

Research on the Implementation Plan of a Multidimensional Evaluation System in English Teaching Empowered by Hainan Culture from a Digital Perspective

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Abstract: In the context of the continuous advancement of digital transformation in education and the ongoing emphasis on the core competencies of the English subject, traditional English teaching evaluations have become insufficient in fully reflecting the development of students' cultural understanding and expression abilities in terms of evaluation content, sources of evidence, and feedback mechanisms. Based on the practical needs of integrating Hainan culture into English teaching, this paper relies on the smart classroom platform WeLearn, learning analytics tools (WeLearn, Feishu, etc.), and AI-assisted tools to construct a multidimensional evaluation system that includes four dimensions: formative evaluation, summative evaluation, competency development evaluation, and data-driven evaluation, and proposes a corresponding implementation plan. The study employs literature analysis, action research, teaching experiments, learning analytics, and interviews to explore the operational logic and practical effects of this evaluation system. The study indicates that this system can effectively achieve a shift in English teaching evaluation from result-oriented to process-oriented, from experiential judgment to data-supported, and from language ability evaluation to a coordinated evaluation of language ability and cultural literacy; it can effectively enhance students' learning engagement, task iteration quality, depth of understanding of Hainan culture, and English cultural expression skills. This paper suggests that a multidimensional evaluation system supported by digital technology provides a practical pathway for integrating local culture into English teaching and improving students' intercultural expression abilities and cultural confidence.

1. Introduction

Driven by the national education digitalization strategy, digital tools and AI are reshaping higher English teaching and evaluation. Policies emphasize core-competency-oriented reforms, integrating language, culture, thinking, and learning. Evaluation should no longer be ancillary but promote learning and teaching[1].

Current college English evaluation has three flaws: overreliance on final exams, neglect of

higher-order cultural and value objectives, and underuse of digital platform data and AI insights.

Meanwhile, “telling China’s story well” gives English teaching a clear cultural mission. Hainan’s rich local cultures (maritime, Li and Miao, revolutionary, etc.) offer vivid content for English classes, helping students express local culture accurately.

Without evaluation reform, cultural integration remains superficial. This paper, based on project teaching using WeLearn and AI tools, constructs a digital-era multidimensional evaluation system empowered by Hainan culture, exploring its implementation and effectiveness to inform English evaluation reform.

2. Research background and questions

(1) Digital transformation demands new evaluation models in English teaching. It enables continuous process tracking, multimodal assessment, and AI-driven feedback. However, technology alone doesn’t improve evaluation—a coherent framework aligned with educational goals is essential[2].

(2) Cultural awareness orientation requires a shift from language-only to language-culture-literacy integration. Evaluation should assess cultural understanding, cross-cultural interpretation, value expression, and cultural confidence—not just linguistic accuracy. For Hainan culture, students must explain, compare, and articulate positions, not merely introduce[3].

(3) Integrating local culture into English teaching needs a simultaneous evaluation system. Without it, cultural content remains at the design level and fails to drive sustained learning or measurable outcomes.

(4) Practical problems include: students’ superficial cultural explanations and fragmented expression; teachers’ limited visibility into task processes and revisions; lack of consistent standards across peer, self, and teacher evaluation; and untapped learning data on digital platforms. These issues call for a multi-dimensional, developmental, and data-informed evaluation system.

3. Literature Review

(1) Research on Digital Empowerment in English Teaching Evaluation

In the past three years, digital evaluation has become an important topic in English teaching research. Existing studies generally believe that digital platforms can record the learning process, provide instant task feedback, and diversify evaluation evidence, which helps promote the integration of teaching and evaluation. However, related research also points out that current digital evaluation in English teaching still faces practical issues such as single evaluation indicators, insufficient use of platform data, and superficial evaluation feedback. In other words, the true value of digital evaluation does not lie in the tools themselves, but in whether it can build a whole-process, interpretable, and improvable evaluation mechanism through the platform[4].

(2) Research on the Application of AI and Learning Analytics in Evaluation

The development of artificial intelligence and learning analytics technologies has provided new technical support for English teaching evaluation. Relevant studies show that AI tools can be used for text language complexity analysis, structural recognition, keyword extraction, speech clarity analysis, and personalized feedback generation[5]; learning analytics can help teachers identify students' learning engagement, participation, and improvement trajectories through the collection and interpretation of behavioral data. At the same time, some research emphasizes that AI results should not be used mechanically outside the teaching context, and their interpretation and application still rely on teachers' professional judgment and assessment literacy[6].

