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Applying Differentiated Instruction to Improve Students' Understanding of Descriptive Texts

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ABSTRACT

Differentiated instruction responds to differences in students' readiness, interests, and learning needs through adjustments to content, process, and products. This study examined changes in descriptive text understanding and classroom participation during its implementation in an English class at SMA Negeri 1 Manggar, East Belitung, Indonesia. Classroom action research involved 34 students in class X1, comprising 13 male and 21 female students. Two cycles were conducted, each involving planning, action, observation, and reflection. Learning needs were mapped through surveys and classroom observations. Cycle I emphasized differentiated content and processes, whereas Cycle II extended the approach to differentiated products. Materials included written descriptions, tourism videos, documentary videos, and posters; students produced written texts, vlogs, presentations, or posters about local destinations. Learning records and classroom observations were analyzed descriptively across the pre-cycle stage and both intervention cycles. Mean achievement scores increased from 50.49 to 74.51 and 92.16. The proportions achieving scores of at least 75 increased from 29.41% to 61.76% and 100%. Based on the tabulated observation scores, active participation increased from 38.24% to 67.65% and 91.18%. Both classroom success targets were reached in Cycle II, although three students still required participation support. The findings indicate improvement within this classroom during the differentiated instructional sequence. Because the study lacked a comparison group and reported no inferential analysis, the findings support reflective classroom improvement rather than a causal or statistically significant treatment effect.

Keywords: differentiated instruction; descriptive texts; English language learning; classroom action research; student participation

INTRODUCTION

Students enter English classrooms with different levels of prior knowledge, language exposure, confidence, and willingness to participate. A uniform task may therefore offer insufficient support to some learners while giving others too little challenge. Differentiated instruction provides a framework for adjusting classroom learning to these differences while retaining shared learning goals (Smale-Jacobse et al., 2019; Tomlinson, 2001). In the Indonesian context, attention to student needs also appears in discussions of differentiated teaching and in research on teachers' implementation of the approach (Herwina, 2021; Suprayogi et al., 2017).

In the classroom examined in this study, descriptive texts were part of Grade X English

learning. Students were expected to understand a text's social function, organization, and language features, and to communicate descriptions through oral, written, and visual forms. Despite prior exposure to this genre, the preliminary assessment showed that only 10 of 34 students achieved the minimum score of 75. The other 24 students, representing 70.59% of the class, scored below this threshold. The classroom problem involved both limited understanding and insufficient participation in learning activities.

Descriptive text learning requires students to connect vocabulary and grammatical resources with information about a person, place, or object. Evidence concerning second-language comprehension identifies vocabulary knowledge as an important correlate of reading and listening performance (Jeon & Yamashita, 2014; Zhang & Zhang, 2022). The teacher's initial observations in the present classroom likewise identified limited vocabulary, weak grammatical understanding, and little English exposure outside lessons. Some students also regarded English as inherently difficult or believed that only talented learners could master it. These observations provided reasons to reconsider the materials, activities, and opportunities for expression offered in class.

A differentiated approach seemed appropriate because it could preserve common descriptive text objectives while varying text complexity, support, grouping, and product formats. Nevertheless, differentiation requires decisions informed by learners' actual needs, and research documents considerable complexity in its planning and implementation (Pozas et al., 2020; van Geel et al., 2019). A conceptual review of differentiation in EFL classrooms offers a relevant language teaching framework (Suwastini et al., 2021), while work on differentiation in secondary EFL education highlights the practical importance of instructional strategies and implementation challenges (Roiha et al., 2025).

This study aimed to examine changes in descriptive text learning outcomes and active classroom participation during two cycles of differentiated instruction. It addressed two questions: How did students' achievement change across the pre-cycle stage, Cycle I, and Cycle II? How did their observed participation change across the same stages? The contribution is a classroom account of integrating content, process, and product differentiation around descriptions of familiar local tourism destinations. The study was designed to improve practice in one class, with conclusions limited to the evidence available from that setting.

LITERATURE REVIEW

Differentiated Instruction and Learner Needs

Differentiated instruction involves purposeful adjustments to what students encounter, how they work with it, and how they demonstrate understanding. Tomlinson's framework links these adjustments to readiness, interests, and learning profiles (Tomlinson, 2001). Readiness concerns students' current knowledge and capacity to undertake a particular task. Interests concern topics or activities that can make participation meaningful. Learning profiles encompass preferences and contextual conditions that may influence participation, including working individually or with others and accessing information through different formats.

