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Delving into Educators' Perspectives and Practices in Second Language Teaching Contexts: Differentiated Instruction in the Spotlight

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ABSTRACT

This study aims to investigate the perspectives and implementation of differentiated learner-centered strategies by 96 English teacher trainers and trainees in Rwanda, employing surveys and semi-structured interviews as data collection tools over one year. The findings reveal positive attitudes toward differentiated instruction but underscore the need for a more nuanced understanding of its practical application. Significant challenges identified include inadequate training, limited resources, and time constraints. The study proposes actionable solutions such as comprehensive professional development programs, enhanced resource allocation, and effective time management strategies. Highlighting the necessity for improved teacher training and capacity building to align practice with the demands of the 21st-century classroom, these findings hold substantial implications for instructional practices in English language education in Rwanda. The study offers valuable insights for educators, policymakers, and researchers in the field.

Keywords: Differentiated instruction; Differentiation; English language education; Teacher trainers; Learner-centred strategies; Teacher capacity building; Professional development

1. Introduction

In today's education system, there is a remarkable

variety of pupils which requires the implementation of efficient teaching methods that address the unique requirements of each person (Eikeland

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and Ohna, 2022, Nicholas et al., 2021, Tomlinson, 2017, Koehler, 2010). In addition to conventional demographic factors like gender, age, ethnicity, and socioeconomic status, pupils also display subtle differences in intellect, learning preferences, and personality characteristics (Nicholas et al., 2021, Melese, 2019, Fitzgerald, 2016, Alwa, 2014, Subban, 2006). Albert Einstein effectively captures this variability with his renowned statement, "Every individual possesses genius" according to which, if you assess a fish based on its capacity to climb a tree, it will mistakenly believe that it is unintelligent. This quote highlights the need to acknowledge and accommodate individual variations in learning.

Differentiated teaching develops as a pedagogical strategy geared to accommodate the various requirements of different learners (Nicholas et al., 2021, Tomlinson, 2017, Awla, 2014, Koehler, 2010). The process involves aligning instructional techniques with the learning styles, preferences, and skills of students in order to maximize their engagement and improve learning results (Awla, 2014, Fouka and Marianna, 2011). Nevertheless, while it is acknowledged as a promising approach, there is still a significant lack of empirical evidence to support it, especially in the field of English language education in Rwanda (Nsenga and Andala, 2022; Ngendahayo and Askell-Williams, 2016).

In Rwanda's evolving education system, characterized by a diverse student body and a shift towards competency-based teaching methods, there is a pronounced need for effective differentiated instruction (Nsenga and Andala, 2022). Despite this, current educational practices often fall short in accommodating individual learning differences. Existing gaps include insufficient teacher training, limited resources, and inadequate implementation of differentiated instruction strategies (Stacie, 2023; Lai and Chang, 2020). This study aims to address these gaps by exploring the perspectives and practices of English teacher trainers and trainees regarding differentiated instruction, identifying the challenges they face, and proposing actionable solutions to improve educational outcomes.

The objective of this research is to examine how English teacher trainers and trainees in Rwanda perceive and use differentiated learner-centred techniques. The study aims to answer three primary questions: (i) What are the perceptions of English teacher trainers and trainees regarding differentiated learner-centered practices? (ii) What methods of differentiation are employed by English teacher trainers and trainees in Rwandan higher learning institutions? (iii) What challenges are encountered in implementing differentiated instruction and what potential solutions can be proposed?

By addressing these questions, the study aims to add to both the broader discussion on language teaching and the specific knowledge of how these tactics might be successfully used in the Rwandan educational setting.

2. Literature review

The educational notion of "differentiation" refers to the practice of customizing teaching to accommodate the varying demands of learners (Stacie, 2023; Nicholas et al., 2021, Graham et al., 2020, Bondi et al., 2019, Morina, 2019, Fitzgerald, 2016, Tobin and Tippett, 2014, Roy et al., 2013, Ruys et al., 2013). The purpose of differentiation is to enhance learning outcomes by customizing teaching to meet the individual requirements of students. However, there is significant variation in how practitioners execute differentiation, resulting in discrepancies in its interpretation and application (Graham et al., 2020, Bondi et al., 2019). Various nations use distinct terminology to indicate differentiated education, hence adding complexity to the situation (Eikeland and Ohna, 2022). Although there is no consensus on a specific definition, the primary objective remains the same: to modify teaching methods to suit the individual requirements, talents, interests, and learning styles of students via proactive planning (Nicholas et al., 2021, Tomlinson, 2017). Instructional differentiation includes the modification of curriculum, teaching methods, resources, activities, assessments, or learning environments in order to effectively meet the requirements of students and enhance their

level of involvement (Tomlinson, 2017). Instead of focusing on personalized learning, differentiation seeks to provide various learning opportunities that cater to varied degrees of preparedness, interests, and learning profiles (Tomlinson, 2005, Anderson, 2007). In general, differentiation is motivated by the understanding that the presence of diverse pupils in the classroom requires adaptable approaches that include all students (Tomlinson, 2014, Tomlinson, 2017).

2.1 Differentiation according to readiness

Readiness in education pertains to a student's existing proficiency and previous understanding (Tomlinson, 2017). Teachers cater to varying degrees of preparedness by modifying the material, methods, or outcomes (Stacie, 2023; Nsenga and Andala, 2022; Tomlinson, 1999). This is consistent with Vygotsky's theory, which highlights the importance of learning within the zone of proximal development (ZPD) (Vygotsky, 1978, 1986). Research on the brain indicates that the best learning happens when activities are of intermediate difficulty (Sousa, 2022). Dewey's approach proposes that the curriculum should be closely matched with the knowledge and experiences of the students (Dewey, 1929).

In order to cater to students' varying levels of preparedness, instructors may use many strategies such as adjusting the complexity of tasks, providing support for understanding complex concepts, including practical exercises, organizing students into various ability groups, offering additional learning materials, and posing thought-provoking questions (Bobis et al., 2021, Tomlinson, 2017). Scaffolding is the process of breaking down complex ideas into smaller, more manageable components (Vygotsky, 1978, Wood et al., 1976). Hands-on activities actively involve students in the topic. Tiered grouping categorizes pupils into different categories according to their level of preparedness (Tomlinson, 2017). Ensuring equal access to materials may be achieved by providing more resources or reading help (Tomlinson, 2017). Guiding questions and checklists assist students in effectively moving

through information. These tactics provide a learning environment that is tailored to individual needs and promotes inclusivity (Tomlinson, 2017).

2.2 Differentiation according to interests

It is essential to differentiate education based on students' interests in order to promote engagement and intrinsic motivation (Bobis et al., 2021, Tomlinson, 2017). By customizing the presentation of ideas to align with students' preferences, educators assist learners in linking new information to their own experiences (Nicholas et al., 2021, Tomlinson, 2017). John Dewey highlights the significance of taking into account the interests of learners in order to stimulate their innate drive (Dewey, 1929). He sees professors as facilitators who assist pupils in autonomously uncovering significance within the topic domain.

In order to accommodate a wide range of interests, educators may use several approaches such as peer coaching, giving many opportunities for discovery, allowing students to choose their learning methods, and integrating inquiry and project-based learning (Tomlinson, 2017). These methods enable students to explore subjects that they find fascinating, promoting a more profound comprehension and long-lasting enthusiasm.

2.3 Differentiation according to student profiles

Student profile differentiation is customizing instructional techniques and material to match the preferred ways in which individual learners acquire and process knowledge. Tomlinson (2017) thoroughly examines the notion of learning profiles, which cover a range of elements including learning styles, kinds of intellect, gender, culture, and language competency (Oikonomou and Papadopoulos, 2024; Papadopoulos, 2020; Papadopoulos, 2021; Papadopoulos, 2022; Papadopoulos, 2024a; Papadopoulos and Bourogianni, 2024; Papadopoulos and Hathaway, 2024; Papadopoulos and Jansen, 2024; Papadopoulos and Papadopoulou, 2023;

Papadopoulos and Shin, 2021). These elements jointly shape a student's learning profile, impacting their level of involvement and understanding of instructional information (Tomlinson, 2017, Begum and Ambreen, 2021).

Gardner's (2011) thesis questions the idea that intelligence is confined to an entity, and instead suggests that educators should adapt their teaching methods to cater to different forms of intelligence. Tomlinson further enhances this viewpoint by highlighting the significance of taking into account group orientation, cognitive style, learning environment, and intelligence preference when designing a course or lesson (Tomlinson, 2017).

In order to cater to a wide range of learning profiles, instructors might use several tactics. These strategies include the creation of flexible learning spaces and options to accommodate different needs, the use of varied methods of delivery, processes, and production to cater to different learning styles, the implementation of the Think-Pair-Share strategy to bridge individual and social learning preferences, the provision of multiple options for activities to allow learners to choose based on their preferences, and the incorporation of authentic learning tasks that resonate with different areas of intelligence. These strategies enhance the relevance and effectiveness of the learning process (Tomlinson, 2017).

2.4 Methods of differentiation

Differentiated Instruction (DI) refers to a range of instructional practices that are specifically designed to address the individual needs and abilities of students with different learning styles and abilities. According to Abbati (2012), there are two main settings in which differentiation might occur: organizational and educational. Within the organizational environment, DI encompasses the establishment of small class groups, allocation of additional resources for personalized teaching, and cultivation of normative traditions that prioritize fairness. From a pedagogical perspective, Differentiated Instruction (DI) ensures that learning objectives, tasks, activities, and resources are

tailored to meet the specific requirements, learning styles, and learning pace of each individual learner (Abbati, 2012). DI, or Differentiated Instruction, places emphasis on modifying instructional tactics and aspects to cater to the individual needs and abilities of learners, regardless of the situation or circumstances (Nurasiah et al., 2020, d'Agnese, 2017, Abbati, 2012).

