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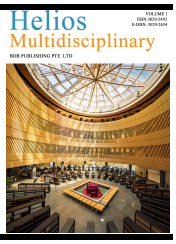

From Teacher Capacity to Institutional Capability: A Narrative Review of Inclusive Teacher Efficacy in China

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ABSTRACT

China's inclusive education reforms have widened access, yet access alone does not secure participation, learning, or belonging. This narrative review asks why investments in teacher technology, professional development, and multicultural preparation so often produce uneven classroom change. Peer-reviewed research and authoritative policy sources were narratively synthesised, with priority given to work published from 2018 to August 2026 and earlier landmark studies retained where conceptually necessary. The evidence supports a clear but qualified conclusion: teacher efficacy is a proximal mechanism linking preparation to inclusive action, not a self-sufficient cause of effective inclusion. Digital tools enlarge teachers' repertoire only when accessibility and pedagogy guide their use; professional learning has greater value when it is sustained, practice-embedded, and collaborative; and multicultural preparation changes teaching only when awareness is converted into situated judgement. Across these pathways, institutional conditions determine whether individual capacity can be enacted. The review therefore advances a capacity-to-capability conversion framework in which leadership, protected time, resources, collaboration, policy coherence, and feedback function as conversion infrastructure. This interpretation reconciles otherwise conflicting findings and explains why positive attitudes and high self-reported efficacy may coexist with modest changes in observed practice. A research agenda prioritising longitudinal, multilevel, intervention, and classroom-observation designs is proposed, especially for provincial Chinese normal universities and under-resourced regions.

1. Introduction

Inclusive education is often described as a destination: learners with disabilities and other marginalised students are placed in ordinary educational settings. That description is administratively convenient but educationally thin. Placement can be counted, while participation, achievement, recognition, and belonging are harder to see. The distinction matters in China, where the Learning in Regular Classrooms movement expanded access but did not always alter the pedagogical routines, assessment practices, or institutional arrangements that had made ordinary classrooms exclusionary in the first place (Deng & Poon-McBrayer, 2012; Yan & Deng, 2019). The central question is therefore no longer simply whether diverse learners enter mainstream settings. It is whether teachers and institutions can reorganise teaching so that learner variability is anticipated rather than treated as an exception.

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International scholarship has gradually made the same move. The field has shifted from a location-based understanding of inclusion towards a systemic one concerned with presence, participation, progress, and equity (Ainscow, 2020; OECD, 2023; UNESCO, 2020). Inclusive pedagogy similarly rejects the idea that most learners need ordinary teaching while a small minority require a separate, specialised response. Instead, it asks teachers to extend what is ordinarily available to everybody, while retaining access to specialist knowledge when it is needed (Florian, 2019; Florian & Beaton, 2018). This is a demanding professional task. Teachers must interpret learner differences, design flexible instruction, collaborate across professional boundaries, manage behaviour without exclusion, and make defensible judgements under conditions of limited time and incomplete information.

Teacher efficacy has consequently become a prominent explanation for the gap between inclusive policy and classroom practice. In social cognitive terms, efficacy is not general optimism; it is a teacher's context-specific judgement that a course of action can be organised and executed successfully. Such beliefs influence effort, persistence, emotional response, and willingness to try unfamiliar practices (Tschannen-Moran et al., 1998; Tschannen-Moran & Hoy, 2001). The Teacher Efficacy for Inclusive Practices scale refined the construct around three tasks that are especially relevant to inclusion: inclusive instruction, collaboration, and managing behaviour (Sharma et al., 2012). Later evidence has linked stronger efficacy to more favourable attitudes, lower concerns, and greater intention to use inclusive practices (Miesera et al., 2019; Yada et al., 2022).

This line of inquiry has been productive, but it has also encouraged an overly individual account of change. When efficacy is measured as a teacher attribute and institutional conditions are entered as background controls, failure appears to sit inside the teacher: insufficient confidence, weak digital competence, limited professional development, or inadequate cultural knowledge. The remedies then arrive as separate training packages. Teachers attend a technology workshop, an inclusion seminar, or a multicultural awareness course and return to schools whose timetables, assessment rules, platform choices, leadership routines, and staffing arrangements remain unchanged. The individual may have learned more, yet the organisation has not increased what that person is actually able to do.

The distinction between capacity and capability provides a more coherent interpretation. Capacity refers here to the knowledge, skill, judgement, and confidence a teacher possesses. Capability refers to the real opportunity to exercise those resources in a particular institutional setting. A teacher may know how to produce accessible materials but lack an accessible learning platform; understand differentiated instruction but teach classes too large for meaningful feedback; or value culturally responsive practice while working within a curriculum and assessment regime that rewards uniformity. In each case, individual capacity is present but cannot be converted into inclusive action.

This review advances the thesis that institutional support is best understood as conversion infrastructure rather than as a peripheral resource or a simple moderator. Leadership, protected time, accessible technology, collegial expertise, specialist partnerships, coherent policy, and usable evidence alter the rate at which individual capacity becomes enacted practice. They also shape efficacy itself by creating mastery experiences, credible feedback, and collective problem solving. This reciprocal relationship is the article's storyline: policy creates an inclusive obligation; teacher education develops three important capacity pathways; institutional conditions convert those capacities into capability; enacted practice generates evidence and experience that either strengthens or erodes efficacy over time.

The argument is developed through a critical synthesis of teacher efficacy, technological integration, professional learning, multicultural preparation, and organisational support, with

particular attention to China. The review does not treat these literatures as five parallel lists. It asks where their conclusions converge, why findings sometimes conflict, and which research designs can distinguish reported readiness from actual inclusive teaching. By doing so, it seeks to clarify an academic trajectory and to offer a framework that is both theoretically parsimonious and institutionally actionable.

