Research Gap on Differentiated Learning in The EFL Classroom: A Conceptual Framework

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1. Introduction

Theories of pedagogy must account for the mechanisms by which students get knowledge, or, in other words, the methods by which students acquire knowledge (Fernando &Marikar, 2017). This element pertains to the mechanisms by which students gain knowledge, and constructivist teaching and learning theory has a wealth of insights to offer. Constructivism, as a theory of knowledge, asserts two fundamental principles: firstly, knowledge is not acquired passively but rather actively constructed by the subject who is cognizant; and secondly, the purpose of cognition is to adapt and organize the experiential world rather than uncover ontological reality,

(Von Glaserfeld, 1989).

Constructivist philosophy posits that individuals acquire knowledge through experiential learning. Individuals construct their own significance through firsthand encounters (Suhenda & Purwarno, 2018). Constructivist thinking is based on many elements of Piaget and Vygotsky's cognitive ideas. Following the teacher's presentation of the main idea, the students will learn the supporting details. The teacher's lack of emphasis on specific information hinders students' comprehension of said information (Aljohani, 2017). The fundamental principle of the constructivist method is that the student plays an active role in the learning process, and the teachers must consider this while attempting to support learning (Von Glaserfeld 1989). The core tenets of the constructivist approach to learning hold that rather than passively absorbing knowledge from outside sources, learners actively produce it (Sjoberg, 2007).

The concept of learning numerous learning theories, such as Tomlinson's differentiated learning theory, have their roots in constructivism. By combining differentiated instruction with constructivist learning theories, students are able to enhance their existing knowledge and use their own abilities, interests, learning preferences, and strengths (Robinson et al., 2014). Differentiated teaching and learning is a comprehensive and intricate method that aims to ensure that all students in classes with varying abilities are able to achieve learning outcomes (Valiande & Tarman, 2011). Practically, the act of differentiating instruction is a remarkably adaptable and responsive process that necessitates proficient educators with extensive understanding of their students and their incremental advancement. Teachers individualize their instruction by offering students a range of interconnected, carefully designed educational activities that build upon their existing knowledge and skills. They also modify and adjust the curriculum to meet the unique requirements and diverse abilities of each student (Mitchell &Hobson, 2005). The individuality of each learner has a major impact on lesson planning (Willis & Mann, 2000). Effective, varied teaching refers to the use of diverse methods, means, and resources to meet the specific requirements of individual students.

Differential learning acknowledges that every student exhibits distinct variances in their requirements, level of readiness, and preferred learning modalities. Implementing customized instructional approaches that address the unique requirements of students and fostering academic inclusivity are essential measures for schools to effectively interact with diverse student (Tomlinson, 1995). This theory highlights the importance of teachers adapting their teaching methods to accommodate diverse academic needs in classrooms with a mix of students. It also emphasizes the need for educational leaders to understand and provide appropriate resources for differentiated learning. This approach moves away from the idea that one teaching style fits all students. Differentiated learning emphasizes six key components: (1) student readiness as the foundation for learning; (2) student interest as a motivating factor; and (3) student learning profile as a guide. Learning is structured by distinguishing between various elements such as contents, process, and products. Differential learning underscores the notion that every student possesses distinct characteristics and qualities. The students in the classroom exhibit diverse levels of readiness, interests, and learning preferences. Consequently, teachers are unable to treat them equally. The paradigm of differentiated learning showcases teachers' capacity to cater to the unique requirements of students by implementing three main learning principles: assigning activities that foster reverence, adopting flexible grouping tactics, and conducting ongoing assessment and adaptation. (Tomlinson, 1999

Gaining expertise in design and utilizing various learning methodologies may encompass a wide array of learning techniques and tactics. Teachers have the advantage of using multiple approaches and strategies to facilitate learning. Three student attributes that might be used as recommendations for differentiation are readiness, interest, and learning profile (Tomlinson, 2001). These three traits will form the foundation for teachers when developing differentiated learning. Teachers' capacity to design instruction varies depending on the level of student readiness. Every learner necessitates a unique degree of readiness from the teacher. The teacher must modify their instructional planning to match the differing degrees of readiness between student A and student B. Teachers create tasks that closely match and correspond to the students' proficiency and understanding of a specific subject. The learning method will enhance comprehension, allowing students to properly grasp the material or topic. To customize learning based on students' readiness, teachers can utilize the notion of an "equalizer" as a method for creating differentiated classes (Tomlinson, 2001).

The notion of equalizer relates to the heterogeneity in students' readiness to learn. To cater to diverse learning needs according to students' readiness, teachers can organize the learning process to advance from fundamental to innovative, from tangible to conceptual, from basic to intricate, from singular aspect to multiple aspects, from gradual steps to significant advancements, from structured to flexible, from limited independence to greater autonomy, and from gradual to rapid pace. At times, when a learner comes across a new idea, they desire further knowledge to fully understand it. Moreover, learners typically need a firm grasp of fundamental factual information prior to advancing to more abstract or theoretical ideas. Students occasionally necessitate a particular formula or framework in order to fully grasp a subject. If a learner wants to get a more profound comprehension, they will actively pursue more sophisticated knowledge. The transition takes place from singular aspects to multiple

aspects, from little increments to significant advancements, from increased organization to enhanced transparency, from reduced reliance to heightened autonomy, and from slow to rapid.

