A Whole-School Cultural Competence Framework for Inclusive Multilingual Education: A Design Case Study in Kazakhstan

Elmira Sultanova[1], Gulnar Sholpankulova[1], Askar Tlegenov[1], and Gulzhazira Sultanova[2]

[1] Faculty of Philology, L. N. Gumilyov Eurasian National University, Astana, Republic of Kazakhstan
[2] School-Lyceum No. 59 named after K. Mynbaev, Astana, Republic of Kazakhstan
Corresponding author: Elmira Sultanova, elmirasultanova38@gmail.com

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ABSTRACT:
Inclusive multilingual schools need designs that address cultural and linguistic participation without confusing language difference with disability or reducing inclusion to physical placement. This article presents a document-based design case study of a whole-school cultural competence framework developed for an officially authorized experimental educational site in Astana, Kazakhstan. The study examined seven institutional documents governing the 2025–2028 program through a structured qualitative content analysis of its aims, participants, pathways, staff roles, inclusion provisions, and assessment plans. The resulting framework integrates four observable competence domains—reflexive cultural awareness, dialogic perspective-taking, collaborative inquiry, and ethical and safe action—across curriculum, multilingual participation, school governance, and feedback. Delivery is organized through two age-differentiated pathways for grades 4, 7, 8, and 10 and distributed roles for coordinators, navigators, mediators, and mentors. The documents explicitly require an inclusive environment and pedagogical support for learners with special educational needs; the analysis operationalizes this commitment through accessibility checkpoints for representation, engagement, expression, language use, social safety, and assessment. The planned design comprises 12 intervention classes (n = 274) and 10 comparison classes (n = 207), but no participant outcomes are reported. The contribution is therefore an implementation-ready design and evaluation architecture, not evidence of effectiveness. The case shows how cultural competence can function as whole-school infrastructure for inclusive multilingual participation while preserving clear boundaries between documented commitments, proposed design specifications, and future ethically governed outcome research.

Keywords: inclusive education, cultural competence, multilingual education, special educational needs, whole-school approach

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1. Introduction

Inclusive education requires more than placing diverse learners in the same classroom. It requires schools to identify and remove barriers to presence, participation, and learning while maintaining meaningful academic expectations [1, 6]. In multilingual settings, these barriers can arise through the interaction of language, culture, disability, school routines, instructional materials, assessment, and social relationships. A learner may understand a concept but be unable to demonstrate it through the dominant language or response mode; another may require predictable routines, assistive support, additional processing time, or an alternative way to participate. Cultural and linguistic difference must not be treated as disability, yet disability and multilinguality can intersect in the same learner experience.

Cultural competence offers one possible organizing construct for this work. Process-oriented models define it as a developing capacity for self-awareness, interpretation of perspectives, respectful communication, and context-sensitive action rather than as factual knowledge about fixed cultural groups [2, 4]. Culturally responsive pedagogy similarly positions learners' cultural and linguistic repertoires as resources for rigorous academic learning, participation, and critique [7, 10]. However, schools often implement cultural learning through isolated celebrations, single lessons, or language-specific activities. Such practices can increase visibility without creating developmental continuity, accessible participation, or a credible assessment system.

The implementation gap is organizational as well as pedagogical. A whole-school approach connects governance, curriculum, classroom interaction, extracurricular participation, professional learning, safeguarding, and feedback. Research on school-wide social and emotional programs indicates that coherence and implementation quality influence whether promising components become sustainable practice [8, 16]. Culturally responsive school leadership likewise requires institutional routines and resource decisions, not only individual teacher goodwill [9]. In Kazakhstan, analysis of inclusive education has emphasized the need to connect regulatory, organizational, methodological, staffing, and feedback conditions [12].

The present case is an experimental educational program titled *Cultural Competence as a Foundation for Quality Education*, authorized for implementation at General Education School No. 102 in Astana from September 2025 to August 2028. The program links cultural competence, inquiry-oriented learning, school safety, and collaborative teacher learning across grades 4, 7, 8, and 10. Its approved documents explicitly identify the creation of an inclusive environment, including pedagogical support for children with special educational needs, as a required condition and intended program output. This commitment makes the case relevant to special education, but it does not by itself establish that accessible practices have been implemented or that learner outcomes have improved.

This article therefore asks:

1. How do the institutional documents configure cultural competence as a whole-school system for inclusive multilingual education?

2. Which design specifications translate the program's inclusion commitment into observable opportunities for access and participation?

3. What evidence would be required to distinguish implementation readiness from future effectiveness?

The study contributes a bounded design case: it reports what has been authorized and specified, identifies the operational features needed for inclusive implementation, and establishes an evaluation architecture. It does not report student-level effects.

