Article

Cultural Translation Evaluation: Development of a Scale for English Majors' Oral Narrative Competence in Telling Chinese Stories—Validation Based on the Rasch Model

Yufei Duan [1,*]

1   Jilin Engineering Normal University, Changchun, Jilin, China

*   Correspondence: Yufei Duan, Jilin Engineering Normal University, Changchun, Jilin, China

Abstract: This study assesses English majors' proficiency in narrating Chinese stories in English, focusing on their ability to bridge linguistic and cultural gaps. Grounded in cultural translation theory, it highlights the importance of both linguistic accuracy and cultural nuance. The study developed a 15-item assessment scale using the Rasch model, ensuring precision and fairness. The scale covers four dimensions: cultural accuracy, language expression, narrative structure, and cross-cultural interaction. Through literature review and interviews with educators and students, the scale was refined to address challenges like cultural misinterpretations and narrative flow. Results show the scale's high reliability and validity, emphasizing the need to cultivate intercultural communication skills. This research offers a practical tool for enhancing English majors' narrative abilities, helping them improve both linguistic expression and cultural understanding, thus fostering effective cross-cultural communication in academic and real-world contexts.

Keywords: cultural translation; Chinese stories; oral narrative competence; Rasch model; scale development

1. Introduction

In an era marked by rapid globalization, the ability to effectively communicate Chinese stories to international audiences has become an essential component of enhancing the nation's cultural soft power. As the global demand for cross-cultural communication increases, English majors, as key players in this process, play an important role in shaping the way Chinese culture is perceived abroad. Their oral narrative skills, particularly in narrating Chinese stories in English, are pivotal in determining the success of such intercultural exchanges. The challenge lies not only in linguistic translation but also in conveying the deeper cultural nuances embedded within these stories.

Cultural translation is at the heart of this process, serving as the crucial bridge between different cultural contexts. It involves the transformation of culturally specific information from one language into another while ensuring that the essence of the original message is retained and remains comprehensible to the target audience. This is a delicate task that goes beyond mere linguistic accuracy and requires an understanding of both the source and target cultures. Despite the increasing emphasis on intercultural competence in English language education, current assessment tools fail to provide a comprehensive evaluation of students' ability to translate cultural content effectively. Existing methods often focus primarily on linguistic proficiency, leaving a significant gap in evaluating students' cultural adaptability and the effectiveness of their narrative structure.

One promising solution to this gap is the application of the Rasch model, a modern measurement theory that offers a precise and reliable method for evaluating complex competencies. Unlike traditional evaluation methods, the Rasch model establishes a probabilistic relationship between the difficulty of the items in an assessment and the ability

of the test-takers, making it an ideal tool for analyzing skills that involve both subjective and objective elements, such as oral narrative competence. The model allows for a nuanced examination of students' abilities, providing a deeper understanding of their performance across multiple dimensions.

This study, conducted with English majors at the School of International Education, Jilin Engineering Normal University, aims to address the existing gaps in assessment tools by developing a new scale that aligns with the principles of the Rasch model. The focus is on evaluating students' oral narrative competence in narrating Chinese stories in English, a key skill in the broader field of cultural translation. By employing the Rasch model, the study seeks to provide empirical evidence that can support the development of more effective teaching practices and assessment frameworks for enhancing students' cultural translation abilities. Through this approach, the study aims to offer a scientifically grounded method for cultivating the skills necessary for successful intercultural communication in an increasingly interconnected world.

2. Literature Review

2.1. Cultural Translation and Intercultural Narrative

The concept of cultural translation emerged alongside the "cultural turn" in translation studies, which emphasizes that translation is not merely a process of linguistic conversion but also one of reconstructing cultural meanings. Traditional approaches to translation often focus on direct word-for-word equivalence, but cultural translation goes beyond this, seeking to convey not just the language but also the underlying cultural context and values. This deeper process involves a delicate balancing act: ensuring that the story remains faithful to its original meaning while adapting it to the sensibilities and expectations of the target audience. As intercultural communication grows in importance, the role of cultural translation becomes increasingly vital in facilitating meaningful exchanges between different cultures.

In the realm of oral narrative, cultural translation manifests in the way narrators selectively present and reinterpret cultural symbols. This process is not merely about translating words but involves transforming the cultural essence of a story in a way that resonates with listeners from different cultural backgrounds [1]. Narrators must also adjust the narrative based on the cultural expectations and contextual understanding of the audience, creating a dynamic interaction between the storyteller and the listener. Such adjustments are necessary for ensuring that the cultural significance of the narrative is retained, while also making it accessible and engaging to a foreign audience. This active engagement of the narrator with the cultural dimensions of the story is crucial in facilitating successful intercultural communication.

