

Precise Evaluation of Foreign Language Learning in Intelligent Environment

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Abstract. The reform of intelligent teaching model based on artificial intelligence continues to deepen. The reform of teaching model and the application of advanced teaching approaches have greatly improved the efficiency of foreign language teaching, facilitating students to form self-learning awareness and habits. However, as the main subject of language learning, most test-based assessments can only evaluate the achievement of learning goals, and there is a lack of tracking to learning process, learning needs, emotional attitudes, and other factors, and the application of evaluation results is insufficient. This study explores a precise evaluation model for foreign language learning, by enriching the dimensions of foreign language teaching evaluation, establishing dynamic learning files, building a precise evaluation system, and formulating a foreign language learning behavior evaluation scale. It seeks to explore the pathways for serving precise foreign language teaching and meeting individualized learning needs.

Keywords: learning-oriented assessment (LOA), precise evaluation, foreign language learning, intelligent environment.

1. Research Background.

1.1. Learning-oriented assessment

Learning-oriented assessment (LOA), also known as "assessment for learning," is a concept proposed by Black et al. in 2003. Black et al. defined assessment for learning as "any assessment that prioritizes enhancing student learning." Compared to formative assessment, assessment for learning places greater emphasis on the role of students and focuses more on how students strive to achieve learning goals under teacher's guidance. Its purpose is to help students understand their own learning and adjust learning strategies in a timely manner (Gao Manman, 2018).

In recent years, many domestic scholars have conducted studies on the application of LOA in language teaching, focusing on assessment criteria, assessment modes, and assessment outcomes. Wu Xuefeng (2022) explored the implementation path of LOA in college English writing based on the Chinese Standards of English (CSE) scale, integrating the scale into various aspects such as clarifying writing concepts, designing writing tasks, and developing assessment criteria. Li Jiuliang (2022) also studied the impact of LOA on students' self-regulated learning in college English writing based on the scale, and found that LOA significantly improved students' levels of self-regulated learning in English writing. He Na et al. (2021) constructed a diversified LOA model for college English based on the U-Campus system, and conducted application and outcome studies, revealing that LOA promotes learning, effectively enhancing students' language skills. Yang Xi (2023) established an integrated teaching model of "teaching-learning-assessment" for the smart business English reading and writing course based on LOA, and conducted empirical research, fully affirming the guiding value of LOA theory for business English teaching.

1.2. Precise teaching in the context of intelligent environments.

Precision teaching is an effective method of knowledge-oriented teaching proposed by American educator Ogden Lindsley. In recent years, domestic scholars have conducted research on precision teaching evaluation systems, evaluation models, and evaluation outcomes relying on data analysis and artificial intelligence. Wang Beibei (2019) explored the precise evaluation model of learning

processes supported by big data, constructed two application modes for personalized error question push and student behavior point-based evaluation, and verified the application effectiveness through smart classroom teaching. Yang Qinqin (2021) conducted research on the precise teaching evaluation model of College English under the background of big data, exploring the evaluation path of precision teaching through the establishment of precision evaluation principles, the establishment of student learning profiles, and the diversification of subjects and evaluation methods. Zhu Xuan et al. (2019) constructed a precise teaching evaluation index system based on intelligent teaching environment, determined the elements and weights of learning evaluation indicators, and built a model of precise teaching evaluation index system, which has high reference value for precise teaching evaluation.

Although research results on precise teaching evaluation have been fruitful in recent years, there is a lack of research on language teaching. While the heated research in language teaching evaluation has shifted from formative assessment to LOA, there is a dearth of research results on tracking evaluation for language learning, with no authoritative evaluation index system and evaluation scale. In addition, the application of evaluation results in teaching is insufficient, and the personalized learning mechanism for language has not been established. This study aims to explore ways to address the above issues.

2. Research Problems

2.1. The existing evaluation system mainly focuses on teacher evaluation, with low participation of students, and the evaluation is not diverse enough.

