An Empirical Study on the Design and Implementation of Differentiated Instruction in Junior High School English Reading Teaching under the "Double Reduction" Policy

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[**Abstract**] Under the "Double Reduction" policy, junior high school English reading instruction urgently needs to move away from the traditional one-size-fits-all approach in order to meet students' diverse learning needs. Drawing on Vygotsky's Zone of Proximal Development theory and Babanski's theory of optimizing the teaching process, this study conducted a 14-week differentiated instruction intervention with 76 ninth-grade students from a middle school in Wuhu City, Anhui Province. The research focused on the specific design and implementation strategies for differentiated instruction across key components, including objectives, instructional processes, homework assignments, and assessment. The findings indicate that scientifically sound and well-structured differentiated instruction can significantly enhance students' reading interest, their ability to employ effective reading strategies, and their reading achievement, with students in Level C reaping the most substantial benefits. This study offers a practical model for improving the quality and efficiency of junior high school English reading instruction within the framework of the "Double Reduction" policy.

[**Key words**] "Double Reduction" policy; differentiated instruction; junior high school English; reading instruction; instructional design

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1 Introduction

With the in-depth implementation of the "Double Reduction" policy, the focus of teaching at the basic education stage has gradually shifted toward reducing burdens while enhancing quality. In junior high school English reading instruction, individual differences among students are particularly pronounced. The traditional one-size-fits-all approach—characterized by uniform pacing and standardized expectations—not only fails to meet the advanced-thinking development needs of high-achieving students but also risks causing struggling learners to lose interest in learning due to prolonged frustration. This runs counter to the original intent of the "Double Reduction" policy, which seeks to promote students' well-rounded and individually tailored development. Differentiated Instruction, as a pedagogical strategy that respects individual differences and tailors teaching to each learner's needs, offers an effective solution by designing differentiated approaches to instructional objectives, content, processes, and assessment.

This study aims to explore the specific design and implementation of differentiated instruction in junior high school English reading under the "Double Reduction" framework, with the goal of providing frontline teachers with practical, actionable guidance.

2 Theoretical foundations of differentiated instruction

Differentiated instruction is not merely about "separating students into different classes" or "grouping them"; it is underpinned by a robust foundation of educational and psychological theories.

2.1 Vygotsky's theory of the Zone of Proximal Development

Vygotsky's (1978) theory of the Zone of Proximal Development (ZPD) posits that students' development occurs at two levels: first, their current level of independent problem-solving; and second, their potential level attainable with adult guidance or through collaboration with more capable peers. The core of differentiated instruction is grounded in this theory: by accurately assessing students' current abilities, educators construct learning scaffolds situated within their ZPD, enabling learners at different levels to experience the sense of achievement that comes from "reaching just a little higher" and thereby facilitating meaningful advances in cognitive development.

2.2 Babanski's theory of optimizing the teaching process

Soviet educator Babansky (2001) argued that the optimization of the teaching process means achieving the greatest possible effectiveness within a given timeframe, based on a comprehensive consideration of pedagogical laws, principles, methods, and students' actual capabilities.

In instructional practice, this means that teachers must, based on students' actual learning needs, select the most appropriate teaching objectives, content, and tasks, thereby avoiding wasted effort and excessive burdens—precisely the theoretical foundation for enhancing classroom quality and efficiency advocated by the "Double Reduction" policy.

2.3 The four-stage model of interest development

Hidi and Renninger's (2006) four-stage model of interest development categorizes the evolution of interest into situational-triggered interest, situationally sustained interest, emerging personal interest, and mature personal interest. In hierarchical reading instruction, designing reading tasks that are both challenging and relevant to students at different proficiency levels can effectively trigger and sustain their reading interest, facilitating a shift from extrinsic to intrinsic motivation.

2.4 Classification theory of reading strategies

Mokhtari and Reichard (2002) categorize reading strategies into global reading strategies, problem-solving strategies, and supportive reading strategies. Students at different proficiency levels exhibit significant differences in their use of these strategies. Differentiated instruction enables targeted interventions to address students' strategic weaknesses, helping struggling learners master foundational strategies while guiding high-achieving students to flexibly apply advanced strategies, thereby enhancing overall reading literacy.

3 Research methodology

3.1 Research subjects

This study selected a total of 76 ninth-grade students from two parallel classes at a middle school in Wuhu City, Anhui Province, as the research subjects. Class 15 (38 students) served as the experimental group, implementing differentiated instruction, while Class 16 (38 students) functioned as the control group, using conventional teaching methods. Prior to the experiment, there were no significant differences between the two classes in terms of English reading scores or gender ratios.

