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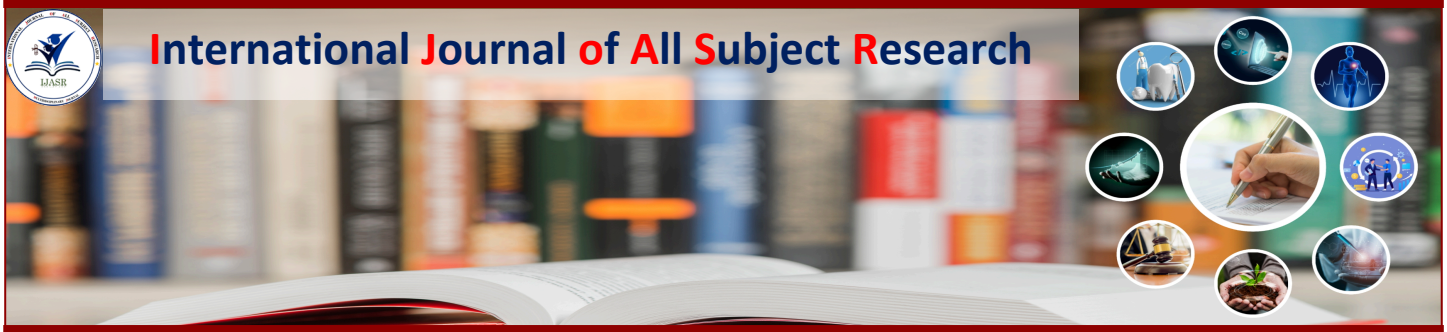

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Towards a New Model of Pre-Service & In-Service Teacher Education: a Qualitative Analysis

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Abstract

The foundation of good teaching rests on three pillars: a robust knowledge base, the ability to translate that knowledge into effective classroom practices, and a focus on personal and professional growth. However, pre-service education programs often stumble over an uneven distribution of emphasis. The current landscape of teacher education faces growing challenges, demanding a re-evaluation of how we prepare and support educators. The traditional model of pre-service teacher education, followed by isolated instances of in-service training, has come under increasing scrutiny for its fragmented nature and its failure to adequately prepare educators for the complex realities of contemporary classrooms. This research recognizes the limitations of a system that compartmentalizes pre-service and in-service experiences. Instead, it proposes a paradigm shift toward a more integrated and dynamic model that fosters meaningful connections between these two stages. This study proposes a new model of pre-service and in-service teacher education informed by a qualitative analysis of existing practices and the experiences of both pre-service and in-service teachers. The research explores themes of collaboration, knowledge sharing, and continuous learning across the pre-service and in-service teacher education programmes. Findings reveal a disconnect between theoretical preparation and practical realities, highlighting the need for a more integrated and context-sensitive approach. By conducting in-depth qualitative analyses of existing programs, the research aims to identify areas for improvement and innovation in both pre-service and in-service teacher education. Special attention will be given to the balance between theoretical knowledge, practical competency, and the promotion of holistic human development in aspiring and practicing teachers. This study investigates the potential benefits of this model, and suggesting how it can foster more dynamic professional development, enhance knowledge exchange, and ultimately, contribute to improved student outcomes.

Keywords: Taxonomy of teacher education, teacher education, model of pre-service teacher education, model of in-service teacher education, knowledge acquisition model, competency oriented model

Introduction

Teacher education refers to the formalized process through which individuals acquire the knowledge, skills, and competencies necessary to become effective educators or teachers. It encompasses both pre-service teacher education, which prepares individuals for teaching roles before they enter the classroom, and in-service teacher education, which provides ongoing professional development and support to practicing teachers. Teacher education programs typically include a combination of coursework, practical teaching experiences, and assessments to ensure that educators are well-prepared to meet the diverse needs of students in educational settings. The field of teacher education stands at the intersection of evolving educational paradigms, emerging technologies, and the ever-changing needs of learners. In response to the dynamic nature of the modern educational landscape, there arises a compelling need to reassess and reframe existing models of pre-service and in-service teacher education. This study embarks on a qualitative analysis, delving into the intricacies of teacher preparation programs with the aim of propelling the discourse towards the development of a new, more responsive model. Traditional teacher education models, while foundational, are confronted with the challenge of adapting to the complexities of contemporary classrooms. The demand for educators to possess not only a robust knowledge base but also finely tuned competencies and a keen understanding of human development underscores the necessity for a more holistic and tailored approach to teacher preparation. The title "Towards a new model of Pre-service & In-service Teacher Education: A Qualitative Analysis" encapsulates the essence of our endeavor to explore, question, and refine the very fabric of how we prepare educators for the challenges of tomorrow. In this discussion, we embark on a qualitative journey, leveraging in-depth interviews, observations, and document analysis to unravel the nuanced layers of existing teacher education programs. By placing emphasis on qualitative analysis, we aspire to capture the rich narratives, experiences, and perceptions of educators, administrators, and other stakeholders involved in teacher education. This qualitative lens provides a unique opportunity to unearth the subtleties often overlooked in quantitative assessments, offering a

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comprehensive understanding of the strengths and weaknesses inherent in current models.

