

A priority needs assessment of foreign language teachers' teaching competency in a Chinese private university

Nabing Mao^{1*}, Chuming Ren^{1,2} and Supalucsana Lomlai¹

¹Payap University, Thailand.

²Nanning Normal University, China.

Accepted 10 March, 2026

ABSTRACT

This study diagnoses the priority development needs of foreign language teachers in a Chinese private university using a dual-evidence framework integrating Modified Priority Needs Index (PNI) analysis and teacher–student perceptual comparison. A total of 179 teachers and 404 students participated in a survey assessing three competency dimensions: educational beliefs (EB), instructional skills (IS), and digital pedagogical competencies (DPC). Results indicate significant gaps between current and desired competency levels across all dimensions, with DPC demonstrating the highest priority need (PNI=0.360). Specifically, smart interactive assessment (PNI=0.413) and digital learner profiling (PNI=0.407) emerged as the most urgent areas for development. Independent-samples t-tests reveal that student evaluations are generally higher than teacher self-assessments in EB and DPC, suggesting a pattern of teacher-driven developmental motivation rather than external performance pressure. The integrated analysis identifies four critical competency units that warrant priority intervention, particularly in digitally mediated instruction. By combining needs intensity ranking with perceptual triangulation, this study advances a data-informed approach to faculty development planning in resource-constrained institutional contexts. The findings suggest a tendency toward internally oriented professional development standards.

Keywords: Priority needs assessment, teaching competency, foreign language teachers, teacher–student perceptual gap, private higher education.

*Corresponding author. Email: 6509040045@payap.ac.th.

INTRODUCTION

Chinese higher education has entered a stage of massification, with private universities playing an increasingly important role in expanding access and diversifying institutional forms. According to the Chinese Ministry of Education (2023), more than one-third of the nation's undergraduate students are enrolled in private institutions. While this expansion has widened participation, it has also intensified inter-institutional competition and raised expectations for teaching quality.

Compared with their public counterparts, Chinese private universities typically operate under tighter financial constraints and rely heavily on tuition revenue (Mok and

Chan, 2008; Yang, 2014). Prior research shows that limited research resources and heavy teaching loads often create difficulties in teacher recruitment, retention, and professional development (Xu and Montgomery, 2019). As a result, teaching quality is not merely an academic issue but a strategic concern for the survival and development of private universities in a competitive higher education market.

Foreign language education holds strategic importance in China's globalization process and the Belt and Road Initiative. The Teaching Guide for Foreign Language and Literature Majors in Regular Higher Education Institutions

(Ministry of Education, 2018) emphasizes not only linguistic proficiency but also intercultural communication, critical thinking, and digital literacy. At the same time, the integration of ideological-political education into the curriculum and the rapid digital transformation of higher education have placed new demands on foreign language teachers' competencies (Bond et al., 2018; Koehler and Mishra, 2009). Digital tools are now deeply embedded in classroom interaction, formative assessment, and teaching resource integration, making digital pedagogical competence a core professional attribute rather than a supplementary skill.

However, faculty development in Chinese higher education has long been shaped by top-down or policy-driven models, with limited systematic diagnosis of actual competency gaps (Fullan, 2016). Existing studies on teacher competency in China often focus on descriptive accounts of current conditions and rely on single data sources, such as teacher self-assessments, without external validation (Spooren et al., 2013). Research specifically examining the professional development needs of teachers in private universities remains limited, even though the resource constraints and market pressures of these institutions may generate distinctive developmental demands.

In needs assessment theory, a "need" is defined as the gap between current conditions and desired standards (Witkin and Altschuld, 1995). Identifying and prioritizing such gaps is essential for the evidence-based allocation of limited resources. Yet subjective gap perception alone is insufficient. When development priorities are determined from only one perspective, the results may reflect perceptual bias rather than genuine structural deficiencies. Integrating teacher self-evaluations with student assessments therefore allows for a more comprehensive diagnosis of professional development priorities.

Given the pressures faced by Chinese private universities, including limited resources, intense competition for student enrollment, and rising demands for digital pedagogy, it is necessary to examine systematically the developmental needs of foreign language teachers within this context. Accordingly, this study uses the Modified Priority Needs Index (PNI Modified) together with data from both teachers and students to identify priority areas for teacher competency development and to examine the consistency of perceptions across these two perspectives. In doing so, the study seeks to provide targeted and contextually relevant evidence for faculty development planning in Chinese private higher education.

Research questions

To address the identified gaps in the literature and provide a systematic diagnosis of competency development

priorities in private higher education, this study addresses the following research questions:

RQ1: How do foreign language teachers in a Chinese private university evaluate their current and desired levels of teaching competency, and what are the priority rankings based on the PNI Modified?

RQ2: Are there significant differences between teacher self-evaluation and student perceptions of teaching competency?

RQ3: Based on the integration of developmental urgency (PNI) and perceptual differences (Gap), which competency areas should be prioritized for intervention?

LITERATURE REVIEW

Teaching competency in higher education

Teaching competency in higher education generally refers to the integrated set of beliefs, knowledge, skills, and practices that enable teachers to facilitate student learning effectively in specific instructional contexts. Earlier studies often treated competency as a combination of subject expertise and pedagogical ability (Shulman, 1987), whereas more recent scholarship has emphasized its multidimensional and developmental nature, especially in response to digital transformation, learner diversity, and changing institutional expectations (Koehler and Mishra, 2009; Caena and Redecker, 2019).