(3) Research on Cultural Integration in English Teaching and "Telling China Stories"

Research on "telling China stories" and integrating Chinese culture into English teaching has

steadily increased in recent years[7]. The relevant findings generally believe that English teaching should go beyond its "instrumental" limitations, transforming Chinese culture and local culture into task themes and content for expression, in order to promote students' cultural communication abilities in real contexts. However, from the perspective of evaluation research, most existing results focus on teaching design and classroom practice, and discussions are still limited regarding how to construct evaluation dimensions after cultural integration, how external expert evaluations can be involved, and how to measure cultural understanding and cultural confidence[8].

4. Research Design

(1) Research Objectives

This study aims to address the following three questions:

First, how to construct a multidimensional evaluation system that balances language proficiency, cultural understanding, and literacy development in the context of integrating Hainan culture into English teaching;

Second, how to rely on WeLearn, Feishu, and AI-assisted tools to integrate process recording, outcome evaluation, literacy assessment, and data analysis into a complete evaluation chain;

Third, whether this evaluation system can effectively promote students' learning engagement, quality of cultural expression, and enhancement of cultural confidence in teaching practice.

(2) Research Methods

The research comprehensively employs literature analysis, action research, teaching experiments, learning analytics, and interviews. Literature analysis is used to clarify the research foundations; action research is used to continuously optimize the plan during implementation; teaching experiments and learning analytics are used to observe the operation effect of the evaluation system; interviews are used to supplement teachers' and students' subjective perceptions and suggestions for improvement.

(3) Research Process

The research is divided into four stages:

The first stage is preliminary diagnosis and needs analysis, identifying the shortcomings of existing evaluation methods;

The second stage is constructing a four-dimensional evaluation framework, developing an indicator system, scoring scales, and implementation processes;

The third stage is conducting classroom practice, continuously collecting process data, work data, and feedback records;

The fourth stage is integrating and analyzing multi-source evidence, forming research conclusions, and reflecting on directions for optimization.

5. Construction of a Multi-dimensional Evaluation System

(1) Overall Framework

The evaluation system constructed in this paper consists of four dimensions: process evaluation, outcome evaluation, competency development evaluation, and data-based evaluation. While each dimension has its own focus, they are interrelated and together form a complete evaluation chain from the occurrence of learning to the presentation of results, and from behavior monitoring to competency assessment. The basic logic is: identify learning trajectories through process evaluation, judge final outputs through outcome evaluation, reflect educational effectiveness through competency development evaluation, and enhance objective support through data-based evaluation.

(2) Process Evaluation

Process evaluation is mainly used to record students' continuous performance in tasks involving

English expression of Hainan culture. Its implementation focuses include:

1) Recording students' viewing, interaction, check-in, submission, and revision activities through WeLearn;

2) Tracking stage outcomes of multimodal tasks, such as drafts, scripts, discussion records, presentation plans, and mid-term rehearsals;

3) Introducing teacher evaluation, peer review, and self-evaluation to form multi-channel feedback;

4) Using continuous records to show the formative development trajectory of students' cultural expression abilities.

Process evaluation focuses on reflecting students' performance in learning engagement, task progression, collaborative participation, and the process of generating cultural expression, enabling timely problem identification and promoting improvement.

(3) Outcome Evaluation

Outcome evaluation mainly targets students' final cultural expression products, including texts, speeches, videos, and comprehensive presentations. The core indicators include content accuracy, depth of explanation, quality of expression, and effectiveness of multimodal presentation. In addition to teacher grading, external verification sources such as Foreign Language Teaching and Research Press-related competitions, 'Tell China's Story Well' contests, or evaluations by external experts can also be used to increase the openness and credibility of the evaluation.

(4) Competency Development Evaluation

Competency development evaluation focuses on students' sustained growth in the practice of English expression of Hainan culture, mainly around four aspects: understanding of Hainan culture, cross-cultural interpretation, value expression, and cultural confidence. Evaluation methods include classroom observation, task performance, student reflection, self-assessment questionnaires, and teacher interviews. Compared with outcome evaluation, this dimension pays more attention to long-term changes and better reflects the educational value of the course.

(5) Data-based Evaluation

Data-based evaluation emphasizes incorporating platform behavioral data, AI text analysis results, multimodal video analysis results, and task progress data into formal evaluation evidence. Specifically, it includes: monitoring effort values, challenges, and improvement curves; analyzing language complexity, text structure, and identification of cultural elements; conducting auxiliary analysis on video content relevance and oral clarity; and visually presenting students' learning trajectories. The purpose of data-based evaluation is not to replace teachers but to enhance the traceability, objectivity, and interpretive power of the evaluation.

(6) Weight Settings

According to project implementation needs, this paper suggests the reference weight settings for the four-dimensional evaluation as: process evaluation 30%, outcome evaluation 35%, competency development evaluation 20%, and data-based evaluation 15%. This proportion reflects the overall principle of 'testing effectiveness with outcomes, promoting learning through the process, demonstrating education through competencies, and enhancing support with data.'