As we navigate through the discourse on pre-service and in-service teacher education, our goal is to not only identify the gaps and challenges but also to recognize the successes and innovative practices that warrant replication. The qualitative analysis serves as a powerful tool to unveil the intricate tapestry of teacher education, paving the way towards a model that aligns seamlessly with the demands of the 21st-century classroom. This discussion sets the stage for a deeper exploration into the various dimensions of teacher education, prompting thoughtful reflections on how a new model can be envisioned, shaped, and implemented. This model not only promises to bridge the gap between theory and practice but also presents the potential to revitalize professional development, enhance knowledge exchange, and ultimately, cultivate a generation of adaptable and responsive educators equipped to thrive in the evolving landscape of education. The proposed model will be evaluated through its potential to address the needs and challenges identified in the qualitative data. Feedback from both pre-service and in-service teachers will be sought to refine and adapt the model for real-world implementation. This research aims to move beyond simply describing the current state of pre-service and in-service teacher education. Instead, it seeks to generate actionable knowledge that can inform the development of a more effective and responsive model for nurturing skilled and adaptable educators for the future.

Statement of the Problem

The current study aims to determine what fundamental attitudes and character traits are connected to good teaching and how a taxonomy can capture and classify them. How may chances for ongoing and significant professional growth be included in the design of in-service teacher education? In what ways may the curriculum for pre-service teachers be designed to offer chances for ongoing and significant professional development? Consequently, the researcher chose to designate the issue as "TOWARDS A NEW MODEL OF PRE-SERVICE & IN-SERVICE TEACHER EDUCATION: A QUALITATIVE ANALYSIS."

Research Questions

- How can a taxonomy capture and categorize the essential dispositions and personal qualities associated with effective teaching?
- How can In-service teacher education be structured to provide continuous and meaningful professional development opportunities?
- How can Pre-service teacher education be structured to provide continuous and meaningful professional development opportunities?

- **A Taxonomy of Teacher Education**

A taxonomy is a systematic classification or arrangement of items into categories based on their shared characteristics. In the context of teacher education, a taxonomy would involve categorizing and organizing the various components, elements, or aspects of teacher education programs. This classification could include considerations such as pedagogical approaches, assessment methods, curriculum content, technology integration, and other relevant factors. A taxonomy of teacher education aims to provide a structured framework for understanding and analyzing the diverse elements that contribute to the preparation and development of teachers. It helps in identifying patterns, relationships, and trends within teacher education practices. This classification can be instrumental in guiding discussions, research, and improvements in teacher education by offering a systematic way to conceptualize and evaluate different aspects of teacher preparation and professional development programs classified in terms of Taxonomy for Teacher Education as stated below.

Table 1: Taxonomy for Teacher Education

Knowledge Base Domain	Competency Based Domain	Human Development Domain
1. Integral Knowledge	1. Innovative Competency	1. Self-Concept and Self-Esteem
2. Innovative Knowledge	2. Reflective Competency	2. Emotional Awareness
3. Critical Knowledge	3. Evaluation Competency	3. Social Development
4. Analytical Knowledge	4. Epistemological Competency	4. Values and Beliefs
5. Aesthetic Knowledge	5. Technological Competency	5. Commitment
6. Experiential Knowledge	6. Management Competency	6. Resilience and Coping Skills
7. Ethical Knowledge	7. Collaborative Competency	7. Empathy and Compassion
8. Practical Knowledge	8. Pedagogical Competency	8. Interpersonal Skills
9. Pedagogical Content Knowledge (PCK)	9. Curricular Competency	9. Adaptability
10. Transactional Knowledge	10. Behavioural Competency	10. Motivation and Engagement
11. Foundational Knowledge	11. Social Competency	11. Mindfulness and Emotional Well-being

- **Knowledge Base in a Hierarchical for Teacher Education**

1. **Integral Knowledge:** This type of knowledge transcends individual disciplines and seeks to connect seemingly disparate fields into a coherent whole. It emphasizes the interconnectedness of everything and aims to understand systems rather than isolated parts. Integral knowledge involves not only knowing facts but also understanding the context, assumptions, and biases that shape our understanding of those facts. It encourages questioning fundamental frameworks and seeking deeper meaning.
2. **Innovative Knowledge:** Innovative knowledge doesn't emerge from a vacuum; it draws upon and reinterprets existing knowledge in new and original ways. Integral knowledge provides the fertile ground for innovative ideas to bloom. This type of knowledge challenges conventional wisdom and explores untrodden paths. It embraces creativity, imagination, and risk-taking to break free from established patterns. Innovation isn't merely about having new ideas; it's about turning those ideas into tangible solutions that address real-world problems. This

type of knowledge thrives on practicality and a focus on impact.

