ZPD - ZPTD: From the Zone of Proximal Development to the Zone of Proximal Teachers Development

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ABSTRACT

In an era where classrooms are increasingly shaped by artificial intelligence, digital ecosystems, and rapidly evolving learner expectations, the teaching profession stands at a defining crossroads. Questions surrounding the future of education continue to dominate academic and public discourse:

Will technology replace teachers? Can traditional pedagogies survive digitally native generations? Is teaching itself undergoing an identity crisis?

At such a crucial moment, the study "ZPD-ZPTD : *From the Zone of Proximal Development to the Zone of Proximal Teachers Development* " emerges as a timely, thought-provoking, and intellectually significant contribution to contemporary educational discourse. Rather than perceiving technological change as a threat, the study reframes it as an opportunity for professional transformation, renewal, and pedagogical evolution. Above all, the book powerfully reaffirms a central truth: education remains fundamentally human. Drawing inspiration from Lev Vygotsky's sociocultural theory, the work extends the concept of the Zone of Proximal Development beyond child learning and situates it within teacher professional growth. One of the paper's most compelling strengths lies in its understanding of contemporary learners belonging to Generations Z, Alpha, and Beta. The study further gains relevance through its strong alignment with India's National Education Policy (NEP 2020), particularly its emphasis on mentoring systems, Continuous Professional Development (CPD), Professional Learning Communities (PLCs), reflective practice, and collaborative learning ecosystems. By integrating these policy perspectives with sociocultural theory, the framework successfully bridges the gap between educational philosophy and institutional practice.

Keywords : Zone of Proximal Development, Zone of Proximal Teacher Development, Professional Growth, Pedagogical Growth, More Knowledgeable Other (MKO), The National Education Policy

RESEARCH OBJECTIVES

1. To explain the theoretical relationship between ZPD, ZPTD, sociocultural learning, and teacher professional development.

2. To specify the stages and mechanisms of the proposed ZPTD developmental cycle.

3. To develop a draft self-assessment checklist and Baseline Ability Curve for formative identification of professional learning needs.

4. To propose a validation procedure for examining the clarity, relevance, reliability, and validity of the draft tools.

5. To identify observable indicators and practical mentoring strategies that can support and document professional growth.

RESEARCH QUESTIONS

1. How can sociocultural and situated-learning perspectives inform a structured ZPTD framework for teacher professional development?

2. What dimensions should a formative self-assessment checklist and Baseline Ability Curve cover to identify current practice and supported-growth needs?

3. How can expert review, pilot testing, and appropriate reliability and validity analyses be used to evaluate the proposed tools?

4. What observable indicators can be used to track changes in teachers' practice during a structured mentoring cycle?

5. How can peer collaboration and technology-integrated activities support the transfer of professional learning into classroom practice?

METHODOLOGY AND STATUS OF THE FRAMEWORK

The present article is a conceptual framework paper. It synthesises selected theoretical and professional-development literature to formulate a proposed model and draft tools. It does not report a completed intervention, a representative teacher sample, or empirical validation results. Accordingly, the BAC values included in any illustrative presentation must be labelled hypothetical examples and must not be interpreted as research findings.

A subsequent empirical study could use a sequential mixed-methods design. Phase 1 would involve expert review by teacher educators, experienced teachers, educational measurement specialists, and specialists in educational technology. Reviewers would assess each item for relevance, clarity, comprehensiveness, and alignment with the intended construct. Item-level and scale-level content validity indices may be calculated where appropriate, alongside qualitative comments and a documented revision log.

Phase 2 would pilot the revised instrument with a small, diverse group of teachers to assess comprehension, completion time, response patterns, missing data, and feasibility. Cognitive interviews could help establish whether participants interpret items as intended. Pilot data should be used to refine the tool, not to make broad claims about effectiveness.