The current evaluation system is mainly based on formative assessment model, whose indicators mainly including classroom performance, routine homework, stage tests, etc. The evaluation system is mainly conducted by teachers, and students are always the passive recipients of evaluation result in the process of language learning. Although language class activities are diverse in form, and teachers encourage students to actively conduct self-evaluation and peer-evaluation during activities, evaluation results are not included in the formative assessment indicators. It can be seen that the existing evaluation system lacks diverse subjects and the evaluation dimensions are not rich enough. Precise evaluation of language learning can achieve diversification of evaluation subjects, diversification of evaluation dimensions, and diversification of evaluation methods, emphasizing students' participation in evaluation, fully reflecting the language learning situation through a combination of self-assessment, peer-assessment, and external-assessment, realizing the precised and personalized teaching evaluation.

2.2. The existing evaluation system focuses more on the achievement of language learning goals, lacking tracking of the language learning process.

College English course's formative assessment often refers to a certain stage of student's participation in language learning, conducting test-type assessments and summary assessments. Teaching assessment mostly occurs in the post-test stage of language learning, and is limited to knowledge and skills, lacking tracking of the learning process and emotional attitudes. Precise evaluation for language learning utilizes intelligent platforms, information assessment tools, accurately collects and processes data of language learning process, and provides personalized analysis of learning situations based on the data, which can fully reflect the problems of language learning and offer solutions. This is of positive significance for promoting students' all-round development and advancing deep learning in language classrooms.

2.3. The existing evaluation system lacks the application of evaluation results and fails to fully satisfy the personalized language learning needs.

Due to the current assessment on teaching mainly occurs at the post-test stage of language learning and focuses on language knowledge and skills, lacking tracking of language learning behaviors. Therefore, the assessment results have limited reference to teaching. Teachers can only get to know

the performance of language learning, lacking information on problems, emotional attitude changes and other issues that may arise in the learning process. The interaction and communication between teachers and students is insufficient, leading to an inability for language teaching to satisfy the personalized needs of students. Accurate assessment of language learning can help teachers to track students' learning status in real time, timely address problems in learning, focus on changes in emotional attitudes, adjust teaching content in a timely manner, thus improving classroom teaching design, stimulating students' enthusiasm and autonomy in language learning.

3. Research Approaches

3.1. Establish a precise LOA process framework for language learning

The research has set up a precise LOA process for language learning (see Figure 1), making full use of the existing intelligent teaching platform (U-Campus) to support online self-learning and self-assessment. This is supplemented by evaluation tools tailored to different language abilities (iTest language proficiency assessment app, CorrectNet writing test platform, Rain Classroom). Tracking the language learning process, enriching the evaluation dimensions. The framework of precise LOA process is shown as below (Figure 1):

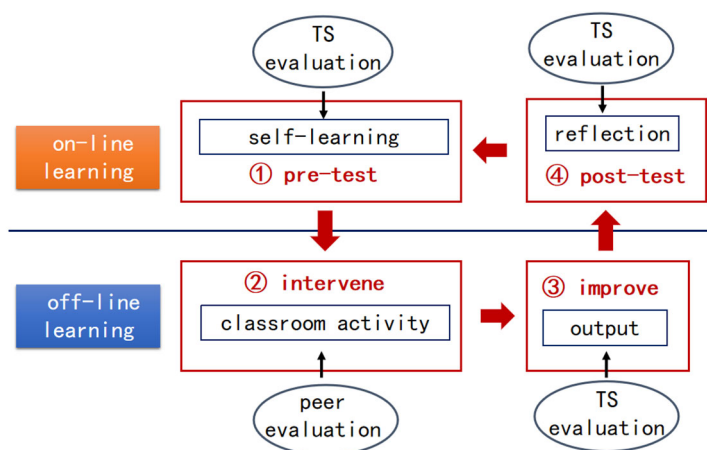


Figure 1. Precise LOA process framework for language learning

3.2. Establish personalized dynamic learning profiles

Artificial intelligence and information technology have empowered language teaching in all aspects of educational reform and innovation. This study aims to establish personalized dynamic learning profiles, to track students' language learning behaviors before, during, and after class, to collect dynamic learning data, and to input them into dynamic learning profiles, achieving "one profile per person". The objects and tools for data collection are listed in the table below (Table 1):