2. Materials and Methods: Narrative Review Approach

This article uses a narrative review design because the problem is conceptual and cross-disciplinary. Relevant evidence is distributed across inclusive education, teacher education, educational technology, professional learning, multicultural education, leadership, and implementation research. A narrowly standardised effect estimate would obscure differences in constructs, educational levels, national systems, and outcome measures. The purpose was therefore interpretive synthesis: to identify mechanisms, tensions, and explanatory links while remaining explicit about the evidence base and its limits.

Searches were undertaken in Scite, SciSpace, Consensus, and OpenAlex through Sider Scholar. Search concepts combined inclusive education with teacher efficacy or self-efficacy, technology or digital accessibility, professional development or professional learning, multicultural or culturally responsive education, institutional support, school climate, leadership, teacher education, and China. Priority was given to peer-reviewed work published from 2018 to August 2026. Earlier studies were retained when they introduced a widely used construct or instrument, established a durable theoretical proposition, or provided essential historical context. Forward and backward citation tracing was used to connect recent reviews and meta-analyses with landmark studies and with empirical research in mainland China.

Sources were selected for conceptual relevance, methodological transparency, and authority. Greater interpretive weight was assigned to meta-analyses, systematic or meta-reviews, longitudinal studies, well-described mixed-methods research, and official reports from bodies such as UNESCO, the OECD, the United Nations, and the State Council of the People's Republic of China. Cross-sectional surveys were retained because they dominate several subfields and provide important contextual evidence, but causal language was deliberately avoided when temporal order and common-method bias could not be ruled out. Retracted papers were excluded, and DOI, journal, volume, issue, and pagination data were checked against Crossref and Scite records.

The analysis proceeded in three passes. First, claims were grouped into three teacher-capacity pathways: technological integration, professional learning, and multicultural preparation. Second, evidence was compared within and across pathways to locate recurring conversion conditions, including leadership, time, collaboration, resources, policy knowledge, and feedback. Third, apparent disagreements were re-examined in light of design, sample, construct definition, educational level, and outcome type. The resulting capacity-to-capability framework is an interpretive model rather than a tested causal model. It is offered as a set of propositions that can guide future multilevel and longitudinal research.

Table 1

Narrative review evidence map

Evidence stream	Guiding question	Evidence given greatest weight	Principal limitation carried into the synthesis
Inclusive teacher efficacy	What enables teachers to attempt and sustain inclusive practice?	Meta-analyses, systematic reviews, longitudinal panels, validated efficacy measures	Heavy reliance on self-report and intention rather than observed teaching or learner outcomes
Technology and	When does digital	Reviews of school digital	Tool-centred studies often

Evidence stream	Guiding question	Evidence given greatest weight	Principal limitation carried into the synthesis
accessibility	provision reduce rather than reproduce barriers?	capacity, teacher digital competence, UDL, and disability inclusion	under-specify pedagogy, accessibility, and institutional maintenance
Professional learning	Which learning designs move knowledge into practice?	Reviews, coaching meta-analysis, collaborative inquiry, practice-embedded interventions	Programmes vary in duration and content; implementation and sustainability are inconsistently measured
Multicultural preparation	How does awareness become culturally responsive action?	Reviews, cross-national studies, reflective and experiential programme research	Constructs are heterogeneous and may collapse culture into attitudes while overlooking power and context
Organisational support and China	Which institutional conditions convert teacher capacity into capability?	Leadership and school-climate studies, policy reviews, Chinese meta-analysis, official reports	Predominantly cross-sectional evidence from urban or accessible samples; provincial variation is under-examined

Note. The review is narrative rather than systematic; the table describes the logic of weighting evidence, not a PRISMA-style study count

3. Results: From Placement to Participation

3.1 The field's changing object of concern

The early policy achievement of inclusive education was to challenge segregation. Its enduring risk is that physical placement becomes the outcome rather than the starting condition. Research syntheses now show that inclusive education encompasses several linked levels: system policy, organisational culture, classroom pedagogy, peer participation, and learner outcomes (Ainscow, 2020; Van Mieghem et al., 2020). A school may be inclusive in enrolment data but exclusionary in its grouping, curriculum, assessment, or disciplinary practices. A teacher may endorse inclusion while relying on routines that leave some learners present but peripheral.

China illustrates this tension sharply. Learning in Regular Classrooms created a pathway into mainstream schools, but implementation has remained uneven across regions and institutions. Historical analyses point to limited specialist support, ambiguity about the responsibilities of general and special educators, and tension between inclusive aspirations and examination-oriented schooling (Deng & Poon-McBrayer, 2012). Teacher-education reform has expanded and diversified provision, yet national policy change is filtered through local resources, institutional status, rural teacher supply, and the organisation of practicum experience (Ye et al., 2019). Survey research likewise suggests that teachers' concerns depend not only on broad endorsement but on what inclusion requires of their own work and whether they see workable consequences (Yan & Deng, 2019).

Recent evidence should temper both pessimism and complacency. A meta-analysis of 16 studies involving 10,361 teachers in mainland China reported moderately positive attitudes, high self-efficacy, and a moderate association between the two (Long et al., 2025). These results challenge the stereotype that Chinese teachers simply resist inclusion. They do not, however, establish that high efficacy is evenly distributed, calibrated to task difficulty, or translated into observed practice. The underlying studies were largely correlational and depended on self-reported beliefs. Regional, institutional, and school-level variation may also be difficult to detect when measures and samples

are not designed for multilevel inference. The finding is therefore best read as evidence of a promising psychological resource, not proof that the implementation gap has closed.

