A Proposed Model for Teacher Education: Rethinking the Future of the Next Generation

Hisham Barakat Bishr Hussein, PhD

http://dx.doi.org/10.29009/ijres.8.2.1

A Proposed Model for Teacher Education: Rethinking the Future of the Next Generation

Hisham Barakat Bishr Hussein, PhD

Professor of Mathematics Education, King Saud University, Saudi Arabia

hbisher@hotmail.com

https://orcid.org/0000-0001-6893-9469

Received on 1st December 2024 Accepted on 5th February 2025

Abstract: Future generations will encounter unprecedented and complex challenges across various dimensions of life, necessitating innovative approaches to education and teacher preparation. As key agents of societal transformation, teachers must be equipped with a forward-thinking educational paradigm that enables them to navigate and respond effectively to evolving economic, social, and technological landscapes. This study proposes a comprehensive framework for a teacher education model structured around three interrelated levels: input, processes, and outputs, with an integrated feedback mechanism ensuring continuous refinement. The input level comprises eight essential components: a clearly defined vision and mission, foundational educational values, core pillars of the model, specifications for future educators, professional teaching standards, pre-service preparation requirements, practical training strategies, and in-service professional development institutions. The second level, "processes," delineates the collaborative mechanisms among these institutions and provides an executive guide for the model's implementation. The third level, "outputs," focuses on the expected outcomes, emphasizing the development of highly competent teachers capable of fostering the next generation of learners. These educators will be equipped with advanced personal, professional, and specialized competencies, ensuring their effectiveness in diverse educational settings. Designed for adaptability, this model offers a flexible framework that can be contextualized and applied across various educational systems and environments. By integrating key components of teacher education with a dynamic and responsive structure, this study

http://dx.doi.org/10.29009/ijres.8.2.1

contributes to the ongoing discourse on enhancing teacher preparation for the challenges of the future.

Keywords: Teacher Education Model, Teacher of The Future Generation, Professional Development, Rethinking the Future, the Future Generation.

http://dx.doi.org/10.29009/ijres.8.2.1

Introduction

The world is undergoing rapid transformation, driven by technological advancements and the evolving landscape of artificial intelligence. This dynamic evolution presents both challenges and opportunities for individuals navigating life's journey. The future generation, in particular, is poised to confront unprecedented challenges in the realm of work and employment. The Fourth Industrial Revolution, with its attendant economic and social shifts, is reshaping the labor market, demanding new skill sets and competencies. Moreover, the escalating global population coupled with dwindling natural resources exacerbates the complexities of the challenges that lie ahead.

The Fourth Industrial Revolution rendered traditional education obsolete, necessitating a comprehensive overhaul of educational systems to align with its evolving demands. Leveraging the immense power of digital technology, the Revolution dismantled the artificial barriers of language, geography, and information scarcity, thereby unleashing the latent creative potential of humanity. This newfound capacity, accessible to all with a simple touch, has ignited a wave of innovation that continues to gather momentum. (Eldahshan, G., 2020).

These challenges have become a considerable burden on society as a whole, but especially on students and teachers. Teachers play a crucial role in preparing new generations for the future, while students are the future generation who will confront these challenges and be tasked with overcoming them.

In the ever-evolving landscape of the twenty-first century, the role of educator has undergone a profound transformation. No longer merely a conduit of knowledge, the teacher is now a dynamic facilitator of learning, a mentor, a collaborator, an innovator, and a leader. To navigate this changing terrain, educators must cultivate a rich tapestry of skills, competencies, and mindsets. These include adaptability to evolving contexts, a deep appreciation for diversity, a cultivated sense of creativity, and a steadfast commitment to social justice. Ultimately, the educator's primary mission remains the same: to prepare learners for a world marked by complexity and

http://dx.doi.org/10.29009/ijres.8.2.1

uncertainty, global challenges, cultural diversity, and the relentless pace of technological advancement. Recognizing the evolving needs and expectations of the future generation of learners is paramount in this endeavor.

The world's uncertain trajectory underscores the imperative to reevaluate fundamental pedagogical paradigms and address evolving demands. As students seek lifelong success, adaptability and flexibility become paramount. Concurrently, teacher educators must possess novel competencies, skills, and knowledge to equip pre-service teachers with the capacity to navigate these challenges and fulfill these requirements. (Danilewicz et al., 2019), (Low et al., 2023)

To meet the challenges of today's educational landscape, teachers must be well-prepared, engaged in ongoing professional development, adaptable to changing contexts, and committed to lifelong learning. By fostering creativity and critical thinking among their students, teachers can equip them with the skills necessary to navigate the complexities of the future. This underscores the importance of investing in teacher preparation and professional development to ensure that educators are equipped to address the evolving needs of their students and society. (Ghanaiem, M., 2015), (Aqeel, H.,2016), (Alsherbiny et al.; M., 2023), (Danilewicz et al., 2019), (Zenkov et al., 2021), (Kissau et al., 2022)

Linda Darling-Hammond underscores in her research the pivotal role of the well-prepared teacher and the necessity of evaluating them against established standards within a framework that benchmarks global best practices. This approach is essential for realizing social justice, accountability, and responsibility, as well as ensuring the quality of teacher preparation. Ultimately, it aims to cultivate teachers who are equipped to navigate the challenges of the future. (Darling-Hammond, 2016, 2017, 2017, 2020, 2021), (Darling-Hammond, L., et al., 2010, 2020, 2024).

The ideal teacher, essential for our current and future needs, is one who recognizes that teaching is fundamentally an art, rather than merely a science or profession. Such a teacher master’s the artistry of instruction before delving into its scientific principles or practical application. Teaching demands a teacher who

http://dx.doi.org/10.29009/ijres.8.2.1

instinctively practices this art, as effortlessly as breathing, to achieve the desired outcomes. Just as a musician requires a deep-seated passion and innate sensitivity before embarking on formal training or performance, so too does a physician need a genuine desire to alleviate suffering and improve lives prior to medical school. Similarly, engineers must possess a passion for innovation and a drive to enhance people's lives before pursuing their studies. This foundational passion equips them with the creativity necessary to harness their engineering skills for the betterment of society.

From this viewpoint, selecting students for Teacher Education colleges should prioritize those who possess the fundamental qualities necessary to become successful human beings before professional practitioners. This involves choosing individuals driven by a passion for positively impacting others' lives, coupled with patience and the ability to empathize with and understand diverse perspectives. Such students must be prepared to face the challenges of the teaching profession with perseverance and creativity. They should also possess the innate ability to communicate effectively and persuasively, expressing their ideas with natural ease and spontaneity.

A promising avenue for educational reform lies in the careful selection of students entering teacher education programs. By identifying candidates possessing the requisite qualities and qualifications, we can cultivate a cadre of educators who are poised to meet the evolving demands of society.

When a teacher graduates with these innate attributes and is subsequently immersed in a comprehensive teacher preparation program, one that addresses future needs, requirements, and ongoing professional development, the result is a creative and effective educator capable of inspiring future generations.