3. **Critical Knowledge:** Critical knowledge involves examining information with a skeptical eye, dissecting arguments, and uncovering hidden biases. It challenges us to move beyond surface-level interpretations and ask deeper questions. This type of knowledge emphasizes analyzing data and evidence objectively, assessing the validity of claims and identifying logical fallacies. It equips us to make informed judgments based on reason and evidence. Critical knowledge encourages actively seeking out opposing perspectives and understanding the reasoning behind them. This allows for a more balanced and nuanced analysis of complex issues.
4. **Analytical Knowledge:** This type of knowledge focuses on breaking down complex information into manageable components for closer examination. It involves categorizing, defining, and identifying relationships between individual elements. Analytical knowledge utilizes logic and deductive reasoning to draw conclusions from available information. It provides a structured framework for understanding and explaining phenomena. By deconstructing and analyzing problems, this type of knowledge lays the groundwork for effective problem-solving strategies. It equips us with the tools to diagnose issues and develop logical solutions.
5. **Aesthetic Knowledge:** This type of knowledge involves the ability to recognize and appreciate beauty in its various forms, from the natural world to artistic expression. It fosters a sense of wonder and awe for the world around us. Aesthetic knowledge goes beyond mere appreciation; it allows us to understand the principles and underlying structures that create beauty. This understanding can inform our own creative endeavors and enrich our experience of art. Beauty often evokes strong emotions, and aesthetic knowledge allows us to connect with these emotions on a deeper level. It fosters empathy, empathy, and a richer understanding of the human experience.
6. **Experiential Knowledge:** This type of knowledge is acquired through first-hand experience and active engagement with the world. It is often tacit and implicit, not easily captured in words but readily available through practice and application. Experiential knowledge builds intuition and an ability to navigate by feel. It equips us with practical skills and a sense of what works in specific contexts. By actively engaging with the world, we learn not only about our surroundings but also about ourselves. Experiential knowledge fosters personal growth, resilience, and adaptability.
7. **Ethical Knowledge:** This type of knowledge involves grasping fundamental ethical concepts like justice, fairness, and responsibility. It allows us to distinguish right from wrong in various situations. Ethical knowledge equips us with the ability to analyze situations through different ethical lenses, such as utilitarianism, deontology, or virtue ethics. This helps us make informed decisions that align with our chosen values. Ethical knowledge isn't merely about knowing principles; it's about applying them to real-world dilemmas. This involves critical reflection on potential consequences, considering diverse perspectives, and finding solutions that minimize harm and uphold ethical principles.
8. **Practical Knowledge:** This type of knowledge involves the ability to take theoretical knowledge and apply it effectively in concrete situations. It bridges the gap between abstract ideas and real-world challenges. Practical knowledge is crucial for problem-solving, allowing us to adapt theoretical frameworks to specific contexts and find practical solutions to real-world issues. Mastering practical knowledge often involves acquiring specific skills and expertise through practice and experience. This allows us to perform tasks effectively and navigate various situations with confidence.
9. **Pedagogical Content Knowledge (PCK):** PCK is specific to the field of education and focuses on the complex interplay between subject matter knowledge, pedagogy, and learner characteristics. It involves not just knowing the content but also understanding how to effectively communicate it to different types of learners. PCK equips educators with the ability to choose and adapt teaching methods based on the specific content, learner needs, and learning environment. It facilitates effective knowledge transfer and caters to diverse learning styles. PCK also encompasses the knowledge and skills for designing effective assessments to measure learning outcomes and adapt teaching approaches based on the evaluation results.
10. **Transactional Knowledge:** This type of knowledge focuses on acquiring simple facts, procedures, or definitions. It serves as a starting point for learning and often involves rote memorization. Transactional knowledge may not always be easily applicable to real-world situations or require deeper analysis. However, it forms a necessary stepping stone for building more complex knowledge structures. The value of transactional knowledge depends on the specific context and purpose. It can be essential for basic tasks or specific situations but may not be sufficient for deep understanding or critical thinking.
11. **Foundational Knowledge:** This type of knowledge forms the essential base for further learning and understanding. It encompasses core concepts, facts, and skills that are needed to build upon in more advanced studies. A strong foundation in fundamental knowledge is crucial for acquiring and comprehending more complex information. It provides a framework for future learning and ensures a solid understanding of key concepts. Foundational knowledge remains relevant throughout life, serving as a springboard for continuous learning and adaptation. It empowers individuals to navigate various situations and engage in new learning opportunities effectively.