The distinction between a common objective and varied routes toward it is central. Differentiation does not require a separate curriculum for every student. Instead, teachers can organize manageable groups and tasks in response to identified needs. Reviews in primary, secondary, and inclusive education show that differentiation encompasses varied practices and that findings depend on the instructional arrangements and research designs examined (Deunk et al., 2018; Lindner & Schwab, 2025; Smale-Jacobse et al., 2019). A review focused on reading in elementary schools provides additional evidence about differentiated reading practices, although its educational level differs from the present secondary English class (Achmad et al., 2024). These studies justify investigating classroom adaptations without assuming that every differentiated activity will produce the same outcome.

Teachers also need to connect their understanding of differentiation with their planning and classroom decisions. Research on the DI-Quest instrument examines teachers' perceptions of differentiated instruction (Coubergs et al., 2017), while work with teacher educators identifies relevant perspectives and implementation experiences (Ginja & Chen, 2020). These contributions emphasize the importance of coherent planning. Research on professional development further suggests that improving practice depends on the characteristics of the learning opportunities available to teachers (Sims & Fletcher-Wood, 2021).

The original classroom approach considered students' preferences for visual, auditory, and activity-based experiences. Such preferences can inform the range of options offered, but they should not be interpreted as fixed learner types requiring matched instruction. A systematic review of the learning styles neuromyth challenges that matching assumption (Newton & Salvi, 2020). In the present study, variation in text, video, discussion, and production activities is therefore understood as a way to broaden access and participation; the study did not test a learning style

matching hypothesis.

Differentiating Content, Process, and Products

Content differentiation adjusts the complexity and accessibility of learning materials while maintaining the central concepts. For descriptive texts, students can work with descriptions of differing linguistic complexity while still examining social function, organization, and language features. The classroom framework included movement between foundational and more demanding knowledge, concrete and abstract representations, simple and complex tasks, single and multiple focuses, small and larger steps, structured and open-ended work, dependence and independence, and slower and faster pacing. These dimensions summarize the readiness equalizer discussed in the source manuscript (Tomlinson, 2001).

Process differentiation concerns activities and support that help students interpret and use content. Reading, viewing, listening, discussion, and guided production can provide complementary opportunities to work with meaning. However, adding media alone does not ensure learning. Multimedia design research emphasizes how information is selected and presented (Noetel et al., 2022), and work on instructional video identifies ways to make video use more effective (Mayer et al., 2020). Cognitive load theory offers a reason to manage the amount and difficulty of information encountered at once (Sweller, 2020). Research on seductive details similarly cautions that interesting but irrelevant material can interfere with learning (Sundararajan & Adesope, 2020). For a descriptive text lesson, these perspectives favor materials that make the relevant language and communicative purpose clear.

Product differentiation allows students to demonstrate understanding through different forms of expression. A written description, spoken presentation, vlog, or poster may all communicate information about a destination, but their instructional value depends on the language and understanding demonstrated. Generative learning research offers a framework for activities in which students actively construct meaningful representations (Fiorella, 2023). Age and instructional conditions also matter when selecting such strategies (Brod, 2021). Research distinguishing learning through activity from activity without sufficient learning reinforces the need to connect each product with a specific objective (Skulmowski, 2024).

Descriptive Text Understanding, Motivation, and Participation

A descriptive text presents the characteristics of a person, place, or object so that readers or listeners can develop a clear representation of it. The source manuscript's treatment of this genre

draws on its author's account of grammar in English texts (Anggraini, 2020). In this study, descriptions of East Belitung destinations connected language learning with places familiar to the students. The instructional objectives integrated listening–speaking, reading–viewing, and writing–presenting rather than treating descriptive text understanding as reading alone.

Writing about content can support learning by requiring learners to organize and express what they understand, although evidence from other school subjects must be transferred cautiously to language learning (Graham et al., 2020). Research on vocabulary learning through digital reading also provides a relevant perspective on encounters with language in digital materials (Zhu et al., 2024). Together, these sources support attention to the language work within an activity rather than to the attractiveness of its format alone.

Participation and motivation are related but distinct. Observable participation includes responding, discussing, presenting, and completing learning activities; these behaviors do not fully reveal a student's motivation or emotional experience. A systematic review of engagement in language learning highlights the importance of clear definitions and measurement (Hiver et al., 2024). Research in the Chinese EFL writing context similarly examines motivation and engagement as constructs requiring explicit investigation (Yu et al., 2019). In this classroom study, observation scores indicate teacher-rated participation and should not be treated as a validated measure of all engagement dimensions.