Problem of the Study

The efficacy of current teacher education programs is compromised by a selection process that often fails to identify candidates possessing the requisite characteristics and qualifications for contemporary pedagogical demands. Reliance solely on secondary school grades undermines the alignment between student aptitude and program objectives. A review of literature and research on teacher education

http://dx.doi.org/10.29009/ijres.8.2.1

confirms the inadequacy of existing programs in equipping educators with the knowledge and skills necessary for the modern era. These programs struggle to meet the diverse and evolving needs of twenty-first-century learners and are ill-prepared to address future challenges. Several studies, including those by Ghanaiem (2015), Mazen (2016), Alsherbiny et al. (2023), Diez et al. (2010), Danilewicz et al. (2019), Chung (2016), Zenkov et al. (2021), Kissau et al. (2022), Hallström et al. (2023), and Fitriati et al. (2024).

Contemporary teacher education programs frequently adhere to a linear paradigm encompassing curricula, pedagogy, and assessment. This model, however, fails to capture the dynamic and intricate nature of the teaching and learning process. As illustrated in Figure1, the conventional Teacher Education model follows a sequential trajectory, comprising pre-service training, certification, and in-service professional development. This approach often proves disjointed from the actual demands of schools and communities, the realities of classroom practice, and the diverse requirements and aspirations of teachers and students. Moreover, it hinders the cultivation of a culture of continuous learning and innovation among educators and fails to provide adequate opportunities for teachers to engage in practice and reflection within authentic teaching contexts.

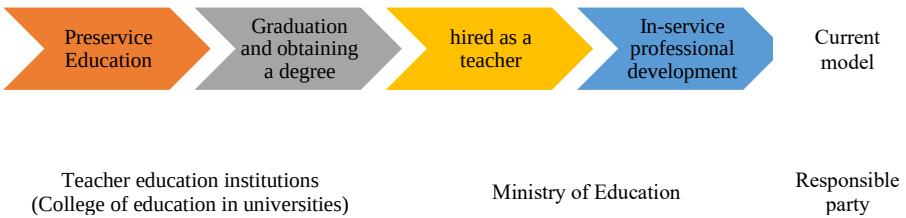

Figure 1 The current model for teacher education

Despite the acknowledged significance of professional development in enhancing teacher performance and bridging potential gaps in pre-service training (Murray et al., 2016; Yuan et al., 2023; Leonard et al., 2023), teacher professional

http://dx.doi.org/10.29009/ijres.8.2.1

development initiatives often encounter challenges, particularly in regard to teachers' adaptation and integration of novel pedagogical approaches (Hayes et al., 2024).

To ascertain the current state and future direction of Teacher education programs, the researcher conducted a comprehensive survey and held in-depth discussions with a substantial group of faculty members from various colleges of education and those invested in Teacher Education programs across Egypt, Saudi Arabia, Jordan, Iraq, Oman, and the United States. The responses garnered from these discussions highlighted a pressing need for Teacher Education programs to undergo significant reform, aligning themselves with the evolving challenges and aspirations of society. The survey also underscored a concerning decline in the teacher's societal image, revealing a disconnect between educators and their role as influential models for students' behaviors, values, and attitudes. Consequently, it is imperative that teacher preparation programs prioritize the restoration of this influential image by cultivating a teacher who is intellectually sound, ethically grounded, and behaviorally exemplary.

The foregoing analysis underscores the critical need for a reimagined teacher preparation paradigm. This paradigm must be attuned to the evolving needs of the future generation of educators. Such a model aligns with contemporary global education discourse, exemplified by initiatives such as UNESCO's 2015 Rethinking Education Initiative, the 2019 Future of Education Initiative, and the 2022 International Commission on the Future of Education report. These endeavors collectively seek to revolutionize education systems and practices, fostering creativity, innovation, and collaborative synergy between teachers and learners. (UNESCO 2015, 2019, 2022)

A pivotal consideration for preparing teachers for the twenty-first century is the transition from the traditional model of knowledge transmission to a more innovative, collaborative, and participatory approach. This new model should prioritize the development of personal skills in future educators, aligning with the demands of a rapidly evolving world. Rather than solely emphasizing professional, technical, and specialized competencies, the focus should be on cultivating the attributes essential for navigating the challenge of the future.

http://dx.doi.org/10.29009/ijres.8.2.1

The proposed teacher education model should adopt a holistic and integrative approach, emphasizing the synergy between theory and practice, content and pedagogy, knowledge and skills, and personal and professional growth. A collaborative and participatory process involving diverse stakeholders is essential for the design, implementation, and evaluation of teacher education programs. Moreover, the model should be flexible and innovative, accommodating a variety of contexts, fostering, experimentation, and to evolving needs.

A comprehensive, interdisciplinary approach to teacher education is urgently needed. This approach should foster collaboration, integrate theory, practice, research, personal growth, and professional development, and promote critical thinking, creativity, innovation, and social justice among both teachers and learners. By equipping them with a diverse range of skills and competencies, we can empower them to navigate the rapidly evolving world.

Central to this model are the values of diversity, equity, inclusion, and intercultural understanding. It should cultivate global citizenship among teachers and learners, leveraging the latest advancements in educational research, technology, neuroscience, and educational sciences. Moreover, the model must be responsive to emerging trends and challenges in education.

A coherent and comprehensive framework, along with supportive policies, is essential to ensure the model's alignment with new visions and goals. Adequate resources and incentives must be provided to facilitate its implementation and evaluation.

The proposed model for teacher education should prioritize the alignment of program objectives, curriculum, pedagogy, and assessment with the evolving needs of the profession. Key stakeholders, including teacher educators, schools, policymakers, and partners, must collaborate to ensure the model's effectiveness.

Grounded in the belief that teaching is a dynamic and intellectually demanding profession, the model should foster a culture of continuous learning, collaboration,

http://dx.doi.org/10.29009/ijres.8.2.1

critical thinking, and innovation. Moreover, it must uphold principles of equality, diversity, inclusion, and social justice by promoting culturally responsive and anti-discriminatory teaching practices.

To facilitate transformative learning, the model should engage teacher candidates in authentic, meaningful experiences that challenge their existing assumptions and broaden their perspectives. By fostering a culture of inquiry and research, the model should encourage candidates to generate and utilize evidence to inform their decision-making. Additionally, it should support the development of a strong professional identity and cultivate a collaborative environment through professional learning communities.

The new model should cultivate robust partnerships among Teacher Education programs, schools, policymakers, and all relevant stakeholders, thereby creating cohesive and supportive learning environments for students and teachers. This model must adapt to the evolving needs and contexts of education, embracing innovation and creativity as fundamental components of Teacher Education. Consequently, the new model should be grounded in the principles of innovation, collaboration, diversity and sustainability.

Questions of the Study

The main question: **What is the proposed model for developing teachers for future generations?**

Methodology: A descriptive analytical Methodology was adopted for this study, with various tools employed to attain its research objectives.

The Purpose of the Study

This study sought to develop a comprehensive model for Teacher Education and Training. The proposed model would encompass the entire teacher lifecycle, beginning with the initial selection and admission process, continuing through the formal preparation programs, and culminating in the provision of ongoing professional

http://dx.doi.org/10.29009/ijres.8.2.1

development. The goal was to create a system that would equip educators with the skills and knowledge necessary to effectively teach the future generation.