In higher education, teaching competency is no longer limited to classroom delivery. It increasingly includes curriculum understanding, student-centered pedagogy, assessment literacy, reflective capacity, ethical orientation, and the ability to integrate digital tools meaningfully into instruction. For foreign language teachers in particular, competency involves not only language knowledge and methodological skills but also intercultural sensitivity, communicative pedagogy, and the capacity to design authentic and technology-enhanced learning experiences (Richards, 2017). These dimensions have become even more important in contexts where blended learning, online interaction, and digital assessment have become normalized.

Within the Chinese higher education context, teaching competency is also shaped by policy expectations and institutional reform. University teachers are increasingly expected to align instruction with broader educational goals, including moral education, innovation capacity, and digital transformation. For foreign language teachers, this means balancing disciplinary teaching with emerging expectations related to curriculum ideology, student development, and technology-mediated instruction. In private universities, these expectations are further intensified by limited institutional resources and strong pressure to improve teaching quality and student

satisfaction.

At the same time, teaching competency should not be viewed as a fixed trait. Rather, it is a dynamic and developable construct that can be strengthened through systematic professional development and reflective practice. Drawing on the literature reviewed above, the present study conceptualizes foreign language teachers' teaching competency as comprising three interrelated dimensions: educational beliefs (EB), instructional skills (IS), and digital pedagogical competence (DPC). These dimensions capture both the pedagogical foundation and the practical capabilities required for high-quality foreign language teaching in contemporary private higher education.

Needs assessment and priority diagnosis

Needs assessment is a systematic process used to identify gaps between existing conditions and desired goals in order to inform decision-making and resource allocation. In educational settings, it is widely used to diagnose developmental deficiencies and determine which areas should be addressed first. Witkin and Altschuld (1995) define a need as the discrepancy between "what is" and "what should be," emphasizing that the purpose of needs assessment is not only to identify gaps but also to prioritize them according to their significance.

In teacher development research, needs assessment provides a practical basis for designing targeted interventions. Instead of treating all professional competencies as equally urgent, it enables institutions to distinguish between areas that require immediate support and those that are already relatively well developed. This is particularly important in resource-constrained settings, such as private universities, where professional development resources are limited and must be allocated strategically.

One widely used approach to priority diagnosis is the Priority Needs Index (PNI), which quantifies the discrepancy between current and desired states. The Modified Priority Needs Index (PNI Modified) further improves interpretability by standardizing the discrepancy relative to the current level, thereby allowing more meaningful comparison across dimensions and indicators. A higher PNI value indicates a more urgent developmental need. In studies of educational management and teacher development, PNI has proven useful for ranking competency needs and supporting evidence-based planning.

However, priority diagnosis based solely on perceived discrepancy may still be incomplete. A large self-reported gap does not necessarily indicate poor external performance; likewise, a small perceived gap may conceal important deficiencies unnoticed by respondents. Therefore, while the PNI Modified is a valuable tool for

identifying developmental urgency, its interpretive strength can be enhanced when combined with additional evidence from relevant stakeholders.

Multi-source evaluation and perceptual differences

In educational evaluation, different stakeholder groups often perceive teaching quality in different ways. Teachers tend to evaluate themselves based on professional ideals, instructional intentions, and reflective standards, whereas students typically judge teaching based on observable classroom experiences, interaction quality, and learning support. These two perspectives do not necessarily contradict each other; rather, they reflect different evaluative reference points.

Research on student evaluations of teaching has shown that student feedback can provide meaningful information about classroom practice, especially in areas related to clarity, engagement, assessment, and responsiveness (Spooren et al., 2013). At the same time, teacher self-assessment remains essential because it reveals how teachers interpret their own professional performance and development needs. When used together, self-evaluation and external evaluation can provide a more balanced understanding of teaching competency.

The comparison between teacher and student perceptions is particularly useful in needs assessment. If teachers rate themselves lower than students do, the resulting gap may reflect a development-oriented professional stance rather than obvious teaching failure. In contrast, if students rate teachers lower than teachers rate themselves, the discrepancy may suggest a need for corrective intervention or closer examination of classroom effectiveness. Thus, perceptual differences can serve as an important interpretive lens for understanding whether identified needs are internally driven, externally visible, or both.

For this reason, the present study combines teacher self-assessment, student evaluation, and PNI-based priority ranking in a unified analytical framework. This integration makes it possible not only to identify which competencies require development, but also to clarify how those priorities are situated within the relationship between self-perception and external observation.

METHOD

This study adopted a quantitative survey design to assess the priority development needs of foreign language teachers in a Chinese private university. The design combined two complementary analytical approaches. First, the Modified Priority Needs Index (PNI Modified) was used to compare teachers' perceived current and desired competency levels and to determine developmental

priorities. Second, teacher self-ratings were compared with student evaluations in order to examine perceptual differences and enhance the interpretive validity of the priority diagnosis.

The overall logic of the study was based on a dual-evidence framework. Developmental urgency was identified through the discrepancy between current and desired states, while perceptual comparison between teachers and students helped clarify whether the identified needs were externally visible or primarily internally recognized by teachers themselves. Through this integrated design, the study aimed to provide more precise and contextually grounded evidence for faculty

development planning.

Participants

Teacher sample

The teacher sample consisted of 179 foreign language teachers from a private university in Guangxi, China. All teachers from the university's foreign language major were invited to participate, resulting in a 100% response rate. Table 1 presents the demographic characteristics of the teacher sample.

Table 1. Demographic characteristics of teacher participants (N = 179).