- **At a Glance Knowledge Base in a Hierarchical for Teacher Education Tabulated Below**

Table 2: Knowledge Base for Teacher Education relating its theoretical Understanding and Corresponding Activities for Building Knowledge

Knowledge Base	Description	Activities for Building Knowledge
1. Integral Knowledge	Understanding the interconnectedness of different subjects and disciplines. Seeing the big picture and connecting knowledge to real-world issues.	Interdisciplinary studies, case studies, project-based learning that integrates multiple disciplines, exploring complex challenges with diverse perspectives.
2. Innovative Knowledge	Generating new ideas and solutions to educational problems. Thinking creatively and outside the box.	Design thinking workshops, problem-based learning, exploring innovative teaching methods, using technology creatively to solve educational challenges.
3. Critical Knowledge	Questioning assumptions, analyzing information, and evaluating evidence. Thinking with depth and rigor.	Philosophy of education courses, critical analysis of research and curriculum, debating educational issues, examining bias and perspectives.
4. Analytical Knowledge	Breaking down complex concepts into smaller parts and understanding their relationships. Identifying patterns and making connections.	Research methods courses, data analysis workshops, problem-solving activities, dissecting texts and curriculum materials.
5. Aesthetic Knowledge	Appreciating and understanding beauty, creativity, and the arts. Integrating various art forms into learning experiences.	Arts integration workshops, exploring different art forms, using creative writing and storytelling in teaching, creating aesthetic learning environments.
6. Experiential Knowledge	Learning through doing and reflecting on experience. Building practical skills and understanding by actively engaging with content.	Hands-on activities, simulations, field trips, service learning projects, internships, action research.
7. Ethical Knowledge	Understanding moral principles and their application in education. Making ethical decisions and promoting moral responsibility.	Professional ethics training, case studies in educational ethics, exploring social justice issues, fostering empathy and respect for diversity.
8. Practical Knowledge	Applying knowledge to solve real-world problems in the classroom. Implementing effective teaching strategies and managing challenges.	Curriculum development courses, teaching methodology workshops, classroom management strategies, peer observation and feedback, practicing and refining teaching skills.
9. Pedagogical Content Knowledge (PCK)	Combining subject-matter knowledge with effective teaching strategies. Understanding how to teach specific content in a meaningful way.	Content-specific pedagogy courses, teaching methods aligned with specific subjects, analyzing curriculum and adapting to students' needs, developing engaging lessons.
10. Transactional Knowledge	Applying knowledge in new and different contexts. Transferring learning from one situation to another.	Interdisciplinary projects, problem-solving activities requiring transfer of knowledge, adapting teaching strategies to diverse learners, using technology to explore different contexts.
11. Foundational Knowledge	Core knowledge and skills necessary for teaching, such as child development, learning theories, and communication.	Teacher education core courses, reading educational research, attending professional development workshops, staying updated on current educational trends.

- **Competency in a Hierarchical for Teacher Education**

1. **Innovative Competency:** It's not just about having new thoughts; it's about turning them into impactful solutions. This involves critical thinking, problem-solving, and the ability to challenge assumptions. True innovation often requires venturing outside comfort zones and exploring uncharted territory. This competency thrives on curiosity, resilience, and a willingness to learn from mistakes. Innovation isn't limited to specific fields or disciplines. It's about finding creative solutions that benefit individuals, communities, and the wider world.
2. **Reflective Competency:** This competency involves examining one's thoughts, feelings, and actions with honest introspection. Every experience, positive or negative, holds valuable lessons. This competency involves analyzing experiences, identifying insights, and applying them to future growth. Embracing feedback and incorporating it into self-improvement is essential for continuous learning and development.
3. **Evaluation Competency:** This competency involves the ability to assess and analyze various aspects of processes, performance, and outcomes. It includes: Critical thinking and analysis, the ability to objectively evaluate information, identify strengths and weaknesses, and draw sound conclusions. Problem-solving, Identifying the root cause of issues and developing effective solutions based on the evaluation findings. Decision-making, making informed choices based on data, analysis, and consideration of potential consequences.
4. **Epistemological Competency:** It's not just about knowing facts; it's about understanding how knowledge is constructed, validated, and interpreted. This involves questioning assumptions, recognizing biases, and engaging in critical analysis. Embracing diverse viewpoints and exploring the limitations of singular narratives are essential for a nuanced understanding of knowledge. This competency thrives on a genuine curiosity about the world and a commitment to ongoing intellectual exploration.
5. **Technological Competency:** Staying up-to-date with emerging technologies and their potential applications is crucial for this competency. Technology is a tool, not a solution in itself. This competency involves using technology thoughtfully, considering its ethical implications and impact on human interactions. Technology is constantly evolving, requiring continuous learning and a willingness to adapt to new tools and processes.
6. **Management Competency:** This competency focuses on effectively organizing and overseeing tasks, resources, and processes. It encompasses: Planning and prioritizing, setting goals, breaking down tasks into manageable steps,

and allocating resources efficiently. Delegation and supervision, assigning tasks effectively and providing guidance and support to team members. Time management, Organizing your own time effectively and meeting deadlines consistently.