2. Methodology

2.1 Design and case

The study used a qualitative, document-based design case approach. Design case research is appropriate when the purpose is to describe how an educational intervention has been assembled,

justify its main decisions, and make its operating logic available for examination and adaptation [13]. The unit of analysis was the whole-school program rather than an individual learner, teacher, or lesson.

The case site is a public general education school in Astana operating in a multilingual national environment. The controlling authorization establishes a program period from 4 September 2025 to 31 August 2028. The planned structure includes 12 intervention classes (n = 274) and 10 comparison classes (n = 207) in grades 4, 7, 8, and 10. These figures describe the intended implementation population; they are not an analyzed research sample.

2.2 Document corpus and analytic procedure

The corpus comprised seven institutional sources: the external authorization order, the school's internal implementation order, the experimental educational program, a program summary, the three-year implementation plan, staffing and participant calculations, and an external expert review. Earlier manuscripts and school outcome files were excluded as evidence because they refer to different timelines or do not provide an auditable dataset, ethics decision, and analysis package for the present program.

A structured extraction matrix was used to record:

a) program purpose and scope; b) target grades and planned cohorts; c) competence definitions; d) curriculum and activity formats; e) staff and governance roles; f) explicit inclusion, accessibility, and safeguarding provisions; g) monitoring and evaluation plans. The analysis proceeded in four stages.

First, overlapping statements were grouped under these categories. Second, controlling documents were used to resolve discrepancies; for example, the external authorization determined the official 2025–2028 timeline. Third, activities were mapped to a common program logic linking inputs, learning opportunities, observable performances, implementation evidence, and prospective outcomes. Fourth, inclusion commitments were translated into operational checkpoints informed by inclusive pedagogy and Universal Design for Learning [3, 6]. This final stage is an analytical design specification, not a claim that every checkpoint is already enacted.

No interviews, surveys, observations, student records, or participant-level datasets were analyzed. The available plan notes that a baseline diagnostic had occurred, but the authors did not have the ethics documentation, instrument versions, codebook, de-identified dataset, or reproducible analysis required to report those data as research findings.

3. Results

3.1 Program logic and competence domains

The document synthesis produced a five-layer whole-school architecture: governance, curriculum, participation, accessibility and safeguarding, and evidence. Governance authorizes the program, assigns responsibility, and schedules review. Curriculum connects cultural competence to subject learning rather than treating it as an extracurricular topic. Participation provides dialogic, project-based, and multilingual ways for learners to contribute. Accessibility and safeguarding anticipate barriers and establish support pathways. Evidence separates documentation of implementation from measurement of outcomes.

Four recurring domains make cultural competence observable (Table 1). Reflexive cultural awareness concerns recognition of identity, language, experience, and assumptions without treating one's own standpoint as universal. Dialogic perspective-taking concerns listening, interpretation, clarification, and communication across difference. Collaborative inquiry concerns the use of disciplinary evidence and multiple sources to investigate a question with others. Ethical and safe action concerns anticipating consequences, resisting exclusion and stereotyping, seeking support, and choosing proportionate action that protects dignity and participation.

Table 1. Cultural competence domains and inclusive evidence

Domain	Learner performance	Accessible learning opportunities	Observable evidence
Reflexive cultural awareness	Identifies standpoint, experience, and initial assumptions	Identity maps, visual or oral reflection, comparison of representations	Distinguishes observation from interpretation and revises a view with a reason
Dialogic perspective-taking	Interprets and communicates across perspectives	Structured dialogue, role-play, multilingual clarification, supported turn-taking	Paraphrases another view, asks a clarifying question, adapts an explanation for an audience
Collaborative inquiry	Uses disciplinary evidence and multiple sources with others	Staged inquiry, mixed-role teams, source triangulation, multimodal products	Evaluates sources, integrates perspectives, documents a contribution or negotiated decision
Ethical and safe action	Chooses action that protects dignity, safety, and participation	Dilemma cases, help-seeking rehearsal, conflict mediation, alternative private response routes	Anticipates consequences, identifies support, challenges stereotyping, justifies a response

The domains are designed to be enacted together. For example, a learner examining a contested local narrative can identify an initial assumption, compare sources in more than one language, explain alternative perspectives, contribute through speech, writing, or a visual representation, and decide how disagreement can be represented fairly. Assessment therefore focuses on situated performance and reflection rather than a quiz about cultural facts.