Phase 3 would test the revised tool with a larger and more diverse sample across school and higher-education settings, subject areas, career stages, and institutional contexts. Sample size should be determined in advance in consultation with a statistician and according to the planned analyses. Internal consistency (for example, coefficient omega or alpha where its assumptions are appropriate), test–retest stability, and construct validity should be considered as relevant. Factor analysis should only be used when the sample size and data support it. Because self-report alone cannot demonstrate actual teaching competence, scores should be compared with additional evidence such as lesson plans, structured classroom observations, teaching artefacts, and mentor ratings. Any intervention study should specify comparison conditions where feasible, pre- and post-measures, consent, confidentiality, and ethical approval.

LITERATURE REVIEW

The development of teacher expertise has long been examined through the lens of sociocultural theory. Lev Vygotsky's (1978) concept of the *Zone of Proximal Development (ZPD)* provides the foundational framework for understanding that cognitive development is socially mediated.

For the extensions of ZPD to Adult Learners, the study refers to the study of researchers such as Judy D. Davis (1990s) extended ZPD to teacher mentoring, viewing it as a space where novices acquire complex skills through "just-in-time" support.

In developing the Situated Learning and Community, the studies of Barbara Rogoff (1990) and Lave & Wenger (1991) furthered this by framing teacher growth within "Communities of Practice." They argued that learning is a trajectory of participation, shifting from peripheral to full engagement, which mirrors the transition from supported novice to independent expert.

The Conceptualization of ZPTD goes through the work of Mark K. Warford (2011) formally coined the term "Zone of Proximal Teacher Development," defining it as the gap between what a teacher can do independently and what they can achieve with strategic assistance.

The study also refers to contemporary perspectives such as Fullan and Hargreaves (2012) emphasize that professional growth is not merely individual skill accumulation but the cultivation of "professional capital" human, social, and decisional—which is optimized in collaborative cultures.

INTRODUCTION

The 21st-century educational landscape is characterized by digital saturation and changing learner expectations. Educators are increasingly pressured to balance traditional instructional duties with the need for technological fluency and emotional intelligence. A prevailing discourse suggests that teaching is an endangered profession. This paper refutes that claim, positing that while the *methods* of instruction are changing, the *necessity* of the teacher is deepening.

To thrive, teachers require a transition from "content delivery" to "learning facilitation." The ZPD-ZPTD framework serves as a structured developmental continuum. It aligns with the National Education Policy (NEP 2020) of India, emphasizing mentoring, continuous professional development, and professional learning communities. This study explores how teachers can progress from supported professional competence (ZPTD) to autonomous leadership and innovation of their professional growth.

ZPD-ZPTD: From the Zone of Proximal Development to the Zone of Proximal Teachers Development

The framework of ZPD to ZPTD posits that teacher growth follows a developmental continuum similar to the theory of ZPD introduced by ven though the concept ZPD, introduced by the popular world psychologist Lev Vygotsky. Lev Vygotsky's concept of the Zone of Proximal Development (ZPD) is the space between what a learner can do independently and what they can achieve with guidance from a *More Knowledgeable Other* (MKO) such as a teacher or more-skilled peer. The MKO uses ‘scaffolding’ ; temporary support to help the learner complete a task within their ZPD. As the learner internalizes the new knowledge, the scaffolding is gradually removed, allowing them to perform the task independently. He believed that learning is a social process and that cognitive development is fostered through interactions with others. A child learns by engaging in dialogue with an MKO. In this process Scaffolding provides just enough support to help a learner succeed in a task.

Following Vygotsky, some educators believe that the role of education is to give children experiences that are within their zones of proximal development, thereby encouraging and advancing their individual learning skills and strategies. Alternatively, Vygotsky saw natural, spontaneous development as important, but not all important. He believed that children would not advance very far if they were left to discover everything on their own. It is crucial for a child's development that they are able to interact with more knowledgeable others: they are not able to expand on what they know if this is not possible. The term *More Knowledgeable Others* (MKO) is used to describe someone who has a better understanding or higher ability level than the learner, in reference to the specific task, idea, or concept. He noted cultural experiences where children are greatly helped by knowledge and tools handed down from previous generations. Vygotsky noted that good teachers should not present material that is too difficult and ‘pull the students along’.