7. **Collaborative Competency:** Effective collaboration relies on fostering a safe space for diverse voices, active listening, and respectful communication. Each team member brings unique skills and perspectives to the table. This competency involves harnessing those strengths for a collective goal. Disagreements are inevitable in any collaboration. This competency focuses on constructive dialogue, compromise, and finding solutions that benefit everyone.
8. **Pedagogical Competency:** This fundamental competency underpins effective teaching and educational practices. It includes: Knowledge of subject matter, having a deep understanding of the content you are teaching is essential for effective knowledge transfer. Teaching methods and strategies, employing diverse teaching methods like lectures, discussions, demonstrations, and activities to cater to different learning styles. Assessment and feedback, designing effective assessments to measure learning outcomes and providing constructive feedback to support student growth.
9. **Curricular Competency:** Designing effective curriculum requires knowledge of how people learn best and tailoring content and activities accordingly. Effective curriculum caters to diverse needs and learning styles. This competency involves creating flexible and adaptable learning experiences. Curriculum development thrives on feedback and continuous improvement. This competency involves measuring learning outcomes and adapting the curriculum based on data.
10. **Behavioural Competency:** This competency revolves around understanding and managing your own actions and reactions in various situations. Recognizing your strengths, weaknesses, triggers, and biases. This self-knowledge is crucial for regulating your behaviour and fostering effective interactions. The ability to perceive, understand, and manage your own emotions, as well as those of others. This includes empathy, conflict resolution, and stress management. Adjusting your behaviour based on the context and needs of the situation. This involves open-mindedness, cultural sensitivity, and a willingness to learn from others.
11. **Social Competency:** This competency focuses on thriving in social environments and building meaningful relationships. It involves: Communication skills, Building and maintaining relationships, Networking and collaboration. Building productive relationships with diverse individuals and groups allows for collaboration, knowledge sharing, and mutual support.

- **At a glance Competency in a Hierarchical order for Teacher Education Tabulated Below**

Table 3: Competency Domain for Teacher Education relating to its Theoretical Understanding and Activities for Teacher Development

Competency Base	Description	Activities for Teacher Development
1. Innovative Competency	Developing creative solutions to educational challenges. Thinking outside the box and implementing new ideas.	Problem-based learning, design thinking workshops, exploring innovative teaching methods, using technology creatively.
2. Reflective Competency	Critically analyzing one's own teaching practices and their impact on student learning. Identifying areas for improvement and setting goals for professional development.	Reflective journaling, self-assessment tools, video analysis of teaching, peer coaching and mentoring. Activities
3. Evaluation Competency	Assessing student learning effectively and using data to inform instruction. Providing meaningful feedback and promoting self-assessment.	Assessment design and development courses, understanding different assessment formats, using data to guide instruction, providing effective feedback.
4. Epistemological Competency	Understanding the nature of knowledge and learning. Reflecting on one's own teaching practices and how they promote meaningful learning.	Philosophy of education courses, action research projects, critical analysis of curriculum and teaching methods, exploring different learning theories.
5. Technological Competency	Integrating technology effectively into teaching and learning. Using technology to enhance engagement, communication, and student success.	Technology integration workshops, learning new tools and platforms, using technology for assessment and feedback, fostering responsible technology use.
6. Management Competency	Creating and maintaining a positive and productive learning environment. Setting expectations, managing behavior, and resolving conflict effectively.	Classroom management strategies, communication and conflict resolution training, creating a positive classroom culture, setting clear expectations and routines.
7. Collaborative Competency	Working effectively with colleagues, parents, and community members. Building strong relationships and sharing knowledge.	Collaborative planning and lesson development, peer observation and feedback, school-community partnerships, participation in professional learning communities.
8. Pedagogical Competency	Understanding and implementing effective teaching strategies. Adapting methods to meet the needs of diverse learners.	Curriculum development courses, teaching methodology workshops, differentiated instruction training, practicing and refining teaching skills.
9. Curricular Competency	Designing and implementing effective learning experiences that align with curriculum standards. Selecting appropriate resources and assessment tools.	Curriculum design and development courses, backward design planning, understanding assessment principles, selecting and adapting resources.
10. Behavioural Competency	Demonstrating professional ethics and integrity. Building positive relationships with students, colleagues, and parents.	Professional ethics training, developing communication skills, fostering cultural sensitivity, demonstrating empathy and compassion.
11. Social Competency	Understanding and appreciating diversity. Fostering inclusivity and social justice in the classroom.	Intercultural competency training, exploring social justice issues in education, promoting empathy and respect for difference, building an inclusive classroom environment.