Teachers who use differentiation tailor the curriculum, tasks, and evaluations to match the individual needs and interests of their students. They deliberately diversify the content, procedures, products, or learning environment (Melese, 2019, LeeKeenan and Ponte, 2018, Faber et al., 2018, Tomlinson, 2017). According to Tomlinson (2017), a differentiated classroom offers several methods for students to learn and show their understanding, which leads to successful learning for every student. Differentiation is seen in four main domains: content, process, product, and affect/classroom environment (Nicholas et al., 2021, Valiandes and Neophytou, 2018, Tomlinson, 2017, Conderman and Hedin, 2015).

Educators use a range of strategies to differentiate material, such as offering diverse resources, modifying activities, and customizing learning objectives to align with the unique degrees of preparedness, interests, and learning styles of each person (Tomlinson, 2015). For instance, they give a diverse range of learning materials, integrate many modes of teaching, provide assistance for language acquisition, use diagnostic evaluations, and allow for options in activities (Tomlinson, 2017). The process of differentiation is offering students several opportunities to interact with and comprehend knowledge via diverse tasks, activities, and degrees of support (Nicholas et al., 2021, Tomlinson, 2017). Strategies include offering options for activities, altering the difficulty of tasks, modifying the time allocated, using flexible grouping, and catering to different learning styles (Pereira et al., 2019, Tomlinson, 2017).

When it comes to distinguishing products, evaluations are customized to address the specific requirements, preferences, and degrees of preparedness of individuals, with the goal of properly evaluating their learning

(Nicholas et al., 2021, Tomlinson, 2017). Strategies include the creation of diverse assessments, the provision of options, the availability of flexible submission methods, the engagement of students in assessment construction, and the emphasis on critical thinking (Pereira et al., 2019, Morina, 2019, Nicholas et al., 2021). Furthermore, the differentiation of the learning environment entails establishing a favorable and all-encompassing atmosphere that caters to a wide range of preferences, requirements, and settings (Pereira et al., 2019, Tomlinson, 2017). Strategies include the establishment of psychological safety, adaptation to individual learning preferences and environments, efficient classroom management, incorporation of mobility and flexibility, and active participation of students in the creation of their learning environment (Tomlinson, 2017).

Studies suggest that implementing differentiated teaching may improve student engagement, motivation, and accomplishment by addressing a wide range of individual requirements (Melese, 2019, LeeKeenan and Ponte, 2018, Faber et al., 2018, Tomlison, 2017). Teachers may create an inclusive learning environment that has a good influence on learning outcomes by establishing high standards, actively involving students, and using different grouping activities (Pereira et al., 2019). Implementing differentiated education facilitates in-depth examination of ideas and enables learners to progress at their own speed (Nicholas et al., 2021, Pereira et al., 2019, Vlachou, 2015). Moreover, learner-centric methodologies have a beneficial impact on students' learning attitudes (Mboniryivuze et al., 2021, Musengimana et al., 2022), emphasizing the importance of differentiation in fostering favorable learning experiences.

2.5 Perceived challenges of Differentiated Instruction

Studies reveal that while many educators acknowledge the efficacy of Differentiated Instruction (DI), they often encounter difficulties when attempting to put it into practice owing to a range of issues. Powell and Smith (2009) discovered that while instructors recognize the significance of Direct

Instruction (DI), many are hesitant to use it due to seeing it as one of the most demanding instructional techniques to implement. Some of the reasons for this hesitance include inadequate training in DI approaches (De Neve et al., 2015), apprehensions regarding the results of standardized testing (Dweck, 2006), and the challenge of handling big class numbers (Blatchford, 2012, 2016). In addition, instructors may have a deficiency in self-efficacy, which is necessary for the successful implementation of DI (De Neve et al., 2015). They may also have difficulties in creating genuine multi-layered activities and evaluations (Bedir, 2015, Tomlinson, 2015, Smit and Humpert, 2012).

According to Zoraloglu (2022), instructors need 39 competencies distributed throughout three domains—knowledge, abilities, and beliefs—in order to effectively execute DI. Nevertheless, even though teacher preparation programs prioritize learner-centered strategies (Nicholas et al., 2021, Hartwig and Schwabe, 2018), both inexperienced and experienced teachers may still experience feelings of inadequacy or be overwhelmed due to the intricacies of Differentiated Instruction (Tomlison, 2017). Therefore, there is a need for professional development programs that provide ongoing training for teachers, helping them gain the necessary skills to successfully apply Differentiated Instruction (DI) (Tomlison, 2017).

In addition, private school instructors exhibit more preparedness to adopt Differentiated Instruction (DI) in comparison to their colleagues in public schools (Leballo et al., 2021). Conversely, public school teachers cite time limitations, bigger class sizes, and inadequate resources as obstacles to the implementation of DI. This underscores the need for public institutions to acquire knowledge from the practices of private schools in order to promote more comprehensive teaching methods.

3. Research methodology

3.1 Purpose of the study

This research aimed to examine the perception

and use of differentiated learner-centred techniques by English teacher trainers and trainees in Rwanda. The goal was to gather significant evidence to inform teaching and address the existing gap in the literature. In order to achieve this objective, the study used the mixed method research methodology, as described by Johnson et al. (2007) and Schoonenboom and Burke (2017).

3.2 Research design

The mixed method design was the optimal choice for this study and played a crucial role in gathering and interpreting data since the research objectives necessitated the use of both quantitative and qualitative approaches. Quantitative methods were used to investigate the attitudes of English teacher trainers and trainees about differentiated teaching practices. In order to address inquiries such as "How do English teacher trainers and trainees incorporate differentiation in their classrooms?" and "What difficulties arise when implementing differentiated instruction?", qualitative methods were employed.

The research used a sequential explanatory mixed method design, which included collecting quantitative data first and then conducting in-depth analysis using qualitative methodologies. This approach allows the researcher to complement quantitative findings with comprehensive theme discussions using qualitative methodologies to address any potential biases and optimize conclusions (Creswell, 2019). **Figure 1** depicts the implementation of the explanatory sequential strategy in this investigation.

The use of a two-phase approach enables the researcher to complement the quantitative findings with comprehensive theme discussions using qualitative methodologies in order to address any potential biases and optimize conclusions (Creswell, 2019). Although the quantitative data and findings provide a general understanding of the topic being studied, doing a more detailed analysis using qualitative data allows for a more comprehensive examination and exploration of the problem (Subedi, 2016). **Figure 2** depicts the implementation of the explanatory sequential strategy in this investigation.

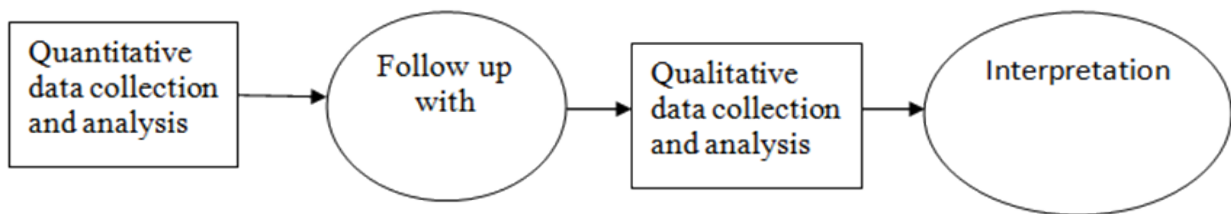


Figure 1. The sequential explanatory design.

Source: Excerpted from Subedi (2016, P. 575).

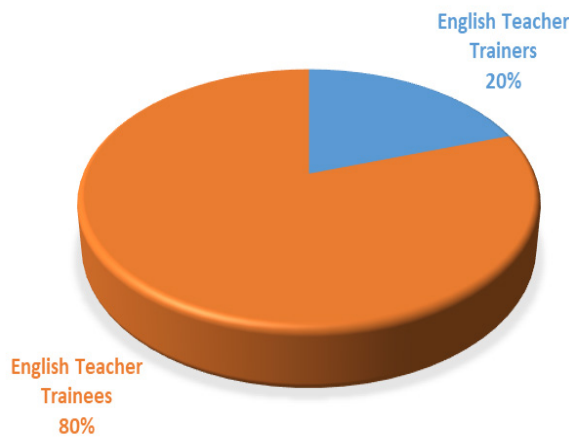


Figure 2. Distribution of the study population.

3.3 Population and sample of the research study

The study sample included 96 individuals selected from four colleges in Rwanda that specialize in educating English teachers. Among these individuals, 17 served as English teacher trainers while the remaining 69 were English teacher trainees. A purposive sampling method was used to ensure that participants were knowledgeable and experienced in English language teaching and training.

3.4 Research tools and procedures

The research was carried out over the academic year 2023–2024, using a combination of structured interviews and questionnaires. The researcher wanted to promote participants' free expression of views and gather deep, nuanced insights by using a semi-structured exploratory interview method, which goes beyond the limitations of prepared questions. The use of questionnaires was justified due to the need of quickly collecting data from a large population.

Questionnaire distribution and interview sessions

Once informed consent was obtained, the distribution of surveys began. The decision to use questionnaires as a method for collecting data was communicated to the participants, enhancing transparency in the study process. The structured questionnaires were designed to gather nominal data using a 5-point Likert scale, with questions such as:

- B1. I know what differentiated instruction is.
- B2. I have ever implemented it in my class.
- B3. Differentiated instruction improves learning outcomes.
- B4. Students learn better when teachers apply differentiated instruction.

These questions aimed to assess participants' knowledge, attitudes, and practices related to differentiated instruction. The questionnaire was validated through a pilot study with a smaller group of similar participants to ensure clarity and reliability.

The semi-structured interview guide included open-ended questions designed to explore themes

such as:

- Perceptions and understanding of differentiated instruction.
- Methods and strategies used for differentiation.
- Challenges faced in implementing differentiated instruction.
- Suggestions for improving the practice of differentiated instruction.

Sample interview questions included:

- "Can you describe your understanding of differentiated instruction?"
- "What strategies do you use to differentiate instruction in your classroom?"
- "What challenges have you encountered while implementing differentiated instruction?"