Procedures

The researcher conducted a comparative analysis of teacher education programs at select American, European, and Arab universities, referencing the 2023 Shanghai Ranking of Academic Subjects (Global Ranking of Academic Subjects). Additionally, in-depth interviews conducted with faculty members from colleges of education and those interested in teacher education. The objective was to gain insights into their visions and perceptions of the ideal teacher, the necessary knowledge and skills, the future role of teachers, and the effectiveness of current preparation programs. Furthermore, the researcher sought to identify areas for improvement in current preparation and professional development programs. To support this investigation, a comprehensive literature review was conducted, and expert opinions were solicited. Based on these findings, a proposed model for teacher education and training is presented.

First: The levels of the proposed model for teacher education

Accordingly, developing an interactive layout of the proposed model that includes inputs, processes, outputs, and feedback is possible. Figure 2 shows the components of the proposed model. And figure 3 shows the levels of the proposed model.

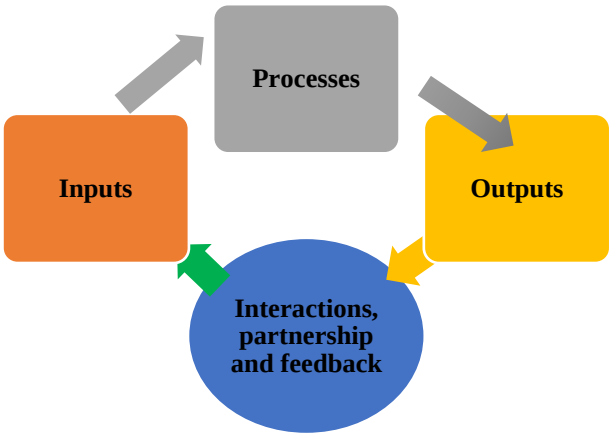

Figure 2 shows the components of the proposed model for future teacher preparation:

http://dx.doi.org/10.29009/ijres.8.2.1

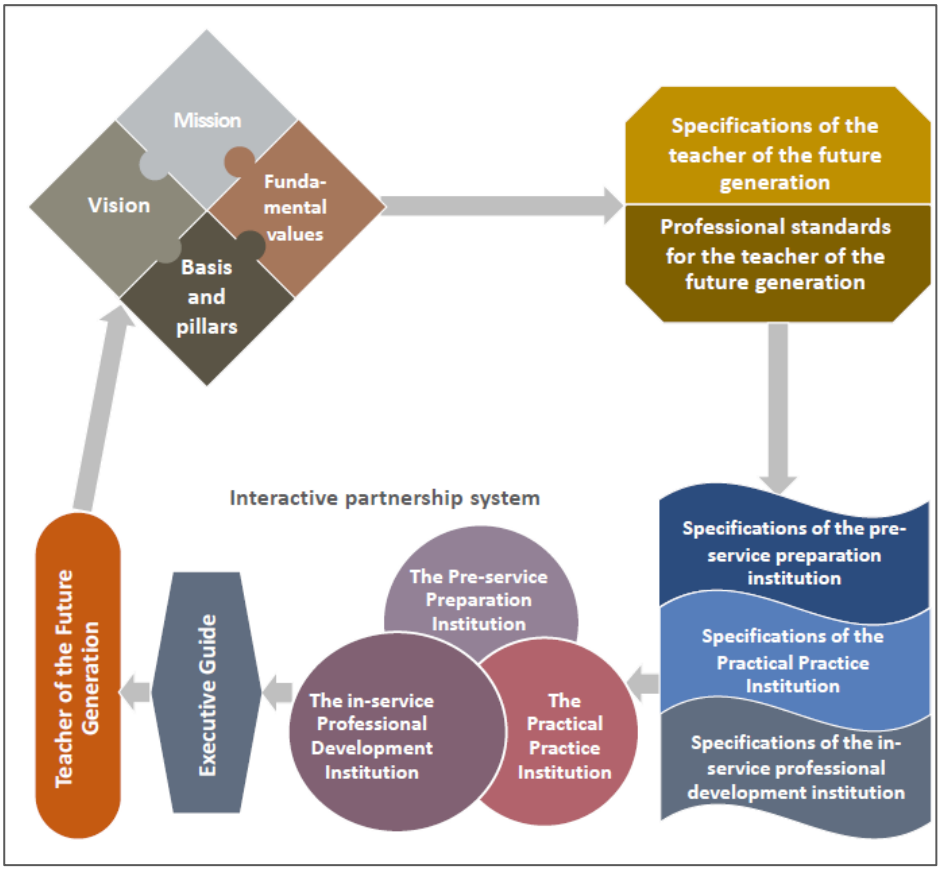

Figure 3: Stages and components of the proposed model for preparing teachers of the future generation.

Second: The Components of the Proposed Model

The proposed model comprises three primary levels of inputs, processes, and outputs. A feedback loop is integrated into this framework. The input level consists of eight elements: the mission and vision, core values, foundational principles, teacher profile specifications, professional standards for future teachers, pre-service preparation institution requirements, Practical Training Foundation specifications, and Continuing Professional Development Foundation specifications. The second level encompasses operations, which are divided into two primary elements: the system of interaction and partnership among the pre-service preparation institution, practical

http://dx.doi.org/10.29009/ijres.8.2.1

training institution, and in-service professional development institution throughout a teacher's career, and the executive guide for the proposed model. The third level consists of the desired outcomes, or outputs, of the model, which are integrated with feedback. These outcomes are as follows:

1. The first level: "Inputs"

1.1. Vision and Mission

The vision and mission of the model are grounded in a contemporary approach to teacher education, seeking to cultivate practitioners who are capable of critical self-reflection and adaptation to evolving educational contexts. Such teachers are lifelong learners, committed to continuous professional growth through a variety of learning activities, including exploration, feedback, and collaboration. They embrace diversity, fostering inclusive and equitable learning environments, and possess creativity, innovation, and problem-solving skills to design engaging educational experiences that meet the unique needs, interests, and strengths of their students. Moreover, these teachers are leaders of change, dedicated to advancing the field of education through their contributions and innovative practices.

Thus, the model's vision and mission can be formulated as follows:

Vision: leadership and excellence in preparing teachers for the future generation, aligned with international standards.

Mission: Nurturing a practitioner teacher equipped with professional, personal, and specialized competencies, we aim to foster a future generation of educators capable of making a significant impact. This will be achieved through a comprehensive framework of pre-service training and ongoing professional development throughout their careers.

1.2. Major Values of the Proposed Model

The foundational principles of teacher education models are shaped by the unique characteristics of each society and its cultural context. Nevertheless, a consensus

http://dx.doi.org/10.29009/ijres.8.2.1

exists regarding a core set of universal values that should define the ideal teacher produced by such programs. These fundamental values, as depicted in Figure 4, are essential components of the proposed Teacher Education model.