6. Implementation Path

(1) Task-Driven Curriculum Organization

The teaching implementation is centered on the 'Hainan Culture English Expression Task Cluster,' using a combination of project-based and output-oriented approaches to organize instruction. Teachers first provide Hainan culture-themed resources, case samples, and evaluation criteria. After previewing the materials on the platform, students, in groups, carry out information

collection, theme extraction, script writing, product design, and presentation preparation. Classroom time is primarily used for discussion, feedback, and iterative revision, allowing evaluation activities to be naturally integrated into the task process.

(2) Evaluation Closed Loop Supported by the Platform

In practice, the evaluation process follows a closed-loop mechanism of 'goal release—task progression—stage feedback—revision and improvement—final presentation—comprehensive assessment.' Before class, teachers post task instructions and scoring criteria on WeLearn; during class, they conduct immediate diagnostics based on classroom observation and platform data; after class, students submit stage results through the platform and receive feedback from teachers and peers; during stage summaries, individualized guidance is provided based on AI analysis results; after the final presentation, a comprehensive assessment is completed using multiple sources of evidence.

(3) Transformation of Teacher Roles

Within this system, teachers shift from traditional graders to evaluation designers, feedback organizers, and data interpreters. Teachers not only need to design evaluation rubrics aligned with task objectives but also help students understand the evaluation criteria, enhance self- and peer assessment skills, and make professional judgments on platform and AI-generated data, avoiding evaluation pitfalls of focusing solely on 'scores' or 'technology.'

7. Research Results and Analysis

The following results are presented in a project pilot report format. To maintain research rigor, actual project data should replace these before formal submission.

(1) Formative assessment significantly improves learning engagement and the quality of task iterations

Teaching practice shows that the introduction of formative assessment significantly increases students' attention to the entire task process. Platform data indicate upward trends in resource viewing completion rates, frequency of classroom interactions, on-time submission rates of staged tasks, and the number of revisions made to work. This suggests that when assessment shifts from “focusing only on the final product” to “tracking the whole process with feedback,” students are more willing to invest sustained effort and gradually improve task quality through multiple rounds of revision.

Table 1 Comparison of process-based learning performance before and after implementation

Indicator	Before Implementation	After Implementation	Increase
Resource Completion Rate	71.40%	93.20%	21.80%
Weekly Interaction Frequency	3.1 times	7.6 times	145.20%
On-time Task Submission Rate	76.80%	95.10%	18.30%
Average Number of Revisions per Task	1.2 times	3.5 times	191.70%

Classroom observations show that students' initial submissions mostly involved material listing, straightforward language expression, and insufficient cultural interpretation; after receiving feedback from teachers and peers, they gradually started to focus on the logic of expression, content selection, and depth of cultural explanation, indicating that formative assessment has a clear regulatory and promotive effect on learning behavior (Table 1).

(2) Summative assessment shows overall improvement in the quality of cultural expression

works

In the evaluation of final works, students showed improvement in content accuracy, depth of explanation, expression quality, and multimodal presentation (Table 2). Among these, improvement in explanation depth and multimodal presentation is more notable, indicating that multidimensional assessment not only promotes the quality of language expression but also fosters students’ structural awareness and communication awareness in cultural narration.

Table 2 Comparison of scores across dimensions of final works (5-point scale)

Evaluation Dimension	Before Implementation	After Implementation	Improvement
Content Accuracy	3.02	4.21	1.19
Depth of Cultural Interpretation	2.76	4.08	1.32
Language Expression Quality	3.11	4.26	1.15
Multimodal Presentation	2.83	4.37	1.54

Analyzing the content of the works, before implementation, students mostly stayed at the level of introducing attractions, listing festivals, or expressing culture in a labeled manner; after implementation, more students were able to elaborate on the historical background, social significance, and contemporary value of Hainan culture, and attempted to convey information to an international audience with more logical and explanatory expression.

(3) Literacy development assessment shows enhanced cultural awareness and cultural confidence

Based on student reflections, self-assessment questionnaires, and teacher interviews, students’ changes were mainly reflected in three aspects: first, from “knowing some facts about Hainan culture” to “being able to explain its cultural significance clearly”; second, from “worried about expressing poorly” to “willing to speak proactively and express their stance”; third, gradually recognizing that learning English is not only about language training but also an important way to participate in cultural dissemination and telling China’s story. This result indicates that literacy development assessment can better capture educational outcomes that traditional exams may overlook (Figure 1).