Interviews were conducted to gain deeper insights into the quantitative data and were recorded and transcribed for analysis.

3.5 Ethical assurances

This study meticulously adhered to ethical assurances outlined by scholars such as Haggerty (2004), Held (2006), and Zegwaard et al. (2017), ensuring the authenticity, integrity, and participant protection throughout the research process. By strictly following ethical standards, including obtaining informed consent, maintaining confidentiality, and upholding honesty and integrity (Zegwaard et al., 2017), this research aimed to foster trust, collaboration, and accountability among all involved parties. Additionally, potential conflicts of interest were addressed transparently, and measures were implemented to safeguard participants' rights and well-being, aligning with the principles advocated by Mantzorou and Marianna (2011) and Zegwaard et al. (2017). Such rigorous adherence to ethical guidelines underscores the commitment of this study to upholding the highest standards of ethical conduct in the research.

Permission and consent

The work was approved by the appropriate ethical review body at the University of Rwanda. The application required a thorough research proposal

explaining the study's aims, methods, possible risks, and rewards. The proposal was examined by an ethical review board to verify that it met the ethical criteria for the human-participant research.

Before taking part in the research, participants were informed of its goal, methods, and rights. All subjects provided informed permission before participating in the research. Consent for the questionnaires was obtained using a consent form included with the electronic survey. Before proceeding to the survey questions, participants had to read the consent material and express their approval to participate by checking a box. Participants in the semi-structured interviews received an information sheet about the research as well as a permission form, which they completed before the interviews began. Participants were advised that their participation was entirely voluntary, and that they may withdraw at any moment with no penalties.

Participant recruitment and anonymization

The research planned to involve 96 individuals from four Rwandan institutions that specialize in training English instructors. While the majority of invited people consented to participate, a few declined due to personal or time restrictions. These objections were honored without additional efforts to convince them, ensuring that participation was completely voluntary.

To safeguard the participants' confidentiality, all questionnaire and interview data were anonymized. Each participant received a unique identification number, and personal identifiers like names and contact information were deleted from the data sets. The anonymised data were securely kept on password-protected computers that only the study team could access. Transcripts of the interviews were similarly classified to guarantee that no personally identifying information was included.

Managing potential conflict of interest

The study recognized possible conflicts of interest, notably those involving the researchers' connections and potential biases in data interpretation. To address these issues, the following steps were taken:

- Transparency: the researchers revealed their

connections and any conflicts of interest at the start of the investigation and in the final report.

- Independent review: to guarantee impartiality, independent colleagues who were not directly engaged in the research examined the study design, data collecting, and analytic methods.

Participants were given the chance to examine and offer comments on the interview transcripts to ensure that their perspectives were accurately represented.

By closely adhering to these ethical standards, such as gaining authorization from the ethical review board, assuring informed consent, anonymizing data, and resolving possible conflicts of interest, this research hoped to create trust, cooperation, and responsibility among all parties involved. This strict attention to ethical rules demonstrates the study's dedication to sustaining the highest ethical standards in the research.

4. Results

4.1 Perceptions on differentiated instructional practices

Findings derived from the questionnaire

Quantitative data from the questionnaires were analyzed using descriptive statistics to summarize the responses and inferential statistics to compare the perceptions of teacher trainers and trainees. A t-test was employed to examine differences in perceptions between the two groups. The choice of t-test was based on its ability to compare means between two independent groups and determine if there are statistically significant differences. Assumptions for the t-test, including normal distribution of data and homogeneity of variances, were checked before analysis. See **Table 1** below.

Table 1. T-test for perceptions.

Participants	Mean	Standard deviation	P-value
English teacher trainers	4.12	0.85	<0.001
Trainees	4.15	0.88	<0.001

To adequately answer research question 1, the researcher formulated key statements that were then

weighed against the Lickert 5 scale. The statements were coded “B” and they read as follows: B1. I know what differentiated instruction is; B2. I have implemented it in my class; B3. differentiated instruction improves learning outcomes; B4. students learn better when teachers apply differentiated instruction; B5. I understand how to implement differentiated instruction; B6. it is easy to implement differentiated instruction; B7. My university offers professional development training sessions to help teachers differentiate instructions; B8. differentiation cannot be applied to the teaching

syllabus of the course; B9. differentiation cannot be applied to the assessment practices of the trainees; B10. Differentiation is an example of personalized teaching.

Based on these statements, nominal data was collected from the participants using the 5-point Likert scale indicating 1 for strongly disagree with the concept, 2 for somewhat disagree with the concept, 3 for undecided, 4 for somewhat agree with the concept, and 5 for strongly agree with the concept. The chart below (**Figure 3**) illustrates the distribution of responses for each of the statements.

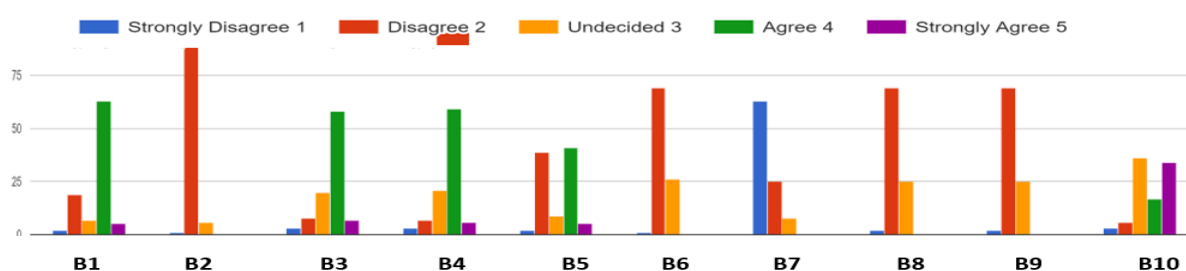


Figure 3. Respondents' perception on Differentiated Instruction.

According to the data shown in **Figure 3**, 68% of the participants are aware of differentiated education, as shown by the green marks (agree). However, only 89% of them have not really implemented it. In addition, a significant majority of the respondents (69%) expressed the belief that implementing differentiation is challenging (B6). Furthermore, a substantial majority (88%) of the respondents also said that their universities do not provide professional development training sessions to assist instructors in differentiating teaching (B7). A majority of the respondents, 69% to be precise, expressed a favorable view of differentiated instruction. They disagreed with the statements B8 and B9, which claimed that differentiation cannot be used in the teaching syllabus and assessment practices of the trainees.

Findings derived from the interviews

Qualitative data from the interviews were analyzed using thematic analysis. The process involved: first, transcribing the interviews verbatim; secondly, coding the data to identify significant

themes and patterns; next, organizing codes into broader categories and themes; and finally, interpreting the themes in the context of the research questions.

Thematic analysis was chosen for its flexibility and suitability for identifying patterns across qualitative data. The coding process was iterative, with themes refined through repeated review and discussion.

The data obtained from the interviews corroborate the findings derived from the questionnaires. The participants in language education are knowledgeable of differentiated teaching and understand many factors that need to be taken into account and need differentiated instruction. As an example,

“I know that differentiated instruction is instruction that is tailored to address students, that is, to respond to their different situations. Of course, students do not come from the same home. They do not have the same experiences. They do not have the same talent. And so, this instruction that is still not to respond to all that knowing that every student should be included, yeah.” [Int.1]

In addition, several individuals also saw differentiated instruction as a very effective teaching method that enhances learning results. As an example, the third interviewee said,

“...So if you use the different methodologies that is what I think okay different methodologies or a variety of things. I believe learners, because of their different different preferences, can each dedicated for. And at the end of the day, and the teaching learning outcome may be effectively realized, that's what I can say.” [Int. 2]

Another participant defined differentiated instruction as,

“...using the various methodologies of teaching so that every kind of learner is catered for because we learn through different meanings, what works for me may not work for another person. In fact, it is one of the best calls. If you decide to use only one method, it may not cater to. You have different categories of learners. We have those who learn visually, those who learn by, by, by lecturing method. There are many methods. But if you decided to use only one method, that means another category of learners is made for differentiation, and works better for all various categories of learners.” [Int.3]

The examination of the opinions of English teacher trainers and trainees about varied instructional approaches has shown a multifaceted and subtle comprehension among the participants. The results obtained from the questionnaire and interviews provide useful insights into their viewpoints about individualized teaching within the realm of language education.

The study's results indicate an intricate range of perspectives among English teacher trainers and trainees about diversified teaching approaches. Although participants show an understanding and a favorable attitude towards differentiated instruction, there is a noticeable discrepancy between their awareness and actual implementation. This, along with perceived difficulties in implementing it and the lack of opportunities for professional development, emphasizes the necessity for focused initiatives

to support and improve the implementation of differentiated instruction in language education. Tackling these obstacles may enhance the efficacy and inclusivity of instructional approaches in the domain.

4.2 Implementation of Differentiation in Classrooms

Findings derived from the questionnaire

To address the second research question, which focuses on how English teacher trainers and trainees implement differentiation in their classrooms, the researcher developed statements that emphasize six crucial aspects of differentiation: the learning environment, content, product, and process. We used a t-test to examine the replies of English teacher trainers and trainees in order to ascertain if there was a statistically significant disparity in their implementation of differentiated teaching. The t-test findings showed that there is no statistically significant difference in the views and practices of differentiated education between these two groups. These findings indicate that both teacher trainers and trainees share comparable viewpoints and methods when it comes to using differences in their classrooms.

a. Learning environment

With regard to the learning environment, the researcher asked the participants to rate the physical environment of their classroom using the following statements against the Likert 5-point scale:

C1. Presents an inviting, relaxed environment for learning. C2. Provides comfortable desks and work areas. C3. Contains individual, designated personal spaces for extra books and other items. C4. Is designed for quick and easy groupings of tables and chairs. C5. Is arranged for teacher and student movement during work sessions. C6. Provides work areas for individual needs, including C7. Reflects current content or skills through student displays and artifacts. **Figure 4** below illustrates the results.