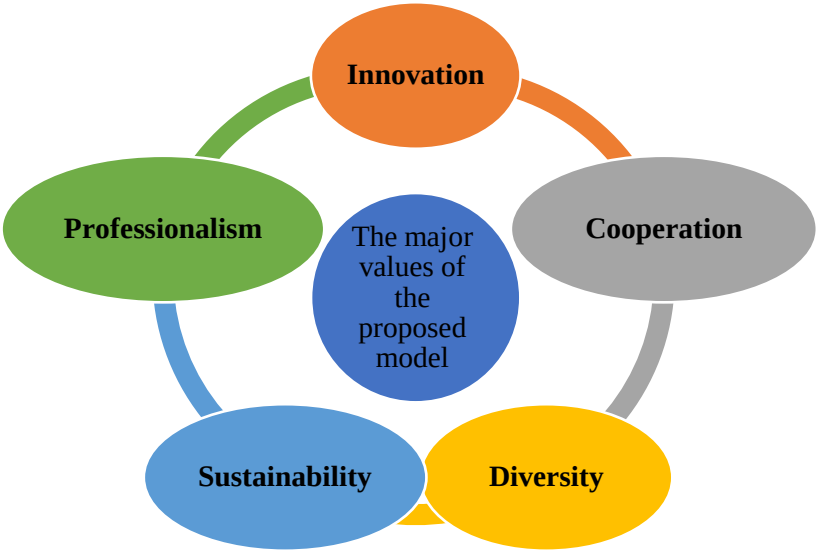

Figure 4 shows the major values of the proposed model.

These values can be explained as follows in table1:

Table 1: Major Values of the Proposed Model

Value	Implications
Innovation	Enhances the development of creativity, critical thinking, problem-solving, and technological proficiency in both educators and students. Incorporates innovative pedagogical approaches and assessment strategies to foster deeper learning experiences and increase engagement.
Cooperation	Promotes a culture of teamwork, communication, and leadership among teachers and learners, and facilitates partnerships with other stakeholders, such as parents, communities, businesses, and policymakers; to support learning and development.
Diversity	Respects and values the rich tapestry of learners and teachers, embracing their diverse backgrounds, identities, abilities, interests, and aspirations. Moreover, it equips educators to navigate issues of equality, inclusion, and social justice within the educational sphere.

http://dx.doi.org/10.29009/ijres.8.2.1

Value	Implications
Sustainability	Promotes a heightened awareness of global objectives in environmental stewardship, economic progress, and societal well-being. Cultivates a spirit of responsibility, ethics, civic engagement, and entrepreneurial acumen among educators and students.
Professionalism	Teaching performance is exemplified by a steadfast adherence to professional standards, a strong work ethic, exceptional competence and knowledge, unwavering integrity, respect, emotional intelligence, and a commitment to fairness.

1.1. Pillars and Foundations of Building the Model.

The model is built on an integrated set of pillars and foundations as shows in table2.

Table 2: pillars and foundations of the model

N	Pillar	Implications
	Lifelong learning	Teacher education ought to be a perpetual and cooperative endeavor that seamlessly merges theory and practice, providing sustained support to educators throughout their professional journeys and cultivating a culture of lifelong learning, rigorous assessment, vigilant oversight, and comprehensive assistance.
	Personal learning	Teacher education should be tailored to the unique attributes and aspirations of both educators and learners, fostering a personalized and distinctive learning experience.
	Integrating research and practice	Leveraging collaborative and innovative research to cultivate critical thinking, creativity, transformation, and empowerment.
	Inclusive awareness of values	Incorporating principles of social justice, equity, and inclusion into educational policies and practices, alongside competencies like critical thinking, problem-solving, intercultural dialogue, global citizenship, and lifelong learning, can foster a more equitable and inclusive educational landscape.
	Determine the competencies of the future generation	Discerning the essential capacities and abilities future learners must possess to navigate a dynamic and intricate world, particularly cultivating a culture of innovation, perpetual growth, inquiry, and introspection.

http://dx.doi.org/10.29009/ijres.8.2.1

N	Pillar	Implications
	Integration of multidisciplinary knowledge	Crafting a comprehensive curriculum that seamlessly merges interdisciplinary concepts, experiential learning, and analytical acumen across various disciplines and educational stages.
	Support network	Cultivating and empowering a cadre of teacher educators who embody the ethos of Rethinking Education, serving as mentors, facilitators, and catalysts for transformation among their colleagues and learners.
	Professional partnership	Forging and fortifying alliances among Teacher Education institutions, schools, communities, civil society organizations, and other key stakeholders, we aim to cultivate a culture of learning and innovation that empowers teachers' professional growth and propels school improvement. This endeavor will also enrich the educational experiences and outcomes of the future generation.

1.2. Traits and Attributes of the Teachers of the Future Generation:

In light of the proposed model, it is important for the teachers of the future generation to be proficient in an integrated system of professional, personal, and specialized skills as in Figure 5, including:

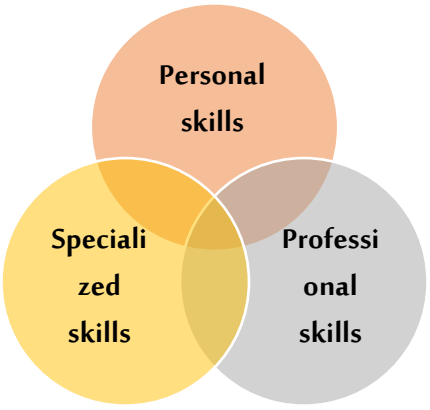

Figure 5 Skills of the Teachers of the Future Generation

The implications of the skills are shown in Table 3.

http://dx.doi.org/10.29009/ijres.8.2.1

Table 3: The implications of the skills

S	Field	Skills
١	Personal skills of the teacher	Positive communication and cooperation with the learning community.
٢		Critical and creative thinking, problem-solving, and decision-making.
٣		Social intelligence, emotional intelligence, and building positive relationships.
٤		The ability to focus on serving the beneficiary.
٥		.Marketing and presentation
٦		The ability to adapt to changes and overcome challenges within the educational landscape, coupled with a capacity for innovative problem-solving.
٧		Time management, priority management, and self-management.
٨		Confronting stress and dealing with challenges and difficulties positively and calmly.
٩		Entrepreneurship, project management, negotiation, and problem-solving.
١٠		Respecting and valuing diversity, differences, and acceptance of others.
١١		Cultural awareness and an open, learnable mindset
١٢		Having a moral vision, integrity, respect, and commitment to professional ethics.
١٣		Achieving standards of the moral and ethical field.
١	Specialized skills of the teacher	Outstanding knowledge in the field of specialization.
٢		A deep understanding of the subject matter and effective teaching methods.
٣		Mastery of scientific research methodologies and effectively utilizing knowledge sources to foster a discerning and informed researcher.
٤		Leveraging technological and informational proficiency to enhance the teaching and learning process.
٥		.Basic data analysis skills
٦		Outstanding linguistic ability in the mother tongue and a foreign language.
٧		Meeting content standards for the area of specialization.
١	Professional Skills of the Teacher	Learning lifelong and actively participating in the individual and collective professional growth of the learning community.
٢		Passion for teaching and learning, motivation, and positive orientation towards the profession of a teacher.

http://dx.doi.org/10.29009/ijres.8.2.1

S	Field	Skills
٣		Being a professional thinker, practitioner, and researcher.
٤		Leadership and supervision, building and leading work teams.
٥		Ability to organize, set priorities, set goals, and delegate.
٦		Entrepreneurship and innovation skills in teaching.
٧		Interacting with the learning community.
٨		Having a moral vision in addition to integrity, respect and being committed to professional ethics.
٩		Meeting professional standards for teaching.