3.2 Developmentally differentiated pathways and distributed roles

The umbrella delivery structure is the Culture Mediators Club. Two pathways differentiate complexity by age while retaining common competence domains. Safety Formula, for grades 4 and 7, uses stories, visual material, role-play, guided cases, and increasingly complex discussion to develop boundary recognition, empathy, media awareness, help-seeking, and constructive responses to exclusion or conflict. Eureka Academy, for grades 8 and 10, emphasizes sustained inquiry, identity, global-local relationships, source evaluation, research ethics, and public communication.

Responsibility is distributed through four functional roles. The coordinator aligns subject objectives, activities, and timing. The navigator curates culturally and linguistically appropriate resources and identifies possible access barriers. The mediator supports dialogue, conflict-sensitive communication, and participation. The mentor provides follow-through, reflection, and links to support. Roles may be combined in settings with fewer staff, but the functions must remain visible. Teacher teams use Lesson Study to plan, observe, and revise focal lessons [5, 11]. Lesson Study provides implementation learning; it is not treated as proof of program effectiveness.

3.3 Operationalizing inclusion without conflating difference and disability

The approved program requires an inclusive environment and pedagogical support for learners with special educational needs, including learners with disabilities. The documents do not provide a verified profile of learner needs, individualized education plans, or evidence that a named accessibility framework has been implemented. The analysis therefore converts the general commitment into prospective design

checkpoints (Table 2). These checkpoints draw on the UDL principle that variability should be anticipated through multiple means of engagement, representation, and action or expression [3] while preserving the inclusive-pedagogy expectation that meaningful learning opportunities remain available to everybody rather than creating a lower-status parallel curriculum [6].

Table 2. From documented inclusion commitments to operational design checkpoints

Documented commitment	Operational checkpoint for each unit	Fidelity evidence
Inclusive environment and support for learners with special educational needs	Identify likely sensory, linguistic, cognitive, mobility, communication, and social-emotional barriers before delivery	Accessibility field in the lesson plan; support-person review where required
Cultural and linguistic responsiveness	Provide key concepts through clear language and more than one relevant mode; allow planned use of learners' linguistic repertoires where it supports meaning	Resource list, language plan, visual or audio supports, learner-access check
Active participation	Offer structured roles, supported turn-taking, small-group and individual entry points, and a non-public response option	Observation record showing who participated, how, and with what support
Project and inquiry learning	Break complex tasks into visible stages; provide models, organizers, checkpoints, and flexible product formats while retaining common criteria	Task sequence, exemplars, progress log, common rubric
Safety and prevention of bullying or conflict	Teach predictable dialogue norms, help-seeking routes, confidentiality limits, and procedures for responding to harm	Safeguarding script, referral route, incident-response record without research reuse unless approved
Monitoring and assessment	Permit appropriate modes of action and expression and document accommodations separately from competence scores	Assessment blueprint, accommodation log, scorer training and reliability checks

Multilingual flexibility is treated as an access resource, not an automatic accommodation for disability and not a substitute for specialist support. Likewise, a disability label does not predict a learner's language, culture, preferences, or required adjustment. Individual supports must be determined with the learner, family, and qualified professionals where appropriate. The whole-school framework supplies common access conditions; it does not replace individualized planning.

3.4 Implementation and evaluation architecture

The documents specify integrated lessons, authentic cultural materials, projects, portfolios, case tasks, clubs, external review, and Lesson Study. These are implementation-readiness outputs. A credible evaluation must answer three different questions: whether the intended design was enacted, how learners and teachers experienced it, and whether outcomes changed.

Table 3. Prospective evidence architecture

Evaluation question	Evidence	Analytic use
Was the framework implemented as intended and accessibly?	Plans, accessibility checks, activity logs, attendance, observation, support and accommodation logs, Lesson Study records	Fidelity profile by grade, pathway, and component; documented adaptations
How was participation experienced?	Age-appropriate interviews or focus groups, reflections, teacher accounts, family feedback where consented	Thematic analysis, attention to barriers, unintended effects, and disconfirming cases
Did learner outcomes change?	Pre-specified and age-appropriate cultural-competence performance tasks and validated measures; belonging, safety, and participation measures	Baseline-adjusted longitudinal analysis with class clustering where feasible; effect sizes and uncertainty intervals
Were outcomes equitable?	De-identified subgroup and support-use data collected under ethics approval	Examination of differential access, attrition, missingness, and outcome patterns without stigmatizing small groups

Because intact classes rather than individual learners are assigned to conditions, the prospective design is quasi-experimental and clustered. Grade-specific estimates will be imprecise with only two or three comparison classes per grade. Outcome analysis should therefore report baseline balance, attrition, effect sizes, uncertainty intervals, and convergent qualitative evidence rather than relying on isolated *p* values. Instruments require evidence of age appropriateness, validity, reliability, linguistic equivalence, and permitted use. Author-developed cases and rubrics require expert review, cognitive testing, scoring calibration, and inter-rater reliability before inferential use.