Variable	Category	n	%
Gender	Male	33	18.4
	Female	146	81.6
Age	≤30 years	40	22.3
	31-40 years	81	45.3
	41-50 years	45	25.1
	>50 years	13	7.3
Education	Bachelor's or below	23	12.8
	Master's	138	77.1
	Doctorate	18	10.1
Professional title	Unrated	36	20.1
	Junior	16	8.9
	Intermediate	70	39.1
	Senior	57	31.8
Language taught	English	110	61.5
	Non-English	69	38.5

The teacher sample was predominantly female (81.6%), reflecting the typical gender distribution in China's foreign language teaching profession. The majority (67.6%) were 40 years of age or younger, indicating a relatively young teaching workforce. Most teachers (77.1%) held a master's degree, and nearly 70% held intermediate or senior professional titles.

Student sample

The student sample comprised 404 students enrolled in foreign language programs at the same university.

Students were selected using quota and stratified random sampling to ensure representation across different grade levels and language majors. Table 2 presents the demographic characteristics of the student sample.

Students were selected because they are direct participants in classroom interaction and can provide valuable external observations regarding teaching practices, instructional clarity, digital support, and learning engagement. Their inclusion in the study was intended not to replace teacher self-assessment, but to complement it as an important reference point for interpreting development priorities.

Table 2. Demographic characteristics of student participants (N = 404).

Variable	Category	n	%
Gender	Male	164	40.6
	Female	240	59.4
Grade level	First year	124	30.7
	Second year	134	33.2
	Third year	146	36.1
Language program	English	251	62.1
	Non-English	153	37.9

Instrument

Teacher and student questionnaires

The teacher questionnaire was developed based on the three-dimensional competency framework (EB, IS, DPC). It comprised 12 items measuring specific competency units, each rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Teachers provided two ratings for each item: one for their current level (Current) and one for their desired level (Desired). The student

questionnaire assessed perceptions of teacher competency using the same dimensions.

The questionnaires were reviewed by three experts in teacher education and educational administration. Based on their recommendations, adjustments and modifications were made to improve item clarity and relevance.

Table 3 presents the internal consistency reliability coefficients for both questionnaires. Cronbach's alpha values for all dimensions exceeded .80, indicating good internal consistency of the scales.

Table 3. Reliability analysis results.

Questionnaire	Dimension	Cronbach's α	CITC range
Teacher	EB	0.888	0.727 - 0.782
	IS	0.886	0.742 - 0.759
	DPC	0.913	0.741 - 0.839
Student	S_EB)	0.819	0.633 - 0.696
	S_IS	0.914	0.647 - 0.694
	S_DPC	0.844	0.660 - 0.710

Table 4. Validity analysis results.

Questionnaire	Kaiser-Meyer-Olkin measure of sampling adequacy	Bartlett's test of sphericity			Cumulative variance explained
		Approx. Chi-Square	df	Sig.	
Teacher	0.912	1535.53	66	0	77.10%
Student	0.924	3256.618	153	0	60.60%

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Rotation converged in 5 iterations.

Table 4 presents the validity results. For the teacher questionnaire, the Kaiser-Meyer-Olkin (KMO) measure

was 0.912, Bartlett's test of sphericity was statistically significant ($p < .001$), three factors were extracted

(cumulative variance explained = 77.1%), and all item factor loadings were >0.6 , indicating sound construct validity. For the student questionnaire, the KMO was 0.924, Bartlett's test was significant ($p < .001$), three factors were extracted (cumulative variance explained = 60.6%), and all item factor loadings were >0.7 , also indicating good construct validity.

Construction of 11 Operational Competency Units (OCUs)

To improve the precision of the needs diagnosis and move beyond macro-dimensional analysis, this study further refines teacher competency into 11 Operational Competency Units (OCUs) based on the three-dimensional framework (EB, IS, DPC). These OCUs represent specific, actionable abilities and serve as the basic units for subsequent needs assessment and difference analysis. Each competency unit was derived from the original teacher questionnaire items and

categorized into its corresponding dimension based on its functional meaning.

To enhance the comparability of teacher and student evaluations, student questionnaire items were mapped according to the principle of semantic isomorphism. The matching process was conducted independently by two experts with backgrounds in teacher development research, with final agreement reached through discussion. In cases where multiple student items collectively reflected the same competency, their mean scores were used to create a composite indicator, and its internal consistency was checked.

It should be noted that a few items focusing on teaching effectiveness or learning experience did not directly correspond to specific competency units. These items were excluded from the teacher-student difference and matrix analyses and were used only for supplementary interpretation.

Table 5 presents the OCUs and their corresponding relationships with items from the teacher and student questionnaires.

Table 5. Operational competency units and item mapping.

Dimension	OCU	Teacher Item	Student Item(s)
Educational Beliefs (EB)	EB1: Student-Centered Beliefs	EB1	S_EB1
	EB2: Intercultural Awareness	EB2	S_EB2
	EB3: Ideological-Political Integration	EB3	S_EB3
Instructional Skills (IS)	IS1: Differentiated Design	IS1	S_IS1
	IS2: Diverse Teaching Strategies	IS2	S_IS3, S_IS10
	IS3: Instructional Flexibility	IS3	S_IS4, S_IS9, S_IS5
	IS4: Comprehensive Assessment	IS4	S_IS2, S_IS6
Digital Pedagogical Competencies (DPC)	DPC1: Digital Learner Profiling	DPC1	S_DPC1
	DPC2: Smart Interactive Assessment	DPC2	S_DPC2
	DPC3: Digital Resource Integration	DPC3	S_DPC3
	DPC4: Data-Driven Instruction	DPC4	S_DPC4

Data analysis

Data analysis proceeded in three stages. First, descriptive statistics were calculated to summarize teachers' current and desired competency ratings and students' evaluations. Paired-samples t-tests were conducted to examine whether teachers perceived significant differences between their current and desired competency levels.