3.2 Efficacy is a mechanism, not an endpoint

Across countries, the relationship between efficacy and inclusive attitudes is reliable but not overwhelming. Yada et al. (2022) synthesised 41 studies and reported a mean correlation of approximately .35, with measurement method accounting for some variation. Dignath et al. (2022), drawing on 102 papers and more than 40,000 teachers, found that beliefs about inclusion generally sat in the middle of available scales; training and intervention effects were favourable, particularly when reflection was combined with practical experience. Wray et al. (2022) similarly identified policy knowledge, professional learning, confidence, preservice preparation, teaching context, and contact with people with disabilities as recurring influences on inclusive self-efficacy.

The strongest evidence for temporal direction comes from a three-year cross-lagged study of Finnish teachers. Efficacy predicted later attitudes and concerns, whereas attitudes did not predict later efficacy in the same way (Savolainen et al., 2022). That result makes theoretical sense: successful action can revise what teachers believe is feasible. Yet it should not be universalised without qualification. The Finnish system provides a particular support structure, and the constructs were relatively stable. In other settings, policy shocks, workload, class composition, leadership turnover, or resource scarcity may alter both. The study supports efficacy as an active mechanism, but it does not justify removing efficacy from its context.

More importantly, similar conceptual understanding can coexist with different practice. In a qualitative study of Australian primary teachers, Woodcock et al. (2022) found that teachers with higher and lower efficacy articulated comparable ideas about inclusion but differed in what they did. Higher-efficacy teachers focused more on learner success and access; lower-efficacy teachers more often framed difference through behaviour and control. A later Australian study likewise warned that teachers may be constrained in their capacity to implement beliefs they endorse (Woodcock et al., 2023). These findings expose a recurrent error in the literature: treating attitude, efficacy, intention, and practice as interchangeable stages on an automatic pathway. They are related, but each transition requires conditions that make action possible.

The practical implication is not to abandon efficacy measures. It is to reposition them. Efficacy is a proximal motivational and interpretive mechanism between preparation and action. It affects whether teachers notice possibilities, persist with adaptation, seek collaboration, and interpret difficulty as a problem to solve rather than evidence that inclusion is unrealistic. It is neither a substitute for competence nor a guarantee that the institution permits competent action. The next sections examine three capacity pathways through that lens.

4. Results: Three Pathways into Inclusive Teacher Capacity

4.1 Technological integration: from access to accessible participation

Technology is frequently presented as an inherently inclusive resource. Digital text can be enlarged or read aloud; captions can make audiovisual content available; multimodal representation can widen entry points; asynchronous interaction can reduce time and communication barriers; and assistive technologies can support independence. These affordances are real. They are also conditional. A platform that is incompatible with screen readers, a scanned PDF without searchable text, an uncaptioned lecture, or an adaptive system trained on unrepresentative data may create a new barrier while appearing innovative.

The critical distinction is between technology availability and inclusive digital capability. The TPACK framework established that effective technology use depends on the interaction of technological, pedagogical, and content knowledge rather than on tool knowledge alone (Mishra &

Koehler, 2006). More recent work has broadened digital competence further to include ethics, professional engagement, learner empowerment, and contextual judgement (Falloon, 2020). For inclusive education, one further adjustment is necessary: accessibility and learner variability must be treated as design requirements within pedagogical knowledge, not as post-production checks delegated to specialists.

Universal Design for Learning offers a useful design grammar because it asks educators to plan multiple ways of engaging with learning, representing ideas, and acting or expressing understanding. A meta-analysis found generally positive effects across a still-limited and heterogeneous body of studies, while noting weaknesses in research design and outcome comparability (Capp, 2017). The current UDL Guidelines 3.0 place greater emphasis on identity, bias, belonging, and learner agency, making the framework more compatible with a broad understanding of inclusion (CAST, 2024). Even so, UDL should not be turned into a checklist of digital features. Its value lies in anticipatory design and disciplined attention to barriers; the presence of multiple media does not in itself show that learners can use them meaningfully.

School-level research explains why teacher training alone has uneven effects. A large literature review found that digital transformation depends on leadership, strategy, infrastructure, teacher collaboration, professional learning, and organisational digital capacity, not merely on individual competence or device supply (Timotheou et al., 2023). UNESCO's global review similarly cautions that technology can support access and personalisation while also intensifying inequality, surveillance, commercial dependence, and distraction when educational purposes do not govern its adoption (UNESCO, 2023). A systematic review focused on university teachers and students with disabilities reached a parallel conclusion: technological training can support inclusion and quality of life, but evidence quality and the translation from training to educational outcomes remain inconsistent (Fernández-Cerero et al., 2023). In other words, the digital pathway contains a double conversion. Teachers must convert technical knowledge into pedagogical judgement, and institutions must convert that judgement into reliable access through procurement, standards, support, and maintenance.

This interpretation resolves an apparent contradiction in the literature. Some studies associate greater digital competence with engagement and differentiated teaching, whereas others document teacher overload, inaccessible materials, or widening digital inequality. The disagreement is not simply about whether technology works. It concerns what technology is being asked to do, for whom, and under which organisational conditions. Emergency remote teaching, for example, increased exposure to digital tools but did not necessarily provide mastery experiences in inclusive design. Frequency of use is therefore a poor proxy for inclusive technological competence (Wu et al., 2026; Zhao et al., 2025).