Vygotsky argued that, rather than examining what a student knows to determine intelligence, it is better to examine their ability to solve problems independently and ability to solve problems with an adult's help. He proposed a question:

"If two children perform the same on a test, are their levels of development the same?"

He concluded that they were not. However, Vygotsky's untimely death interrupted his work on the zone of proximal development, and it remained mostly incomplete.

However, Vygotsky originally created the idea of the Zone of Proximal Development (ZPD) for learners with the help of MKO'

"Who and How would the MKOs be ?

But ! A challenge left over for the new stakeholders."

Obviously, he meant for teachers as the MKO but he did not explain ZPD for teachers, since it must be a focused area in *21st century skill based education and in transforming teaching practices.* But his theory of social learning naturally extends to teachers as adult learners in professional development. As it is evident to the teaching aptitude, it is crystal clear the need of ZPTD is essential in the present and upcoming teachers career development. In this 21st educational era this study facilitates the new teachers to meet the need of the teaching community to resolve their greater challenge in teaching the new age learners, basically the learners who were born from the early 2000s. They are typically known as *'Generation Zoomers'* or in short it is called *'Gen Z'* and *Generation Alpha* have been described as better behaved and less hedonistic than previous generations. It arrives as a major challenge among the educators world.

This issue arrives into the context through in three major open ended questions ;

1. How far do teachers have to travel from the traditional concept of teaching to the modern concept of teaching or to a revolutionary teaching?

2. How often are the teachers willing to adopt a new style of integrated pedagogy?

3. How to raise the bar graph of teaching growth and interest and What strategy can be utilised for the understanding of the shifted bar?

The Zone of Proximal Teacher Development (ZPTD) is the foundational phase. Here, teachers, while academically qualified, may function in a "comfort zone" of routine instruction. In this zone, they require scaffolding, mentorship, peer dialogue, and reflective practice to move beyond basic certification requirements. It is a motivated zone where training is essential. This is the advanced stage of reflective autonomy. Teachers in this zone function as "pedagogical thrivers." They demonstrate innovation, technological integration, and leadership. They align personal professional goals with institutional objectives.

The Transition Mechanism:

Out of a common misunderstanding is the belief that the ZPD applies only to children. Although Vygotsky developed the idea within the context of child development, the underlying principles of guided learning and social mediation extend well beyond childhood. The ZPTD represents the foundational phase of a teaching career, which helps the teacher to focus shifts toward a holistic view of their career with a full round of growth. This creates a cycle of continuous improvement where the teacher is a lifelong learner, constantly updating their "scaffolding" to reach higher levels of pedagogical effectiveness. In the below ZPTD diagram explains the growth of a teacher how far depends and independence from their nature and ability.

A comparison ZPTD diagram to ZPD of Lev Vygotsky : The diagram explains the meeting place of a teacher's dependency and independence from their profession





ZPTD developed for the study ZPD of Vygotsky

In the above ZPTD diagram the inner core circle is meant for the foundational trained ability of a teacher, where the teachers apply at a minimum level. They may be academically qualified but in modern teaching situations their skill may be limited or they may not be trained to deal with GenZ learners. The teachers being under the inner zone may face many challenges to cope-up with certain situations. They gradually feel tired and lack interest in their profession, soon they feel quit the profession. The middle circle, representing the zone of proximal teacher's development, is the motivated zone, frequent guidance and mentorship provided for a better teaching environment . The outer zone is ZPPG, the teacher performs outstanding performance with personal pedagogical plans and professional growth.

Based on the shift in ZPTD diagram teachers are classified :

To measure this shift, a teacher can review themselves and find the gaps easily better than the other. Self evaluation makes a bridge between what has been achieved and what is to be achieved clearly. The monthly or yearly evaluation from the institutions also helps a teacher to facilitate a scaffolding for the future development in their pedagogy settings.