Second, the Modified Priority Needs Index (PNI Modified) was calculated for each competency dimension and operational competency unit. This allowed the ranking of developmental priorities according to the magnitude

of the discrepancy between current and desired states.

Third, independent-samples t-tests were conducted to compare teacher self-ratings with student evaluations across the corresponding competency units. Based on these results, an integrated scatter plot was constructed to visualize the joint distribution of developmental urgency (PNI) and teacher-student perceptual difference (Gap). This analysis made it possible to identify competencies that were both highly urgent and characterized by notable perceptual patterns. All statistical analyses were conducted using SPSS 26.0, with the significance level set at $p < .05$.

RESULTS

Priority needs analysis

Paired-samples analysis

Paired-samples t-tests comparing current and desired competency ratings revealed significant differences for all three dimensions (Table 6).

Table 6. Paired samples t-test results: Current vs. desired levels.

Dimension	Current M (SD)	Desired M (SD)	t	df	p
EB	3.712 (0.796)	4.602 (0.641)	-14.112	178	0.000
IS	3.689 (0.729)	4.565 (0.639)	-15.436	178	0.000
DPC	3.466 (0.859)	4.479 (0.735)	-16.005	178	0.000

Figure 1 visually presents the levels of current and desired teaching competency.

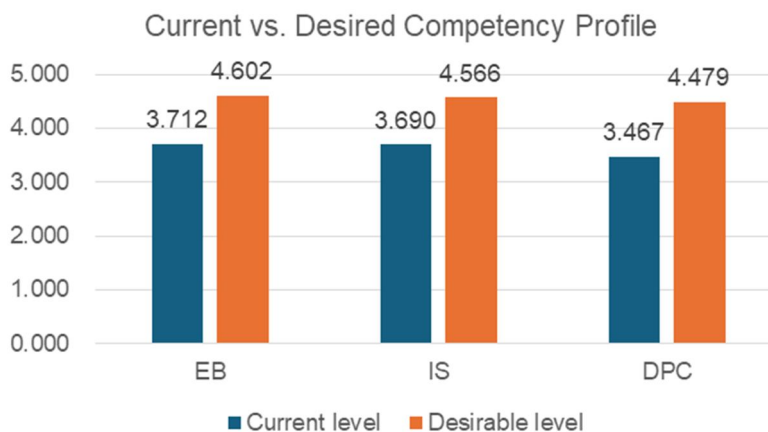


Figure 1. Current vs. desired competency profile.

PNI at the dimensional level

Table 7 presents the Modified PNI values and rankings for the three competency dimensions. Digital Pedagogical

Competence (DPC) showed the highest PNI value (0.360), followed by Educational Beliefs (EB, PNI = 0.297) and Instructional Skills (IS, PNI = 0.276).

Table 7. PNI modified values and rankings by dimension.

Dimension	Current M	Desired M	PNI	Rank
DPC	3.467	4.479	0.360	1
EB	3.712	4.602	0.297	2
IS	3.690	4.566	0.276	3

PNI at the OCUs level

Table 8 presents the PNI values and rankings for the 11

OCUs. The four highest-priority OCUs were: DPC2 (Smart Interactive Assessment, PNI = 0.413), DPC1 (Digital Learner Profiling, PNI = 0.407), DPC4 (Data-Driven

Instruction, PNI = 0.374), and EB1 (Student-Centered Beliefs, PNI = 0.372). In contrast, the two OCUs with the lowest PNI values were IS3 and IS2.

To visually illustrate the differences in need intensity across the three dimensions, Figure 2 displays the Modified PNI gap chart.

Table 8. PNI modified values and rankings by OCU.

OCU	Dimension	Current M	Desired M	PNI	Rank
DPC2	DPC	3.35	4.39	0.413	1
DPC1	DPC	3.46	4.5	0.407	2
DPC4	DPC	3.5	4.53	0.374	3
EB1	EB	3.61	4.61	0.372	4
IS4	IS	3.56	4.55	0.363	5
DPC3	DPC	3.55	4.5	0.352	6
IS1	IS	3.54	4.5	0.346	7
EB3	EB	3.65	4.55	0.34	8
EB2	EB	3.79	4.64	0.313	9
IS3	IS	3.82	4.61	0.252	10
IS2	IS	3.84	4.61	0.251	11

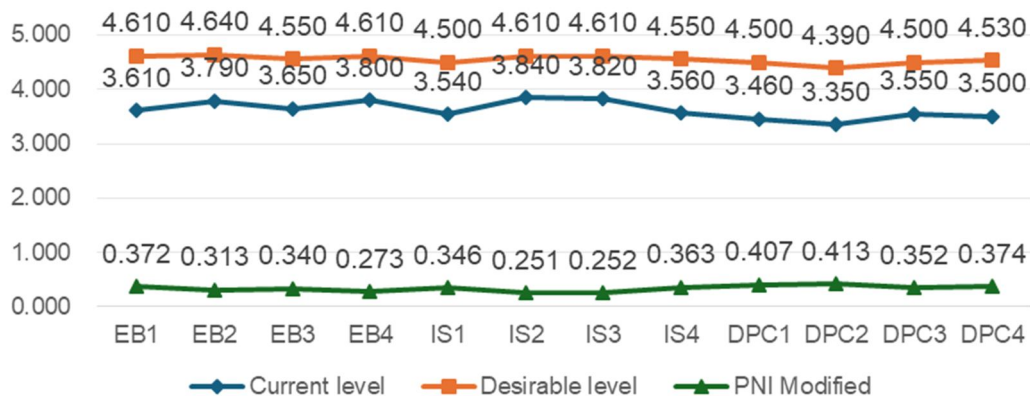


Figure 2. Competency PNI analysis.

