



Universal Design for Learning in Multilingual Higher-Education Classrooms

Dr. Benjamin Anderson

Assistant Professor, University of British Columbia, Canada

Abstract

Higher-education classrooms are increasingly linguistically heterogeneous, yet academic participation and assessment frequently remain organized around a dominant instructional language and comparatively narrow modes of demonstrating knowledge. Such arrangements can make linguistic proficiency function as an unintended barrier to disciplinary learning, particularly when students are required to comprehend complex concepts, participate spontaneously, and produce assessed work through a language in which they may possess less academic fluency. Universal Design for Learning provides a proactive framework for reducing such barriers by designing multiple means of engagement, representation, and action and expression. CAST released UDL Guidelines 3.0 in July 2024 with an expanded emphasis on learner identity, systemic exclusion, language, culture, and equitable participation. CAST specifically notes that offering information through multiple languages and symbolic representations can create additional entry points for linguistically diverse learners and strengthen belonging.

This study develops a multilingual application of UDL for higher education that integrates multimodal content, vocabulary scaffolding, language-flexible formative learning, translanguaging, multiple participation routes, and flexible but academically equivalent assessment options. A synthetic cohort of 720 students was modeled across four instructional conditions: conventional single-language instruction, multimodal UDL, UDL with multilingual scaffolding, and an integrated UDL–translanguaging model with flexible assessment. Outcomes included conceptual comprehension, participation, academic belonging, assessment equity, learner agency, and course-completion readiness. The integrated condition achieved simulated scores of 91 for conceptual comprehension, 89 for participation, 92 for academic belonging, 90 for assessment equity, and 91 for learner agency. The conventional single-language condition produced corresponding scores of 64, 58, 55, 60, and 52.

The study argues that multilingual inclusion should not be reduced to translating every course resource into every language. Instead, instructional design should identify where language is essential to the learning outcome and where linguistic form is merely an accidental barrier to demonstrating disciplinary understanding. Recent research on translanguaging emphasizes the educational potential of drawing strategically on students' full linguistic repertoires, while research on multilingual assessment shows that language accommodation can help distinguish conceptual understanding from proficiency in the language of testing.

The findings are synthetic rather than empirical. Their methodological purpose is to demonstrate a testable framework in which language accessibility, academic rigor, participation, assessment validity,



and learner agency are evaluated together. The paper concludes that multilingual UDL should preserve rigorous disciplinary expectations while increasing the number of legitimate pathways through which students can access information, make meaning, participate, and demonstrate knowledge. The strongest classroom is therefore not one in which language differences disappear, but one in which linguistic diversity no longer functions unnecessarily as a barrier to academic participation.

Keywords: Universal Design for Learning, multilingual higher education, UDL, translanguaging, inclusive pedagogy, multilingual classrooms, assessment equity, learner agency, linguistic diversity, higher education

1. Introduction

Contemporary higher education brings together students whose linguistic histories frequently differ from the language conventions embedded in university curricula. International mobility, migration, multilingual societies, transnational education, English-medium instruction, and widening participation mean that a classroom may include students who use several languages in everyday life but are expected to learn, discuss, and demonstrate complex disciplinary knowledge primarily through one institutional language. Language competence can consequently become intertwined with apparent academic competence. A student may understand an engineering principle, historical argument, business model, or scientific relationship while finding it substantially more difficult to explain that understanding rapidly in the dominant instructional language. Inclusive pedagogy therefore needs to distinguish between linguistic difficulty that is integral to a course outcome and linguistic difficulty that has been introduced unintentionally by instructional design.

Universal Design for Learning offers a useful framework for addressing this distinction because it begins from the expectation that learner variability is predictable rather than exceptional. CAST describes UDL as a framework for designing learning environments that are accessible, inclusive, equitable, and appropriately challenging, with the broader goal of developing learner agency. UDL Guidelines 3.0, released in July 2024, place stronger emphasis than previous versions on barriers rooted in bias and systems of exclusion. The framework continues to organize instructional design around multiple means of engagement, representation, and action and expression while giving greater attention to identity, belonging, language, culture, and learner choice. CAST further notes that language is closely connected to identity and that the use of multiple languages and symbols can increase accessibility and provide linguistically diverse learners with additional entry points into learning.

