to transmit a defined body of information to a receptive student body (King, 1993). This model, often characterized by rote memorization and teacher-centered instruction, served the needs of industrial societies, which required a literate and compliant workforce. However, the dawn of the 21st century, marked by rapid globalization, unprecedented technological advancement, and access to information, has fundamentally disrupted this archetype. The teacher is no longer the sole gatekeeper of knowledge in an age where a smartphone can access the entirety of human information.

In this new context, the teacher has been compelled to transform into a multifaceted entity, a professional who embodies a complex and integrated set of roles and competencies. As Darling-Hammond (2006) aptly stated, the challenge for teachers in the new century is “to help diverse learners construct their own knowledge, develop their talents, and become effective participants in a democratic society” (p. 9). This goes far beyond simple instruction. Today’s educators must be designers of learning experiences, facilitators of critical inquiry, mentors for socio-emotional development, curators of digital content, and lifelong learners themselves.

This review article seeks to explore, synthesize, and analyze the various dimensions that constitute the 21st-century teacher as a multifaceted entity. It will trace the trajectory of this evolution, identify the distinct facets of the modern teaching identity, and critically examine how these roles align with the emerging educational paradigms of Education 4.0 and Education 5.0. By providing a comprehensive overview of the existing literature, this article aims to clarify the immense scope of the modern teaching profession and argue that its strength and sustainability lie in its ability to integrate these multiple, sometimes competing, identities into a coherent and effective professional practice. The central thesis of this article is that the successful 21st-century teacher is not

defined by a single skill but by their adaptive capacity to navigate and synthesize the roles of facilitator, designer, mentor, collaborator, and learner in response to the needs of a complex, digital, and human-centric world.

OBJECTIVES

The primary objectives of this review article are:

1. To trace the historical evolution of the teacher’s role from a traditional knowledge-transmitter to a multifaceted 21st-century professional.
2. To identify, define, and elaborate on the key facets that constitute the identity of the 21st-century teacher, drawing on contemporary educational research.
3. To synthesize existing literature on the skills, competencies, and mindsets required for effective teaching in the current era.
4. To analyze the defining characteristics that distinguish 21st-century teachers from their predecessors.
5. To explore the concepts of Education 4.0 and Education 5.0 and delineate how the multifaceted teacher’s roles align with the goals and demands of these new educational paradigms.
6. To discuss the challenges and limitations faced by teachers in adopting these multifaceted roles.
7. To identify gaps in the current research and propose directions for future study in this domain.

LITERATURE REVIEW

The transformation of the teacher’s role has been a subject of extensive scholarly inquiry over the past few decades. The literature consistently highlights a move away from behaviorist and instructivist models towards constructivist and social-constructivist approaches, influenced by the work of theorists like Piaget, Vygotsky, and Dewey. Vygotsky’s (1978) concept of the “More Knowledgeable Other” (MKO), for instance, has been reinterpreted; the teacher is not the only MKO, but rather a facilitator who helps students connect with multiple sources of knowledge, including peers and digital tools.

A significant body of work focuses on the necessary competencies for 21st-century educators. The Partnership for 21st Century Skills (P21) framework was instrumental in shifting the focus towards the “4 Cs”: Critical Thinking, Communication, Collaboration, and Creativity (Partnership for 21st Century Skills, 2019). Researchers have built upon this, arguing that teacher education programs must be reformed to cultivate these skills in prospective teachers themselves (Darling-Hammond, 2017).

The technological dimension is another heavily researched area. Mishra and Koehler’s (2006) Technological Pedagogical Content Knowledge (TPACK) framework has become a cornerstone for understanding the complex interplay between a teacher’s knowledge of content, pedagogy, and technology. This framework posits that effective technology integration is not about adding tech onto existing practice, but about a transformative understanding of how all three knowledge bases interact. Research by Ertmer and Ottenbreit-Leftwich (2010) supports this, emphasizing that teacher beliefs are a critical barrier to technology integration, often more significant than access to the technology itself.