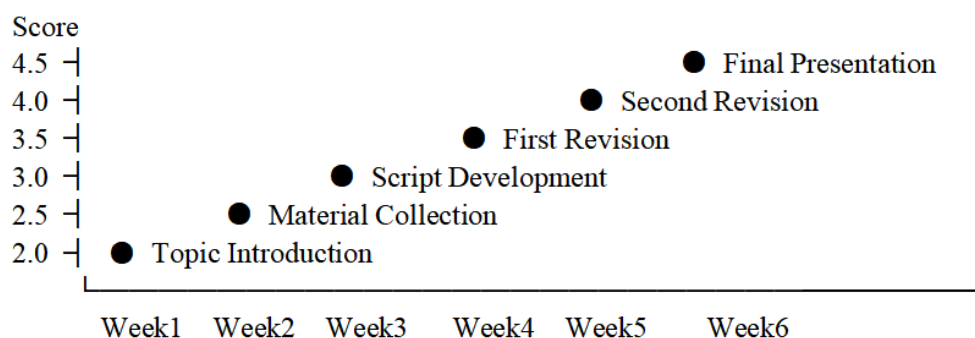


Figure 1: Schematic Diagram of the Formation Trajectory of Students' Cultural Expression Ability

(4) Data-based assessment enhances traceability and diagnostic capability of evaluation

Platform behavior data and AI analysis results allow teachers to more precisely identify student issues. For example, some students’ low final scores are not simply due to weak language skills but are closely related to insufficient early resource engagement, inadequate collaboration participation, and fewer revisions; other students have relatively fluent language but limited coverage of cultural

keywords and insufficient depth in explanations, indicating a tendency to prioritize form over content. Through cross-verification of multi-source evidence, teachers can decompose “result problems” into “process problems,” “content problems,” and “expression problems,” enabling more targeted interventions.

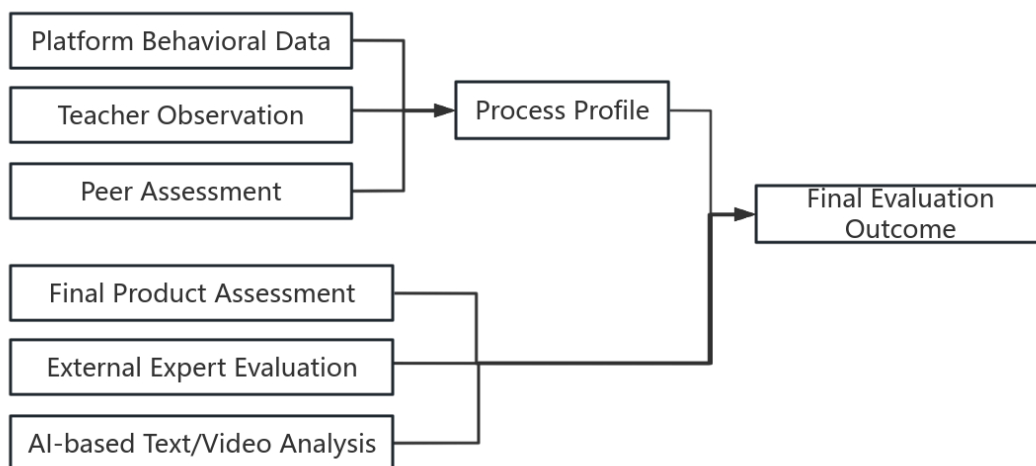


Figure 2: Model for Integrating Multi-Source Evaluation Evidence

(5) Discussion of Results

Overall, the effectiveness of the multi-dimensional evaluation system is mainly reflected in three aspects (Figure 2). First, the sources of evaluation evidence are more comprehensive, covering the entire process of learning preparation, task advancement, presentation feedback, and outcome display. Second, the evaluation conclusions are more explanatory, helping teachers identify the specific stages where problems occur. Third, the evaluation better reflects an educational orientation, enabling cultural understanding, value expression, and cultural confidence to go beyond teaching objectives and be transformed into observable, describable, and feedbackable concrete dimensions.

8. Conclusion

This paper takes the integration of Hainan culture into English teaching as a practical scenario and, focusing on the transformation needs of English teaching evaluation under the digital background, constructs a multi-dimensional evaluation system composed of formative evaluation, summative evaluation, literacy development evaluation, and data-driven evaluation. It also proposes specific implementation paths relying on WeLearn, Feishu, and AI-assisted tools. The study shows that this system can effectively promote English teaching evaluation from single summative assessment to whole-process evaluation, from experiential judgment to data-supported judgment, and from language-centric evaluation to a comprehensive evaluation that values both language proficiency and cultural literacy. It helps enhance students' learning engagement, the quality of task iteration, the depth of understanding of Hainan culture, and English cultural expression abilities. It also helps strengthen students' cultural confidence and awareness of "telling Hainan's story well."

Of course, this paper still has certain limitations. First, part of the research results are mainly presented in a project pilot format, and follow-up verification with larger samples and more rigorous design is needed; second, the boundaries, reliability, and ethical issues of AI participation in evaluation require further study; third, whether different types of Hainan cultural themes require differentiated evaluation indicators is also worth deeper exploration.

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