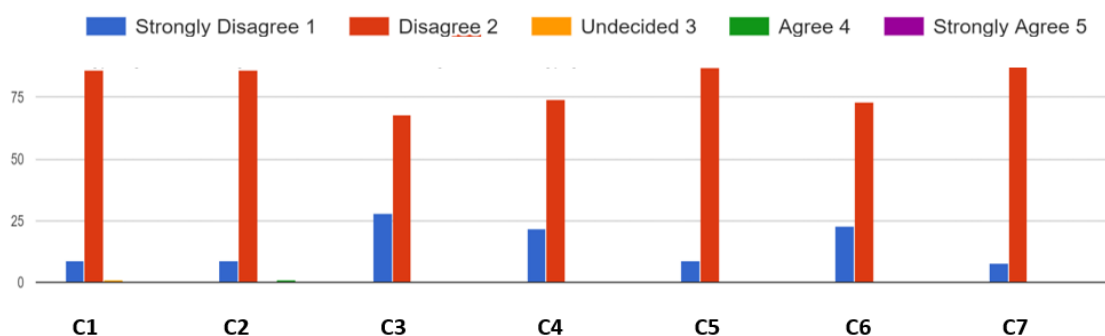


Figure 4. Respondents' differentiation of the learning environment.

According to the data shown in **Figure 4**, there was a general agreement among respondents that they do not distinguish between their learning contexts, as evidenced by their disagreement with all the claims. 95% of the respondents reported that their learning environments are not inviting and relaxed (C1). Similarly, 95% stated that they do not have comfortable desks and work areas, or they are not provided with them (C2). Additionally, 96% mentioned that their learning environments lack individual, designated personal spaces for extra books and other items (C3). Likewise, 96% disagreed that their learning environment is designed for easy and efficient groupings of tables and chairs (C4). Furthermore, 96% of the respondents indicated that their learning spaces are not arranged to facilitate movement for both teachers and students during work sessions (C5). Moreover, 96% stated that their learning environments do not provide work areas that cater to individual needs, including knowledge and ability levels (C6). Lastly, 96% mentioned that

there are no opportunities for students to display their work and artifacts (C7). Applying a t-test, it was shown that the p-values for all claims exceed 0.05, suggesting that there is no statistically significant disparity between teacher trainers and trainees in their execution of a varied learning environment.

b. Content

The following statements were used to gauge the respondents' implementation of differentiated instruction as regards content. F1. Include a variety of reading levels that are related to the subject or topic. F2. Materials are diversified ie videos, audio, texts, PPTs, etc. F3. Are accessible to students. F4. Content is scaffolded into smaller digestible chunks that are logically organized. F5. Support the standards and topic. F6. Are age-appropriate. F7. Are up-to-date. F8. Are available in an adequate number for the class size. F9. Include appropriate reference sources and materials. The findings are illustrated in **Figure 5** below.

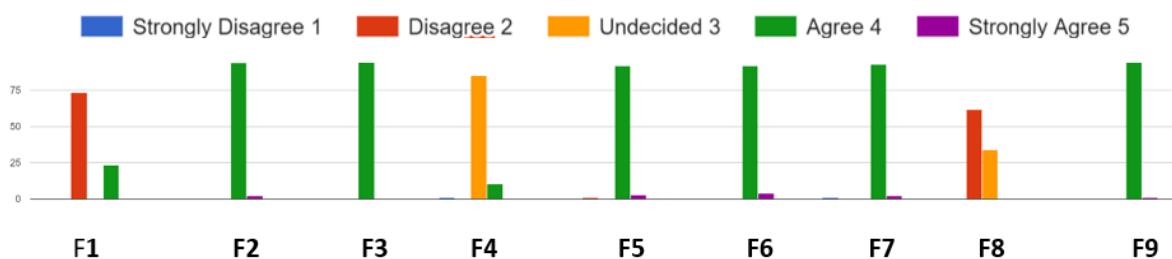


Figure 5. Respondents' differentiation of content.

In **Figure 5**, it is evident that 73% of the respondents do not incorporate a range of reading levels relevant to the subject or topic (F1), and 62% fail to provide sufficient materials for the learners

(F8). However, 94% of the respondents reported diversifying materials for learners, such as videos, audio, texts, and PPTs (F2), and 93% stated that these materials are typically accessible. Similarly,

85% of the respondents expressed uncertainty regarding the process of breaking down content into smaller, easily understandable sections that are logically arranged. However, 92% agreed on the importance of providing materials that align with the standards and topics, and 93% confirmed that the materials they typically share are suitable for the age group and are kept up-to-date. The overwhelming majority of the respondents, 95%, also said that they typically include suitable reference sources and materials. Using a t-test, the study showed that the p-values for all the assertions were higher than the threshold of 0.05. This result suggests that there is no statistically significant difference between teacher trainers and trainees in their implementation of a differentiated learning environment.

c. Product

The researcher used the following key statements

to gauge the participants' implementation of differentiated instruction with regard to product. D1. Use a variety of ongoing assessment tools such as checklists, surveys, and anecdotal records. D2. A variety of formative (ongoing) assessments are used to determine what students know, understand, and are able to do. D3. I use conversations (e.g., oral assessments, whole-group discussions, student-led conferences). D4. I use observations (e.g., labs, performances, audio-visual presentations). D5. I vary the products (e.g., individual assignments, group projects, portfolios, pencil and paper tests, quizzes, or assignments). D6. I apply assessment information to guide instruction. D7. I address academic, emotional, social, and physical student needs. D8. I provide time for students to actively process information. D9. I give specific feedback to individuals and/or small groups. The findings are displayed in **Figure 6** below.

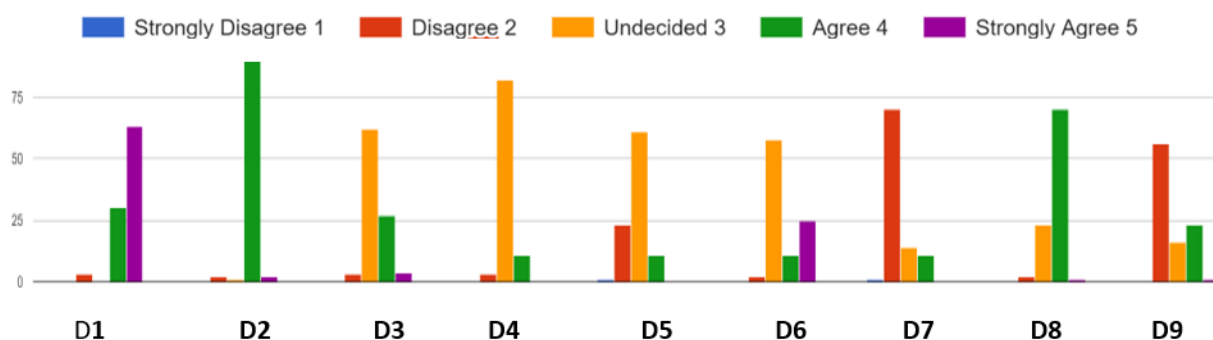


Figure 6. Respondents' differentiation of product.

The survey results, shown in **Figure 6**, indicate that 91% of participants use diversified teaching by means of evaluations. However, a notable percentage (56%) do not provide targeted feedback to individuals or small groups, and 70% do not address diverse student needs during assessments. Furthermore, there is a lack of clarity and assurance surrounding other areas of product diversification. These include the use of talks (62%) and observations (82%), the introduction of multiple variations of goods (61%), and the utilization of assessment data to direct teaching and cater to the requirements of students (58%). However, the majority (70%) of educators use a variety of formative assessments to measure

student progress and comprehension, while 82% set aside time for students to actively participate in the learning process. A t-test statistical study reveals that there are no significant differences ($p > 0.05$) between teacher trainers and trainees in how they apply diversified learning settings.

d. Process

Findings derived from questionnaires. To examine how teachers differentiate the process of instruction, the researcher applied the following statements: G1. I use a variety of assessment tools before, during, and after learning. G2. I use a variety of instructional strategies and activities to teach standards. G3. My

strategies meet the diverse needs of learners. G4. I apply strategies that engage students in various flexible grouping designs. G5. I use centers and/or stations for individual and small-group instruction. G6. I engage students through projects and/or problem-solving activities. G7. I present students with choices in learning activities, assessments and forms of submission. **Figure 7** below illustrates the findings.

The data depicted in **Figure 7** reveals that a majority of respondents (61%) have reported limited usage of a range of assessment tools prior to, during, and after learning. Similarly, a significant proportion of respondents (63%) have reported employing instructional strategies that are aligned with standards and cater to the needs of diverse learners. Furthermore, a substantial majority of respondents (71%) have implemented flexible grouping designs,

such as centers or stations. However, only 49% of respondents have provided students with choices in both learning activities and assessments. A t-test was used for statistical analysis, which revealed that there were no significant differences ($p > 0.05$) between teacher trainers and trainees in terms of implementing a varied learning environment.

In addition to the above, the following statements were administered to examine the respondents' assessment of students' response to the differentiated processes implemented. E1. Exhibit on-task behavior while working alone. E2. Work effectively in small groups. E3. Work on their individual knowledge or ability levels. E4. Use materials/resources on the student's own level of success. E5. Feel respected and emotionally safe. E6. Have multiple options for learning. E7. Use self-discipline. **Figure 8** below illustrates the results.

Please indicate the number that corresponds to your level of agreement or conformity to the statements below as regards the instructional strategies applied by you or your trainer in the course.