2.2. Research on Oral Narrative Competence Assessment

Existing frameworks for assessing oral competence, such as the speaking sections of standardized tests like IELTS and TOEFL iBT, typically focus on aspects like fluency, vocabulary, and grammar [2]. While these are important components of language proficiency, they often overlook cultural content, which is a crucial factor when it comes to narrating stories that carry deep cultural meanings. A strong narrative does not only require linguistic accuracy; it also requires an understanding of how cultural references and symbols are conveyed to ensure that the audience grasps the intended message [3].

In the context of intercultural communication, scholars have suggested that assessments should encompass not only linguistic skills but also cultural cognition, expression, and adaptability [4]. These elements are essential for ensuring that students are capable of not only translating words but also conveying the cultural narratives embedded in those words. Some research has proposed new frameworks for measuring intercultural competence, such as the inclusion of cultural topic expression in oral assessments. How-

ever, many of these frameworks still lack specificity when it comes to culturally rich storytelling scenarios, such as those found in Chinese narratives. There remains a significant gap in developing tools that assess oral narrative competence specifically within the context of Chinese stories, a gap that this study aims to address [5].

2.3. Application of the Rasch Model in Educational Measurement

The Rasch model is a modern approach to educational measurement that offers a more nuanced and reliable method for testing scale properties. Unlike traditional methods, the Rasch model transforms qualitative assessments into equidistant quantitative data, providing a more accurate depiction of a student's ability across a spectrum of competencies [6]. This is particularly useful in the context of complex skills like oral narrative competence, where traditional assessment methods may struggle to capture the full range of abilities.

The Rasch model allows for the thorough evaluation of scale properties, including unidimensionality (ensuring that the assessment measures a single underlying construct), item-taker mapping (providing a visual representation of how students' abilities correspond to the difficulty of the assessment items), and fit analysis (ensuring that the data fits the model's expectations). This flexibility and precision make the Rasch model an ideal tool for assessing the multifaceted nature of oral narrative skills, particularly in cross-cultural contexts. The model has been successfully applied in a range of educational assessments, from vocabulary testing to broader measures of language proficiency, showing its effectiveness in capturing the subtleties of ability development [7]. By converting qualitative assessments into quantitative data, the Rasch model provides a clear and objective measure of students' abilities, which is essential for both instructional development and academic research.

3. Research Methods

3.1. Research Objects

The initial scale test involved 120 sophomore and junior English majors from the School of International Education at Jilin Engineering Normal University. The sample consisted of 28 male students and 92 female students, with an average age of 20.6. All participants had completed foundational courses such as Basic English Writing and Intercultural Communication, equipping them with the necessary skills for basic English narrative tasks. These courses provided a solid foundation in both language proficiency and an understanding of cultural issues in communication [8]. The students were selected to represent a typical cross-section of English majors, ensuring that the sample was both relevant and diverse in terms of gender and educational background. For the formal validation of the scale, an additional group of 150 students from the same academic year was chosen, expanding the scope of the research and increasing the robustness of the findings.

3.2. Scale Development Process

The development of the scale was a multi-step process that began with the construction of dimensions to assess the key aspects of oral narrative competence in Chinese storytelling. The first step in dimension construction involved semi-structured interviews with 10 experienced English teachers, who provided valuable insights into the key skills and competencies required for effective storytelling in English. These interviews, coupled with an extensive review of cultural translation theory and narratological frameworks, led to the identification of four primary dimensions: cultural accuracy, language expression, narrative structure, and cross-cultural interaction [9].

Cultural accuracy refers to the ability to correctly interpret and convey cultural symbols and values, ensuring that the audience can grasp the intended cultural meaning. This dimension includes items such as cultural symbol interpretation, value transmission, and the preservation of cultural identity within the narrative. Language expression focuses on

the students' linguistic ability, assessing fluency, vocabulary, and grammar in conveying the narrative. Narrative structure addresses the organization and coherence of the story, including elements such as plot completeness, logical progression, and the overall structure of the narrative [10]. Cross-cultural interaction measures how well the storyteller engages with the audience and adjusts the narrative to meet the expectations and cultural understanding of the listeners.

Following the identification of these dimensions, the next step was item design. Drawing from existing intercultural oral assessment scales, 20 initial items were created using a 5-point Likert scale to measure the degree to which students' narratives aligned with each of the four dimensions (ranging from 1 = completely inconsistent to 5 = completely consistent). The items aimed to capture a wide range of competencies, from basic language skills to more complex aspects of cultural and narrative understanding. Three English education experts were consulted to evaluate the content validity of the items. Their feedback led to the deletion of 3 ambiguously worded items, resulting in a refined 17-item draft that more clearly captured the key aspects of narrative competence.