Chinese teacher education institutions face an additional equity question. Coastal and well-resourced universities may have stronger infrastructure and support teams than provincial or rural institutions, while students' devices, bandwidth, disability-related access, and digital literacy also vary. A national technology initiative can consequently produce locally different capability sets. Future evaluation should distinguish access, accessibility, pedagogical use, and learner participation rather than compressing them into a single technology-integration score.

4.2 Professional learning: from exposure to mastery

Professional development is the most commonly proposed response to low readiness for inclusion, but the label covers radically different experiences. A single lecture on disability law, a demonstration of differentiated instruction, a semester-long inquiry community, coached classroom cycles, and a supervised inclusive practicum are all called professional development. Their effects should not be expected to match.

The inclusive education literature has long warned that professional development research is fragmented. Waitoller and Artiles (2013) found conceptual inconsistency, weak attention to equity, and limited evidence connecting teacher learning to student outcomes. Across the wider professional-learning literature, effective designs tend to be content-focused, active, collaborative, modelled, coached, reflective, and sustained rather than episodic (Darling-Hammond et al., 2017). More recent meta-analytic work indicates that training and interventions can produce meaningful changes in beliefs and self-efficacy, especially when practical experience and reflection are combined (Dignath et al., 2022). Wray et al. (2022) also identified professional learning and confidence-building experience as recurring sources of efficacy. These findings are compatible with social cognitive theory: information may clarify what to do, but mastery experiences, credible modelling, feedback, and manageable challenge are more likely to revise efficacy.

Evidence from adjacent professional-learning research strengthens this conclusion. A meta-analysis of causal studies found that teacher coaching improved instruction and student achievement, although effects varied and were harder to sustain at scale (Kraft et al., 2018). Collaborative inquiry in inclusive settings has also shown promise. Teachers in professionally facilitated learning communities reported changes in beliefs, efficacy, and practice when they engaged in critical dialogue, shared work publicly, and examined classroom problems together (Brennan & Gorman, 2023). Related case research described how a school-based learning community supported the enactment of inclusive pedagogy and narrowed the gap between espoused values and routine practice (Brennan et al., 2021; Brennan & King, 2022).

These studies do not imply that every collaborative programme works. Collaboration can reproduce existing assumptions, become an administrative meeting, or place additional labour on already overextended teachers. External facilitation may help establish psychological safety and intellectual challenge, but it also raises questions about sustainability once project support ends. Coaching may improve observable practice, yet high-quality coaches are costly and effects can attenuate when programmes expand. The defensible conclusion is narrower: professional learning is more likely to change inclusive practice when it is sustained, specific to teachers' learners and curriculum, connected to opportunities for enactment, supported by feedback, and embedded in collegial routines.

Preservice programmes face the same problem in a different form. Coursework can increase knowledge and positive beliefs, but candidates need repeated opportunities to apply inclusive strategies in placements where mentors model them. If the practicum school treats inclusion as the responsibility of a specialist, the placement may undermine what the university teaches. Metsala and Harkins (2020) found that preservice teachers' efficacy and beliefs varied with programme and experience, while Malinen et al. (2013) showed that inclusive efficacy has both cross-national commonalities and contextual variation. The relevant unit of design is therefore not the university course alone. It is the university-school partnership, including mentor preparation, placement quality, feedback, and the coherence of expectations across sites.

For China, this matters because teacher education reform has pursued expansion, certification, practicum innovation, and rural teacher supply simultaneously (Ye et al., 2019). A generic inclusion module may have limited influence if candidates encounter large classes, limited specialist collaboration, examination pressure, and mentors who lack inclusive preparation. Professional learning must be designed as an institutional pathway into supported practice, not as evidence that the teacher has been informed.

4.3 Multicultural preparation: from awareness to situated judgement

Inclusive education in China is still frequently narrated through disability, yet learner diversity also involves migration, ethnicity, language, socioeconomic position, gender, and the intersections

among them. Disability itself is culturally interpreted and differently resourced. A teacher who is confident in adapting a worksheet for a learner with a recognised impairment may be less prepared to understand linguistic participation, family knowledge, rural-urban inequality, or the way assessment practices privilege particular forms of expression. Multicultural preparation expands the field of vision, but only if it avoids reducing cultures to stable lists of traits.

Reviews of multicultural professional development identify both promise and caution. Parkhouse et al. (2019) found a small and heterogeneous evidence base, with important unresolved questions about resistance, programme theory, and the balance between learning about cultural patterns and reinforcing stereotypes. Romijn et al. (2021) likewise concluded that intercultural competence can be developed in initial and continuing teacher education, but programmes vary widely and stronger research designs are needed. Cross-national evidence suggests that participation in multicultural education is associated with higher multicultural self-efficacy, yet such associations may reflect selection, institutional culture, or differences in what programmes actually provide (Choi & Lee, 2020).

The most useful distinction is between awareness and judgement. Awareness can help teachers recognise that their own assumptions are situated. Inclusive judgement requires more: eliciting learners' and families' knowledge, interpreting participation in context, adapting curriculum without lowering intellectual demand, examining whose language and history are treated as normal, and reflecting on the consequences of one's decisions. Culturally responsive and culturally sustaining traditions insist that learners' linguistic and cultural repertoires are resources for rigorous teaching rather than deficits to be corrected (Gay, 2018; Paris & Alim, 2017). Critical reflection becomes generative when it produces alternative courses of action rather than ending in self-description (Liu & Ball, 2019). This is why cultural preparation needs cases, community engagement, guided inquiry, and classroom application alongside conceptual work (Pan, Zou, et al., 2026; Wang & Pan, 2022).