Students' perceptions of teaching competence

Dimensional-level student ratings

Table 9 presents the mean student evaluation scores for

the three competency dimensions. Students rated Educational Beliefs (EB) highest (M = 4.036), followed by Digital Pedagogical Competence (DPC, M = 3.908) and Instructional Skills (IS, M = 3.703).

Table 9. Student evaluation means by dimension.

Dimension	Mean	SD	Skewness	Kurtosis
S_EB	4.036	0.896	-1.358	1.509
S_IS	3.703	0.82	-0.723	-0.525
S_DPC	3.908	0.866	-1.037	0.862

OCU-level student ratings

Table 10 presents the mean student evaluation scores for the 11 OCUs. The highest-rated OCUs were EB1

(Student-Centered Beliefs, $M = 4.200$), DPC1 (Digital Learner Profiling, $M = 4.070$), and EB3 (Ideological-Political Integration, $M = 4.030$).

Table 10. Student evaluation means by OCU.

OCU	Dimension	Mean	SD	Rank
S_EB1	EB	4.200	0.986	1
S_DPC1	DPC	4.070	1.028	2
S_EB3	EB	4.030	1.071	3
S_DPC3	DPC	3.990	1.028	4
S_EB2	EB	3.880	1.077	5
S_IS1	IS	3.860	1.102	6
S_DPC2	DPC	3.850	1.050	7
S_IS2	IS	3.802	0.940	8
S_DPC4	DPC	3.720	1.091	9
S_IS3	IS	3.715	0.902	10
S_IS4	IS	3.702	0.951	11

Teacher–student perceptual differences**Differences at the dimensional level**

Independent-samples t-tests revealed significant differences between teacher self-ratings and student

evaluations for Educational Beliefs ($t = -4.469$, $p < .001$) and Digital Pedagogical Competences ($t = -5.696$, $p < .001$), but not for Instructional Skills ($t = -1.182$, $p = .238$). For the two significant dimensions, student ratings were consistently higher than teacher self-ratings (Table 11).

Table 11. Teacher-student comparison by dimension.

Dimension	Teacher M (SD)	Student M (SD)	t	p
EB	3.683 (0.834)	4.036 (0.896)	-4.469	<.001
IS	3.690 (0.730)	3.771 (0.829)	-1.182	.238
DPC	3.467 (0.859)	3.908 (0.866)	-5.696	<.001

Differences at the OCU level

Table 12 presents the results of independent t-tests comparing teacher and student ratings across the 11

OCUs. Significant differences ($p < .05$) were found for 7 OCUs: EB1, EB3, IS1, DPC1, DPC2, DPC3, and DPC4. In all cases of significant difference, student ratings were higher than teacher self-ratings.

Table 12. Teacher-student comparison by OCU.

OCU	Teacher M (SD)	Student M (SD)	t	p
EB1	3.615 (0.919)	4.198 (0.986)	-6.725	<.001
EB2	3.788 (0.930)	3.876 (1.077)	-0.953	.341
EB3	3.648 (0.968)	4.032 (1.071)	-4.11	<.001
IS1	3.536 (0.876)	3.864 (1.102)	-3.836	<.001
IS2	3.844 (0.847)	3.802 (0.940)	0.529	.597
IS3	3.821 (0.815)	3.715 (0.902)	1.346	.179
IS4	3.559 (0.842)	3.702 (0.951)	-1.733	.084

Table 12. Continued.

DPC1	3.464 (1.007)	4.074 (1.028)	-6.657	<.001
DPC2	3.352 (1.013)	3.854 (1.050)	-5.381	<.001
DPC3	3.548 (0.937)	3.985 (1.028)	-4.869	<.001
DPC4	3.503 (0.896)	3.720 (1.091)	-2.524	.012

Integrated distribution analysis of the developmental priority structure

Theoretical basis for integrating PNI and perception gap PNI

Although the PNI Modified is effective for identifying developmental urgency, its interpretation becomes more meaningful when considered together with perceptual differences between teachers and students. A high PNI value indicates that teachers perceive a large gap between their current and desired states, but it does not reveal

whether this gap is also visible to learners. Similarly, teacher-student perceptual differences alone cannot determine whether a competency should be prioritized for intervention.

For this reason, the present study integrated the two indicators into a single analytical framework. PNI represented developmental urgency, while the teacher-student gap represented the relative direction of perception. This made it possible to distinguish between competencies that were urgent because teachers set high standards for themselves and competencies that might reflect externally observable shortcomings.

Table 13. PNI-gap coordinates.

OCU	PNI	Mean Difference (T-S)
EB1	0.37	-0.59
EB2	0.31	-0.09
EB3	0.34	-0.38
IS1	0.35	-0.32
IS2	0.25	0.04
IS3	0.25	0.11
IS4	0.36	-0.14
DPC1	0.41	-0.61
DPC2	0.41	-0.50
DPC3	0.35	-0.44
DPC4	0.37	-0.22

Characteristics of the integrated distribution

Figure 3 presents the scatter plot distribution of the 11 OCUs. The horizontal axis represents the PNI value, reflecting the relative urgency of developmental need. The vertical axis represents the teacher-student perception gap (Gap), with Gap = 0 serving as the reference line. Values below this line indicate that student evaluations were higher than teacher self-ratings, while values above it indicate the opposite.