- **Human Development as a balancing force for Teacher Education**

1. **Self-Concept and Self-Esteem**
   a) **Self-Concept:** This refers to the mental image you have of yourself, including your strengths, weaknesses, values, and beliefs. A positive self-concept involves seeing yourself as worthy and capable, while a negative self-concept can lead to self-doubt and insecurity.
   b) **Self-Esteem:** This reflects your overall evaluation of yourself, often linked to the perceived gap between your ideal self and your actual self. High self-esteem is associated with confidence, resilience, and positive well-being, while low self-esteem can lead to anxiety, depression, and difficulty coping with challenges.
2. **Emotional Awareness:** This involves understanding and recognizing your own emotions, their triggers, and their impact on your thoughts and behaviours. Being emotionally aware allows you to regulate your emotions effectively, make conscious choices, and communicate authentically with others.
3. **Social Development:** This refers to the process of developing the skills and knowledge needed to form and maintain healthy relationships. It involves building empathy, communication, conflict resolution, and social awareness. Strong social development enables you to connect with others meaningfully, collaborate effectively, and navigate diverse social situations.
4. **Values and Beliefs:** These are the guiding principles that shape your decisions and actions. Values represent what you consider important and desirable, while beliefs are convictions you hold about the world and yourself. Identifying and aligning your life with your values and beliefs leads to a sense of purpose, direction, and inner peace.
5. **Commitment:** This refers to the ability to stick to your goals and persevere through challenges. It involves dedication, focus, and the willingness to expend effort over time. Strong commitment empowers you to achieve your aspirations and navigate obstacles with unwavering determination.
6. **Resilience and Coping Skills:** These are the tools you use to bounce back from adversity and overcome challenges. Resilience involves the ability to adapt to change, deal with setbacks, and maintain a positive outlook in difficult situations. Coping skills provide healthy ways to manage stress, regulate emotions, and navigate challenging experiences.
7. **Empathy and Compassion:** Empathy is the ability to understand and share the feelings of others, while compassion is the desire to alleviate suffering and promote well-being. These qualities foster strong connections with others, encourage prosocial behaviour, and contribute to a more harmonious society.
8. **Interpersonal Skills:** These are the abilities you use to communicate effectively, build trust, and collaborate with others. They include active listening, empathy, assertiveness, and conflict resolution. Strong interpersonal skills enable you to build meaningful relationships, navigate social situations confidently, and thrive in a collaborative environment.
9. **Adaptability:** This refers to your ability to adjust to changing circumstances and new situations. It involves flexibility, open-mindedness, and the willingness to learn and grow. Adaptability is crucial for navigating a rapidly changing world, dealing with unforeseen challenges, and embracing new opportunities.
10. **Motivation and Engagement:** These are the driving forces that propel you towards your goals and keep you engaged in activities you find fulfilling. Motivation involves setting meaningful goals, finding purpose in your pursuits, and maintaining a positive attitude. Engagement refers to immersing yourself fully in tasks you find stimulating and rewarding.
11. **Mindfulness and Emotional Well-being:** Mindfulness is the practice of paying attention to the present moment without judgment. It fosters self-awareness, emotional regulation, and a sense of calm amidst life's ups and downs. Emotional well-being encompasses mental health, emotional stability, and the ability to cope with stress and challenges effectively.

- **At a Glance Human Development as a Balancing Force for Teacher Education Tabulated Below**

Table 4: Human Development Domain relating to its Theoretical Understanding and different activities for Teacher Development.