Self-determination theory provides a framework for considering why meaningful choice and appropriate challenge might support motivation (Ryan & Deci, 2020). Meta-analytic studies examine relationships between motivation and educational outcomes, and between supportive conditions and motivation (Bureau et al., 2022; Howard et al., 2021). Autonomy-supportive teaching research offers a further rationale for giving students purposeful choices within a clear structure (Reeve & Cheon, 2021). These perspectives are relevant to interpreting differentiated products, but motivation was not independently measured in the present study.

Assessment can help teachers identify the support students need and revise instruction. Formative assessment theory connects evidence of learning with decisions about subsequent teaching (Black & Wiliam, 2009). Reviews of feedback emphasize the importance of the information learners receive about their work (Hattie & Timperley, 2007; Wisniewski et al., 2020). Research on self-assessment and peer assessment offers additional options for future classroom development (Andrade, 2019; Double et al., 2020). These approaches are discussed as instructional possibilities; the source manuscript did not document a separate self-assessment or peer assessment

intervention. Likewise, evidence about retrieval practice supports the value of checking understanding, but does not establish that retrieval practice caused the changes reported here (Agarwal et al., 2021).

METHODS

Research Design and Participants

The study used classroom action research with two cycles. Each cycle comprised planning, action, observation, and reflection. The teacher served as the researcher and participated actively in instruction and data collection. Action research provided a framework for reviewing classroom evidence and revising practice (Kemmis et al., 2014). The study was a local classroom improvement inquiry and did not include a comparison class or random assignment.

Participants were the 34 students of class X1 at SMA Negeri 1 Manggar, East Belitung, Indonesia: 13 male and 21 female students. They differed in English readiness, interests, and learning preferences. The instructional focus was understanding and producing descriptive texts through the integrated skill pairs of listening–speaking, reading–viewing, and writing–presenting.

Planning and Instructional Procedures

Planning included preparing lesson plans, assessment questions, and an observation sheet. The teacher used surveys and classroom observations to map students' readiness, interests, and learning profiles. This information informed the selection of materials and the organization of learning groups. The pre-cycle assessment and observations provided the baseline for comparison with the intervention cycles.

In Cycle I, the teacher emphasized differentiation of content and process. Students encountered descriptive materials with different levels of difficulty and worked in groups informed by the initial needs mapping. Resources included textbook descriptions, links to tourism promotion videos from different Indonesian destinations, documentary videos produced by former students, written descriptions of East Belitung, and related posters. Classroom activities provided opportunities to examine information, discuss descriptive features, respond to questions, and develop simple descriptions.

Observation accompanied teaching. At the end of Cycle I, the teacher reviewed the learning records and observation sheets to identify remaining difficulties. Reflection indicated that some students continued to struggle with vocabulary, grammar, oral descriptions, and simple written

production. Some also needed support to participate in discussion or presentation. These findings informed the continuation of the intervention.

Cycle II extended the approach to product differentiation. Students could communicate descriptions through written texts, vlogs, presentations, or posters. The products focused on local destinations, including Pantai Lalang, Pantai Serdang, and Warung Kopi Manggar. The aim was to provide different ways of expressing understanding while retaining the descriptive text objectives. Final assessment and observation were followed by reflection on the classroom success criteria.

Data Collection and Analysis

Data were collected through documentation and classroom observation. Documentation comprised records of learning outcomes at the pre-cycle stage, Cycle I, and Cycle II. Classroom observation considered students' responses during discussions and question-and-answer sessions, their participation in learning activities, and their written or descriptive products. The teacher recorded participation using a four-point observation scale. Scores of 3 and 4 represented the good and very good participation categories and were grouped as active participation; scores of 1 and 2 were grouped below this participation criterion.

Analysis was descriptive. Achievement was summarized using the highest score, lowest score, mean, and numbers of students attaining or not attaining a score of 75. Participation was summarized using the frequency of each observation score. Percentages were calculated as the relevant count divided by 34 and multiplied by 100. Changes in achievement means were expressed as score-point differences; changes in proportions were expressed as percentage-point differences. No inferential significance tests were reported.

The source manuscript specified an 80% classroom success target, an achievement benchmark of at least 75, and good or very good participation. For reporting, the achievement threshold and participation threshold are examined separately, together with the class mean. Individual paired records were unavailable for determining how many students satisfied both criteria simultaneously at the pre-cycle stage and in Cycle I. In Cycle II, all students met the achievement threshold, so the 31 students meeting the participation criterion also met both criteria. The source did not report the number of assessment items, detailed scoring descriptors, instrument reliability, cycle duration, or an independent observer. These omissions limit assessment comparability and the interpretation of the observation scores.