Evidence from Chinese teacher education makes the intention-action gap visible. Feng et al. (2025) found generally positive multicultural attitudes among preservice teachers, but the knowledge and action dimensions did not map straightforwardly onto students' perceptions of differentiated instruction. Interviews pointed towards formal preparation, reflection, and practical application as necessary bridges. The result should not be interpreted as failure of multicultural education. It shows that favourable dispositions are an input, not a classroom outcome.

Multicultural and disability-focused preparation should therefore be integrated without collapsing one into the other. A broad equity lens helps teachers see intersecting barriers; disability-specific expertise remains necessary for communication, access, assistive technology, and specialised support. Florian's (2019) argument for the co-existence of special and inclusive education is helpful here. The problem is not specialist knowledge itself but the organisational use of difference to transfer responsibility away from ordinary teaching. An inclusive institution makes specialist expertise available to extend common provision, while keeping belonging and curricular participation as shared responsibilities.

Table 2

Critical synthesis of the three capacity pathways

Capacity pathway	What the literature supports most consistently	Why results conflict	Conversion condition implied by the evidence
Technological integration	Digital tools can widen access, representation, communication, and learner expression	Studies conflate device access, use frequency, digital competence, accessibility, and inclusive outcomes	Accessible procurement, technical support, UDL-informed design, learner feedback, and time to redesign teaching

Capacity pathway	What the literature supports most consistently	Why results conflict	Conversion condition implied by the evidence
Professional learning	Efficacy and practice improve more plausibly through sustained, specific, practice-embedded learning with feedback	One-off workshops and coached inquiry are grouped under the same label; outcomes often stop at satisfaction or self-report	Protected time, skilled facilitation, coherent practicum, mentoring, collaboration, and follow-through
Multicultural preparation	Reflection, intercultural learning, and experiential engagement can strengthen beliefs and culturally responsive judgement	Programme theories and constructs vary; awareness is often treated as equivalent to action	Community partnership, case-based inquiry, supervised application, critical reflection, and curriculum flexibility

Note. None of the pathways is inherently inclusive; each becomes inclusive through the interaction of pedagogical purpose, institutional conditions, and evidence of learner participation

5. Results: Institutional Support as Conversion Infrastructure

Institutional support is often operationalised as a short scale covering resources, leadership encouragement, or collegial help. Such measures are useful but conceptually passive: support appears as something surrounding the teacher. The evidence reviewed here suggests a stronger formulation. Institutions actively configure the opportunities through which competence is expressed. They decide what time is protected, which tools are purchased, how classes are staffed, whose expertise counts, what data are reviewed, how risk is shared, and whether collaboration is routine or exceptional. This builds on earlier work showing that organisational cultures and leadership are central to the development of inclusive systems (Ainscow & Sandill, 2010).

Several studies support links among policy knowledge, school support, efficacy, and inclusive attitudes. In an Israeli sample, perceived policy knowledge and school support were associated with higher efficacy, which in turn related to more positive attitudes (Werner et al., 2021). In Turkey, student- and school-related factors both predicted inclusive teacher efficacy, with parental involvement and class size standing out within their respective sets (Baş, 2022). These studies are cross-sectional, so the direction may be reciprocal: efficacious teachers may perceive support more positively or elicit greater collaboration. The reciprocal possibility strengthens rather than weakens the conversion argument, provided causal claims remain modest. Institutions and teachers can form reinforcing or eroding cycles.

Leadership research clarifies some of the organisational mechanisms. Lambrecht et al. (2022) linked transformational and instructional leadership practices with the implementation of individualised education planning. In mainland China, distributed leadership and teacher leadership were positively associated with inclusive teacher efficacy; teacher leadership partly carried the influence of distributed leadership through advocacy of inclusive values and external liaison (Wang et al., 2022). A subsequent study connected distributed leadership with differentiated instruction through teacher leadership and inclusive professional competence (Wang & Tian, 2023). These findings are consistent with the proposition that leadership matters by reorganising participation and expertise, not merely by offering encouragement.

At the same time, the Chinese leadership evidence illustrates a methodological limitation. Both major studies used cross-sectional survey data and structural equation models. Model fit and statistically significant indirect paths do not establish temporal mediation. Common-method variance, selective participation, urban sampling, and reciprocal influence remain plausible. Scite

records also show that the leadership literature is not uniformly confirmatory, which is unsurprising because leadership labels conceal differences in enactment. Distributed leadership can mean authentic authority and shared problem solving; it can also mean responsibility dispersed without resources. Transformational language can inspire a common purpose, but it may not change timetables, class size, assessment, or access to expertise.

Conversion infrastructure can be specified more concretely in six interdependent functions. First, normative alignment makes inclusion a shared educational responsibility rather than a specialist project. Second, resource reliability ensures that accessible tools, learning materials, and specialist support are available when needed. Third, temporal capacity protects time for co-planning, observation, feedback, and redesign. Fourth, relational coordination connects general educators, specialists, families, communities, and students without turning collaboration into referral. Fifth, learning architecture embeds professional inquiry in routine work. Sixth, evidence loops examine participation, access, progress, and belonging, allowing the institution to learn whether its inclusive intentions are producing inclusive experiences.

This formulation also explains why institutional support can be both a precondition and an outcome of teacher leadership. Teachers with stronger efficacy may advocate more effectively, share resources, and build external relationships; those actions can make the institution more supportive for colleagues. Conversely, a school that treats failed adaptations as individual inadequacy may erode efficacy even after good training. The causal system is dynamic. A single mediation coefficient cannot represent it fully.