Human Development Domain	Description	Activities for Teacher Development
1. Self-Concept and Self-Esteem	Understanding oneself, strengths, weaknesses, values, and beliefs. Developing a healthy sense of self-worth.	Self-reflection activities, journaling, affirmations, goal setting, positive feedback, celebrating successes.
2. Emotional Awareness	Recognizing and understanding emotions in oneself and others. Understanding the connection between emotions, thoughts, and behaviours.	Activities that explore emotions, emotional vocabulary building, role-playing, mindfulness practices, identifying emotions in literature.
3. Social Development	Building healthy relationships with others. Communicating effectively, resolving conflict constructively, and showing empathy.	Collaborative learning activities, cooperative games, peer mediation training, social and emotional learning (SEL) programs.
4. Values and Beliefs	Exploring personal values, ethical principles, and moral reasoning. Understanding diverse perspectives and respecting differences.	Discussions about values and ethics, case studies, service-learning projects, exploring different cultures and religions.
5. Commitment	Perseverance and goal-oriented actions. Setting goals, overcoming challenges, and demonstrating persistence. Taking responsibility and being accountable for actions.	Project-based learning, setting SMART goals, developing grit and resilience, celebrating effort and progress.
6. Resilience and Coping Skills	Navigating challenges and setbacks in a healthy way. Dealing with stress, adversity, and developing coping mechanisms and problem-solving skills.	Stress management techniques, mindfulness and relaxation practices, building optimism and hope, problem-solving activities.
7. Empathy and Compassion	Understanding and caring for others. Recognizing and understanding the feelings of others. Showing compassion and acting with kindness.	Active listening exercises, perspective-taking activities, volunteering and service learning, social-emotional learning programs.
8. Interpersonal Skills	Communication and collaboration. Communicating effectively verbally and nonverbally. Building positive relationships, collaborating effectively, and resolving conflict constructively.	Communication skills training, collaborative learning activities, group projects, peer mediation training.
9. Adaptability	Adjusting to change and new situations. Being flexible and open to new experiences. Learning new skills and adapting to changing environments.	Problem-solving activities, learning new technologies, cultural competency training, embracing diversity and change.
10. Motivation and Engagement	Intrinsic and extrinsic drive. Finding meaning and purpose in learning. Developing intrinsic motivation and a desire to learn.	Inquiry-based learning, student-centered approaches, fostering curiosity and creativity, providing opportunities for choice and autonomy.
11. Mindfulness and Emotional Well-being	Maintaining physical and mental health. Recognizing and managing stress. Practicing mindfulness and self-care for emotional well-being.	Mindfulness exercises, relaxation techniques, stress management workshops, promoting healthy habits and positive lifestyles.

Knowledge acquisition, traditionally king of the castle, towers over the other two. Textbooks reign supreme, exams judge understanding, and theoretical frameworks weave intricate tapestries in the minds of future educators. While this intellectual rigor is crucial, it risks becoming a sterile museum exhibit if not paired with practical application.

Competency, the bridge between theory and practice, often emerges as a timid companion to knowledge. Practicum placements offer glimpses of the real classroom, but these fleeting visits can leave pre-service teachers yearning for deeper immersion. Honing essential skills like lesson planning, classroom management, and differentiated instruction requires more than occasional field trips.

Thankfully, human development, the third pillar, stands tall and strong. Courses on self-awareness, empathy, and resilience equip pre-service educators with the emotional tools they need to navigate the complex terrain of the classroom. Yet, even this strength can overshadow the other two. While fostering well-rounded individuals is essential, without a balanced knowledge and skillset, their good intentions might struggle to materialize into effective teaching.

- **Model Based on in-Service Teacher Education**

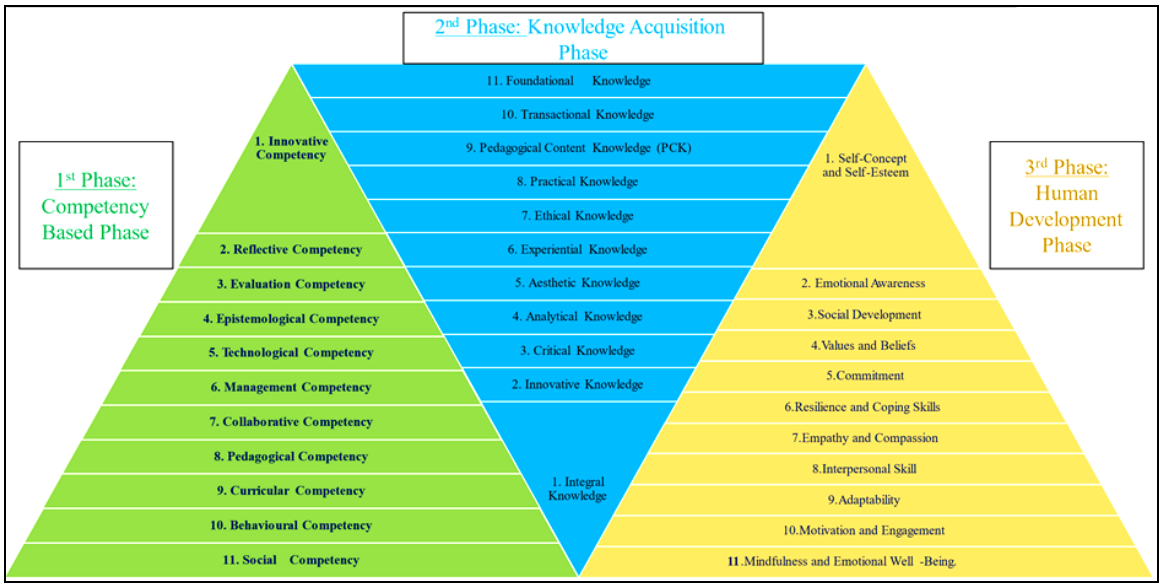

Fig 1: In-Service Teacher Education Model: Competency oriented Model

- **Prioritize Competency Development:** Focus on workshops, training sessions, and professional development opportunities centered on practical skills and immediate classroom needs.
- **Minimize Knowledge Acquisition:** Less emphasis on theoretical updates, research explorations, or in-depth subject matter knowledge expansion.
- **Maintain High Emphasis on Human Development:** Including activities for stress management, mindfulness practices, collaboration, and support networks for teachers.