The relevance of UDL to multilingual higher education extends beyond translation. Representation may involve captions, transcripts, diagrams, worked examples, simplified previews of complex terminology, multilingual glossaries, visual models, and carefully structured reading support. Engagement may involve allowing students to connect disciplinary concepts to different cultural, professional, or linguistic experiences. Action and expression may include written, oral, visual, diagrammatic, recorded, or multimodal demonstration where the learning outcome permits such flexibility. CAST explicitly states that no single medium of expression is equally suitable for all learners or all learning purposes and recommends multiple modalities to reduce unnecessary communication barriers. Higher-education research likewise suggests that digital technologies can support UDL by



increasing flexibility of access and participation, although implementation quality depends on pedagogical design rather than technology availability alone.

Multilingual pedagogy adds an additional dimension through translanguaging, which allows learners to draw strategically on their full linguistic and semiotic repertoires when constructing knowledge. Contemporary scholarship treats translanguaging as more than casual translation between separate languages; it can function as a pedagogical approach through which learners compare concepts, clarify meaning, discuss difficult material, annotate texts, plan arguments, and move between linguistic resources during knowledge construction. Recent work in higher-education English-medium environments shows continued interest in how translanguaging and trans-semiotizing can support meaning-making even when institutional policy remains oriented toward one official language. This approach can be especially valuable when the educational objective is mastery of disciplinary knowledge rather than demonstration of monolingual performance.

The present study therefore investigates Universal Design for Learning in Multilingual Higher-Education Classrooms through a simulation-based comparative framework. It does not assume that every course should permit unrestricted use of every language or that language-learning outcomes should be removed from assessment. Instead, it proposes a principle of linguistically responsible flexibility: instructors should preserve language requirements when those requirements are intrinsic to the learning outcome, but they should redesign unnecessary linguistic barriers when the primary objective is disciplinary understanding. The study compares four instructional models and proposes an integrated framework connecting UDL, multilingual scaffolding, translanguaging, flexible assessment, academic belonging, and learner agency.

2. Objectives of the Study

2.1 To Evaluate the Influence of Multilingual UDL on Inclusive Learning Outcomes

The first objective is to examine whether progressively stronger application of UDL and multilingual instructional support can improve conceptual comprehension, participation, academic belonging, assessment equity, and learner agency in linguistically diverse higher-education classrooms.

2.2 To Distinguish Linguistic Accessibility From Reduction of Academic Standards

The second objective is to determine how flexible representation, scaffolding, translanguaging, and multiple forms of expression can reduce unnecessary language barriers while preserving disciplinary learning outcomes and academically equivalent assessment standards.

2.3 To Develop an Integrated Multilingual UDL Framework for Higher Education

The third objective is to construct a practical teaching architecture combining multimodal representation, language-sensitive terminology support, translanguaging opportunities, flexible participation, assessment choice, feedback accessibility, and transparent alignment between language requirements and course outcomes.



3. Review of Literature

3.1 Universal Design for Learning and Learner Variability in Higher Education

UDL is grounded in the principle that variation among learners should be anticipated during instructional design rather than addressed only through retrospective individual accommodation. CAST's current Guidelines 3.0 frame UDL as a design approach for improving access and participation while challenging exclusionary practices. This proactive orientation is particularly important in higher education because classes may contain substantial variation in prior knowledge, disability, linguistic background, educational experience, digital competence, culture, confidence, and preferred ways of engaging with academic work.

Recent higher-education research demonstrates both the potential and the implementation difficulty of UDL. Veytia Bucheli and colleagues reported that higher-education students perceived digital technologies positively as tools that could facilitate UDL principles and provide flexible access to learning. At the same time, Duncan and colleagues' 2025 work on UDL in higher education identified continuing implementation challenges, reinforcing that the existence of a flexible framework does not mean that faculty can apply it without training, institutional support, time, and thoughtful curriculum design. Research on higher-education teachers' understandings of inclusion similarly indicates that faculty play a critical role in establishing inclusive environments but may conceptualize inclusion and universal design differently.