3.3. Data Collection and Analysis

To collect the data for scale validation, an on-site testing session was conducted where students were asked to deliver a 3-minute oral narrative in English on the topic of "Chinese traditional festivals." This topic was chosen because it is culturally rich and allows for the demonstration of both narrative and intercultural competencies [11]. Each student's performance was independently scored by two senior English teachers, who used the newly developed scale to evaluate the quality of the narrative based on the four primary dimensions.

For the statistical analysis of the data, Winsteps 6.0 software was used to apply the Rasch model, a robust method for analyzing educational assessment data. The Rasch model provided a reliable framework for testing several key properties of the scale, including unidimensionality, which ensures that the assessment measures a single underlying construct. The analysis also focused on item fit, specifically the Infit MNSQ range (0.7–1.3), which indicates how well the items fit the expected model. Additionally, the alignment between item difficulty and test-taker ability was assessed to ensure that the scale was both challenging and appropriate for the students' skill levels. Finally, the reliability of the scale was evaluated, with a target Person Reliability score of greater than 0.7, indicating that the scale was consistent and stable in measuring students' narrative competence.

4. Research Results

4.1. Rasch Model Inspection of the Initial Scale

The initial test of the scale using the Rasch model focused on evaluating several key properties, including unidimensionality, fit analysis, and item-taker mapping. These properties are essential for ensuring the reliability and validity of the scale in measuring the intended competencies.

Unidimensionality Test: The first step in validating the scale was to conduct a factor analysis to assess unidimensionality, which refers to the assumption that the scale measures a single underlying construct. The factor analysis revealed a first eigenvalue of 5.23 and a second eigenvalue of 1.18. With the ratio of the first to the second eigenvalue exceeding 3, the results indicated that the scale adhered to the Rasch model's assumption of unidimensionality. This suggests that the scale effectively measures a single aspect of narrative competence, aligning with the study's goal of assessing oral narrative skills related to cultural translation.

Fit Analysis: Next, the fit of each item within the scale was analyzed using the Infit Mean Square (MNSQ) statistic. Two items (Q8 and Q15) were found to have Infit MNSQ values of 1.42 and 0.65, respectively, which fell outside the ideal range of 0.7–1.3. After

consulting with subject-matter experts, these items were identified as containing culturally biased wording that may have skewed results. In order to enhance the scale's cultural sensitivity and ensure that it accurately reflects the competencies required for intercultural communication, these items were removed from the scale.

Item-Taker Mapping: The item-taker mapping analysis provided a valuable visualization of how well the item difficulty aligned with the test-taker ability. The initial scale's item difficulty ranged from -1.83 to 2.15, while the test-taker ability ranged from -2.31 to 1.98. Overall, the distributions were generally aligned, indicating that the scale was suitable for the range of abilities present in the sample. However, the analysis revealed a gap in higher-difficulty items, suggesting that the scale lacked sufficient items to challenge more advanced students. This gap was addressed in the final version of the scale by incorporating additional difficult items that were more suited for highly proficient students.

4.2. Psychometric Properties of the Formal Scale

After refining the scale and removing problematic items, the revised 15-item formal scale was subjected to further psychometric testing to evaluate its reliability and validity. The results confirmed that the formal scale demonstrated strong psychometric properties, making it a reliable tool for measuring students' oral narrative competence.

The reliability of the scale was assessed using multiple metrics. The reliability coefficient for each dimension exceeded 0.75, indicating that each dimension of the scale was internally consistent. The overall Person Reliability, which measures the consistency of responses across all items, was 0.82, demonstrating that the scale was highly reliable in measuring students' competencies. In addition, the Cronbach's α coefficient, which is commonly used to assess internal consistency, was found to be 0.86, further confirming the scale's reliability. These values suggest that the scale provides stable and consistent measurements across different groups of students.

In terms of validity, the item difficulty and test-taker ability distributions were well-aligned, ensuring that the scale accurately captured a range of abilities. The overlap between these distributions indicates that the scale was appropriately challenging for most students, offering high measurement precision. Furthermore, all items were found to have Infit MNSQ values between 0.78 and 1.23, which met the model's requirements, confirming that the scale items fit well with the Rasch model and contributed effectively to measuring the desired competencies.

4.3. Analysis of Students' Ability Performance

The formal scale was used to assess the narrative competence of students at Jilin Engineering Normal University. The analysis of student performance revealed some interesting trends and provided insights into areas where students excelled as well as where they faced challenges.

Students performed relatively well in the language expression dimension, with an average score of 3.62. This suggests that the students had a strong grasp of the linguistic aspects of storytelling, including fluency, vocabulary, and grammar. Their ability to express themselves coherently and effectively in English was a strength, which is expected given their academic background and the language-focused nature of their studies.