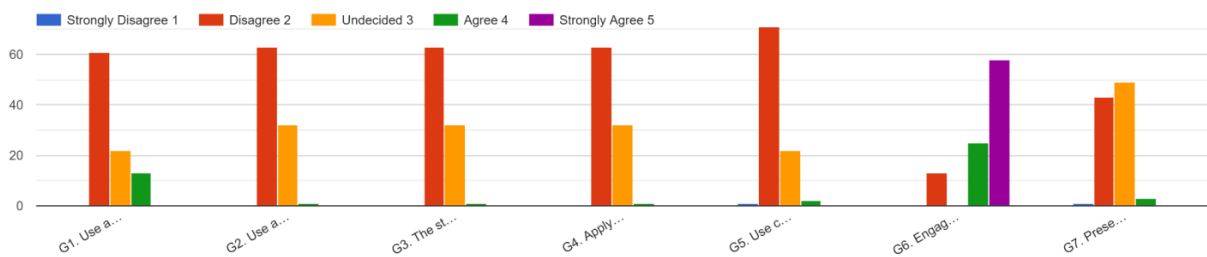


Figure 7. Respondents' differentiation of process.

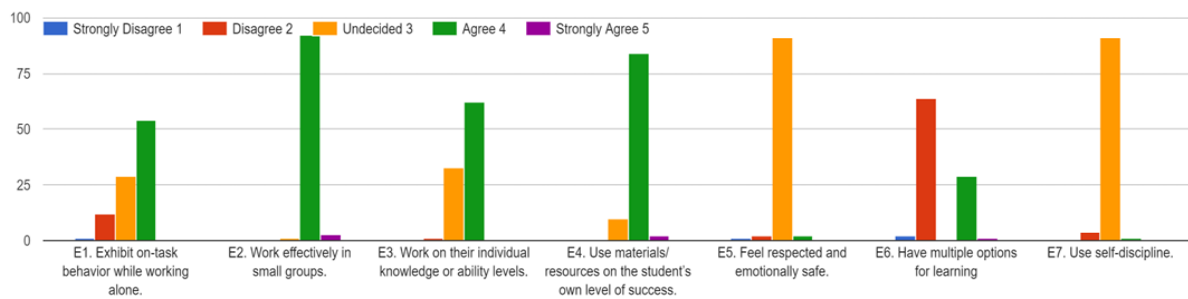


Figure 8. Respondents' assessment of student behavior during process differentiation.

As illustrated in **Figure 8** above, the majority of respondents agree that when processes are differentiated, learners exhibit on-task behavior while working alone (54%), work effectively in

small groups (92%), work on their individual knowledge or ability levels (62%) and use materials/resources on their own levels of success (84%).

Findings derived from interviews The data

obtained from the interviews corroborate the findings derived from the questionnaires. The participants in language education are knowledgeable of the overall context of differentiated teaching. They understand the specific characteristics that need to be taken into account and need differentiated instruction. Specifically, the following was disclosed.

Learning environment. When asked whether the English teacher trainers differentiate instruction, or more specifically, the learning environment, one of the trainees indicated that,

“they just come in class they just read the notes then explain some words here and there and then like you feel like you can if I can read myself I can read the the the notes by myself I can also do the exam but the way they were doing it is not really helpful because some are left behind.” [Int. 4]

According to this submission, the trainer discusses a teaching approach where the instructor primarily reads notes to the students and provides explanations for some words, but there is limited engagement or interaction. This teaching method gives learners the impression that they can learn the material independently by reading the notes themselves. It also suggests that the instructor's role may not have a significant impact when instruction is not tailored to individual needs.

As a result, one of the participants disclosed that instructors do not use learner-centered tactics since their trainers did not demonstrate it to them. Therefore, they are unable to demonstrate it to the teachers they are teaching. Put simply, instructors tend to instruct in a manner consistent with their own educational experiences.

The trainer illustrated his point thus,

“I think it will not be very personal for me to mention that I really struggled with mathematics in primary and secondary school and I I don't think mathematics was difficult just that it was not taught to me my way.” [Int. 5]

In the previous response, the trainer asserts that mathematics is not intrinsically challenging, but rather the teaching technique or method did not match their chosen learning style. The interviewee

suggests that their unique learning style was not accommodated in the manner mathematics was taught to them due to the teacher's lack of knowledge in differentiating teaching. This statement emphasizes the need of customizing instructional approaches to suit the specific requirements and preferences of individual students, in order to enhance the accessibility and comprehensibility of disciplines such as mathematics.

The study of the interview data reveals an intricate terrain of attitudes, difficulties, and possibilities for individualized teaching in language education. The acquired insights highlight the need of focused instruction, demonstration by teacher trainers, and continuous assistance to close the disparity between understanding and actual implementation. Tackling these obstacles may aid in the development of inclusive, captivating, and efficient learning settings for a wide range of learners in the field of language education.

The trainees also demonstrated their knowledge and practice of content differentiation. The second interviewee submitted:

“If I'm having an English class and I plan to use let's say visual method, I also plan to use the lecture method. I usual and maybe I plan also to use the audio method, so I have those things beforehand or before the class. So I come with them and I make sure that I have gone through them and they are related to the content that I'm going to teach. And then I also know who is going to use that method, meaning that I must be known the nature of the class that I'm going to teach using those methods.” [Int. 6]

This answer indicates a dedication to providing a diverse range of educational opportunities to accommodate various learning styles and preferences. The respondent underscores the need of meticulous preparation before the lesson. They ensure that they possess all the essential materials and resources required for any instructional style they want to use. The answer indicates that the respondent give priority to aligning their teaching techniques with the material they want to teach. This alignment guarantees that the strategies

efficiently facilitate the achievement of the learning goals. The interviewee has a strong dedication to a comprehensive and varied teaching strategy, which considers the subject, class dynamics, and the appropriateness of various approaches to improve the learning experience in an English lesson.

Another interviewee indicated,

“I have tried to make sure that there are different types of resources that are available for students. Anciently people would just use the teachers’ notes, but I try to make sure that they can either watch a video somewhere or read a news article somewhere just to make sure that they are different sources of resources. Of course that does not come very easily. It requires a lot of time.” [Int. 7]

Based on this submission, it is evident that the interviewee is very committed to enhancing the educational experience of their pupils. They do this by offering a variety of materials that go beyond the typical teacher's notes, despite the significant amount of time and effort required. The interviewee promotes individual study and research by providing several sources of knowledge. This method may facilitate the development of students' critical thinking abilities and foster a more profound comprehension of the subject matter.

The interview replies demonstrate the trainees' dedication to distinguishing information via a range of teaching techniques and the availability of a wide array of learning materials. These methods are in accordance with the concepts of differentiated education, which prioritize the significance of accommodating various learning styles and encouraging self-directed learning. Although these endeavors need meticulous preparation and a substantial time commitment, the trainees' commitment signifies a favorable progression towards establishing comprehensive and rewarding educational opportunities in the English classroom.

Process

When asked about how they differentiate the process of learning, one of the interviewees indicated,

“And the second thing that I do is to make sure that in trying, in trying to differentiate learning, I try to differentiate the process itself. So sometimes I bring in discussions, other times I want them to just go out and observe and even within the classroom to make sure that not only the assignments are not just submitted on paper. Sometimes people do presentations, other times people do a little acting, although that does not happen very often.” [Int. 8]

The interviewee employs a diverse range of instructional techniques to accommodate various learning styles and preferences. These strategies include many forms of communication, such as dialogues, observations, presentations, and even theatrical performances. The interviewee seemed to advocate for active learning, which involves students actively participating in the learning process via conversations and observations, rather than just taking knowledge passively. This strategy caters to many learning styles, guaranteeing that every student has the chance to develop and demonstrate their strengths.

Another participant says,

“So with differentiate instruction, you you, you have different learners and then you're going to ask them to do the same thing but doing it differently, yeah. For example, you might have learners who maybe have a rich in vocabulary and those ones who are weak. So you want to ask all the learners to write for you Adjectives. So so for the strong one you you you can tell them to write the the the adjectives that they know. For the weak ones, you can give them a sheet that has a paper that has adjectives and nouns. And then you tell them to identify. So at the end of the day, they will all have learnt nouns [adjectives], but these ones are writing what they know. And then these ones you've given them a push, like you've guided them to arrive at the answer because you know they are not at the level with others.” [Int. 9].

Despite variations in learners' capacities, the interviewee's goal is to ensure that all students attain a shared learning target. The purpose of this example is to facilitate students' understanding of adjectives. In order to accomplish the same goal, the

interviewee employs several teaching methodologies tailored to students with varying degrees of skills. Those with an extensive vocabulary are encouraged to engage in autonomous writing, while those with lesser vocabulary skills get further guidance. In addition, the interviewee highlights the provision of materials, such as a reference page including adjectives and nouns, specifically tailored for kids who may struggle academically. The interviewee's methodology fosters fairness in the classroom by recognizing and tackling the diverse range of pupils' aptitudes. It guarantees that every student is given the chance to acquire knowledge and advance. To summarize, the interviewee's approach to diversified instruction entails modifying instructional techniques to accommodate the varying requirements of pupils, all while striving towards a shared educational goal. This methodology promotes inclusiveness and enables every student to advance at their own speed.

One of the interviewees also demonstrated how they differentiate process through group activities:

“Take an example grouping students learners in a certain number like fives or fours or something and they benefit from each other and more importantly when they are in those different groups.” [Int. 10]

The interviewee implies that organizing students into smaller learning groups may effectively enhance peer learning, cooperation, and engagement. This strategy may result in a classroom setting that is more lively and engaging, allowing students to gain advantages from the abilities and viewpoints of their peers. Nevertheless, one of the individuals interviewed raised apprehensions over the differentiation of process by means of grouping, highlighting the ineffectiveness of collaborative work.

“And because you know, when you put them together with others, the ones who know actually, they will keep quiet. And the ones who know will be the ones giving the answers. And then you go to a group, you find they have no group answers but only been contributed by only one or two people.” [Int. 11]

The interviewee is emphasizing the difficulties associated with student involvement and active participation in the classroom, where some students

may monopolize conversations while others adopt a passive role. The respondent notes disparities in student engagement during class discussions or group activities. Certain students actively participate by providing responses, whilst others have a more passive and reserved demeanor. There seems to be an inequitable allocation of contributions during collective endeavors. The respondent does not directly articulate the factors contributing to these disparities in engagement, but it is plausible that they stem from differing degrees of expertise, self-assurance, or inclination to actively participate in classroom discourse. The interviewee's views indicate that these disparities in involvement may impact the dynamics of the group. More informed or outspoken students may exert dominance over debates, thereby impeding the involvement of less talkative pupils.