3.2 Research design

The experimental period spans from February to June 2026, lasting a total of 14 weeks. Based on students' reading scores, reading interests, and their use of reading strategies, the experimental class was divided into three levels—A (advanced), B (intermediate), and C (basic)—using an implicit stratification approach. The study employed classroom observations, analysis of instructional design documents, and pre- and post-test data to examine, in particular, the effectiveness of differentiated instruction at each stage of the teaching process.

4 Research process

To ensure the effective implementation of differentiated instruction in junior high school English reading classes, this study has developed a rigorous and systematic set of experimental procedures. The entire research process is divided into three phases—preparation, implementation, and adjustment—and incorporates specific

instructional strategies both inside and outside the classroom.

4.1 Preparatory phase: scientific assessment and implicit stratification

During the first two weeks of the experiment (Weeks 1-2), the research team conducted a comprehensive assessment of the experimental class students' learning status. In addition to referencing their eighth-grade end-of-term English scores, they also administered a reading strategy questionnaire and a reading interest scale for a holistic evaluation. Based on these results, students were categorized into three proficiency levels—A, B, and C. To safeguard students' self-esteem and prevent the negative psychological implications of "labeling", this study adopted an "implicit stratification" approach: teachers maintained an internal roster of student groupings but refrained from publicly disclosing each student's assigned level during classroom questioning, homework assignments, or feedback. Instead, students were encouraged to select learning activities that matched their abilities through a "task menu" and "challenge levels", with teachers subtly guiding them toward appropriate tasks as needed.

4.2 Implementation phase: 14-week stepped teaching approach

The 3rd to 14th weeks of the experiment constitute the core implementation phase of differentiated instruction, during which teachers, guided by the principle of "ensuring a minimum baseline while setting no upper limit", deeply integrate the concept of differentiation into every aspect of PWP-based reading instruction.

Differentiated pre-reading warm-up: During the introduction phase, teachers design tiered warm-up tasks tailored to the text's difficulty level. For example, when teaching a reading passage on environmental protection, for C-level students, the teacher shows an engaging excerpt from an environmental documentary and provides accompanying core vocabulary list with Chinese annotations to help students develop an initial schema; for B-level students, teachers use mind maps to guide them in predicting the text's structure; and for A-level students, a debate topic—"Is economic development necessarily at odds with environmental protection?"—is introduced to stimulate higher-order thinking.

Heterogeneous Collaboration and Tiered Instruction in Reading Comprehension: During the reading process, teachers employ a "heterogeneous grouping" strategy, assigning students from A, B, and C levels to mixed groups. In group work, A-level students serve as "reading facilitators", responsible for mapping out the text's structure and underlying logic; B-level students act as "information synthesizers", tasked with extracting key details; and C-level students function as "basic reporters", responsible for reading aloud and restating basic facts. Throughout this process, teachers provide "circulating tiered guidance": offering sentence pattern scaffolds and vocabulary cues to C-level students to ensure they can keep pace with the group; guiding B-level students to focus on the logical connections between paragraphs; and encouraging A-level students to question the text and pose critical questions.

Diversified post-reading output: During the output phase, teachers offer a "task buffet". Students in level C may choose to complete text-fill-in exercises or draw simple information-structure diagrams; students in level B are required to engage in role-play or rewrite a paragraph; and students in level A must write a response essay or deliver a themed speech. This approach ensures that learners at every level can experience a sense of accomplishment within their Zone of Proximal Development.

4.3 After-class extension: tiered assignments and dynamic adjustment

In terms of homework assignments, we strictly control the overall workload and adopt a "required + optional" model. The required tasks are designed for all students, focusing on core vocabulary and foundational comprehension, with a time limit of no more than 15 minutes. Optional assignments offer extended reading materials or inquiry-based activities at varying levels of difficulty, tailored to students' individual needs. In addition, our research team has established a "dynamic adjustment mechanism". Every four weeks, a mini-assessment is conducted, allowing students in level C to advance to level B, and those in level B to move up to level A, based on their progress. This flexible, fluid system significantly boosts students' intrinsic motivation, turning differentiated

instruction into a dynamic force that fosters student growth rather than creating rigid hierarchies.

5 Research and analysis

After 14 weeks of experimental intervention, this study collected extensive quantitative and qualitative data. Using SPSS 26.0, we conducted statistical analyses on pre- and post-test scores, the reading interest scale, and the reading strategy questionnaire; the results are as follows.