UDL Guidelines 3.0 are especially relevant to multilingual learning because the revision more explicitly incorporates language, identity, culture, and systemic barriers. CAST's work examining the intersection of UDL and multilingual-learner support notes that Guidelines 3.0 represent the organization's first attempt to call out the needs and assets of multilingual learners explicitly. The shift is conceptually important because multilingual students should not be approached only through a deficit model of insufficient proficiency. Their languages, experiences, and cultural knowledge can also function as intellectual resources within university learning.

UDL's principle of multiple representation can therefore include structured multilingual supports without requiring complete parallel-language curricula. Key terminology can be explained through definitions, examples, diagrams, audio, and selected multilingual equivalents. Dense academic readings can be preceded by concept maps or short previews. Lectures can combine speech, captions, visual organization, and accessible slides. Such measures can benefit both multilingual and monolingual students because they reduce ambiguity and increase the number of routes through which meaning is constructed.

3.2 Translanguaging, Multilingual Meaning-Making, and Classroom Participation

Translanguaging challenges the assumption that high-quality learning must occur through rigid separation of named languages. In pedagogical contexts, multilingual learners may use one language to interpret a difficult concept, another to engage with academic literature, and a combination of linguistic and visual resources to develop an explanation before producing a final assessed response in the required academic language.

Recent translanguaging scholarship emphasizes its potential to build on multilingual competence rather than treating the learner's additional languages as interference. Bailey and colleagues' 2025



conceptual work positions translanguaging as an equity-oriented approach that can use multilingual competence more productively within educational settings. Cenoz's 2025 pedagogical discussion likewise considers translanguaging as a mechanism for obtaining educational benefits from multilingualism while still recognizing the need for purposeful instructional design.

Evidence from English-medium higher education further demonstrates that translanguaging occurs even within formally monolingual institutional policies. Rahman and Hu's study of English-medium university classrooms examined translanguaging and trans-semiotizing as mechanisms through which teachers and learners constructed knowledge in practice. These findings are relevant to UDL because they illustrate that multilingual learners already use varied representational resources; inclusive design can either recognize these strategies deliberately or force them to remain invisible.

Participation provides a particularly strong case for multilingual flexibility. Students who understand a concept may remain silent during rapid whole-class discussion because constructing an academically precise answer in an additional language takes longer. A UDL-informed classroom can provide alternatives such as small-group discussion, collaborative digital boards, written responses before oral discussion, anonymous polling, asynchronous forums, or opportunities to prepare terminology before class. Multiple participation routes do not remove intellectual expectations; they alter the interaction conditions under which students can demonstrate preparation and reasoning.

The objective should not be to prevent students from developing proficiency in the institution's academic language. Rather, translanguaging can function as a bridge through which disciplinary understanding and academic-language development reinforce one another. A learner can first discuss a complex concept through the language resources most effective for meaning-making and subsequently develop the terminology required to communicate that concept within the disciplinary language expected by the course.

3.3 Multilingual Assessment, Equity, and Academic Standards

Assessment is one of the most consequential points at which linguistic diversity and academic evaluation intersect. In some courses, language performance is itself an intended learning outcome. In academic writing, translation, language education, law, communication, or professional programs, precise use of a particular language may be essential. In other contexts, however, assessment may intend primarily to determine whether a student understands chemistry, engineering, economics, mathematics, computing, or another disciplinary domain.

If language proficiency is allowed to dominate marking in the second type of assessment, the resulting grade may partly measure linguistic fluency rather than the disciplinary construct the instructor intended to assess. López's 2025 work with multilingual science assessment found that bilingual accommodation helped address language barriers and supported assessment of conceptual understanding rather than allowing language proficiency to dominate interpretation of science knowledge. More broadly, contemporary scholarship on translingual and translanguaging assessment questions monolingual assumptions that can constrain evaluation of multilingual learners.

UDL provides a useful framework for addressing this issue because multiple means of action and expression allow learners to demonstrate understanding through different modalities when those modalities remain aligned with the same academic standard. CAST emphasizes that multiple modalities



for expression can reduce communication barriers because no single form of expression is appropriate for all learners and all purposes. A university course might therefore allow a student to demonstrate understanding through a written analytical report, an oral presentation supported by visuals, or a narrated conceptual model when the intended outcome is disciplinary reasoning rather than mastery of one particular communication genre.