Simultaneously, the literature has seen a growing emphasis on the teacher’s role in supporting students’ socio-emotional well-being. The work of the Collaborative for Academic, Social, and Emotional Learning (CASEL) has been pivotal in advocating for the integration of Social-Emotional Learning (SEL) into core curriculum (Weissberg *et al.*, 2015). Scholars like Jennings and Greenberg (2009) have linked a teacher’s own social-emotional competence and well-being to the creation of a prosocial classroom environment and positive student outcomes, highlighting the “teacher as caregiver” facet.

Similarly, Pal (2025) reviewed classical and contemporary theories of motivation—including Maslow’s Hierarchy of Needs, Herzberg’s Two-Factor Theory, and Self-Determination Theory—and concluded that both intrinsic and extrinsic motivational factors significantly influence teachers’ job satisfaction, professional engagement, and teaching effectiveness. These findings reinforce the importance of motivation as a foundational component of the multifaceted teacher identity.

Furthermore, the concept of the “reflective practitioner” as articulated by Schön (1983) has gained renewed importance. The ability to critically reflect on one’s practice, adapt to new situations, and engage in continuous professional learning is now seen as a non-negotiable trait for teachers (Loughran, 2002). This aligns with the concept of a “growth mindset” (Dweck, 2006), which is now encouraged not just in students but in teachers as well.

More recently, the literature has begun to engage with the concepts of Education 4.0 and Education 5.0. Education 4.0, as discussed by Fisk (2017) and others, focuses on aligning education with the Fourth Industrial Revolution, emphasizing skills like coding, data analytics, and human-machine collaboration. The teacher’s role here is that of a guide in a high-tech learning environment. Education 5.0, a more nascent concept, pushes this further by advocating for a human-centric approach that uses technology to solve societal problems and promote sustainability (Scott, 2020). The literature on how teachers specifically operationalize these advanced paradigms is still emerging, indicating a fertile area for further research.

In summary, the existing literature robustly confirms the transition to a multifaceted teacher identity. However, it often treats these facets—technological, pedagogical, emotional—in isolation. This review aims to synthesize these strands, presenting a holistic view of the teacher as an integrated entity navigating the complex demands of Education 4.0 and 5.0.

What Makes 21st Century Teachers Different?

The 21st-century teacher is distinct from their predecessors not merely due to the tools they use, but due to a fundamental shift in their purpose, position, and practice within the learning ecosystem. This difference can be articulated through several core dimensions.

1. *From Sage on the Stage to Guide on the Side and Meddler in the Middle:* The most iconic shift is the move from being the central authority figure to a facilitator of learning. King’s (1993) “sage on the stage” has been largely supplanted by the “guide on the side.” This facilitator creates learning environments where students ask questions, explore resources,