The tabulated participation frequencies were used consistently in the analysis. In Cycle II, they show 12 students at score 4, 19 at score 3, and three at score 2. The dash at score 1 was treated as zero because the other frequencies already total 34. The source narrative instead reports 32 active and two less active students in one paragraph; this inconsistency requires author verification. The subsequent reflection and the table both indicate three students below the participation criterion.

RESULTS AND DISCUSSION

Changes in Learning Outcomes

Table 1 presents students' descriptive text learning outcomes across the three stages. The highest, lowest, and mean scores increased over the instructional sequence. The mean rose from 50.49 before the intervention to 74.51 in Cycle I and 92.16 in Cycle II. The improvement was 24.02 score points between the pre-cycle stage and Cycle I, and a further 17.65 points between the two cycles. The total increase was 41.67 points.

Table 1. Descriptive text learning outcomes across the study stages (N = 34)

Indicator	Pre-cycle	Cycle I	Cycle II
Highest score	83.33	100	100
Lowest score	16.67	50	83.33
Mean score	50.49	74.51	92.16
Students scoring ≥75, n (%)	10 (29.41%)	21 (61.76%)	34 (100%)
Students scoring <75, n (%)	24 (70.59%)	13 (38.24%)	0 (0%)

Source: Learning records reported in the original manuscript. Original scores and counts are retained; percentages use N = 34 and are rounded to two decimal places.

At the pre-cycle stage, the score range was 16.67–83.33, and 10 students, or 29.41%, achieved at least 75. In Cycle I, the lowest score increased to 50 and the highest reached 100. Twenty-one students, or 61.76%, attained the achievement threshold. These changes indicated progress, although the class mean of 74.51 remained below 75 and the proportion attaining the threshold remained below 80%.

In Cycle II, all 34 students attained at least 75. The lowest score was 83.33 and the mean was 92.16. The percentage meeting the achievement threshold increased by 70.59 percentage points from the baseline. Thus, the classroom achievement target was reached by the end of Cycle II. These results describe improvement across the stages; they do not demonstrate a statistically

significant difference because no inferential test was conducted.

Changes in Classroom Participation

Table 2 presents the observation score distributions. At baseline, 13 students obtained scores of 3 or 4, equivalent to 38.24% of the class. This increased to 23 students, or 67.65%, in Cycle I and 31 students, or 91.18%, in Cycle II. The overall increase was 52.94 percentage points. Conversely, the number scoring below 3 decreased from 21 to 11 and then to three.

Table 2. Classroom participation observation scores across the study stages (N = 34)

Observation score / indicator	Pre-cycle	Cycle I	Cycle II
4 (very good), n	2	8	12
3 (good), n	11	15	19
2, n	15	9	3
1, n	6	2	0*
Active participation (scores 3–4), n (%)	13 (38.24%)	23 (67.65%)	31 (91.18%)
Below criterion (scores 1–2), n (%)	21 (61.76%)	11 (32.35%)	3 (8.82%)

Source: Observation table in the original manuscript. The final two rows are calculated from the reported frequencies. *The original dash is treated as zero because the other Cycle II frequencies total 34. The source narrative also reports 32 active students; this conflicts with the table and requires author verification.

The number of students in the highest participation category increased from two to eight and then to 12. The number at score 3 increased from 11 to 15 and then to 19. In Cycle II, no student was recorded at score 1, although three remained at score 2. Consequently, the participation target was reached at the class level while a small group still needed continued encouragement and support.

Achievement and participation did not move identically. All students met the achievement threshold in Cycle II, but three remained below the participation criterion. Meeting the assessment target therefore should not be taken to mean that every student participated actively. The different outcomes also support maintaining separate evidence for learning attainment and classroom participation.

Reflection Across the Two Cycles

Reflection after Cycle I identified continuing difficulty with the descriptive genre, simple spoken information, and short written descriptions. The teacher attributed these difficulties to limited vocabulary, weak grammatical knowledge, and restricted language exposure. This interpretation is consistent with research linking vocabulary and other second-language knowledge

to comprehension (Jeon & Yamashita, 2014; Zhang & Zhang, 2022), but the study did not isolate the contribution of each factor.

Some students also hesitated to answer questions, discuss ideas, or present their work. The teacher associated this hesitation with prior learning experiences and beliefs that English was difficult or reserved for particularly talented learners. These were classroom interpretations rather than results from a separate motivation instrument. The distinction matters because language engagement includes more than visible classroom behavior (Hiver et al., 2024).