Table 1. Dynamic learning profile data collection objects and collection tools

Learning Stage	Learning Behavior	Data Collection	Tools
Before-class	before-class self-learning	before-class self-learning, self-test scores of online learning, participation in group learning activities	Rain Class, Language Learning Behavior Evaluation Scale, U-campus platform
In-class	participation of classroom activities	classroom participation (barrage, answering questions, speaking, questioning, testing, etc.), peer evaluation in group work	Rain Class, Language Learning Behavior Evaluation Scale
After-class	self-test performance and reflection	assignment performance, self-test scores, self-assessment data	Language Learning Behavior Evaluation Scale, iTest evaluation app, Correcting Network platform

3.3. Construct a precise assessment index system for language learning

This study refers to the precise teaching evaluation index system model constructed by Zhu Xuan (2019), combines the characteristics of language learning, constructs a precise evaluation index system for language learning, establishes primary and secondary indicators, clarifies evaluation standards, and conducts a comprehensive evaluation of language learning.

Table 2. Precise evaluation index system for language learning

Primary indicator	Secondary indicator	Evaluation criteria
Knowledge and skills	Knowledge mastery	Fully grasp language knowledge (vocabulary, sentence structures, opinions, phenomena, etc.)
	Skill application	Flexibly apply language skills (reading, writing, translation, listening, speaking skills)
	Knowledge transfer	Able to adjust or establish connections between knowledge and skills, solve new problems
Learning process	Learning preparation	High participation in learning preparation activities, the language knowledge and skills needed to complete the output task are ready
	Learning engagement	Able to observe and accurately describe, communicate, and share problems, participate in discussions, explore issues in depth, collaborate in learning, and form solutions
	Learning reflection	Having mastered language knowledge and skills to serve the output task, able to communicate, adjust learning strategies in a timely manner when encountering difficulties
Affective attitude	Learning attitude	High acceptance of smart teaching environment, voluntary participation in teaching activities, interest in learning content and methods, strong motivation for language learning
	Learning methods	Able to solve learning difficulties promptly, high focus on participating in learning activities
	Peer recognition	High enthusiasm for participating in mutual assistance, collaboration, and discussions in the learning process

3.4. Accurately push personalized learning materials

Precise evaluation in language learning relies on the generation of personalized learning data in intelligent environment, which provides important evidence for language learning diagnostics, personalized material push, and diverse evaluations. This study aims to analyze students' individual characteristics such as language learning problems, learning motivation, and emotional attitudes based on precise evaluation. It also aims to design learning tasks and classroom activities suitable for different language proficiency levels and cognitive abilities. Before class, teachers will push personalized self-learning material packages based on self-test scores and learning behavior data, and assign output tasks of different difficulty levels to different student groups. During class, teachers will group students according to the output tasks and design various types of classroom activities to facilitate full discussions, cooperative learning, and language output. After class, teachers will analyze students' learning behavior in-class and, combined with post-test scores, push assignments of different difficulty levels.

4. Conclusion

This study is based on the new stage of university curriculum system construction, combined with the overall plan for educational evaluation reform in the new era. Guided by "fully utilizing information technology, improving outcome evaluation, strengthening process evaluation, and improving comprehensive evaluation," the study explores a new path for the precise evaluation model for foreign language learning. The aim is to meet the personalized needs of foreign language learning, enhance self-directed learning ability, and promote precise teaching of language courses. The study enriches the dimensions of language teaching evaluation, establishes dynamic learning profiles, constructs a precise evaluation index system, formulates a language learning behavior evaluation

scale, explores student factors that affect foreign language learning such as emotional attitudes, cognitive abilities, and learning habits, clarifies teacher evaluation behavior and responsibilities in the process of foreign language learning, accurately identifies the problems of language learning, and provides references for improving language course teaching methods and evaluation models.

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