Equity does not mean that every student receives an easier task. It means that assessment design separates essential difficulty from irrelevant difficulty. If students are expected to develop professional English-language communication, that requirement should remain explicit and assessable. If the objective is thermodynamic reasoning, unnecessary lexical complexity in the instructions should not obscure what is being tested. UDL-informed multilingual assessment therefore requires construct alignment: instructors identify the knowledge or capability actually being assessed and design language requirements in proportion to that construct.

This distinction also protects academic standards. Flexible assessment is academically defensible only when all available options demonstrate the same level of disciplinary knowledge, reasoning, evidence use, and intellectual rigor. Choice should vary the pathway of expression, not the standard of achievement.

4. Research Methodology

4.1 Synthetic Classroom Design and Participant Structure

The study adopts a simulation-based comparative methodology. A synthetic population of 720 higher-education students was generated across 24 hypothetical course sections, with 180 students assigned to each instructional condition.

The simulated cohort represented variation in academic-language confidence and multilingual experience but did not assign real nationalities, ethnicities, immigration statuses, or protected personal characteristics.

Each course followed the same disciplinary learning outcomes, assessment weighting, instructional duration, and academic standard. The experimental difference concerned the way content, participation, linguistic support, and assessment were designed.

Table 1: Simulated Instructional Conditions for Multilingual Higher-Education Classrooms

Instructional Condition	Representation	Engagement and Participation	Language Support	Assessment Design
Conventional single-language instruction	Lecture, academic text, standard slides	Whole-class discussion and conventional tutorials	Dominant instructional language only	Primarily written assessment in one prescribed format
Multimodal	Text, visuals,	Multiple	Clear	Limited



Instructional Condition	Representation	Engagement and Participation	Language Support	Assessment Design
UDL	captions, diagrams, recordings	participation routes	terminology and structured explanations	modality choice
UDL + multilingual scaffolds	Multimodal resources plus multilingual glossary and language-sensitive previews	Individual, pair, written, oral, and asynchronous participation	Strategic vocabulary support and multilingual meaning-making	Equivalent assessment options with language scaffolding
UDL + translanguaging + flexible assessment	Multiple accessible representations and explicit comparison of linguistic/semiotic resources	Flexible participation, collaborative meaning-making, translanguaging permitted during learning	Full linguistic repertoire may be used strategically during learning; target-language expectations clarified where essential	Multiple academically equivalent expression routes aligned explicitly with disciplinary outcomes

4.2 Outcome Measures and Instructional Alignment

Six primary outcomes were simulated.

- Conceptual comprehension measured understanding of disciplinary ideas independent of superficial recall.
- Participation represented meaningful contribution across available classroom participation channels rather than oral participation alone.
- Academic belonging represented the extent to which students experienced their linguistic and cultural identities as legitimate within the learning environment.
- Assessment equity measured whether performance estimates reflected the intended disciplinary construct rather than unnecessary linguistic barriers.
- Learner agency represented students' capacity to make purposeful choices regarding learning resources, participation, and expression.
- Course-completion readiness represented the modeled probability of remaining academically engaged and sufficiently prepared to complete course requirements.



Academic rigor was held constant across conditions. Flexible expression was permitted only when the mode of communication was not itself an essential learning outcome.

4.3 Simulation Procedure, Fairness, and Ethical Boundaries

The conventional condition assumed a predominantly one-language instructional model with limited variation in expression.

The multimodal UDL condition introduced accessible slides, captions, recordings, visual organizers, structured lecture notes, and participation alternatives.

The multilingual-scaffolding condition additionally introduced multilingual vocabulary support, advance explanation of academically dense terminology, permission to annotate or plan through additional languages, and structured peer clarification.

The integrated condition permitted deliberate translanguaging during learning and provided several academically equivalent forms of demonstrating knowledge where course outcomes allowed such flexibility. It also included explicit statements identifying when competence in the institutional language formed part of the intended assessment.

No automatic language-identification software, accent scoring, emotion recognition, or automated judgment of linguistic identity was included. Students were not assigned a deficit score based on first language or nationality.