1.3. Professional Standards of the Teacher of the Future Generation:

To realize the envisioned principles and foundations, the proposed model should be grounded in a comprehensive set of professional standards for future educators. These standards, as outlined by Hussein (2022), were developed through a meticulous review of numerous international teacher standards. This process culminated in a framework encompassing fifty-one standards, organized into four key fields: values and ethics, professional knowledge, professional practice, and continuous professional growth, as illustrated in Figure 6."

Figure 6 Fields of standards for distinguished teachers in a changing world (Source: Hussein, H; 2022)

http://dx.doi.org/10.29009/ijres.8.2.1

These four fields include a variety of standards under which there are 51 standards, as follows in table4.

Table 4: Professional Standards of the Teacher of the Future Generation

Fields and Standards	
The first field Values and Ethics	**This field encompasses ethical principles, practices, and conduct, ensuring that teachers adhere to personal behavioral standards that uphold the dignity of the profession in an evolving world rife with ethical and moral dilemmas.**
First Field Standards	**1.** Maintaining the trust and respect of the learning community and the dignity of the teaching profession
	2. Maintaining high standards of behavior and ethics inside and outside schools.
	3. Building solid relationships with mutual respect with students, colleagues, and all members of the learning community, inside and outside schools.
	4. Commitment to professional values and ethics, which include social justice, trust, respect, integrity, and care.
	5. Achieving high levels of tolerance and respect to the rights of others.
	6. Ensuring that teachers are receiving appropriate respect from all members of the learning community inside and outside the school.
	7. Understanding the profession's legal framework, responsibilities, and duties.
	8. Commitment and respecting the cultural diversity of the learning community.
	9. Respecting the cultural values, ethics, and societal practices of the learning community
	10. Commitment to facilitating learning for all students of all levels and backgrounds.
	11. Refraining from any behavior that might impede the fulfillment of teachers' professional obligations, particularly their exemplary role.
	12. Strengthening students' abilities to confront the moral and ethical challenges in a changing society.

http://dx.doi.org/10.29009/ijres.8.2.1

Fields and Standards	
:The second field Professional Knowledge	**This field encompasses the comprehensive knowledge required of a teacher, including a deep understanding of the student as a learner—their developmental stages, learning styles, and individual abilities and differences—as well as mastery of the subject matter, effective teaching methodologies and techniques, and the modern technologies essential for contemporary pedagogical practices.**
Second Field Standards	**1.** comprehending and understanding students' growth, developmental characteristics, learning styles, and how to take into consideration individual differences.
	2. comprehending and understanding students as learners, how they learn the subject matter, and the impact on their learning, including people with special needs.
	3. Demonstrating knowledge of the content, mastering its cognitive structure, and understanding its nature and how to teach it.
	4. Structuring and organizing academic content for optimal student learning, particularly through the implementation of a comprehensive scope and sequence matrix.
	5. Acquainting with methodology and strategies in general and teaching academic content in particular.
	6. Familiarization with methodologies and strategies for effective teaching, both in general and specifically within academic contexts.
	7. Showcasing the ability to integrate subject knowledge across disciplines and real-world scenarios.
	8. Modeling good teaching of the subject.
	9. Acquainting with technological innovations in the field of work and understanding their role and effectiveness in facilitating student learning.
:The third field Professional Practice	**This field includes everything a teacher should practice and perform within the learning community, starting with planning learning and creating learning environments that promote understanding and respect, applying teaching strategies and methods, evaluating learners and their actual achievements, and employing innovations in science and technology to facilitate student learning.**
The third Field Standards	**1.** Planning teaching and designing learning experiences that suit all students.

http://dx.doi.org/10.29009/ijres.8.2.1

Fields and Standards	
	2. Identifying the educational needs of learners.
	3. Setting high expectations that inspire students, stimulate their learning, and challenge their abilities
	4. Encouraging learners to solve problems and think in a critical and creative way.
	5. Establishing an adaptive learning environment that fosters safety, support, fairness, and equality for all students. This environment respects individual differences and continuously strives for differentiation.
	6. Maintaining a highly professional approach to student behavior management, we cultivate a safe, equitable, and stimulating learning environment that fosters the development of students' full potential.
	7. Fostering a nurturing environment that empowers all students to excel in their learning endeavors.
	8. Using teaching strategies for all students that facilitates their learning.
	9. Planning to individualize teaching and achieve personalized learning.
	10. Providing teaching with creative, practical, and inspiring methods and strategies for students.
	11. Using learner-centered teaching strategies.
	12. Providing personalized instruction tailored to each student's unique learning style and pace.
	13. Promoting the development of student learning outcomes.
	14. Managing learning time efficiently and effectively.
	15. Employing technological innovations and e-learning tools to enhance student learning.
	16. Evaluating student progress, offering constructive feedback, and crafting comprehensive evaluation reports to foster learning and ensure accurate, productive assessment practices.
	17. Involving family in promoting learning and assessment practices to develop student learning and improve student performance.
	18. Employing various tools to evaluate students' cognitive skills and effective learning outcomes
	19. Employing the analysis of evaluation results in restructuring teaching.
	20. Providing remedial and enrichment programs in the light of the results of evaluating student learning outcomes.

http://dx.doi.org/10.29009/ijres.8.2.1

Fields and Standards	
	21. Encouraging learners to express their opinions and feelings about their practices in teaching and learning situations.
	22. Mastering scientific research, communication, and distance learning skills via digital platforms.
	23. Mastering problem-solving and crisis-response skills.
The fourth Field Continuous Professional Growth	**This field encompasses the knowledge and practices necessary for a teacher's professional development throughout their career. It includes strategies for personal and collaborative growth, engagement with professional networks, participation in learning communities, and effective interaction with local parents. Moreover, it emphasizes staying abreast of contemporary advancements, particularly in technology and its applications.**
Forth Field Standards	**1.** Being able to identify training needs and working to achieve them continuously.
	2. Participating in professional learning as a professional through personal and collaborative activities
	3. Participating in professional activities with colleagues, parents, students and the local community to promote professional capabilities.
	4. Nurturing collaborative professional connections with colleagues, family, and learning communities, and executing professional responsibilities with enthusiasm to support and advance teaching and learning.
	5. Nurturing collaborative professional connections with colleagues, family, and learning communities, and executing professional responsibilities with enthusiasm to support and advance teaching and learning.
	6. Keeping up with the modern developments which are necessary for the teacher's work in various fields, especially, technological innovations and their applications and e-learning tools.
	7. Mastering research skills in the field of specialization and preparing more action research.

http://dx.doi.org/10.29009/ijres.8.2.1

1.6. Specifications and guidelines of the Pre-Service Preparation Institution, and Partnership with the Practical Practice Foundation

Pre-service teacher education institutions (colleges of education in universities) must prioritize graduating teachers with exceptional qualifications, skills, and competencies that equip them to meet the evolving challenges of modern life. Merely producing teachers with strong subject matter knowledge is insufficient for nurturing future generations. Therefore, a focus on preparing students for their roles as educators should be at the core of teacher education program development. These programs must adhere to rigorous accreditation standards, such as those set by the Council for the Accreditation of Educator Preparation (CAEP). These standards emphasize the graduate's mastery of content and pedagogy, the establishment of partnerships and practical experiences, quality assurance and continuous improvement, and ongoing evaluation of the program's impact on students, society, and the environment.