The distribution reveals several clear structural characteristics.

First, all OCUs with relatively high PNI values are located below the Gap = 0 reference line. Competency units such as Digital Learner Profiling (DPC1), Smart Interactive Assessment (DPC2), Digital Resource Integration (DPC3), Student-Centered Instructional Beliefs (EB1), Data-Driven Instruction (DPC4), and Comprehensive Assessment (IS4) are clustered in the "high developmental urgency – negative Gap value"

region. This indicates that in areas teachers identified as most urgent for development, students did not assign lower evaluations; on the contrary, student ratings were on par with or higher than teacher self-ratings.

Second, no OCU is distributed in the "high PNI – positive Gap" region. In other words, no competency unit simultaneously exhibits the characteristics of "high perceived urgency by teachers" and "low evaluation by students." The absence of this distribution pattern suggests that, in this dataset, high-priority needs are not directly associated with low student ratings.

Third, the only two competency units showing positive Gap values—Diverse Teaching Strategies (IS2) and Instructional Flexibility (IS3)—are both located in the low PNI region. These units show a slight perceptual advantage in teacher self-ratings but are not identified as urgent development needs. Their distribution suggests relative stability rather than structural risk.

This distribution pattern may reflect a trend: when assessing their own development needs, teachers tend to

refer to professional expectations and reflective self-evaluation, rather than simply responding to lower external evaluations. This internally referenced mode of professional appraisal is discussed in the literature on teachers' professional self-understanding and reflective practice (Kelchtermans, 2021; Schön, 1983).

Overall, the scatter plot does not show a fragmented or

polarized distribution. Instead, the arrangement of OCUs indicates that urgency and perceptual differences do not overlap in a way that signals crisis. This clustered pattern reflects a relatively consistent distribution of priorities across competencies, rather than a fragmented configuration.

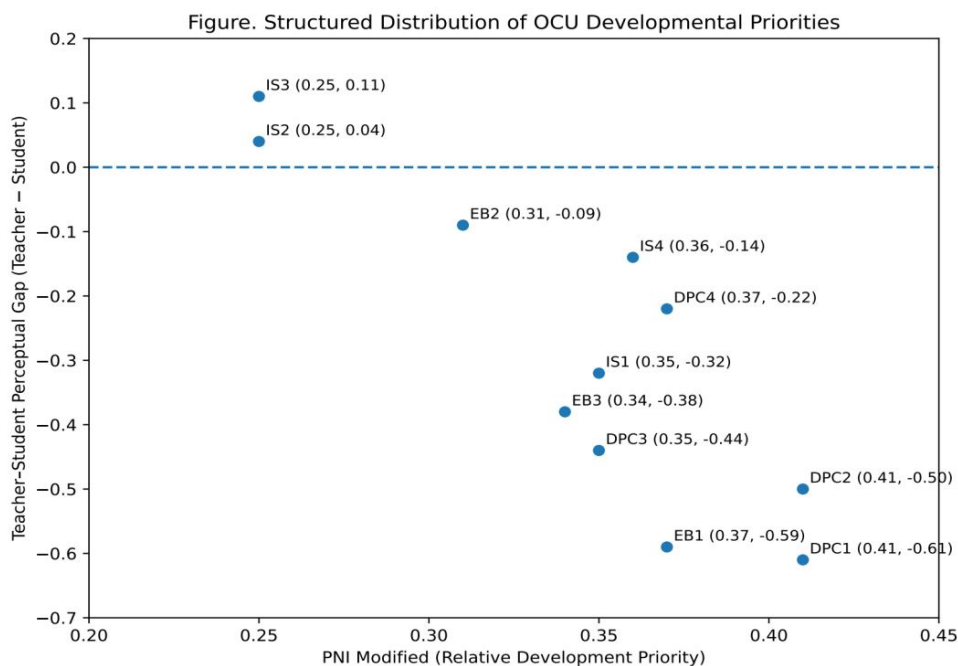


Figure 3. Structured distribution of OCU developmental priorities.

Structural interpretation of the developmental orientation

The integrated distribution pattern suggests that the most urgent development needs in this study were not primarily caused by visible teaching failure. Rather, they reflected a professional development orientation in which teachers recognized the need to strengthen competencies that were increasingly important in contemporary higher education, particularly those related to digital pedagogy.

In other words, teachers' development priorities appeared to be shaped more by internal professional standards and evolving instructional expectations than by student criticism. This finding is important because it shows that needs assessment should not be interpreted solely as a remedial mechanism. In some cases, high-priority needs may emerge precisely because teachers are actively benchmarking themselves against higher standards of professional practice.

Implications for resource allocation priorities

From a resource allocation perspective, the integrated distribution analysis offers clear guidance. Competencies located in the "high PNI – negative Gap" region can be viewed as strategic enhancement areas, particularly those related to digital pedagogical competence. These areas represent internally recognized priorities coupled with stable external evaluations, making them suitable for systematic capacity-building initiatives.

In contrast, competencies located in the low PNI region do not require immediate strategic intervention. Routine professional support mechanisms are likely sufficient to maintain their current performance levels.

Importantly, the absence of competency units exhibiting both high urgency and negative external evaluations indicates that no urgent corrective measures are necessary. Institutions can adopt structured, supportive, and forward-looking professional development

strategies, rather than crisis-driven reform measures.