In addition, the participants showcased process difference by discussing the specific ways they use in the classroom to convey material. Their statement was as follows:

“If I use a PowerPoint that is more kind of more technology and more advanced and students are looking at this other projected content you see, how would I put it? You see, then you win that, you capture, you grab their interest. And you see them more concentrated. Yeah, actually they perform better during the lesson, during the lesson you see them even if you tell them to write something that you clearly projected and they can see, etc. Yeah, so you find the lesson is more amusing to them than going tradition all the time with your heart.” [Int. 12].

The interviewee is discussing the use of sophisticated technology, namely PowerPoint presentations, to effectively include and captivate pupils in the classroom. The interviewee emphasizes the benefits of using sophisticated technology, particularly PowerPoint presentations, to augment involvement, focus, and general effectiveness in the educational setting. This technique has the potential to update teaching methods and provide a learning environment that is more dynamic and captivating for pupils.

Product

The interview sessions revealed that the participants lacked a comprehensive understanding of the concept of differentiating evaluations. Only one participant attempted to distinguish the assessment. One of the respondents demonstrates the variation in their judgments.

“So sometimes I bring in discussions, other times I want them to just go out and observe and even within the classroom to make sure that not only the assignments are not just submitted on paper.” [Int. 13]

The interviewee seems to surpass conventional paper-based tasks and examinations. Presentations and acting are used as alternative evaluation techniques, offering a comprehensive perspective on students' comprehension and abilities. Observations and presentations foster the application of students' knowledge and abilities in real-life situations, therefore augmenting their comprehension and long-term retention of the subject.

In summary, the study uncovered both positive aspects and areas that need to be improved in the execution of differentiation in English language courses. Both teachers and trainees have shown the understanding of the significance of differentiation. However, there is a need for more organized professional development to improve their knowledge and implementation of differentiation. Furthermore, it is crucial to provide inclusive learning settings, diversify material and evaluations, and enhance teaching techniques in order to effectively cater to the particular requirements of students.

4.3 Challenges in Differentiating Instructions

To address the third study question, which is "What are the difficulties encountered in distinguishing instructions?". In order to thoroughly analyze the trainers' and trainees' experience with differentiated teaching, the research used semi-structured exploratory interviews. Based on the interviews, the primary obstacles encountered while implementing differentiated education are

limited time, insufficient resources, teacher's lack of expertise, and insufficient knowledge about the specifics of differentiation.

Time constraints

Time limitation is often identified as a significant obstacle in the interviews. Participants said that the process of differentiation requires prior preparation, which is time-consuming.

“I'm going to use visuals, I have to look for them.” It is not easy for the teacher on the side of the teacher because you're going to use one or more than one method in a single lesson. It requires real preparation which takes a lot of time.” [Int. 14]

This comment emphasizes the significance and difficulties linked to differentiated education, particularly in relation to the time required for teacher preparation. The reply addresses the difficulty of using visuals in teaching, the intricacy of incorporating several teaching approaches, and the substantial time investment needed for thorough lesson preparation.

Another respondent submitted:

“So one of the things that are very important in a lesson is preparation and the time that one invests in preparing that lesson. Now the institution does not allocate that time. So there is not much time set aside for that lesson preparation so that it would accommodate getting all these things, creating different lesson plans, creating different activities.” [Int. 15]

The respondent emphasizes the conflict between the significance of lesson planning and the restrictions imposed by time limits inside the institution. The respondent emphasizes the need of meticulous lesson planning in successful teaching. Nevertheless, he/she voices concern over the institution's insufficient allocation of time for lesson preparation. The absence of allocated time may be a significant obstacle for educators, as they need enough time to meticulously create different lesson plans, design a variety of activities, and procure materials to enrich the educational process.

A participant emphasized the complex process of planning for individualized teaching, particularly

when integrating visual aids. Integrating images into teaching requires significant exertion from the instructor. The reply emphasized the intricacy of using different teaching approaches in a single class and the significant amount of time it requires. This comment highlights the complex and time-consuming process of creating customized educational strategies. Another participant highlighted the crucial significance of the amount of time spent on preparation in order to provide lessons that are successful. Nevertheless, a crucial issue was brought up about the institution's distribution of time for lesson preparation. The respondent highlighted that the school does not provide enough time for professors to appropriately plan classes that may effectively include diverse teaching approaches and activities. The discrepancy between the acknowledged need of comprehensive preparation and the restricted time allotted is a significant obstacle for instructors.

Inadequate resources

Another challenge that the study revealed is the lack of resources to facilitate differentiation of instruction. One of the respondents indicated,

“The second thing is, of course resources are not easy to find when you operate within an institution. The resources are institutional. I know there is a need to to to innovate, but then innovation can only go so far if the institution is not joining in the innovation, then it becomes a problem.” [Int. 16]

This declaration addresses several crucial aspects about the accessibility of resources and the significance of innovation inside an educational institution. The respondent highlights the difficulty in locating resources inside the institution. These resources are often of an institutional character, implying that they may have restrictions and are under the jurisdiction of the institution. The limited availability of materials might provide difficulties for educators seeking to improve their instructional techniques.

Teacher capacity

Respondents have identified a lack of teacher

ability to effectively conduct differentiated education as another significant problem. Based on the interviews, it seemed that the English teacher trainers were not effectively demonstrating the practical elements of differentiation that might be imitated. One of the participants said,

“...they just come in class. They just read the notes then explain some words here. And then you feel like you can, if I can read myself, I can read the the notes by myself, I can also do the exam, but the way they were doing, it is not really helpful because some are left behind.” [Int. 17]

The interviewee's comment emphasizes concerns with a pedagogical method that mainly depends on conventional lecture-style instruction without active participation. This strategy leads to passive learning, as pupils are required to assimilate knowledge without engaging in active engagement. The interviewee also observes that this pedagogical approach may need intermittent elucidation of certain phrases or ideas, but on the whole, it lacks active involvement with the subject matter. This may engender a sense among pupils that they are as capable of learning by perusing the notes alone. This emphasizes the significance of instructional strategies that accommodate various learning styles and degrees of student involvement. The trainees cannot be expected to engage in activities they are not knowledgeable about.

Inadequate information about differentiation

Based on the feedback, it seems that individuals lack a sophisticated comprehension of differentiated training. Consequently, those who attempt to implement distinct solutions will have difficulties with the stakeholders. One of the attendees stated:

“One of them is with doing a assessment, the assessment that is recognized within the institution and beyond the institution within the law. Nobody really takes assignments that are not within, let us say 60 minute paper where you write an essay and you write this. Nobody, nobody assesses doing things by hand, for example. The society is too much inclined to memorization and things like those, and also the students themselves in the classroom.” [Int. 18]

The interviewee emphasizes the prevalence of standardized and widely accepted evaluation procedures, such as timed essay writing, throughout educational institutions and society as a whole. The focus on conventional evaluations may provide difficulties for instructors who want to implement alternative evaluation techniques that foster more profound learning and critical reasoning. It also prompts inquiries on the need for a broader and adaptable approach to evaluation in the field of education, if there is a lack of understanding and agreement among the stakeholders about diverse evaluation techniques.

In addition to the above, another respondent mentioned,

“And the other challenge of course that I find is the expectations from my school, from the parent, even from the learner. Because this is not the traditional things that the Lama expects. This is not what my supervisor expects. This is not what my the parent expects, the stakeholders, the board of management. And so it is not something that is very impressed because all the other stakeholders are outside that and it may take educating them.” [Int.19]

This remark emphasizes the challenge of implementing new or unconventional teaching approaches in an educational environment when they deviate from the expectations of different stakeholders. The interviewee experiences pressure to conform their teaching methods to the expectations of stakeholders, including school administrators, parents, and the board of management. This adherence to social norms might be difficult since it may need to deviate from conventional standards and customs. The respondent acknowledges the need of informing stakeholders about the advantages and efficacy of their unconventional strategy. This suggests that teachers may have to argue for their teaching approaches and provide justifications for the departures from the standard practices. Similarly, educators may be required to manage these expectations, champion their techniques, and provide proof of the beneficial influence on student learning

in order to get approval and support from the wider educational community.

The same respondent further highlighted the same problem with the learners who are the key stakeholders in this.

“And on the side of the learners, some of them think they always question why am I given audio and another one is given, another is thought using another method, yet is the same content.” [Int. 20]

This statement emphasizes the need of having clear communication and a logical explanation for the usage of different instructional techniques and resources. It is crucial for educators to acknowledge and respond to pupils' inquiries and apprehensions in order to guarantee their comprehension of educational decisions and their appreciation of the advantages of varied instructing methodologies. Nevertheless, it is important to initiate this process at the institutional level to ensure that all individuals are in agreement about effective and ineffective approaches.

5. Discussion

The results suggest a significant disparity between the level of knowledge and the actual execution of DI. The survey indicates that a substantial majority of participants, accounting for 68% of the whole sample, are familiar with the concept of differentiated education. Moreover, a greater proportion, namely 69%, indicated a favorable opinion of diversified education. This conclusion aligns with the collection of scholarly works that were examined over the course of this investigation. A number of prior researches (Zoraloglu, 2022, Lydner et al., 2021, Leballo et al., 2021, Melese, 2019, Fitzgerald, 2016) have shown the same pattern. The notion of differentiated education has become more popular and well-regarded among educators, as shown by actual data and current researches.

This discovery is consistent with recent studies undertaken by researchers such as Jung et al. (2018), and Connor et al. (2009). The empirical data offered in these researches supports the idea that differentiated instruction, which entails

adjusting teaching approaches to meet the varying needs and skills of students, may greatly improve the educational experience and results. These results emphasize the significance of recognizing the influence of teaching methods on student performance and emphasize the potential advantages of implementing differentiated instruction techniques widely in educational environments.