5.1 A significant increase in reading interest and effect size analysis

The scale test based on Hidi and Renninger's (2006) four-stage model of interest development indicates that the experimental class students' total reading interest scores were significantly higher than those of the control class. Independent-samples t-test results show that, in the post-test, the experimental class had a mean reading interest score of 4.12 (SD = 0.58), which was significantly higher than the control class's 3.45 (SD = 0.64), $t(74) = 4.87$, $p < 0.001$, with Cohen's $d = 1.12$, suggesting that differentiated instruction has a very large effect size in enhancing reading interest.

Further analysis revealed that students in level C exhibited the most significant increases on both the "situation-triggered interest" and "situation-sustained interest" dimensions, with mean differences of 1.24 ($p < 0.01$) for each. Interview excerpts corroborate this finding. In a post-class interview, student Li from level C stated: "In the past, I would always lose focus during reading classes because I couldn't understand the texts. Now, with the vocabulary list and simple tasks provided by the teacher, I feel capable of comprehending English articles, which gives me a strong sense of accomplishment." This indicates that differentiated instruction, by lowering the cognitive threshold, effectively alleviates reading anxiety among struggling learners, enabling them to rediscover the joy of reading.

5.2 Precision in the application of reading strategies and data-driven support

According to the analysis of the reading strategy questionnaire by Mokhtari and Reichard (2002), students in the experimental class showed significant improvements in both overall reading strategies and problem-solving strategies. A paired-samples t-test revealed that, following the post-test, the mean score for overall strategy use in the experimental class increased from 3.15 to 3.89 ($t(37) = 6.45$, $p < 0.001$).

In the discussion of anomalous data, we observed that students in level A showed a smaller increase (mean difference of 0.32) in their scores on "supportive reading strategies" (such as note-taking and underlining key points) compared to students in level C (mean difference of 0.85). This does not indicate regression among level A students; rather, it reflects a "ceiling effect", as level A students already possessed a high level of strategic awareness prior to the intervention. In contrast, level C students, who had previously lacked explicit strategy instruction, experienced a significant awakening of strategic awareness under the targeted interventions of tiered instruction, leading to remarkable progress. In the qualitative interviews, level B student Wang remarked, "In the past, I only knew how to translate word for word. Now, my teacher has taught us to identify topic sentences and linking words. After drawing a mind map, I found that the text's logic has become much clearer". This demonstrates that differentiated instruction has shifted strategy training from vague generalizations to precise, targeted guidance.

5.3 Overall improvement in reading achievement and the effectiveness of differentiated instruction

The post-test English reading scores indicate that differentiated instruction has yielded significant results in both nurturing high-achieving students and addressing learning gaps. The experimental class's mean post-test reading score was 26.45 (out of 30, SD = 3.82), which was significantly higher than the control class's 22.18 (SD = 4.56, $t(74) = 4.42$, $p < 0.001$).

From the perspective of tiered data, the pass rate among C-level students rose from 42% before the intervention to 70%, an improvement of 28 percentage points; the proportion of B-level students achieving excellent scores increased by 15%; and the number of A-level students scoring in the top range (28-30 points) grew from 3 to 7. Notably, despite their weaker foundational skills, C-level students experienced a reduction of

1.2 in the standard deviation of their reading scores under the support of tiered instruction, indicating that academic performance within this group has become more stable and that extreme disparities have been preliminarily alleviated. This robustly demonstrates that tiered teaching truly achieves the goal of enabling "every child to make progress based on their own starting point".

6 Research conclusions and implications

6.1 Main conclusions

This study confirms that, under the "double reduction" policy, the hierarchical teaching design and implementation framework for junior high school English reading—constructed on the basis of theories such as the zone of proximal development—is both scientifically sound and effective. Its core strengths are as follows: First, by stratifying objectives and tasks, it achieves a precise alignment between instructional content and students' cognitive levels, thereby preventing both underchallenge and overchallenge; second, through implicit differentiation and heterogeneous collaboration, it balances educational equity with individualized development, fostering a classroom environment characterized by mutual support and shared success; third, by employing tiered assignments and assessments, it effectively reduces students' unnecessary workload, stimulates intrinsic motivation to learn, and ensures that students in the C-level group reap the greatest benefits.