One of the most significant drawbacks in current teacher education programs is the weakness of their partnership with institutions of practical practice (schools). Therefore, it is essential to prepare a new framework for partnership based on achieving mutual benefits and not just sending students to teach some classes one day a week for a semester or for the student to devote full time to teaching a specific class for a semester. Therefore, it is essential to start a new partnership that begins by choosing -very carefully- schools of professional practice to provide an experience which is similar to that offered by university hospitals to medical school students where the university professor practices medicine and teaches it directly to students through examining patients alongside consultant doctors, representatives, specialists, and practitioners in an integrated medical educational system. This is what Linda Darling-Hammond indicated in several of her research and writings, including (Linda Darling-Hammond, 2020)

Thus, it is essential to create a new partnership with schools which play a role similar to that of a university hospital for medical colleges, where the university professor and students teach together in schools with distinguished educational

http://dx.doi.org/10.29009/ijres.8.2.1

supervisors and creative teachers in an integrated educational system like the educational and medical systems in university hospitals. While acknowledging that this idea is not entirely new, its features have been applied previously since the beginning of the twentieth century in many teacher education institutions. In Egypt, for example, there was an old experience in which some general education schools were attached to teachers' homes under the name (Teachers' Annex), to be an institution for clinical teaching practice. Many studies, including (Lavonen et al., 2019) and (Hallström et al., 2023), confirm the importance and quality of university-affiliated schools in the professional development of teachers.

According to the proposed model, this partnership should be framed and carefully governed institutionally between teacher education institutions and general education schools, in order to define each party's joint and individual tasks and responsibilities and clarifying the opportunities and advantages that will return to each party. Schools are more than just places for students of teacher education institutions to spend their time; they receive only limited supervision and training, and the results could be more substantial.

1.7. Specifications and guidelines for the in-service professional development institution and the collaboration with the pre-service preparation institution.

The in-service professional development institution and the pre-service preparation institution share similar tasks and roles. The outputs of the pre-service institution serve as the inputs for the professional development institution. A robust and distinguished pre-service teacher education institution produces teachers with exceptional qualifications. The professional development foundation can then build upon these strong foundations, refining teachers' experiences and skills and adding new competencies that are relevant to the field, grounded in best practices, and informed by academic research. The professional development institution should design its programs and systems to address the training needs of teachers, the needs of students and schools, and future trends and challenges. By offering a diverse and interactive

http://dx.doi.org/10.29009/ijres.8.2.1

program system that integrates knowledge and experiences with practical application, the institution can effectively meet current and future needs and aspirations.

2. The 2nd Level: Processes

The second level consists of processes, encompassing two primary elements. The first is the collaborative framework among the three institutions involved in teacher education: the pre-service preparation institution, the practical practice institution, and the in-service professional development institution. The second element is the executive guideline for the proposed model.

2.1. The system of interaction and partnership between the three institutions concerned with teacher education.

To develop the desired teacher for the future generation, an integrated interactive system is essential. This system should encompass the pre-service preparation institution, the practical practice institution, and the in-service professional development institution, spanning various stages and levels. Characterized by its interconnectedness and interactive exchange relationships, this system will foster a more comprehensive and effective teacher preparation process, as illustrated in Figure7.

To foster institutional partnerships and enhance practical training, a select team of elite faculty members from the teacher education institution, experienced educational supervisors, and outstanding teachers collaborate to create an integrated system. This team meets annually to develop a comprehensive practical training plan. Students are engaged in daily teaching practice, followed by reflective observation sessions. This approach ensures that they receive timely feedback based on optimal performance. To guide field training and practical teaching, the Charlotte Danielson model is implemented, incorporating its essential elements, models, and evaluation tools.

Establishing and operationalizing this integrated system will require a robust partnership between the three institutions. This collaborative framework will support student teachers throughout their academic journey and into their professional careers. By adopting a unified governance structure and implementing effective educational

http://dx.doi.org/10.29009/ijres.8.2.1

practices, we anticipate the development of highly skilled and innovative teachers and researchers. This aligns with the core objectives of our proposed model.

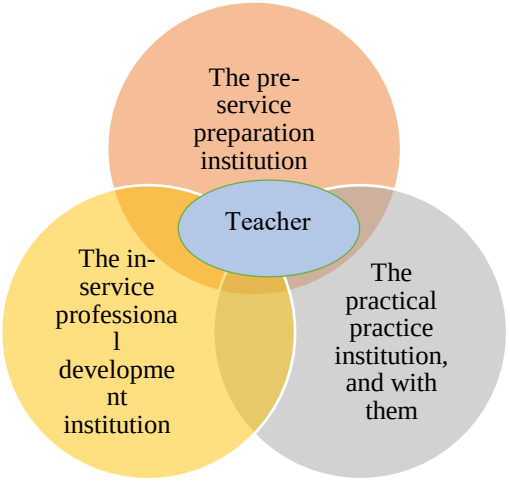

Figure 7 shows the system of interaction and partnership between the three institutions concerned with teacher Education.

2.2. The executive guide for implementing the proposed model.

In order to make a fundamental shift in teacher education, it is proposed to activate the proposed model through a new entity created with a philosophy, vision, and policies which are different and far away from the current situation and not affected by the culture of change resistance. So, the new entity can provide the minimum essential elements for success in teacher education and training with:

- An attractive educational environment for distinguished students who will make change in the future to join teacher education institutions and to retain outstanding teachers to teach in the classroom.
- Raising the teacher's professional motivation
- A competitive social and economic situation within society makes a teacher's profession a competitive choice for students.

According to the following steps shows in Table 5:

http://dx.doi.org/10.29009/ijres.8.2.1

Table 5: The executive guide for implementing the proposed model.