The findings indicate that a significant proportion of participants, accounting for 89% of the sample, have not included differentiated instruction into their teaching methodology. The main factors mentioned for this are the perceived complexity of execution, as indicated by 69% of respondents, and a deficiency in training and capability, which was voiced by 88% of participants. The results align with the existing researches we examined, which repeatedly emphasizes the variables that impact teachers' adoption of differentiated teaching. Consistent with the existing body of research, it seems that several educators hold the belief that the effective execution of differentiated teaching relies on their ability and confidence in themselves. Research conducted by De Neve et al. (2015) and Wan (2017) highlights this fact, highlighting that instructors often avoid using this method because of their uncertainties about their competence to implement it proficiently. Moreover, the results support the literature's claim that teachers may encounter difficulties in implementing differentiated instruction because of factors such as insufficient expertise in creating complex activities and assessments that align with standards, as well as limited availability of resources specifically designed for diverse learners. This discovery aligns with the findings of Bedir (2015), Tomlinson (2015), and Smit and Humpert (2012).

In order to thoroughly examine the consequences of the results for this inquiry, the researcher deconstructed the subject into four crucial markers of differentiation: the learning environment, content, process, and product. The findings demonstrate a significant agreement among the participants about their educational settings. These results highlight a notable lack of variation in the learning settings

of the participants, with most of them disagreeing with the essential components needed to create a personalized and student-centred setting. One of the participants expressed that the teaching approach involved the instructor simply reading the notes and occasionally explaining some words, which made the participants feel that they could read the notes and take the exam on their own. However, this teaching method was not considered helpful as it resulted in some participants falling behind.

In this contribution, the interviewee explains a conventional pedagogical approach in which educators primarily impart information via lectures, with less involvement or contact with pupils. The respondent believes that they may acquire knowledge successfully by reading the notes independently. This implies that the instructor's influence is diminished when teaching lacks individualization. The interviewee expresses discontent with the lecture-based method, asserting that it is ineffective and fails to accommodate different learning styles and skills, hence leaving some pupils behind. Moreover, the interviewee's comments indicate a deficiency in student involvement and interaction, which might have an adverse effect on the entire educational experience.

The learning environment refers to the whole atmosphere and physical surroundings in which education takes place, including both traditional classrooms and online platforms. It encompasses elements such as the configuration of furniture, the accessibility of equipment, materials, media, lighting, and teaching methods (Tomlison, 2017). Teachers may enhance the learning environment by offering a variety of learning materials that represent other cultures and align with students' interests. This may include creating designated areas inside the classroom for both individual work requiring concentration and group work that encourages collaboration. Implementing strategies, such as granting students the freedom to move around the classroom, involving them in the process of establishing class rules, using different seating arrangements, and changing the locations within the

classroom where learning occurs, are all effective ways to create a differentiated learning environment (Tomlison, 2017).

Regarding the diversification of content, there is a significant difference in the practices connected to instructional materials among the respondents. The research indicates a combination of behaviors about instructional materials, with some areas, such as the sufficiency of resources and the variety of reading levels, requiring further focus. On the other hand, there is a significant emphasis on offering a wide range of materials that are easy to get and meet established criteria, which is praiseworthy. Attending to the specific issues might enhance the efficiency and inclusivity of the learning environment.

The proponents of content differentiation argue that its main objective is to provide a more comprehensive exploration of the subject matter by offering a range of resources and structuring the material to cater to the diverse needs of learners (Nurasiah et al., 2020). In order to accomplish this, educators suggest that teachers can adopt two primary strategies: 1) adapting the content itself, which may involve altering the complexity, depth, or format of the subject matter to cater to the diverse learning abilities and preferences of students, and 2) altering the manner in which the content is presented or accessed by students. This may include using diverse pedagogical approaches, instructional materials, and technological tools to enhance the accessibility and comprehensibility of the content for learners with distinct requirements.

According to the results, it seems that instructors are rather successful in altering how knowledge is accessible, which is an important element of differentiation. This suggests that they are using a range of resources, instructional techniques, and teaching approaches to enhance the accessibility of the material for students with different learning requirements. Nevertheless, there are significant obstacles in two distinct domains—the data suggests that a considerable proportion of educators have difficulties in providing sufficient resources for their students. This is a significant issue since having

an adequate and suitable set of learning resources is essential for delivering successful training. Teachers should consider methods to improve the accessibility and quality of teaching materials. One further problem emphasized in the results is the limited variety of reading levels associated with the subject or topic. This suggests that instructors may not be adequately customizing the text to suit the varying reading skills of their pupils. In order to tackle this issue, educators could consider offering a more extensive selection of reading materials that correspond to different proficiency levels, guaranteeing that every student can effectively interact with the material at a suitable level.

Regarding product differentiation, the research emphasizes both the acknowledgment of the significance of assessment differentiation among educators and the areas that might be improved. Educators may benefit from additional assistance and professional development in the areas of providing targeted feedback for individual students, addressing a wide variety of student needs, and investigating alternate ways of assessment. Nevertheless, the use of continuous evaluations is a promising indication that educators are actively adjusting their teaching methods to cater to the requirements of their varied student body. The results indicate that teacher preparation programs should prioritize providing educators with extensive knowledge and effective tools for differentiation. By doing so, educators would be able to provide a greater variety of educational opportunities that are accessible and beneficial to a wide range of students. This would eventually lead to improved academic achievements in the field of English language instruction.

The process of designing assessments that include different degrees of preparedness, interests, and student characteristics is informed by a set of fundamental principles identified by scholars and educators such as Tomlinson (2017), Nicholas et al. (2021), Morina (2019), and Pereira et al. (2019). They assert that the fundamental objective of evaluations should be to evaluate the caliber of learning using various means. Assessments serve the

purpose of evaluating the extent to which students have achieved mastery of the topic, rather than being purely for enjoyment or the creation of standardized examinations. Utilizing differentiated assessments enables instructors to get a nuanced understanding of the development of each student (Tomlison, 2017).

In their study, Nicholas et al. (2021) suggest that to cater to the unique requirements and preferences of students, it is advisable to provide alternatives in assessments. This may be done by creating several assessment options and allowing learners to choose which assessments to complete and how to submit them. This enables students to actively participate in examinations according to their own learning methods and degrees of preparedness. In addition, Nicholas and his colleagues (2021) recommend that instructors should use flexible working arrangements when offering alternatives. They contend that instructors have the ability to provide students the option to work alone or collaboratively, based on their personal preferences and the specific requirements of the job at hand. This adaptability promotes a feeling of independence and control over the process of acquiring knowledge.

Tomlinson (2017), Nicholas et al. (2021), Morina (2019), and Pereira et al. (2019), who are educators and researchers, also support the idea of collaborative assessment construction. This approach entails working together with students to create tests and rubrics that align with the assigned tasks. The co-creation approach guarantees that the evaluation is in harmony with the students' comprehension of the learning goals and their specific requirements. By following these concepts, educators may provide a more comprehensive and student-focused assessment environment. Implementing differentiated assessments not only fosters individual development but also actively involves students in their learning process, eventually resulting in enhanced learning achievements.

The results provide valuable insights into the strategies used by educators to customize the learning process, as well as the difficulties and opportunities for improvement related to these techniques.

According to the results, a substantial proportion of participants (61%) said that they have not been using a diverse range of evaluation instruments. This suggests that many instructors may depend on a restricted array of evaluation techniques, perhaps overlooking more efficient and varied approaches to evaluate student comprehension. The findings also indicate that 63% of participants have not been using a wide range of teaching techniques and activities to teach the established criteria. This indicates the need for enhancing the variety of teaching approaches, which may boost student engagement and learning results. Furthermore, it is worth mentioning that a significant 63% of respondents have not been using techniques to address the varied requirements of learners. This underscores the need of implementing instructional approaches that can cater to diverse learning styles and individual requirements, hence fostering a more inclusive form of education. The results also suggest that a substantial majority (71%) of participants have not been using tactics such as variable grouping arrangements, and an additional 49% have not been offering students options in learning activities, evaluations, and submission methods.

The comprehensive interviews with the participants also revealed the restricted extent of differentiation methods and implementation in the educational process. Several participants reveal that they use a range of instructional methods, such as talks, observations, presentations, and even role-playing, to cater to different learning styles and preferences. Additionally, several individuals mentioned using groups and PowerPoint as instructional tools in their seminars. These techniques promote active learning and student involvement, which are crucial for creating a collaborative and efficient learning atmosphere.

Nevertheless, the results also emphasize the need of enhancing instructors' understanding and familiarity with a wider array of techniques for process differentiation. Although the described ways are helpful, educators may investigate other tactics and techniques to enhance learning experiences

and make them more dynamic and inclusive. This may include offering educators professional development opportunities and materials to increase their proficiency in process differentiation. By providing educators with a more extensive range of instructional techniques that accommodate varied learning requirements and preferences, schools and educational institutions may enhance their ability to assist a wide range of students and facilitate more efficient and captivating teaching approaches. Consequently, this leads to enhanced learning results and a more comprehensive educational experience.

In order to distinguish the process, an instructor can offer students a range of options for various activities, adjust the difficulty level of tasks, allocate different amounts of time for tasks among different student groups, vary the amount of guidance provided, utilize both tiered and homogeneous groupings for different tasks, create a variety of activities that cater to visual, auditory, and kinesthetic learners, and incorporate learning centers/stations (Pereira et al., 2019, Tomlison, 2017). In essence, a teacher has to provide many channels and platforms via which learners may engage with and comprehend the knowledge, concepts, and skills that have been presented to them (Tomlinson, 2001). As a result, learners not only acquire knowledge of the specific idea but also develop the skills to study and solve difficulties. According to Tomlison (2017), successful educational activities are ones that are given in different ways, with different levels of complexity, over different periods of time, and with changing quantities of help from the instructor or peers. When students engage in repeated cycles of layering, it facilitates the development of patterns, the establishment of linkages between current and previous knowledge, the application of concepts, and the creation of new understandings (Pham, 2012, Tomlison, 2017).