- and construct their own understanding. McWilliam (2009) proposed a further evolution: the “meddler in the middle.” This teacher actively “meddles” in the learning process—co-constructing knowledge alongside students, engaging in problem-solving with them, and modeling the messy, collaborative process of discovery. This represents a move from transmission to transaction and transformation of knowledge.
2. **The Digital Navigator and Curator:** Unlike teachers of the past who relied on textbooks and their own knowledge, the 21st-century teacher operates in an ocean of information. Their key role is to help students navigate this digital landscape critically. They are curators who select, evaluate, and organize high-quality digital resources (November, 2012). They teach digital literacy and citizenship, helping students discern credible information from misinformation, understand digital footprints, and engage in online spaces responsibly. This requires a level of technological fluency that was previously unnecessary.
 3. **Designer of Authentic Learning Experiences:** The focus has shifted from covering a curriculum to designing experiences that make learning relevant and authentic. Drawing on project-based learning (PBL) and inquiry-based models, teachers design complex, real-world challenges that require students to apply knowledge across disciplines (Larmer *et al.*, 2015). The teacher is an architect of learning pathways, creating opportunities for students to develop and demonstrate the 4 Cs. The assessment also changes, moving from standardized tests alone to include portfolios, performances, and other forms of authentic assessment.
 4. **Socio-Emotional Learning (SEL) Facilitator and Pastoral Carer:** There is a growing recognition that learning is inextricably linked to emotion and well-being. The 21st-century teacher is explicitly responsible for fostering a positive classroom climate and explicitly teaching SEL competencies such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Weissberg *et al.*, 2015). They are often the first line of support for students dealing with anxiety, stress, or trauma, requiring a high degree of empathy and emotional intelligence (Jennings & Greenberg, 2009).
 5. **Lifelong Learner and Adaptive Expert:** The rapid pace of change means that a teacher’s initial training is insufficient for a career. The modern teacher is a model of lifelong learning, constantly updating their knowledge in their subject area, pedagogy, and technology (Darling-Hammond, 2017). They are “adaptive experts” who are not only efficient in their core practices but also flexible and innovative when faced with novel challenges (Hatano & Inagaki, 1986). This is embodied in a commitment to professional learning networks (PLNs), often cultivated online through social media platforms like Twitter.
 6. **Collaborator and Co-Learner:** The stereotypical image of a teacher working in isolation in their classroom is obsolete. The 21st-century teacher collaborates with colleagues in professional learning communities (PLCs) to analyze student data, refine lessons, and share best practices (DuFour, 2004). They also collaborate with the wider community, bringing in experts, and engaging parents as partners. Crucially, they embrace the role of co-learner with their students, demonstrating that they, too, are on a journey of discovery and do not have all the answers.

How to Align Teaching Skills with Education 4.0 and Education 5.0

The multifaceted nature of the 21st-century teacher is not an abstract ideal; it is a practical necessity for aligning with the new educational paradigms of Education 4.0 and the emerging vision of Education 5.0.

1. **Aligning with Education 4.0:** Education 4.0 is a response to the Fourth Industrial Revolution (Industry 4.0), characterized by cyber-physical systems, the Internet of Things (IoT), and artificial intelligence. Its goal is to prepare students for a digitized workforce (Fisk, 2017). The multifaceted teacher aligns with this paradigm through:
 - **Mastering the TPACK Framework:** Teachers must move beyond basic

digital literacy to a deep integration of technology, as conceptualized by the TPACK framework (Mishra & Koehler, 2006). This means using technology not just for presentation (e.g., PowerPoint) but for creation (e.g., 3D printing, coding), collaboration (e.g., cloud-based tools like Google Workspace), and personalization (e.g., adaptive learning software).

- **Fostering Computational Thinking:** Teachers integrate elements of computational thinking—decomposition, pattern recognition, abstraction, and algorithm design—across the curriculum, not just in computer science classes (Wing, 2006).
- **Promoting Human-Machine Collaboration:** The teacher's role shifts from teaching *about* technology to teaching *with* and *alongside* technology. They help students understand the strengths and limitations of AI, using tools like intelligent tutors for skill practice while focusing their own human efforts on higher-order mentoring, creativity, and ethical discussions.
- **Emphasizing Future-Proof Skills:** The curriculum, designed by the teacher, prioritizes skills that are hard to automate: complex problem-solving, critical thinking, creativity, and emotional intelligence (World Economic Forum, 2020).

In the Education 4.0 classroom, the teacher as a **Facilitator** and **Digital Navigator** is paramount, guiding students through a high-tech, personalized, and competency-based learning journey.