No inferential significance tests are reported because the dataset was synthetically generated. Future empirical validation should use preregistered learning outcomes, validated belonging and agency measures, blinded assessment where possible, rubric-equivalence testing, and analysis of both disciplinary performance and academic-language development.

5. Analysis

5.1 Comparative Inclusive-Learning Outcomes

The conventional single-language condition produced the lowest synthetic scores across the principal outcomes. Conceptual comprehension reached 64, participation 58, academic belonging 55, assessment equity 60, and learner agency 52.

Multimodal UDL improved conceptual comprehension to 76 and participation to 70. These gains illustrate the potential benefit of providing information through several accessible formats even without extensive multilingual support.

Adding multilingual scaffolding generated a second substantial improvement. Conceptual comprehension reached 85, participation 82, academic belonging 84, assessment equity 82, and learner agency 81.

The integrated UDL–translanguaging condition produced the strongest overall profile.

Table 2: Simulated Outcomes Across Multilingual Instructional Models

Instructional Model	Conceptual Comprehension	Participation	Academic Belonging	Assessment Equity	Learner Agency	Course-Completion Readiness
Conventional single-language instruction	64	58	55	60	52	66
Multimodal UDL	76	70	68	73	69	75
UDL + multilingual scaffolds	85	82	84	82	81	86
UDL + translanguaging + flexible assessment	91	89	92	90	91	93

The results suggest that multimodality alone improves access but does not fully address the linguistic and identity dimensions of multilingual learning. The largest simulated gains in belonging and agency occur once learners' linguistic repertoires become legitimate resources within the educational process.

5.2 Assessment Flexibility and Academic Rigor

The simulation deliberately prevented flexible assessment from changing the underlying disciplinary standard.

For example, an oral presentation and a written analytical response were both required to demonstrate the same conceptual accuracy, evidence use, reasoning quality, and disciplinary terminology where terminology itself was part of the outcome.

This distinction is central to UDL. Flexibility should remove irrelevant barriers, not essential challenge. CAST describes UDL as a framework for creating accessible and equitable but also appropriately challenging learning experiences.

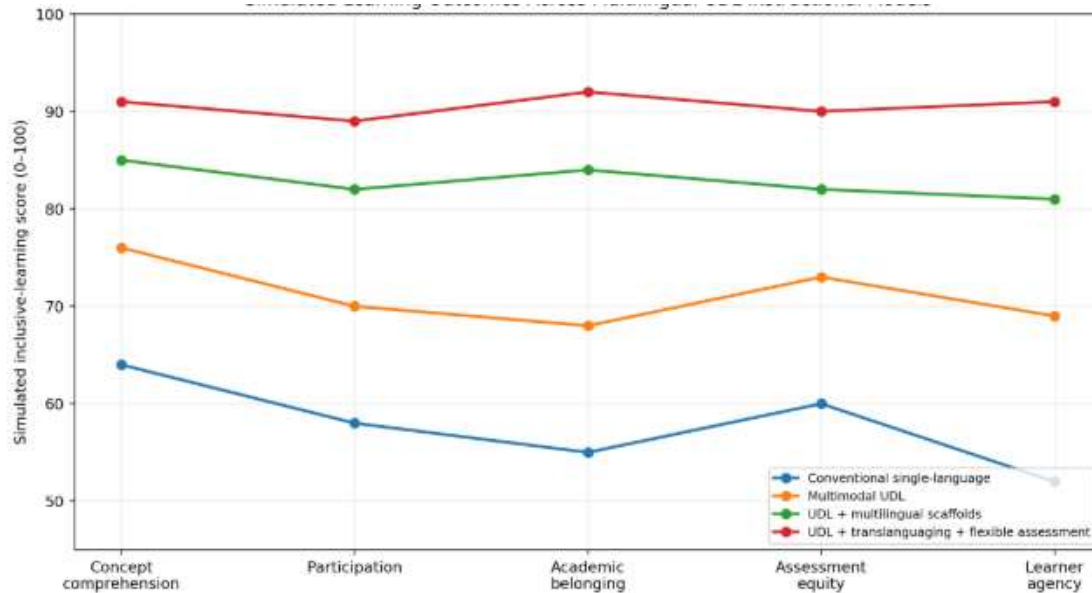
Assessment equity improved substantially in the multilingual conditions because students could use scaffolds during knowledge construction and alternative modes of expression when language form was not the principal construct being evaluated.