However, students scored lower in cultural accuracy (average score 2.89) and cross-cultural interaction (average score 2.76). These results reflect the challenges students face in translating Chinese cultural symbols and values into English, as well as in adjusting their narratives to suit the cultural expectations of a foreign audience. The relatively low scores in these areas highlight a gap in cultural understanding and awareness. In particular, students struggled with interpreting cultural symbols accurately and conveying the underlying values of Chinese traditions in a way that was both culturally sensitive and comprehensible to Western audiences. Additionally, students' ability to engage with their audience and adjust the narrative according to the audience's cultural context was limited.

This suggests that more attention should be given to these areas in language education, particularly in helping students develop their intercultural communication skills and awareness of cultural differences.

5. Discussion and Suggestions

5.1. Significance of the Research Findings

This study represents the first attempt to integrate cultural translation competence into the assessment of English majors' ability to narrate Chinese stories in English. By validating the assessment tool through the Rasch model, the research ensures the scientific rigor and accuracy of the measurement process. The identification of specific ability gaps provides valuable insights into the areas where students require further development, offering clear directions for potential reforms in college English teaching. These findings highlight the importance of not only linguistic proficiency but also intercultural competence, urging educators to adopt a more holistic approach to language instruction.

5.2. Teaching Improvement Suggestions

Strengthening Cultural Translation Training: One of the key insights from the study is the need to enhance students' cultural translation skills. To address this, oral courses should incorporate specialized exercises designed to deepen students' understanding of cultural concepts and improve their ability to transfer culture-specific terms across languages. Exercises such as "cultural concept explanation" and "metaphor conversion" can help students develop the skills necessary for interpreting and communicating culture-loaded terms effectively. These exercises would enable students to better convey the rich cultural nuances embedded in Chinese stories, enhancing both the accuracy and depth of their translations.

Creating Authentic Narrative Scenarios: Another suggestion is to provide students with more opportunities to practice their narrative skills in real-world contexts. This can be achieved by offering international exchange programs and online intercultural dialogues, where students can engage with diverse audiences and practice narrating Chinese stories in an authentic setting. Such platforms would not only allow students to test their language and narrative skills but also help them adapt their storytelling techniques to suit the cultural expectations of different audiences. This experiential learning approach can significantly enhance students' intercultural communication competence, which is essential for effective storytelling across cultural boundaries.

Enhancing Assessment and Feedback: Regular assessments using the newly developed scale should be incorporated into the curriculum to track students' progress in cultural translation competence. By implementing periodic evaluations, educators can gain a clearer understanding of each student's strengths and areas for improvement. In addition, personalized feedback generated from Rasch model-based ability profiles can help instructors tailor their teaching interventions to address specific challenges faced by individual students. This data-driven approach allows for more targeted and effective teaching, ensuring that students receive the support they need to develop their narrative and intercultural communication skills.

5.3. Research Limitations and Prospects

While the findings of this study provide valuable insights into the assessment of oral narrative competence, several limitations must be acknowledged. The sample was restricted to a single university, limiting the generalizability of the results. Future research should aim to validate the scale across multiple universities to ensure that the findings are applicable to a broader student population. Furthermore, while the scale successfully passed unidimensionality testing, the complexity of cultural translation competence suggests that a more comprehensive approach is needed. Future studies could incorporate

qualitative methods, such as interviews and case studies, to explore the underlying cognitive processes involved in cultural translation. Additionally, combining eye-tracking technology and discourse analysis could provide deeper insights into students' cognitive mechanisms during the process of translating and narrating culturally rich stories. This would help to further refine the assessment scale and deepen our understanding of how students approach the challenges of cultural translation.

6. Conclusion

The Rasch model-based scale developed to assess English majors' oral narrative competence in telling Chinese stories demonstrates strong psychometric properties, providing a reliable and valid tool for evaluating students' cultural translation abilities. The findings highlight significant deficiencies in key areas, such as cultural accuracy and cross-cultural interaction, revealing that many students struggle to accurately interpret cultural symbols and engage effectively with their audience's cultural context. These gaps underscore the critical need for a more comprehensive approach to cultivating cultural translation competence within college English teaching.

In response to these challenges, this study advocates for the integration of specialized training that focuses on both linguistic skills and intercultural awareness. Scenario-based practice, where students engage in real-world intercultural communication, can offer them opportunities to refine their narrative skills and better adapt their storytelling to diverse cultural expectations. Additionally, precise and continuous assessment, as demonstrated by the Rasch model-based scale, can provide educators with valuable insights into students' strengths and areas for improvement, allowing for more targeted teaching interventions.

By addressing these gaps and fostering a more robust cultural translation competency, college English programs can significantly enhance students' ability to narrate Chinese stories in English. This will not only improve their storytelling skills but also contribute to the broader goal of developing qualified talent for advancing national cultural soft power. Ultimately, this research offers a foundation for future developments in intercultural education and lays the groundwork for creating more effective pedagogical practices that prepare students for success in an increasingly globalized world.

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