5.1 Communication differentiation

The results indicate that code-switching, which refers to the act of alternating between languages during conversation, is a prevalent and pervasive

activity among the participants. Code-switching can happen in various situations, such as when talking to students or colleagues, ending conversations, discussing specific topics, reflecting on thoughts, asking questions, seeking help or clarification, and expressing emotions like anger or happiness. The findings suggest that the respondents often and regularly use various languages in these circumstances.

Additionally, a significant number of participants said that they usually do not transition to a different language when reiterating or rectifying their previous statements. Nevertheless, it is important to mention that they admitted to using many languages while expressing their emotions or intents via non-verbal signals, such as body gestures. Furthermore, they acknowledged using other languages while offering apologies or showing appreciation towards others. This indicates that while the use of many languages is less frequent in specific linguistic activities, it continues to be a widespread phenomenon in non-verbal communication and the display of politeness or thanks.

The interviews yielded useful information about the difficulties instructors have while endeavoring to differentiate education. The following were recognized as substantial impediments to successful differentiation.

The English teacher trainers and trainees voiced apprehensions over the restricted timeframe available for devising, organizing, and executing differentiated teaching. The issues are undeniably legitimate and are corroborated by other research. Researchers such as Van Casteren et al. (2017), De Jager (2016), and Shareefa (2019) have undertaken interviews and studies that have indicated time as a prevalent difficulty encountered by instructors throughout the implementation of Differentiated Instruction (DI). Designing and implementing personalized education may be a laborious task, especially when instructors are expected to teach a significant amount of material within a certain schedule, leaving little opportunity for comprehensive customization. Striking a balance between the demands of the curriculum and the

need for differentiation may be a sensitive task. In addition, successful distinction requires careful and deliberate planning. Teachers are required to identify the various requirements of pupils, provide suitable resources, tests, and instructional methodologies, and structure their classes to accommodate these variances.

As a result, instructors may have to discover methods to simplify the planning process while ensuring that differentiation is successfully included in their lessons. In addition, providing teachers with professional development opportunities in differentiation may provide them with the necessary skills and tactics to expedite the planning process and enhance its efficiency. Likewise, engaging in collaborative planning and resource sharing among educators may also alleviate the task of developing a wide range of materials and tactics. Collaborative efforts among teachers may be used to develop and distribute educational materials that are advantageous for all pupils. By recognizing and dealing with limitations on time, educators may more effectively manage the requirements of the curriculum while also ensuring that education is inclusive and effective via differentiation.

A limitation may arise from the lack of appropriate resources, such as textbooks, instructional materials, technology, and classroom space. To successfully diversify teaching, instructors need a range of learning tools and resources to cater to the unique requirements of their pupils. These may include textbooks, additional readings, multimedia resources, and other materials. Restricted access to these resources may impede a teacher's capacity to provide differentiated teaching. The difficulties that instructors have while looking for materials for their classes are generally acknowledged in the educational domain, as shown by scholars such as Maddox (2015), Lunsford (2017), Avgousti (2018), Merawi (2018), and De Jager (2017). Undoubtedly, it is important to guarantee that every student has access to the essential tools and resources in order to foster fairness and inclusivity in the classroom. Teachers encountering difficulties in locating suitable

materials might lead to inequities in the learning experience.

In order to tackle these issues, schools and educational institutions should commit resources and assistance for the procurement of a wide range of instructional materials, including both physical and digital formats, that can be used for differentiation. In addition, schools may promote the dissemination of resources, exemplary methods, and instructional plans among instructors to alleviate the task of looking for and creating materials. Furthermore, educational institutions should provide training and professional development programs that enable instructors to acquire the ability to find, modify, and produce resources that facilitate differentiation. By tackling the difficulties related to locating material resources, educational institutions may enable instructors to conduct Differentiated Instruction with more efficiency and provide inclusive learning environments that accommodate the varied requirements of their students.

Based on the results of this research, it was shown that teacher trainers fail to enhance the trainees' ability to effectively execute differentiated teaching. The trainees expressed their worries about the primary use of the lecture approach in their sessions, which mainly depends on conventional lecture-style teaching without active involvement. This strategy leads to passive learning, as pupils are required to passively absorb knowledge without actively participating. Even the trainers who claimed to possess a complete comprehension of differentiation and claimed to put it into practice, only exhibited little evidence of it—there was no strong implementation as the trainers seemed to have a very rudimentary grasp of differentiation. Multiple studies have found that teacher training institutions fail to adequately prepare trainees to effectively implement learner-centred approaches such as differentiated instruction (Wan, 2016, Chien, 2015, Lunsford, 2017, Suprayogi and Valcke, 2016, De Jager, 2017, Tobin and Tippett, 2014, Avgousti, 2018, Boston, 2017, Robinson, 2014, Shareefa, 2019, Siam and Al-Natour, 2016, Merawi, 2018). These studies

emphasize that instructors' insufficient understanding of differentiation is a significant obstacle to its implementation. Aldosari (2018) argues that the ineffective implementation of differentiated teaching may be attributed, in part, to the failure to adequately educate teachers to meet its standards before their employment.

On the other hand, several studies argue that teacher training programs prioritize learner-centred practices that really address the learners' needs (Nicholas et al., 2021, Hartwig and Schwabe, 2018, Morina, 2019). To achieve effective differentiation, one must possess a profound comprehension of various learning requirements, instructional methods, and assessment tactics. The implementation of differentiation is hindered without a wide range of skills and competencies in this area. Even highly skilled instructors in the field of learner-centred methods still need ongoing professional development training to enhance their expertise. Despite the existence of teacher training programs, inexperienced teachers still feel ill-equipped to use DI (Stecie, 2023), while experienced instructors find it too complicated to manage (Tomlison, 2017).

Therefore, it is highly recommended by Smeets et al. (2015) and Holzberger et al. (2014) that instructors get ongoing assistance to develop self-efficacy. This will provide them with the internal drive to create impactful learner-centred activities in the classroom. Their research, titled *Predicting teachers' instructional behaviors: The interaction between self-efficacy and intrinsic needs*, demonstrates that instructors' instructional conduct is strongly influenced by their intrinsic needs. When these needs are met by enhancing their efficacy, teachers are able to provide high-quality education to pupils.

The research also finds that a lack of adequate information and advice on distinction, particularly from stakeholders, might pose difficulties. The conflict between conventional teaching techniques and progressive student-centred and active approaches, such as differentiated instruction, is a prevalent issue in education.

Conventional administrators who favor pupils working silently at their desks may have concerns about classroom activities that include physical movement, engagement, and frequent changes. Endorsing the DI techniques by school leadership would assist in mitigating the problems related to resource allocation, teacher training, and workload distribution. The research done by Shareefa et al. (2019) in the Maldives, with a sample size of 137 primary teachers, demonstrates the substantial influence of administrative assistance on the execution of differentiated teaching. When teachers are provided with training and assistance in differentiation, and when schools provide the appropriate resources and time, they become better prepared to overcome these barriers and apply instructional techniques that are more effective, inclusive, and learner-centred.

Overall, the individuals included in this research had favorable attitudes towards diversified instructional approaches, specifically in terms of their influence on educational achievements and students' acquisition of knowledge. Nevertheless, there were discrepancies in their degrees of expertise, comprehension, and convictions about the simplicity of execution. Moreover, there was a recognized need for additional professional development opportunities in this field, namely at the university level. The results provide useful insights into the attitudes and views of English teacher trainers and trainees, as well as their perspectives on differentiated teaching.

6. Conclusions

The study aims to investigate the comprehension and utilization of differentiated learner-centred strategies among English teacher trainers and trainees in Rwanda, aiming to fill gaps in the existing literature and inform instructional practices. Interviews reveal varied perceptions of differentiated instruction, though a prevailing understanding emerged: adapting teaching methods to meet diverse learner needs. Survey responses indicate a positive perception of its impact, aligning with the literature,

yet highlighted a significant gap between attitude and implementation. Reasons for this disconnect include perceived difficulties, lack of training, and capacity constraints. Psychological barriers are also noted, underscoring the need for targeted training and support. The study advocates for a comprehensive professional development approach to bridge this gap, emphasizing both technical skills and confidence building. In conclusion, it calls for a holistic understanding and approach to empower educators to effectively implement differentiated instructional strategies in their classrooms.

To recap, teachers generally exhibit positive attitudes toward differentiated instruction but often lack a nuanced understanding of its practical application, highlighting broader issues related to teacher capacity building and professional support within educational institutions. There is a need to reimagine teacher training and capacity building to address the misalignment in practice and effectively equip teachers with the requisite skills for the reality of the 21st-century classroom. The study also underscores the substantial challenges hindering the effective implementation of differentiated instruction. It is imperative to address these challenges through enhanced planning, resource allocation, teacher training, and administrative support to foster more inclusive and learner-centred instructional practices.

To move forward, the study calls for collective efforts from various stakeholders within the education system. This includes educators, policy makers, school leaders, parents, and students. Educators are encouraged to integrate differentiated instruction into their teaching methodologies, with continuous professional development opportunities provided. Policy makers are urged to allocate resources and implement policies that support differentiated instruction. School leaders should actively endorse innovative teaching methods and provide necessary resources. Parents can participate in their child's education, while students are encouraged to engage with their own learning preferences.

Author Contributions

Christine Osaе was a doctoral student researching

this field. Dr Isaak Papadopoulos was a supervisor and they jointly co-authored this paper equally.

Conflict of Interest

The authors declare no conflict of interest.

Data Availability Statement

The datasets generated and/or analyzed during the current study are available in the UNICAF University Repository, accessible via a particular request to the School of Doctoral Studies. Restrictions apply to the availability of some data, which were used under license for this study. Data are available from the authors with the permission of the UNICAF UREC Committee. Detailed information on the data and how to request access can be provided by contacting Dr Isaak Papadopoulos.

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Ethics Statement

ETHICS approval has been obtained from the participating institutions' Ethics Committees.

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