This study initiates a scientific assessment framework to identify a teacher belonging to which type of teacher listed below. The framework utilizes the Baseline Ability Curve (BAC), which categorizes teachers into three development stages:

1. 0'APS: Insufficient professional scaffolding (requires urgent intervention).
2. APS'D: Adequate Professional Scaffolding but under development (the active ZPTD stage).
3. APS'G: Adequate Professional Scaffolding and Self-Growth (the threshold of ZPPG).

To recognize the category of a teacher either they can develop a self assessment tool or they can utilize the ZPTD developed scientific assessment tool. They shall design a self graph to showtheir growth.

Demo :

A. Current Professional Competence

ZPTD Bar : What can I do independently ?

Sl. No	Statement	✓/ ○
1	I can plan lessons that match learning outcomes independently	
2	I can manage classroom behaviour without external help.	
3	I can assess students' learning using basic tools confidently.	
4	I can explain subject content clearly to diverse learners.	
5	I can use traditional and digital resources comfortably.	
6	I can reflect on my teaching and identify strengths.	

Supported-Growth Zone

ZPTD Bar: What can I do with guidance or mentoring?

Sl.No.	Statement	✓/ ○
7	I can design higher-order, inquiry-based lessons with guidance.	
8	I can integrate ICT tools meaningfully when supported.	
9	I try new pedagogical strategies (UDL, FLN, blended learning) with help.	
10	I analyse student data more effectively when a mentor helps.	
11	I can differentiate instruction better when I collaborate with peers.	
12	I experiment with innovative classroom practices when coached.	
13	I can give constructive feedback to students when guided.	
14	I plan remedial and enrichment activities with expert suggestions.	

Potential Professional Competence :

ZPTD Bar : What Future independent abilities do I have? Or What do you aspire to master soon ?

Sl.No.	Statement	✓/ ○
15	I want to design competency-based, personalised lesson plans independently.	
16	I want to confidently implement 21st-century pedagogies on my own.	
17	I aim to use assessment data to design targeted interventions independently.	

18	I aim to mentor other teachers in a few years.	
19	I want to lead collaborative professional development activities.	
20	I want to reflect deeply and redesign my practice autonomously.	

Reflection Questions Answer briefly:

21. Which items under "Supported-Growth Zone" (Section B) have the most ticks?

22. What kind of scaffolding helps me most? (mentoring, peer collaboration, modelling, feedback?

23. What changes do I notice after receiving scaffolding?

24. What is my next target in professional growth?

25. How will I move from supported performance to independent mastery? How to Use the Checklist :

Each ticks can rate 10 score and calculate the sum:

- Many ticks (4 and above) in Section A = Strong current competence
- Many ticks (5 and above) in Section B = Your active professional growth
- Many ticks (6 and above) in Section C = High pedagogical growth and professional aspiration