- **Model Based on Pre-Service Teacher Education**

Fig 2: Pre-Service Teacher Education Model: Knowledge Acquisition Model

- **Prioritize Knowledge Acquisition:** Focusing heavily on theoretical coursework, textbooks, and standardized exams.
- **Underemphasize Competency:** Lacking sufficient opportunities for practical application, hands-on experiences, and feedback on real-world teaching scenarios.
- **Maintain High Emphasis on Human Development:** Including courses on personal growth, classroom relationships, and social-emotional learning.

Findings

- Applying a taxonomy of teacher education is an ongoing journey, not a one-time solution. By thoughtfully considering these steps, fostering collaboration, and embracing continuous improvement, you can leverage this framework to create a more effective and supportive environment for teachers to thrive, ultimately benefiting students and the entire education system.
- Within in-service teacher education programs, a pronounced emphasis is placed on competency development. The curriculum and training initiatives

prioritize refining and enhancing the practical skills and abilities of practicing educators. In contrast, there is a comparatively lower emphasis on knowledge acquisition during this stage, reflecting a recognition that in-service teachers already possess foundational knowledge. Notably, despite the reduced focus on knowledge acquisition, there exists a substantial commitment to human development. These programs actively foster the personal and professional growth of educators, acknowledging the ongoing need for holistic development in the ever-evolving landscape of education. This emphasis reflects an understanding of the crucial role that continued personal and social development plays in the effectiveness of experienced teachers.

- In pre-service teacher education programs, there is a distinct emphasis on knowledge acquisition. The curriculum places a substantial focus on imparting theoretical understanding and foundational concepts to aspiring educators. Conversely, there is a relatively lower emphasis on competency development during this phase. The priority lies in equipping future teachers with a robust knowledge base. However, a notable feature of pre-service teacher education is the heightened attention given to human development. Recognizing the importance of holistic growth, these programs aim to nurture personal and social dimensions alongside the acquisition of academic knowledge. This commitment reflects an understanding of the multifaceted role teachers play in the lives of their future students.

Conclusion

This research delved into the intricate relationship between teacher dispositions, professional development, and effective teaching. Through exploring taxonomies and analyzing diverse learning formats, we have gained valuable insights into fostering the qualities that make educators truly impactful. Our investigation into capturing essential dispositions within a taxonomy revealed the multifaceted nature of effective teaching. While knowledge and skill are undeniably crucial, it's the constellation of personal qualities like resilience, empathy, and self-reflection that illuminate the path to student success. A nuanced taxonomy that encompasses these dispositions, while acknowledging their contextual and dynamic nature, provides a valuable framework for both pre-service and in-service teacher education. The journey toward becoming an effective teacher requires continuous learning and growth. The traditional "one-size-fits-all" approach to professional development falls short in this regard. Our findings emphasize the need for a personalized, flexible, and responsive approach to in-service education. Mentoring programs, collaborative learning communities, and targeted interventions based on individual needs can offer opportunities for educators to refine their craft and address specific challenges. Pre-service education lays the foundation for a lifelong journey of learning. Integrating elements of the proposed taxonomy into pre-service curricula can equip budding educators with the awareness and tools to cultivate those critical dispositions. Experiential learning, critical reflection exercises, and exposure to diverse pedagogical approaches can provide early opportunities for self-discovery and a deeper understanding of the complexities of effective teaching. Ultimately, this research underscores the interconnectedness of dispositions, professional development, and effective teaching. Cultivating the qualities that define impactful educators requires a continuous cycle of learning, reflection, and refinement. In-service and pre-service programs must evolve to embrace this cyclical process, providing adaptable and individualized support that empowers teachers to grow and thrive throughout their careers. By nurturing not just their skills and knowledge, but also their dispositions and emotional intelligence, we can empower teachers to not only impart knowledge, but also ignite a passion for learning in their students.

However, our research also suggests the need for further exploration. Future research could investigate the efficacy of specific interventions designed to nurture particular dispositions, develop culturally relevant taxonomies, and explore the role of technology in facilitating personalized professional development. As we continue to learn and grow alongside our educators, we can cultivate a generation of teachers who not only master the art of teaching but also embody the essence of effective education.

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