For teacher education institutions, the same six functions apply across university coursework and school practicum. Programme leaders can align inclusion across modules, ensure that learning platforms and materials are accessible, prepare mentors, protect structured reflection time, formalise specialist and community partnerships, and collect evidence from candidates, mentor teachers, and learners. In provincial normal universities, where resources may be tighter and placement schools more heterogeneous, these functions are especially important. Institutional capability does not require identical resources everywhere; it requires deliberate arrangements that make inclusive action possible in the local context.

6. Critical Synthesis: Reconciling Convergence and Contradiction

The literature converges on four propositions. Teachers' efficacy is positively related to inclusive attitudes and intentions. Practical experience, relevant knowledge, and well-designed professional learning can strengthen efficacy. School and institutional conditions shape both efficacy and enactment. Finally, inclusive change is more plausible when professional learning is connected to collaboration, leadership, and opportunities to apply what is learned (Dignath et al., 2022; Wray et al., 2022; Yada et al., 2022).

The same literature contains recurring contradictions. Experience sometimes predicts stronger efficacy and sometimes does not. Special education preparation can be associated with more favourable beliefs, but a degree label alone may explain little once attitudes and context are considered (Alnahdi & Schwab, 2021). Technology is described as both an access mechanism and a source of new exclusion. Leadership is statistically associated with inclusive practice, yet teachers in ostensibly supportive systems continue to report overload and limited capability. Preservice teachers may report higher efficacy than in-service teachers, despite having less classroom experience (Dignath et al., 2022).

These disagreements become more intelligible when five sources of heterogeneity are considered. The first is construct definition. General teacher efficacy, the TEIP domains, digital competence, confidence, attitude, and intention are related but not equivalent. A teacher can be

highly efficacious in behaviour management and less efficacious in collaboration or accessible instructional design. Aggregated scores hide these task-specific patterns.

The second is outcome proximity. Training satisfaction is closer to the intervention than learner participation; self-reported practice is closer than attainment but farther than direct observation. Effects often weaken as outcomes move from belief to behaviour and from behaviour to learner experience. This attenuation should be expected, not treated as evidence that beliefs do not matter. Each transition introduces additional constraints.

The third is calibration. High efficacy can reflect genuine mastery, but it can also reflect limited awareness of task complexity. Preservice teachers may feel confident before encountering the full demands of inclusive classrooms, while experienced teachers may report lower efficacy because their judgements are more discriminating. Without performance evidence, the same score can represent different relationships between confidence and competence.

The fourth is context. Class size, learner composition, assessment pressure, specialist availability, policy clarity, and leadership practice alter the meaning of an inclusive task. Malinen et al. (2013) found both shared and country-specific patterns in inclusive efficacy across China, Finland, and South Africa. A measure can be psychometrically comparable while the opportunity to enact the measured capability remains different.

The fifth is design. Cross-sectional self-report studies can establish patterned association but not temporal order, reciprocal effects, or classroom impact. Longitudinal and observational studies are rarer, and intervention research often has short follow-up. The literature therefore supports a mechanism-rich explanation more strongly than it supports a precise causal ranking of interventions.

The synthesis leads to a disciplined conclusion. Individual capacity is necessary, and teacher efficacy matters because it organises action under uncertainty. Yet the causal object of inclusive teacher education should be institutional capability: the patterned ability of a programme, school, or university-school partnership to convert professional resources into sustained inclusive practice. This is more than adding another variable to a regression model. It changes what counts as an intervention and what should be measured.

7. Discussion: A Capacity-to-Capability Conversion Framework

Figure 1 presents the framework derived from the synthesis. Three capacity pathways feed teacher efficacy and professional judgement. Institutional conversion infrastructure shapes whether those resources become enacted inclusive practice. Learner evidence then feeds back into professional learning and organisational decisions. The framework is deliberately cyclical because efficacy is revised through experience, and institutions learn through the consequences of their arrangements.

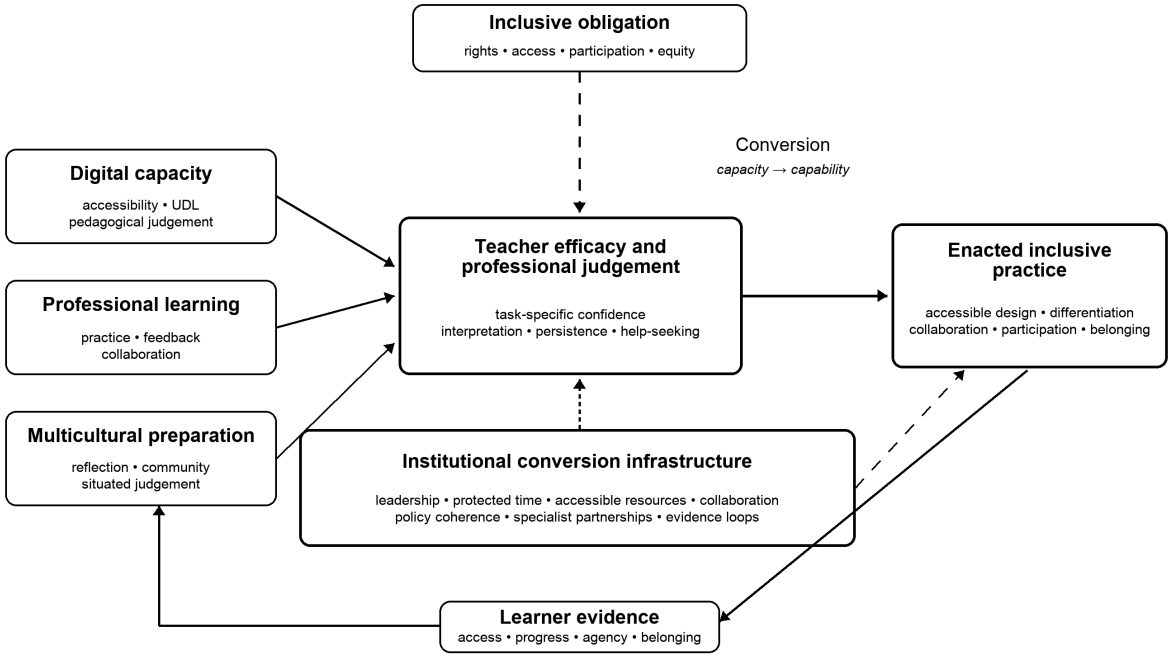

Figure 1. Capacity-to-capability conversion framework for inclusive teacher education