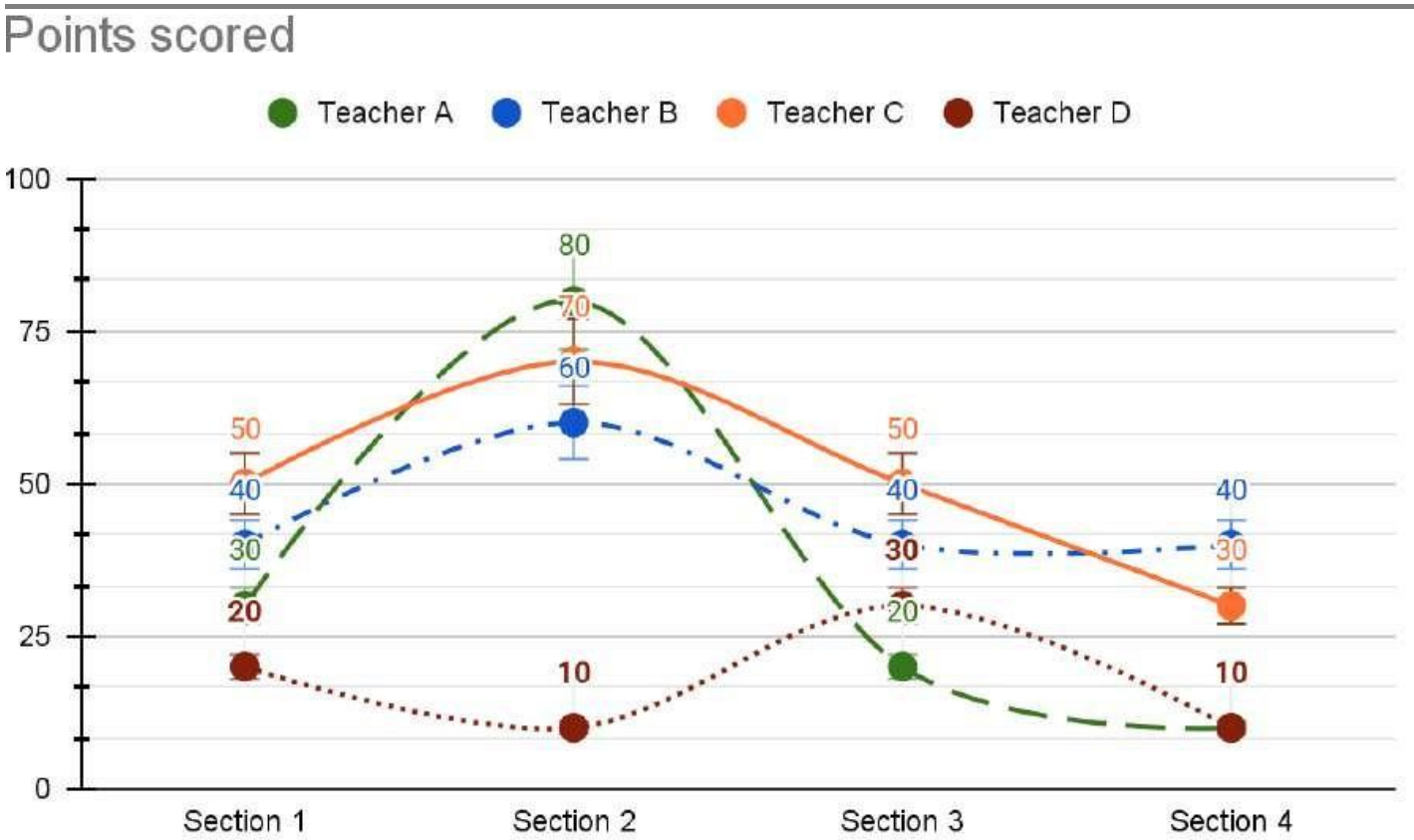
This checklist helps you prove (identify and demonstrate) your pedagogical growth by showing:

- what you can do alone
- what you can do with support, and
- what you will soon be able to do independently and
- How you can help others

BAC ***(Baseline Ability Curve) :***

Sampling :

Case	***Statement 1***	***Statement 2***	***Statement 3***	***Total points***
Teacher A	30	80	20	130
Teacher B	40	60	40	140
Teacher C	50	70	60	180
Teacher D	20	10	30	60



The transition occurs when scaffolding provided by mentors, AI-integrated digital tools, and peer collaboration is gradually withdrawn as the teacher internalizes competencies, transforming from a passive knowledge-transmitter into an active learning-facilitator.

CONCLUSION

The shift from ZPD to ZPTD represents a revolutionary movement for the teaching profession. This research demonstrates that teacher development is not a static achievement but a continuous progression. By embedding structured scaffolding, mentorship, peer communities, and reflective assessment, into institutional culture, schools can ensure that teachers move from traditional, routine practices to dynamic, autonomous pedagogical leadership.

As Gen Z, Alpha, and Beta cohorts reshape classrooms, the ability of teachers to enter and navigate their ZPTD and eventually reach the ZPPG is the definitive factor for quality education. Institutional leaders and policymakers must prioritize these frameworks to move beyond compliance-based training toward a culture of sustained professional excellence.

Theme : (NO.8) Education Eco Systems: Policy, Curriculum, Pedagogy, Technology, And Teacher Education In The Context Of NEP 2020.

Sub Theme : Teacher Education And Professional Development

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