N	Steps		Implications
١	pre-service preparation institution	Organizational design	• Both the teacher preparation institution and its curricula are designed according to modules not courses belonging to academic departments, that each module consists of integrated units. • Students move through the modules sequentially, and success depends on projects which are based on innovation and solving real-life problems within the time frame for graduation in 4 years. • The teaching practicum is organized according to the Charlotte Danielson model and in interactive partnership with schools. • National standards and local teacher licenses are within a particular module parallel with the teaching practicum module. • The student-teacher passes the teaching practicum module depending on the projects of the students he teaches in schools and their success in solving realistic problems or creating projects that serve the community. • The last academic year will be for modules of teaching practicum, national standards, and local licenses.
		Program structure	• The core curriculum is the basis for organizing the curriculum for teacher preparation. • The teacher preparation program modules are built and organized according to the PBL. .Methodology • Designing the content and curricular and extracurricular activities for the module units should be based on the proposed model's inputs, especially the foundations and pillars, the general characteristics of the future teacher, and the professional standards of the future teacher, and in the light of the unity and integration of knowledge. • Curricula and curricular and extracurricular activities focus on students' community service, assuring volunteerism and charitable work ideas to develop the community, and integrating entrepreneurship ideas and practices.

http://dx.doi.org/10.29009/ijres.8.2.1

N	Steps		Implications
			• The modules are distributed throughout the years of study in an interactive matrix, horizontally and vertically, in light of the unity and integration of knowledge. • The distribution of percentages for personal, professional, and specialized skills is in content and curricular and extracurricular activities will be according to the vision of the partnership management system and the local accreditation body.
		students Selection	Visionary and creative students are selected through special ability tests, which are developed to measure the student's motivation, passion, desire to change society, extent of patience with the problems of the profession and its requirements, creative abilities, and skills, especially in leadership, persuasion, and entrepreneurship.
		Selection of faculty members	Innovative faculty staff who are passionate about teaching, learning, and research and who are ambitious to change and support the culture of innovation and continuous development are selected according to standards and specifications that show that they possess the qualities that their students should acquire, especially the personal, professional, and specialized skills and professional standards desired by the student teacher upon graduation. So, they can join the integrated system for specific periods which will be renewed according to performance evaluation.
		faculty-to-student ratio	During the first trial period, the ratio of students to faculty members is expected to be at most (15:1) so that great effectiveness can be achieved in preparation, training, and acquiring skills and experience.
٢	Practical practice institution	Specifications	The schools of practical practice are selected according to distinct specifications, like having places, human capabilities that include administrative staff and distinguished teachers, financial capabilities, and appropriate equipment that allows observation, training, feedback, practice development, and learning.
		Selection of Supervisor	The same mechanism was used for selecting faculty staff in the preparation institution

http://dx.doi.org/10.29009/ijres.8.2.1

N	Steps		Implications
٣	the specifications of the in-service professional development institution.	Selection of trainer	Same mechanism used for selecting faculty staff and supervisors of practical practice
		programs	• Training programs are planned according to the training teachers' needs, students' needs, and the requirements of the future, especially on the three sides: personal, specialized, and professional, and the most significant focus should be on individual skills, considering teaching is an art before being a science and a profession. • The programs focus on creativity, persuasion, leadership, entrepreneurship, project approaches, problem-solving, personal intelligence, social intelligence, and culture of excellence. In order to complete the training program, graduation projects should be done on innovation, problem-solving, and their applications in the classroom. • The structure of all training programs should be interactive and applied, integrating knowledge with practice and application. This will ensure that participants can effectively demonstrate their practical skills.
٤	Interactive partnership system	Governance framework	The interactive partnership system between the three institutions (preparation, practical practice, and professional development) should be framed and governed by global best practices in a way that achieves the model's vision and mission. Everyone should accurately understand their roles within the system and know their connection to others and their roles via the principles of equality and cooperation.
		Attractive educational environment	Formulating educational policies and providing adequate resources to create an attractive educational environment for distinguished students who are capable of making change in the future, increase the professional motivation level for teachers, and achieve a competitive social and economic status within society, that make the profession of teacher a competitive option for students to join teacher preparation institutions.
		Professional developme	The model's vision and mission establish a clear, binding path for training and professional development and applies to all faculty

http://dx.doi.org/10.29009/ijres.8.2.1

N	Steps		Implications
		nt for human resources	members, practice supervisors, and trainers. To ensure the continuity of distinguished human resources within the system.
٥	Assessment		Specific tools are utilized for formative and alternative assessments within a project-based, problem-solving framework. These tools are applied to all components of the preparation and training system in a comprehensive, interactive manner, aligned with a culture of innovation and continuous improvement.
٦	Feedback and lifelong learning		The strengths, weaknesses, and lessons learned are identified based on application and feedback results. The model is developed through periodic reports to achieve the desired teacher for the future generation.

The Third Level: Output

This level outlines the desired outcomes of the model, which is to prepare future generations to adopt the proposed interactive partnership system. This system will be established between institutions involved in teacher education and training, based on a matrix that combines the necessary knowledge, skills, and attitudes. The goal is to develop teachers with exceptional personal, professional, and specialized competencies. The model will utilize feedback and learning analysis to achieve this. It aims to create an outstanding preparation and training program that produces teachers who are proficient in professional, personal, and specialized skills and who can effectively contribute to building future generations. This is the ultimate objective of the proposed model.

4. Feedback

To achieve the desired outcomes, it's crucial to incorporate feedback and formative evaluation at all stages of the model's implementation. This involves analyzing learning in a distinctive manner throughout the three levels and throughout the entire process.

http://dx.doi.org/10.29009/ijres.8.2.1

Conclusion

This study aimed to develop a comprehensive framework for a teacher education model that encompasses all stages of teacher development, from initial selection to continuous professional growth. Structured across three interconnected levels—inputs, processes, and outputs—this model emphasizes the integration of feedback to ensure ongoing refinement and relevance. While it does not prescribe specific program structures, its inherent flexibility allows for adaptation across diverse educational contexts and systems.

To effectively implement this teacher preparation model, it is essential to establish an independent entity that fosters innovation and remains unencumbered by resistance to change. This entity should prioritize the creation of a socially and economically attractive learning environment that enhances the status of the teaching profession. By cultivating a positive and supportive educational climate, teachers can be empowered to serve as role models who shape students' behaviors, values, and aspirations. Such an approach will not only elevate teaching as a profession but also ensure the development of educators who meet global standards. Ultimately, this model aims to prepare a new generation of learners equipped with the knowledge, skills, and adaptability needed to navigate future challenges and contribute meaningfully to societal advancement.

Conflict of interest

The author states that there is no conflict of interest.

http://dx.doi.org/10.29009/ijres.8.2.1

References

Alsherbiny, F. & Aljalawi, M. (2023). Developing the Teacher Education program in colleges of education in light of Egypt's Vision 2030. To achieve the requirements of the new republic. College of Education Journal, 11 (3), 1-39, https://doi.org/10.21608/foej.2023.196094.1183. (In Arabic).

Aqeel, H. (2016). Preparing secondary school teachers in colleges of education in Saudi Arabia in light of comprehensive quality standards: an analytical study. Journal of Education, No. 168, Part 1, 233-305, https://doi.org/10.21608/jsrep.2016.31422 (In Arabic).