The framework makes four contributions. First, it relocates institutional support from the margin to the mechanism. Resources, leadership, time, collaboration, policy, and feedback are not interchangeable supports. Together they constitute the infrastructure through which a teacher's potential course of action becomes feasible. A professional-development programme should therefore be evaluated partly by whether the institution changes the conditions surrounding enactment.

Second, it distinguishes proximal and distal outcomes. Efficacy and professional judgement are proximal; differentiated and accessible teaching is more distal; learner participation, progress, and belonging are more distal still. A plausible evaluation traces the chain rather than claiming that a change in confidence proves inclusive impact. This is especially important where reform funding rewards the number of teachers trained rather than the quality of the environments in which they work.

Third, the framework treats technology, professional learning, and multicultural preparation as interacting rather than additive. Accessible digital design requires pedagogical judgement and knowledge of learner variability. Professional inquiry is stronger when teachers can examine cultural assumptions and use accessible tools to test alternatives. Multicultural preparation becomes actionable when curriculum, assessment, and digital platforms allow teachers to represent knowledge and participation in more than one legitimate form. An intervention that develops only one pathway may be blocked by weakness in another.

Fourth, the framework clarifies the role of special expertise. Inclusive pedagogy does not require general educators to work alone. Specialist knowledge, assistive technology, counselling, language support, and family expertise expand capability when they are organised around shared responsibility. They reduce inclusion when they become a route for transferring the learner and the problem elsewhere. The institutional question is therefore not whether specialist support exists, but how it is connected to ordinary teaching.

7.1 Implications for Chinese teacher education

The framework suggests a shift in programme design. Rather than distributing technology, inclusive pedagogy, and multicultural education across disconnected modules, programmes can organise them around recurring cases of learner participation. Candidates might analyse a

classroom barrier, consult learners and families, design an accessible and culturally responsive response, enact it in practicum, examine evidence, and revise their judgement with mentors and specialists. The same case can reveal how technology, pedagogy, culture, behaviour, and collaboration interact.

Practicum quality becomes central. Universities should select and develop placement partnerships based not only on available seats but on the school's capacity to model shared responsibility, provide feedback, and allow candidates to attempt inclusive teaching. Mentor education should address observation and coaching for accessibility, differentiation, collaboration, and culturally responsive judgement. Where exemplary inclusive placements are scarce, video cases, rehearsals, and simulation can prepare candidates, but they should supplement rather than replace supported contact with real learners and families.

Programme assessment should also change. A single self-efficacy score is useful for diagnosis but insufficient for accountability. A balanced evidence set would combine task-specific efficacy, analysis of lesson and assessment design, structured observation, candidate reflection, mentor judgement, accessibility audits, and learner voice. Calibration is itself an outcome: candidates should become neither complacently confident nor paralysed by complexity, but increasingly accurate about what they can do independently, what they can learn, and when collaboration is necessary.

Institutional leaders can use the six conversion functions as a practical audit. Are inclusive values visible in staffing and assessment decisions? Is time available for co-planning? Do digital procurement rules require accessibility? Are specialist and community relationships stable? Does professional learning continue into practicum and early career? Are learner participation and belonging examined alongside attainment? These questions turn institutional support from a perception score into an inspectable set of arrangements.

Regional differentiation is essential. The State Council's action plan for special education development strengthens the national policy mandate, but implementation capability varies across provinces, universities, and placement schools (State Council of the People's Republic of China, 2021). National frameworks should specify entitlements and accessibility standards while allowing locally designed conversion strategies. Equity requires additional support where class size, specialist supply, infrastructure, or travel distances make inclusive enactment harder. Equal expectations without differentiated institutional investment can reproduce regional inequality.

7.2 What the framework does not claim

The capacity-to-capability model should not be read as a completed causal theory. The synthesis does not establish that every listed institutional function is necessary in every context or that they carry equal weight. It also does not imply that institutions can compensate indefinitely for exclusionary policy or structural inequality. School and university leaders act within funding, curriculum, examination, labour, and accountability systems that constrain local choice.

Nor does the model reduce inclusion to teacher performance. Learners, families, peers, communities, and disabled people's organisations are knowledge holders and political actors, not merely recipients of professional action. The United Nations Convention on the Rights of Persons with Disabilities establishes participation and inclusion as rights, and UNESCO's system-level framing makes clear that education systems must address exclusionary structures (United Nations, 2006; UNESCO, 2020). Teacher capability matters because teachers mediate daily experience, but responsibility remains collective.

Finally, the framework does not assume that more technology, training, or leadership is always better. Poorly chosen technology can exclude; training can individualise a structural problem;

distributed leadership can distribute burden; and multicultural content can harden stereotypes. Quality depends on purpose, enactment, and evidence of consequences.