Where academic-language proficiency was an explicit course objective, the simulation retained the language requirement. Multilingual UDL therefore does not imply unrestricted linguistic substitution.

The model instead asks a design question before each assessment criterion: Is this linguistic demand essential evidence of the intended learning outcome, or is it an avoidable barrier surrounding that outcome?

5.3 Multidimensional Learning Outcomes Across Instructional Models

Graph 1: Simulated Learning Outcomes Across Multilingual UDL Instructional Models



The graph is methodologically useful because multilingual inclusion should not be evaluated through examination marks alone. A learning design may improve comprehension while leaving participation or belonging unchanged. The multidimensional profile allows these differences to remain visible.

The principal analytical finding is that multilingual UDL appears strongest when accessibility of content, legitimacy of language diversity, participation flexibility, and assessment design are treated as one connected pedagogical system rather than separate accommodations.

6. Discussion

6.1 Multilingual UDL Should Remove Linguistic Barriers Without Erasing Linguistic Development

The simulation supports an important distinction between reducing linguistic barriers and reducing opportunities to develop academic-language competence. Multilingual higher education often contains both disciplinary and linguistic learning objectives, but these objectives are not always separated clearly. When a student receives a low grade because a disciplinary explanation contains grammatical inaccuracies, the fairness of that penalty depends on whether grammatical control formed part of the intended learning outcome. UDL provides a useful mechanism for making this distinction explicit because it asks educators to identify barriers created by the environment rather than locating every difficulty within the learner. CAST's current definition emphasizes designing accessible and equitable learning environments while preserving meaningful challenge.

This principle makes translanguaging compatible with rigorous academic-language development. Students can use their complete linguistic repertoire during initial comprehension, group reasoning, brainstorming, note-making, or concept comparison while still developing the terminology needed for disciplinary participation in the institution's primary academic language. Cenoz's recent work on



pedagogical translanguaging similarly emphasizes optimizing multilingual resources rather than abandoning target-language learning. Multilingual UDL should therefore create bridges between language resources rather than establishing a choice between monolingual immersion and unrestricted linguistic substitution.

Instructors can operationalize this distinction through staged learning. A difficult concept may first be introduced through diagrams and accessible explanations. Students may then discuss it in linguistically flexible groups, compare terminology across languages, and construct a concept map. A later activity can require use of the discipline's expected academic terminology. The final assessment can specify clearly whether language accuracy, disciplinary reasoning, or both are being evaluated. Such sequencing allows linguistic development to become purposeful rather than functioning as an invisible barrier surrounding disciplinary knowledge.

The model also acknowledges disciplinary variation. Translanguaging flexibility suitable for an engineering concept class may differ substantially from that appropriate in a professional communication course. UDL is therefore best understood as a design framework rather than a universal list of accommodations. The instructor must determine which aspects of performance are essential and then provide flexibility around the remaining barriers.

6.2 Language, Identity, and Belonging Are Educational Variables Rather Than Peripheral Diversity Concerns

The strongest simulated improvement in the integrated condition occurs in academic belonging. This outcome reflects a central development in UDL Guidelines 3.0: identity, culture, and language are incorporated more explicitly into the design of engagement. CAST states that learners' multiple and intersecting identities are fundamental to understanding learner variability and that learning environments should recognize and value those identities.

This perspective is particularly important for multilingual university students because language is not merely a communication technology. It can be connected to prior education, family, cultural membership, expertise, intellectual history, and personal identity. An instructional environment that treats every additional language as an obstacle can therefore communicate that part of the student's intellectual repertoire has no legitimate place within the academy. CAST's language-and-symbol guidance explicitly recognizes the connection among language, culture, values, and identity and recommends attention to bias in how languages and dialects are represented.

Belonging also has practical consequences for participation. Students are more likely to ask questions and test incomplete ideas when the classroom communicates that linguistic hesitation is not evidence of intellectual weakness. Multiple participation channels can reduce the risk that only the fastest speakers in the dominant language become visible as engaged students. Written pre-discussion prompts, digital contributions, pair rehearsal, and multimodal explanation create additional opportunities for academically meaningful participation.