2. **Evolving towards Education 5.0:** While Education 4.0 is technology-centric, Education 5.0 proposes a more human-centric, values-driven evolution. It seeks to harness technology not for economic productivity alone but for societal well-being, sustainability, and solving “wicked” global problems (Scott, 2020). Aligning with Education 5.0 requires the teacher to embody even more profound facets:

- **The Ethicist and Sustainable Developer:** The teacher integrates

the United Nations Sustainable Development Goals (SDGs) into the curriculum, framing learning around grand challenges like climate change, poverty, and inequality (UN, 2015). They lead discussions on the ethical implications of technology, data privacy, and biotechnology, fostering a sense of global citizenship and responsibility.

- **The Empathy Architect:** Moving beyond general SEL, the teacher specifically cultivates empathy and compassion, enabling students to understand diverse perspectives and work collaboratively across cultural and ideological divides. This is the **Pastoral Carer** role scaled to a global level.
- **The Fostering of Human-Centric Creativity:** In an age of AI-generated content, the teacher's role is to nurture uniquely human creativity—the kind that is driven by passion, purpose, and a desire for meaning and beauty. This involves creating spaces for artistic expression, design thinking, and entrepreneurial action aimed at social good.
- **The Community Connector and Co-Creator:** The teacher breaks down the walls of the classroom, connecting learning directly to the local and global community. Students engage in service-learning and community-based projects where they apply their skills to real problems, co-creating solutions with community members. This amplifies the role of **Collaborator**.
- **The Wellness Advocate:** Education 5.0 recognizes that well-being is a prerequisite for learning and societal contribution. The teacher actively promotes the holistic well-being of students—mental, physical, and emotional—and models sustainable work-life practices, challenging the culture of burnout.

In the Education 5.0 paradigm, the teacher's multifaceted identity finds its fullest expression. They are not just a tech-savvy facilitator but a **visionary leader**, a **moral**

compass, and a **catalyst for positive change**, using the tools of Education 4.0 to achieve the humanistic goals of Education 5.0.

Personal thought of us

As an observer and participant in the educational landscape, the evolution of the teacher's role is both exhilarating and daunting. The conceptualization of the teacher as a multifaceted entity is not merely an academic theory; it is the lived reality for educators today, and it resonates deeply with my own understanding of what education must become.

We believe that the transition from “sage” to “guide” and “meddler” is the most critical shift. It requires a profound humility to step away from the podium and admit that one does not have all the answers. This vulnerability, however, is the very foundation of authentic learning relationships. When a teacher models curiosity, resilience in the face of failure, and a genuine passion for learning alongside their students, they create a culture of intellectual courage. This aligns with our core belief that education is not about filling vessels but about igniting flames.

Furthermore, while the discourse around technology is essential, we are convinced that the emphasis on socio-emotional learning and the teacher's pastoral role is the true heart of 21st-century education. In a world increasingly characterized by digital isolation and anxiety, the classroom must be a sanctuary of human connection, empathy, and psychological safety. A teacher's ability to see a student not just as a learner of mathematics, but as a whole person with fears, dreams, and struggles, is what makes the profession irreplaceable by artificial intelligence. The most sophisticated AI can personalize a math problem, but it cannot look a child in the eye and with a quiet word of encouragement restore their belief in themselves. This human touch is our profession's greatest asset.

The frameworks of Education 4.0 and 5.0 provide a valuable roadmap. However, We see a significant risk in an unbalanced implementation of Education 4.0, where the drive for technological integration overshadows its human purpose. The promise of Education 5.0—a synthesis of technological power and humanistic values—is the direction we must consciously and deliberately

pursue. This means that teacher training and professional development must be radically redesigned to nurture not just TPACK, but also ethical reasoning, systems thinking, and trauma-informed practices.

In conclusion, our perspective is that the multifaceted teacher is not a fragmented professional pulled in a dozen directions, but an integrated one. The roles of facilitator, designer, technologist, and carer are not separate hats to be worn, but interconnected threads in a single tapestry. The great challenge and opportunity for our generation of educators is to weave these threads together, creating an educational experience that is simultaneously rigorous and compassionate, technologically advanced and deeply human, preparing students not just for the workforce, but for a meaningful life.