Chung, J. (2016). The (mis) use of the Finnish Teacher Education model:' policy-based evidence-making'? Educational Research, 58(2), 207-219, DOI: 10.1080/00131881.2016.1167485

Danilewicz, W., Korzeniecka-Bondar, A., Kowalczuk-Walędziak, M., & Lauwers, G. M. L. V. (2019). Rethinking Teacher Education for the 21st Century: Trends, challenges, and new directions (p. 402). Verlag Barbara Budrich. https://library.oapen.org/bitstream/handle/20.500.12657/23733/1006411.pdf?sequence=1

Darling-Hammond, L. (2013). Diversity, equity, and education in a globalized world. Kappa Delta Pi Record, 49(3), 113-115, DOI: 10.1080/00228958.2013.819186

http://dx.doi.org/10.29009/ijres.8.2.1

Darling-Hammond, L. (2016). Research on teaching and Teacher education and its influences on policy and practice. Educational Researcher, 45(2), 83-91. https://doi.org/10.3102/0013189X16639597

Darling-Hammond, L. (2017). Teacher Education around the world: What can we learn from international practice? European journal of teacher education, 40(3), 291-309, DOI: 10.1080/0161956X.2014.939009

Darling-Hammond, L. (2017). Teacher Education around the world: What can we learn from international practice? European journal of teacher education, 40(3), 291-309,DOI: 10.1080/02619768.2017.1315399

Darling-Hammond, L. (2017). Teaching for social justice: Resources, relationships, and anti-racist practice. Multicultural Perspectives, 19(3), 133-138., DOI: 10.1080/15210960.2017.1335039

Darling-Hammond, L. (2020). Accountability in teacher education. Action in teacher Education, 42(1), 60-71., DOI: 10.1080/01626620.2019.1704464

Darling-Hammond, L. (2021). Defining teaching quality around the world. European Journal of Teacher Education, 44(3), 295-308, DOI: 10.1080/02619768.2021.1919080

http://dx.doi.org/10.29009/ijres.8.2.1

Darling-Hammond, L., & Hyler, M. E. (2020). Preparing educators for the time of COVID… and beyond. European Journal of Teacher Education, 43(4), 457-465, DOI: 10.1080/02619768.2020.1816961

Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. Applied developmental science, 24(2), 97-140. DOI: 10.1080/10888691.2018.1537791

Darling-Hammond, L., Newton, X., & Wei, R. C. (2010). Evaluating Teacher Education Outcomes: A study of the Stanford Teacher Education Program. Journal of Education for Teaching, 36(4), 369-388. DOI: 10.1080/02607476.2010.513844

Darling-Hammond, L., Schachner, A. C., Wojcikiewicz, S. K., & Flook, L. (2024). Educating teachers to enact the science of learning and development. Applied Developmental Science, 28(1), 1-21. DOI: 10.1080/10888691.2022.2130506

Diez, M. E., Athanasiou, N., & Mace, D. P. (2010). Expeditionary learning: The Alverno College Teacher Education model. Change: The magazine of higher learning, 42(6), 18-24, DOI: 10.1080/00091383.2010.523402

Eldahshan, G. (2020). Ethical dilemmas for the applications of the Fourth Industrial Revolution. International Journal of Research in Educational Sciences., 3(3), 51 -90. http://dx.doi.org/10.29009/ijres.3.3.1

Fitriati, F., Rosli, R., Iksan, Z., & Hidayat, A. (2024). Exploring challenges in preparing prospective teachers for teaching 4C skills in the mathematics classroom: A school-university partnership perspective. Cogent Education, 11(1), 2286812, DOI: 10.1080/2331186X.2023.2286812

Ghanaiem, M. (2015) The Arab educational reform in the digital age a necessity, Why and How. 1st International Scientific Conference (Fifth Annual) Arab Education in the Digital Age Opportunities and Challenges). October 12-13, 2015. (In Arabic).

Hallström, J., & Frejd, J. (2023). University Teachers' Experiences of Teaching Hands-On Components in Science and Technology in Primary Teacher Education during COVID-19. Journal of Science Teacher Education, 1-20, DOI: 10.1080/1046560X.2023.2165999

Hayes, K. N., Preminger, L., & Bae, C. L. (2024). Why does teacher learning vary in professional development? Accounting for organizational conditions. Professional development in education, 50(1), 108-128, DOI: 10.1080/19415257.2023.2283433

Hussein, H. (2022). The Standards of the Outstanding Teacher in a Changing World, Journal of Mathematics Education, 25 (3) part1, April 2022, 41-73. https://dx.doi.org/10.21608/armin.2022.243259 (In Arabic).

Jennifer Chung (2016) The (mis)use of the Finnish Teacher Education model: 'policy-based evidence-making'?, Educational Research, 58:2, 207-219, DOI: 10.1080/00131881.2016.1167485

http://dx.doi.org/10.29009/ijres.8.2.1

Kissau, S., Dack, H., & Fitchett, P. (2022). Does Practice Make Perfect? The Curricular Give and Take of One Teacher Education Program's Re-design. Action in Teacher Education, 44(2), 123-142. DOI: https://doi.org/10.1080/01626620.2021.1955775

Lavonen, J., Henning, E., Petersen, N., Loukomies, A., & Myllyviita, A. (2019). A comparison of student teacher learning from practice in university-affiliated schools in Helsinki and Johannesburg. European Journal of Teacher Education, 42(1), 4-18, DOI: 10.1080/02619768.2018.1541083

Leonard, A. E., Burns, A., Hamilton, E. R., Taylor, L., & Tanck, H. (2023). Place as Teacher: Community-Based Experiences, Third Spaces, & Teacher Education. Studying Teacher Education, 1-22, DOI: 10.1080/17425964.2023.2250822

Low, E. L. (2023). Reimagining Teacher Education in Singapore for a changing international landscape. European Journal of Teacher Education, 1-14, DOI: 10.1080/02619768.2023.2242576

Mazen, H. (2016). There is a need to reform the architecture of our educational curricula system and digitize it in light of the challenges of the post-Internet era, the information society, and digital citizenship. The 4th International Scientific Conference of the Egyptian Society for Curricula and Teaching Methods, August 3-4, 101-150. (In Arabic).

Murray, M. M., & Mereoiu, M. (2016). Teacher–parent partnership: an authentic Teacher Education model to improve student outcomes. Journal of Further and Higher Education, 40(2), 276-292, DOI: 10.1080/0309877X.2014.971108

http://dx.doi.org/10.29009/ijres.8.2.1

UNESCO. (2015). Rethinking education: Towards a global common good? Paris: UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000232555

UNESCO. (2019). The Futures of Education, Paris: UNESCO., https://www.unesco.org/en/futures-education

UNESCO. (2022). Reimagining our futures together: A new social contract for education. Paris: UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000379707/PDF/379707eng.pdf.multi

Yuan, R., Liu, S., & Wang, Z. (2023). Humanising Teacher Education through translanguaging: experiences from an online English-medium instruction (EMI) course. International Journal of Multilingualism, 1-23, DOI: 10.1080/14790718.2023.2268120

Zenkov, K., Helmsing, M., Parker, A. K., Glaser, H., & Bean, M. (2021). Portrait of the Teacher Educator as a Weary Pedagogue: Narrating Our Way to a Post-Pandemic Vision of Educator Preparation. Teacher Educators' Journal, 14, 106-125. https://files.eric.ed.gov/fulltext/EJ1296521.pdf

http://dx.doi.org/10.29009/ijres.8.2.1