Group differences in priority needs

To enhance the specificity of management recommendations, this study further analyzed differences in teaching competency needs across age groups, professional titles, and language specializations.

A one-way ANOVA revealed significant age group differences in PNI values for Educational Beliefs ($F = 3.373$, $p = .020$) and Instructional Skills ($F = 2.704$, $p = .047$), but not for Digital Pedagogical Competence ($F = 0.886$, $p = .450$). LSD post-hoc tests indicated that the 31-40 age group had significantly higher PNI values for EB and IS compared to the 41-50 age group. However, no significant differences in PNI values were found across professional title groups (unrated, junior, intermediate, senior) for any dimension (all $p > .05$), suggesting that development needs are distributed across all career stages.

Independent-samples t-tests showed no significant differences in PNI values between English and non-English language teachers across all dimensions (all $p > .05$), indicating consistent development needs across different language specializations.

DISCUSSION

This study diagnosed developmental priorities for foreign language teachers in a Chinese private university by integrating teacher self-evaluation, student perception, and Priority Needs Index (PNI) analysis. By combining internal and external evaluation data, the study provides a structured view of competency development patterns rather than relying on a single assessment source.

Priority needs and the central role of digital competency

The findings of this study show that foreign language teachers in the selected Chinese private university perceived significant developmental gaps across all three competency dimensions. Among them, digital pedagogical competence (DPC) emerged as the most urgent area for improvement. This result reflects the growing importance of digital transformation in higher education and confirms that digital teaching capacity is no longer peripheral to professional development. Rather, it has become a core component of effective foreign language instruction.

At the operational level, Smart Interactive Assessment (DPC2) and Digital Learner Profiling (DPC1) were identified as the two highest-priority competency units. These findings suggest that teachers were especially

aware of the need to strengthen their ability to use digital tools for formative assessment, feedback, learner monitoring, and adaptive teaching. In contrast to more traditional dimensions such as educational beliefs or general instructional skills, these digitally mediated competencies involve not only technical knowledge but also pedagogical redesign. Their high ranking, therefore, indicates that teachers are responding to deeper structural changes in teaching practice rather than merely requesting training in isolated digital tools.

This finding is consistent with previous studies emphasizing that digital competence in education should be understood as the ability to integrate technology into teaching in pedagogically meaningful ways, rather than as simple technical proficiency (Koehler and Mishra, 2009; Caena and Redecker, 2019). In the context of foreign language education, where classroom interaction, feedback cycles, multimodal resources, and individualized learning pathways are increasingly mediated by technology, the demand for such competence is particularly strong.

Teacher–student perceptual differences

Another important finding is that students generally rated teachers more positively than teachers rated themselves, particularly in educational beliefs (EB) and digital pedagogical competence (DPC). This result suggests that teachers did not overestimate their professional performance. Instead, they appeared to evaluate themselves more conservatively and with reference to stricter professional standards.

These differences do not necessarily indicate disagreement between teachers and students. Rather, they suggest that the two groups relied on different evaluative reference points. Students based their judgments mainly on classroom experience and observable teaching performance, whereas teachers were more likely to assess themselves in relation to professional expectations, institutional demands, and ideal standards of practice. This difference is especially meaningful in the case of digital pedagogy, because some aspects of digital competence—such as learner profiling, instructional analytics, or strategic assessment design—may not always be fully visible to students even when teachers regard them as important developmental goals.

The present findings therefore support the value of multi-source evaluation in teacher development research. Teacher self-assessment alone may overemphasize internal aspirations, while student evaluation alone may underrepresent areas that are professionally important but less visible in day-to-day classroom perception. Integrating both perspectives provides a more balanced basis for identifying meaningful development priorities.

Developmental orientation and policy context

The integrated analysis of PNI and teacher-student perceptual difference revealed that several of the highest-priority competency units were located in the quadrant characterized by high urgency and negative perception gaps. In other words, teachers identified these competencies as highly important for improvement, even though students did not evaluate them negatively. This is a particularly meaningful result.

It suggests that the identified priority needs were not mainly driven by crisis, failure, or student dissatisfaction. Instead, the findings may indicate that teachers were orienting their professional development toward evolving instructional expectations and emerging standards in higher education. Such a pattern reflects a developmental rather than remedial logic. Teachers were not simply reacting to criticism; they were proactively recognizing the need to improve in areas that are increasingly important for future teaching effectiveness.

This interpretation is especially relevant in the context of private universities. Because these institutions often operate with limited resources, development planning cannot rely on broad and undifferentiated training programs. Instead, institutions need to identify those competencies that are both strategically important and genuinely in need of support. The present findings suggest that digital pedagogy should be treated as one of these core strategic areas.

Implications for professional development in private universities

The findings of this study have several practical implications. First, faculty development programs for foreign language teachers in private universities should place greater emphasis on digitally mediated teaching competence, especially in the areas of learner data use, technology-supported feedback, and smart assessment design. These competencies are likely to have growing importance as higher education continues to adopt blended, online, and data-informed teaching models.

Second, the results suggest that professional development should not be designed solely as a corrective response to poor performance. In the present study, the most urgent needs emerged in areas where teachers themselves recognized developmental demands more strongly than students did. This indicates that teacher development planning should also support aspirational growth and forward-looking capacity building.

Third, the study demonstrates the value of combining priority needs analysis with multi-source evaluation. Institutions seeking to allocate limited training resources more effectively may benefit from using a similar framework that integrates teachers' perceived current-

desired gaps with student feedback. This is especially important in private university settings, where development resources are often constrained and therefore need to be allocated strategically.