6.2 Pedagogical implications

Foster a scientific understanding of student differences and reconstruct the teacher-student relationship: Teachers should recognize that students' differences are valuable educational resources, not obstacles to teaching. Differentiation is not intended to "label" students or rank them into hierarchical categories; rather, it aims to deliver the most appropriate education for each learner. In practice, teachers must shift from being mere "knowledge transmitters" to becoming "designers of learning resources" and "facilitators of personalized learning".

Emphasize the dynamic nature of grouping and safeguard students' self-esteem: Students' placement within groups is not fixed. Teachers should establish a mechanism for dynamic adjustment, allowing students to move between different levels based on their performance at each stage. At the same time, implicit grouping is a minimum requirement; through strategies such as "self-selected tasks" and "challenge-based progression", teachers must protect the self-esteem of students in level C and motivate their drive to excel.

6.3 Strengthen teachers' lesson-planning capabilities and deepen collaborative teaching research

Differentiated instruction places extremely high demands on teachers' professional competence. Teachers must devote greater effort to studying curriculum standards, analyzing students' learning needs, and designing tiered tasks. Schools should reinforce the development of subject-specific teaching research groups, employing strategies such as collaborative lesson planning, case-study discussions, and "same lesson, different designs" approaches to establish a "differentiated instruction resource bank", thereby reducing the individual workload of lesson preparation and enhancing teachers' capacity for differentiated instructional design.

6.4 Foster students' emotional well-being and cultivate an inclusive classroom culture

When implementing differentiated instruction, it is essential to provide effective psychological support to students. Special attention should be given to the mental state of students in the lowest-performing level (level C), offering them ample encouragement and opportunities to demonstrate their abilities. In assessing group collaboration, "value-added assessment" should be adopted—focusing not only on the group's final outcomes but also on the level of participation and progress demonstrated by level C students. This approach can motivate high-achieving students to support their peers, thereby fostering a classroom environment characterized by inclusivity and mutual assistance.

7 Final remarks

This study, grounded in the context of the "Double Reduction" policy, systematically evaluated the effectiveness and scientific soundness of a tiered instruction model for junior high school English reading through a 14-week empirical intervention. Data analysis indicates that this instructional approach has yielded significant improvements

in students' reading motivation, strategy use, and academic performance. In particular, the implementation of implicit grouping and an accountability-based assessment system has effectively addressed the longstanding issue in traditional teaching—where high-achieving students are underchallenged while struggling learners remain underserved—thereby achieving an organic integration of educational equity and personalized development. Nevertheless, upon reflection on the entire research process, certain limitations remain, leaving ample room for future scholarly inquiry.

Firstly, in terms of the breadth of the research sample, this study examined only two classes from a single secondary school. Although extraneous variables were controlled, the homogeneity of the sample does impose certain limitations on the external validity of the findings. Schools across different regions and at varying levels of educational provision differ in student demographics, teaching staff quality, and instructional culture; thus, the applicability of differentiated instruction in such complex contexts remains to be further validated. Future research should aim to broaden the sample scope by conducting large-scale empirical studies that span multiple regions and educational stages, thereby assessing the generalizability of the differentiated instruction model and exploring its localized implementation strategies within diverse educational ecosystems.

Secondly, in terms of the length of the research cycle, a 14-week experimental intervention, while sufficient to observe short-term fluctuations in students' academic performance and changes in their interests, falls short of fully revealing the long-term, far-reaching effects of differentiated instruction on students' reading literacy, self-regulated learning skills, and lifelong learning habits. Education is a slow-moving process; whether differentiated instruction leads students to develop path dependencies, or whether the "situational interest" it sparks can be smoothly transformed into stable "individual interest", both require extended longitudinal tracking. Future research could establish long-term monitoring mechanisms to examine the sustained impact of differentiated instruction on students' English learning beyond junior high school, extending into the senior high school years.

Finally, in terms of research methodology and technical support, this study relies primarily on traditional tools such as scales, test papers, and interviews, leaving the exploration of deep cognitive processing mechanisms during reading still somewhat inadequate. As educational digitalization continues to advance, future research on differentiated instruction should actively incorporate artificial intelligence, eye-tracking, and big data technologies. By generating precise profiles of students' reading trajectories, we can capture their cognitive load and attentional allocation across tasks at different levels, thereby facilitating a transition from "experience-based differentiation" to "data-driven differentiation". This approach not only enhances the scientific rigor of differentiation decisions but also leverages intelligent algorithms to deliver personalized resources with pinpoint accuracy, ultimately fostering an intelligent, adaptive new ecosystem for English reading instruction.

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