4. Discussion

The case demonstrates how cultural competence can be repositioned from an aspirational value to an organizational design for inclusive participation. Its main contribution is not a new list of cultural activities. It is the alignment of common learner performances, age-differentiated pathways, distributed staff functions, accessibility checkpoints, and an evidence system. This alignment responds to the implementation problem identified in whole-school research: components become meaningful when roles, resources, professional learning, and feedback are coordinated [8, 9].

The model also connects culturally responsive pedagogy and inclusive design without collapsing their purposes. Culturally responsive pedagogy asks whose experiences, languages, and knowledge are recognized and how these resources support disciplinary [7, 14]. UDL asks how predictable learner variability can be addressed through flexible engagement, representation, and expression [3]. Their intersection is useful when handled carefully: a multilingual source set can improve cultural representation, while multimodal access, explicit task structure, flexible response modes, and specialist supports address different barriers. Cross-pollination between culturally sustaining pedagogy and UDL is strongest when it attends to identity, power, and disability rather than presenting flexibility as culturally neutral [15]. For special and inclusive education, the framework offers three practical implications. First, access decisions should be embedded in routine unit planning rather than added after a learner fails to participate. Second, support must be documented as part of implementation fidelity; otherwise, an outcome difference may reflect

unequal access rather than the underlying competence. Third, school-wide cultural work should explicitly include disability as a dimension of human diversity while avoiding inspirational stereotypes, deficit narratives, and disclosure of personal information. Learners with special educational needs should be able to influence how participation, representation, and public presentation are designed.

The framework is adaptable rather than prescriptive. Schools can change pathway names, local cultural resources, grade placement, and staffing. Three elements should remain protected: observable competence domains, culturally and linguistically responsive disciplinary tasks with planned accessibility, and a feedback system that distinguishes implementation from outcomes. This form of principled adaptation is more credible than literal replication across different policy and resource settings.

4.1 Limitations

This study has substantial limitations. It is a documentary analysis of one school program and does not include classroom observation, learner voice, family perspectives, or outcome data. Institutional authorization establishes legitimacy and feasibility but does not demonstrate enactment. The documents state an inclusion commitment but do not provide a verified profile of learners with special educational needs, the supports they currently receive, or evidence that the proposed accessibility checkpoints have been tested. The checkpoints are therefore a prospective design specification.

The planned comparison groups are nonrandom, the number of classes within each grade is small, and ages differ substantially. Cultural competence is also vulnerable to social-desirability bias, cultural essentialism, and overreliance on self-report. Multilingual measures require careful translation and measurement-equivalence testing. Implementation will require coordination time, staff learning, specialist input, accessible materials, and safeguarding capacity. Future research must report null, mixed, and adverse findings as carefully as positive ones.

5. Conclusion

Inclusive multilingual education requires schools to coordinate cultural recognition, disciplinary learning, accessibility, participation, and evidence. The Kazakhstan design case organizes this work through four observable cultural-competence domains, two age-differentiated pathways, distributed staff roles, and prospective accessibility checkpoints for learners with varied educational needs. Its current contribution is an implementation-ready whole-school architecture and an explicit evaluation plan. It does not establish effectiveness. By distinguishing documented commitments, analytical design specifications, implementation evidence, and future outcomes, the framework provides a transparent basis for school improvement and ethically governed research in special and inclusive education.

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8. Author Declaration

The authors confirm that this manuscript is original, has not been published previously, and is not under consideration by another journal. All authors reviewed and approved the submitted version and accept responsibility for its content.

Author contributions. Elmira Sultanova: conceptualization, project administration, resources, and writing-review and editing. Gulnar Sholpankulova: methodology, validation, and writing-review and editing. Askar Tlegenov: formal analysis and writing-review and editing. Gulzhazira Sultanova: curriculum design, visualization, and writing-review and editing. These proposed CRediT roles must be confirmed by all authors before submission.

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Institutional Review Board statement. This article analyzes institutional curriculum and governance documents and reports no human-participant data. Before submission, insert the name of the competent ethics committee, its determination (approval or exemption), identification number, and date; upload the required certificate as a separate Research Material file. Future collection or research reuse of student, teacher, or family data requires prospective ethics review and the applicable consent and assent procedures.

Informed consent statement. Not applicable to the document analysis reported in this article. Consent and age-appropriate assent will be required or formally waived for future participant research in accordance with the ethics decision and applicable law.

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