Cycle II provided additional ways to communicate understanding through locally relevant products. The teacher observed increased willingness to follow instructions, examine materials, express ideas, and produce descriptions. Reflection at the end of the cycle indicated that the achievement and participation targets had been reached, so the action research ended after two cycles. Continued support remained necessary for the three students whose participation scores were below 3.

Interpreting the Instructional Changes

The intervention combined differentiated materials, varied learning activities, and opportunities to choose a product format. These arrangements correspond to the content, process, and product framework (Suwastini et al., 2021; Tomlinson, 2001). The changes also fit a broader account of learning that attends to students' prior knowledge, supportive relationships, and meaningful participation (Darling-Hammond et al., 2020). However, the present design cannot distinguish the effects of differentiation from those of additional practice, teacher attention, familiarity with the assessment, or changes in the tasks.

Content differentiation may have made descriptions more accessible to students who initially needed simpler language while preserving challenge for others. The classroom account is compatible with research on differentiated practice, but systematic reviews emphasize variation in implementation and limitations in the available evidence (Deunk et al., 2018; Smale-Jacobse et al., 2019). Grouping was a practical way to respond to learner differences within one class of 34 students; it did not require 34 independent lesson plans.

The use of video, text, and posters provided different representations of descriptive information. Their possible contribution should be interpreted through the quality of the learning tasks and the relevance of the representations (Mayer et al., 2020; Noetel et al., 2022). The study did not compare individual media or measure cognitive load, so it cannot identify which format

was most effective. The relevant pedagogical implication is to select resources that support the language objective and to manage their complexity (Sweller, 2020).

Product differentiation connected expression with places students knew. Describing local beaches or Manggar coffee shops gave students a concrete subject for selecting details and organizing information. Producing a text, vlog, poster, or presentation potentially required learners to reconstruct meaning rather than only recognize it. This interpretation is informed by generative learning research (Fiorella, 2023), while the actual learning value still depends on what students do with the content (Skulmowski, 2024).

Meaningful choice may also help explain the teacher's observations of greater confidence and willingness to participate. Motivation theory and research offer plausible explanations involving autonomy and competence (Bureau et al., 2022; Reeve & Cheon, 2021; Ryan & Deci, 2020). Nevertheless, confidence and motivation were not separately measured. They should therefore remain proposed interpretations rather than additional demonstrated outcomes.

Limitations and Implications for Practice

The findings are limited to one class and two cycles. There was no comparison group, no long-term follow-up, and no reported analysis of individual score changes. The teacher conducted the intervention and observations, which may have influenced participation judgments. Missing information about assessment equivalence, scoring procedures, and observation reliability further limits interpretation. The inconsistent Cycle II participation narrative also needs reconciliation with the original records before submission.

For practice, the results support using classroom evidence to revise differentiated lessons and checking learning outcomes and participation separately. Future implementation could use explicit criteria shared across written, spoken, and visual products, document how assistance changes, and preserve comparable assessments across cycles. Feedback and formative assessment research can inform these refinements (Black & Wiliam, 2009; Wisniewski et al., 2020). An independent observer and fuller descriptions of the assessment instruments would strengthen future inquiry. Longer follow-up and a comparison design would help examine whether improvement persists and whether it can be attributed to particular instructional changes.

CONCLUSION AND RECOMMENDATIONS

The implementation of differentiated instruction was accompanied by improved descriptive text achievement and teacher-rated participation in class X1 at SMA Negeri 1 Manggar. Mean

achievement increased from 50.49 before the intervention to 74.51 in Cycle I and 92.16 in Cycle II. The proportion achieving at least 75 increased from 29.41% to 100%. Based on the tabulated observation scores, active participation increased from 38.24% to 91.18%. Both classroom targets were reached in Cycle II, although three students still required participation support.

The classroom experience suggests that adjusting content difficulty, varying learning processes, and allowing different descriptive products can provide useful ways to respond to learner differences. Locally familiar destinations offered a meaningful context for English use. The findings support continued reflective use of differentiated instruction in this classroom, with conclusions restricted to descriptive improvement rather than a causal or statistically significant effect.

Teachers are encouraged to begin with evidence of students' readiness and interests, maintain shared descriptive text objectives, and offer manageable choices in activities and products. Assessment criteria should remain explicit across formats, and participation support should continue for students whose learning achievement exceeds their visible engagement. Further research should document instrument quality, include independent observation where possible, examine longer-term learning, and resolve the discrepancy in the source participation counts before interpreting individual participation outcomes.

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