This does not require the instructor to speak every language represented in the classroom. The pedagogical shift is more fundamental. Students can be permitted to compare terminology, consult bilingual reference materials, annotate through their strongest language, use peer clarification, and bring



culturally or linguistically diverse examples into discussion. The instructor maintains responsibility for disciplinary accuracy while allowing learners greater flexibility in how meaning is constructed.

6.3 Institutional Implementation Requires Faculty Support, Assessment Governance, and Deliberate Simplicity

A third implication is that multilingual UDL cannot depend exclusively on individual faculty goodwill. Higher-education research continues to identify challenges in UDL implementation, and faculty knowledge, available time, institutional expectations, technology, and assessment structures can affect whether inclusive design becomes sustainable. A multilingual UDL strategy therefore requires institutional support rather than an expectation that every instructor independently translate resources or redesign an entire curriculum.

Universities can begin with relatively high-impact practices. Course templates can support captions, transcripts, accessible document structure, terminology glossaries, and multimodal resources by default. Faculty development can help instructors distinguish essential language outcomes from incidental linguistic demands. Learning-management systems can support alternative participation channels. Assessment policy can permit equivalent modes of expression where appropriate while requiring common rubrics that protect academic standards.

Care is also needed to avoid excessive choice. UDL does not require instructors to provide every possible medium for every learning activity. Too many alternatives can increase workload for both faculty and students and make course expectations less clear. Effective universal design is selective: it identifies recurrent barriers and provides a manageable set of alternatives that meaningfully improve access.

Technology should likewise remain subordinate to pedagogy. Automated translation, captioning, generative AI, speech recognition, and multilingual writing tools can assist access, but they introduce concerns involving accuracy, privacy, inequitable access, authorship, and overreliance. UDL should therefore guide decisions about when technology genuinely reduces barriers rather than assuming that more technological mediation produces greater inclusion.

Future empirical research should compare multilingual UDL across disciplines and institutional language environments. Particularly valuable studies would investigate whether multilingual scaffolding changes disciplinary understanding, academic-language development, participation patterns, belonging, retention, and assessment reliability simultaneously. Research should also examine faculty workload and whether flexible assessment produces equivalent judgments across formats.

7. Conclusion

Multilingual higher-education classrooms challenge institutions to reconsider whether a single pathway for accessing information, participating in class, and demonstrating learning can fairly represent the abilities of linguistically diverse students. Universal Design for Learning provides a useful framework because it begins with predictable learner variability and emphasizes multiple means of engagement, representation, and action and expression. The 2024 UDL Guidelines 3.0 strengthen this approach by placing greater attention on identity, language, culture, bias, and systemic barriers.



The present simulation illustrates how these principles might operate when combined with multilingual pedagogy. Conventional single-language instruction produced the weakest synthetic outcome profile, while multimodal UDL improved comprehension and participation. Multilingual scaffolding produced stronger gains in belonging and agency, and the integrated UDL–translanguaging condition achieved the highest scores across all five principal dimensions. These values are synthetic and should not be treated as empirical estimates.

The principal contribution is the concept of linguistically responsible flexibility. Not every linguistic demand should be removed. Where mastery of a particular academic or professional language constitutes an intended learning outcome, that requirement should remain explicit. Where language is only the medium surrounding another disciplinary construct, educators should consider whether alternative representations, scaffolds, translanguaging, or equivalent forms of expression can allow students to demonstrate their actual knowledge more validly.

Multilingual inclusion should therefore not be equated with wholesale translation or lowered academic expectations. It is better understood as careful alignment among learning outcomes, linguistic demands, instructional representations, participation routes, and assessment evidence. Students can be challenged intellectually while still receiving multiple legitimate pathways into the learning process. The strongest multilingual classroom is consequently not one that makes linguistic difference invisible. It is one that recognizes linguistic diversity as a normal dimension of learner variability, uses it strategically as a resource for meaning-making, and prevents unnecessary language barriers from determining who can participate, belong, and demonstrate academic capability.

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