CONCLUSION

Main findings

This study investigated the priority development needs of foreign language teachers in a Chinese private university by integrating the Modified Priority Needs Index (PNI Modified) with teacher-student perceptual comparison. Three main conclusions can be drawn.

First, teachers reported significant gaps between their current and desired competency levels across all three dimensions of teaching competency, namely educational beliefs, instructional skills, and digital pedagogical competence. Among these, digital pedagogical competence emerged as the highest-priority area for development.

Second, student evaluations were generally higher than teacher self-ratings, especially in the dimensions of educational beliefs and digital pedagogical competence. This suggests that teachers tended to assess themselves more conservatively and may have been guided by stricter internal professional standards.

Third, the integrated analysis of PNI and perceptual difference showed that the most urgent development needs were concentrated in competency units characterized by high urgency but negative perception gaps. This indicates that the priority needs identified in this study were primarily development-oriented rather than crisis-driven.

Practical implications

The study contributes to faculty development research in three ways. First, it provides empirical evidence on the professional development priorities of foreign language teachers in the underexamined context of Chinese private higher education. Second, it demonstrates the usefulness of combining priority ranking with teacher-student perceptual comparison to strengthen the interpretation of needs assessment results. Third, it offers a practical framework for identifying strategic targets for faculty development in resource-constrained institutional contexts.

In practical terms, the findings suggest that faculty development initiatives should prioritize digitally mediated teaching competencies, especially those related to learner analysis, interactive assessment, and instructional adaptation. More broadly, the study indicates that development planning should support both immediate

instructional improvement and long-term professional growth.

Limitations and future research

This study has several limitations. First, the research was conducted in a single private university, which may limit the generalizability of the findings to other institutional contexts. Second, the study relied on questionnaire-based self-report and perception data, which may not fully capture actual classroom practice. Future studies could incorporate classroom observation, interviews, or teaching artifacts to provide richer evidence for competency diagnosis.

In addition, although the present study identified priority competency areas, it did not examine how these competencies develop over time or how targeted professional development interventions might influence teacher growth. Future research could therefore adopt longitudinal or intervention-based designs to explore the developmental trajectories and practical outcomes of faculty support programs in private higher education.

REFERENCES

- Altschuld, J. W., & Kumar, D. D. (2010). *Needs assessment: An overview*. Sage. <https://us.sagepub.com/en-us/nam/needs-assessment/book232308>
- Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: A systematic evidence map. *Computers & Education*, 122, 1–15. <https://doi.org/10.1016/j.compedu.2018.03.006>
- Bond, M., Marín, V. I., Dolch, C., Bedenlier, S., & Zawacki-Richter, O. (2018). Digital transformation in German higher education: Student and teacher perceptions. *International Journal of Educational Technology in Higher Education*, 15(1), Article 48. <https://doi.org/10.1186/s41239-018-0130-1>
- Caena, F., & Redecker, C. (2019). Aligning teacher competence frameworks to 21st century challenges: The case for the European Digital Competence Framework for Educators (DigCompEdu). *European Journal of Education*, 54(3), 356–369
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage.
- Fullan, M. (2016). *The new meaning of educational change* (5th ed.). Teachers College Press.
- Kelchtermans, G. (1996). Teacher vulnerability: Understanding its moral and political roots. *Cambridge Journal of Education*, 26(3), 307–323. <https://doi.org/10.1080/0305764960260302>
- Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching*, 15(2), 257–272. <https://doi.org/10.1080/13540600902875332>
- Kelchtermans, G. (2011). *Vulnerability in teaching: The moral and political roots of a structural condition*. In New understandings of teacher's work: Emotions and educational change (pp. 65–82). Springer Netherlands.
- Kelchtermans, G. (2021). *Teacher professional self-understanding: A narrative and autobiographical perspective*. In C. Day (Ed.), *The Routledge international handbook of teacher and school development* (pp. 55–67). Routledge.
- Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70. <https://www.learntechlib.org/primary/p/29544/>
- Ministry of Education of the People's Republic of China. (2018). *Education Informatization 2.0 Action Plan*. http://www.moe.gov.cn/srcsite/A16/s3342/201804/t20180425_334188.html
- Mok, K. H., & Chan, D. (2008). Privatization or quasi-marketization? In Higher education in post-Mao China (pp. 281–302). Hong Kong University Press.
- Richards, J. C. (2015). *Key issues in language teaching*. Cambridge University Press.
- Schön, D. A. (1992). *The reflective practitioner: How professionals think in action* (1st ed.). Routledge. <https://doi.org/10.4324/9781315237473>
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22. <https://doi.org/10.17763/haer.57.1.j4743v2438j30642>
- Spooren, P., Brockx, B., & Mortelmans, D. (2013). On the validity of student evaluation of teaching: The state of the art. *Review of Educational Research*, 83(4), 598–642. <https://doi.org/10.3102/0034654313496870>
- Xu, C. L., & Montgomery, C. (2019). Educating China on the move: A typology of contemporary Chinese higher education mobilities. *Review of Education*, 7(3), 598–627
- Witkin, B. R., & Altschuld, J. W. (1995). *Planning and conducting needs assessments: A practical guide*. Sage.
- Yang, D. L. (2014). China's private universities. *Science*, 346(6208), 401.

Citation: Mao, N., Ren, C., and Lomlai, S. (2026). A priority needs assessment of foreign language teachers' teaching competency in a Chinese private university. *African Educational Research Journal*, 14(1), 291-304.