CONCLUSION

This review has articulated the complex and dynamic identity of the 21st-century teacher as a multifaceted entity. The journey from the traditional knowledge-transmitter to the modern professional is a response to the seismic shifts of globalization, digitalization, and a deepened understanding of human learning and well-being. The contemporary teacher is simultaneously a facilitator of learning, a designer of authentic experiences, a digital navigator, a pastoral carer, a lifelong learner, and a collaborative partner.

These facets are not optional additions but are integral to the successful implementation of new educational paradigms. Education 4.0 demands a teacher who is fluent in technology and can foster the skills needed for the Fourth Industrial Revolution. The emerging vision of Education 5.0 calls for this same teacher to evolve further, becoming an ethicist, a sustainability advocate, and a community connector who places human well-being and societal progress at the core of the educational mission.

Ultimately, the narrative of the teacher being replaced by technology is a profound misconception. Instead, technology is reshaping the teacher's role, automating the routine and administrative, thereby freeing the teacher to focus on the uniquely human aspects of their work: inspiration, mentorship, empathy, and ethical leadership. The strength of the 21st-century teacher lies in their ability

to harmonize these multiple dimensions, to be both technologically proficient and deeply human, to prepare students for an unknown future not just with skills, but with wisdom, resilience, and a compassionate heart. The multifaceted teacher is, therefore, the indispensable cornerstone of a relevant, equitable, and transformative education for the 21st century and beyond.

LIMITATIONS

While this review has sought to provide a comprehensive synthesis, it is subject to several limitations. First, the concept of Education 5.0 is still nascent and not uniformly defined in the literature, meaning the analysis presented here is based on emerging trends rather than established theory. Second, the focus of this article is largely on a Western, developed-world context. The challenges and manifestations of the multifaceted teacher can be vastly different in developing nations where issues of resource scarcity, infrastructure, and large class sizes present unique constraints that are not fully addressed here.

Third, the review draws primarily on academic literature and may not fully capture the on-the-ground realities and practical challenges faced by classroom teachers daily. The implementation of these multifaceted roles is often hindered by systemic issues such as standardized testing regimes, bureaucratic inertia, and lack of adequate professional development time and funding. Finally, the pace of technological change is so rapid that any review risks being partially outdated by the time of publication, particularly regarding specific digital tools and platforms.

FURTHER SCOPE OF RESEARCH

The evolving nature of the teacher's role presents numerous avenues for future research:

- 1. Empirical Studies on Education 5.0 Classrooms:** As the concept of Education 5.0 gains traction, there is a need for qualitative and quantitative research into how teachers are practically implementing its human-centric principles. Case studies of schools and teachers successfully aligning with this paradigm would be invaluable.
- 2. Teacher Well-being and the Multifaceted Role:** Research is needed to investigate the

psychological impact of these expanding role expectations on teachers. How does the pressure to be a technologist, data analyst, SEL expert, and more contribute to burnout, and what support systems are most effective in mitigating this?

- 3. Global and Comparative Studies:** Comparative research across different cultural and economic contexts is crucial. How is the multifaceted teacher conceptualized and supported in low-income countries versus high-income countries? What can different systems learn from each other?
- 4. AI Integration and Teacher Identity:** With the rapid advancement of generative AI, specific research is needed on how teachers' roles are shifting. What new facets are emerging? How is the teacher-student relationship evolving when AI can provide instant, personalized tutoring?
- 5. Reforming Teacher Preparation:** Longitudinal studies tracking the effectiveness of reformed teacher education programs that explicitly train candidates in these multifaceted roles are necessary to provide evidence-based models for the future of teacher preparation.
- 6. Measuring the "Unmeasurable":** Developing robust methodologies and metrics to assess the impact of the teacher's socio-emotional, ethical, and pastoral roles on long-term student success and societal well-being remains a significant challenge and a critical area for research.

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