8. Identifying Research Gaps and a Future Research Agenda

The first gap is temporal. The evidence base is dominated by cross-sectional studies, including influential work on leadership, support, and efficacy. Longitudinal studies should follow preservice teachers from coursework through practicum and into early career, measuring how efficacy is calibrated by experience and how institutional conditions alter its trajectory. Intensive repeated measures could capture whether specific mastery experiences, failures, feedback episodes, or leadership changes precede shifts in efficacy.

The second gap is the distance between self-report and practice. Studies should combine validated efficacy scales with structured classroom observation, accessible-material audits, digital trace data, lesson artefacts, and learner reports. Observation should distinguish inclusive instruction, collaboration, and behaviour support rather than collapse them. Learner outcomes should extend beyond attainment to participation, agency, belonging, and the distribution of opportunities to contribute (Pan, Xu, et al., 2026).

The third gap is level of analysis. Teacher, classroom, school, university, partnership, and regional factors are frequently studied in separate literatures. Multilevel designs can test whether institutional conversion functions explain differences between teachers with similar preparation. Cross-level interactions are especially relevant: professional learning may have stronger effects where leaders protect time, mentors are prepared, and digital systems are accessible.

The fourth gap concerns intervention packages. The field needs factorial or sequential trials that compare isolated training with training plus institutional change. For example, a UDL programme could be paired with accessible procurement rules and co-design time; multicultural preparation could be paired with community partnership and coached classroom inquiry. Hybrid effectiveness-implementation studies would examine both educational outcomes and the feasibility, fidelity, adaptation, and cost of sustaining the intervention.

The fifth gap is contextual representation within China. Much research relies on urban samples or single accessible sites. Comparative studies should include provincial normal universities, rural placement schools, western and central regions, and institutions with different resource levels. Sampling should allow analysis of disability, migration, language, ethnicity, socioeconomic status, and their intersections without treating any group as internally uniform. Cross-national comparison remains useful, but within-country institutional comparison may be more actionable for policy.

The sixth gap is learner and family participation. Research on teacher efficacy rarely asks whether learners perceive the resulting practice as accessible, respectful, and enabling. Co-produced studies can define meaningful outcomes with students, families, disabled people's organisations, and community partners. Their involvement is particularly important in multicultural preparation, where professional interpretations of culture can otherwise go unchallenged.

The seventh gap is calibration and unintended effects. Researchers should examine when high efficacy becomes overconfidence, when repeated constraint erodes realistic confidence, and whether collective efficacy protects teachers from burnout or encourages uncritical conformity. Technology studies should report accessibility failures, privacy, algorithmic bias, and workload. Professional-learning studies should report who performs the extra labour and whether innovation remains after facilitation or project funding ends.

Table 3

Priority research agenda for the capacity-to-capability framework

Gap	Recommended design	Minimum evidence set	Decision value

Gap	Recommended design	Minimum evidence set	Decision value
Efficacy development over time	Longitudinal cohort from preservice education into early career	Task-specific efficacy, placement quality, critical incidents, retention, repeated observation	Identifies when and where efficacy is strengthened, calibrated, or eroded
Belief-practice gap	Mixed-method observation study	Efficacy, lesson artefacts, accessibility audit, observation, learner voice	Tests whether reported readiness corresponds to inclusive action
Institutional conversion	Multilevel study across universities and partner schools	Teacher capacity, leadership, time, collaboration, resources, policy coherence, learner outcomes	Estimates which organisational conditions change the return on preparation
Integrated intervention	Factorial or stepped-wedge effectiveness-implementation trial	Training fidelity, institutional changes, practice, participation, cost, sustainability	Separates the effect of training from the effect of conversion infrastructure
Regional inequality in China	Purposeful comparative study of coastal, central, western, urban, and rural sites	Resource profiles, staffing, practicum, digital access, disability and diversity indicators	Supports differentiated rather than nominally uniform policy investment
Cultural and disability intersection	Co-produced multiple-case study	Student and family accounts, teacher judgement, curriculum and assessment evidence	Prevents culture or disability from being treated as a fixed individual trait

Note. Study designs should pre-register primary outcomes where appropriate and report null, adverse, and implementation findings alongside favourable results

Together, these priorities would move the field from asking which teacher characteristic correlates with inclusion to testing how professional and institutional systems produce inclusive capability. They would also make contradiction more informative. A null training effect in a low-support setting may reveal a blocked conversion pathway rather than an ineffective idea; a positive self-report effect without classroom change may reveal an outcome-proximity problem; and a successful local adaptation may identify a function that can travel even when the programme form cannot.

9. Conclusion

The literature on inclusive teacher efficacy has reached a productive turning point. It is now difficult to defend the view that inclusive reform succeeds through policy placement alone, and equally difficult to defend the view that teachers need only more confidence or another isolated course. Teacher efficacy matters because it shapes effort, persistence, collaboration, and professional interpretation. Technology, professional learning, and multicultural preparation can strengthen the resources on which efficacy rests. Yet none of these pathways guarantees inclusive practice.

The central insight of this review is that institutional support performs a conversion function. Leadership, time, accessible resources, collaboration, policy coherence, and feedback determine whether individual capacity becomes a real opportunity to teach inclusively. They also shape the mastery experiences through which efficacy is revised. This reciprocal process explains why strong attitudes, high self-reported efficacy, and ambitious policy can coexist with uneven classroom change.

For China, the next phase of inclusive teacher education should therefore be judged by institutional capability: whether normal universities and their partner schools can repeatedly convert preparation into accessible, culturally responsive, evidence-informed practice across diverse regions. The most valuable research will not merely identify another predictor. It will show which arrangements make inclusive action possible, for whom, in which contexts, at what cost, and with what consequences for learners' participation, progress, and belonging.

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