The theory of differentiated learning has been extensively investigated by researchers and scholars in the field of learning, particularly in the context of English as a Foreign Language (EFL) classrooms. It has been found that differentiated learning has a favorable impact on English learning outcomes. The present study examined the viewpoints and difficulties faced by teachers in implementing differentiated learning strategies in the EFL classroom. Enhancing students' reading comprehension skills in EFL can be achieved through a range of instructional resources. These resources should prioritize student-centered teaching and learning, cater to individual needs and interests, and ensure equity and academic excellence. To accomplish this, it is important to accurately identify students' reading needs, assist teachers in developing effective strategies, and conduct a qualitative survey to understand how learning differences affect students' performance and engagement (Ortega et al. 2018), El Khdar et al, 2019, Saleh, 2021)

Differentiated learning enhances the grammar learning achievement of grade XII students in an EFL class. It also aids teachers in conceptualizing their intuitive techniques and expanding their range of differentiated strategies. (Melka & Jatta, 2022; Nagy, 2023). Utilizing individualized instruction as a pedagogical approach is essential for acquiring EF languages (Naka, 2018). The utilization of differentiated learning strategies improves the engagement of students by making the subject more accessible, encouraging active participation, and providing immediate feedback (Loanna & Konstantinos, 2023). The implementation of differentiated education in critical reading is believed to be efficacious in fostering communication and comprehension in critical reading lectures. Furthermore, it fosters students' enthusiasm and proficiency, elevates their self-assurance, and facilitates genuine communication in English as a goal in the context of learning English as a foreign language (Sahril et al., 2021).

Gustian et al. (2023) found that implementing differentiated learning enhances learning outcomes by increasing confidence, engagement, and the capacity to adapt teaching methods to cater to the specific needs of each student. Implementing diversified instruction strategies is certain to enhance in-class activities and bolster students' confidence in speaking English (Astuti et al., 2023; Arianto et al., 2023). Maulana & Oktavia (2023) investigated the perceptions of EFL students about the implementation of differentiated learning. They discovered that altering the setting of learning, technique, product, and material proved to be an effective and pleasurable strategy for student learning. The curriculum's diverse learning strategy, which focuses on content, process, and product, enhances English lesson outcomes and fosters effective teaching and learning (Hidayati & Sujarwati, 2023).

However, the researches above tend to look at the impact of differentiation learning on the EFL classroom. The researchers focused more on two elements of the previous research: (1) the content and the process. The researchers focused more on the differentiation of learning materials and learning methods applied in English classes to see students' learning outcomes. Furthermore, they identified the level of student readiness, interests, and learning styles to stimulate student learning motivation, overcome the challenges faced by teachers and students, and determine the perceptions of teachers and students towards the implementation of differential learning in English classrooms. A number of studies have not focused on the aspects of product differentiation and the tricks for differentiating materials and learning methods to prepare for classroom. (2) The research methods used are quantitative with an experimental design, descriptive, and qualitative with a case study design. The researchers have not yet looked at cultural (ethnographic) aspects such as patterns of interaction, communication, and habits that occur in the classroom. With these backgrounds in mind, the objectives of this paper are to: (1) examine the implementation of differential learning published byscholars and researchers in online articles and books; (2) identify gaps in the implementation of differential learning in the EFL classroom from prior research; and (3) develop a conceptual framework for differentiated learning in the EF classroom.

2. Methods

The researchers employed a qualitative approach. Qualitative research the analyse phenomena within their authentic environments, aiming to comprehend and understand them based on the subjective significance attributed by individuals. (Denzin & Lincoln, 2011). It utilises a content analysis design to conduct this research. Krippendoff (2004) emphasises that content analysts play a crucial role in examining data as representations of words, images, and expressions that are intended to be perceived, read, interpreted, and responded to in order to derive meaning. This underscores the significance of taking these intended uses into account during the analysis process. Examining a text within the framework of its utilisation distinguishes content analysis from other investigative approaches. In addition, Elo et al. (2008) contend that content analysis is well-suited for examining a wide range of events, as it promotes the processing and use of extensive amounts of textual material and multiple textual sources to strengthen evidence. The researchers gather the research data from two sources: articles and books. The researchers utilise the Publish or Perish tool to retrieve articles and books published online via Google Scholar, CrossRef, and Scopus indexing. The data sources pertain to learning theory, distinguish between both

notions in a broad sense, and apply them in EFL classroom. Articles and books that review its consistency in holistic and compressive analysis. Singh (2008) states that the analysis and interpretation of data involve the use of deductive and inductive logic in the research process.

Moreover, data obtained from articles and books was then analyzed in three stages adopted by Siyoto & Sodik, (2015), namely: (1) information reduction involves condensing, selecting the most pertinent elements, prioritising crucial details, identifying key subjects and patterns, and eliminating extraneous content from articles and books. (2) Information display/data display: Information is presented in an organised fashion, allowing for a comprehensive view of certain components of differentiated learning, from articles and books to categories and presenting information based on its specific content, starting with the process of assigning codes to each individual subproblem. This strategy presents information pertaining to differential learning (3), as demonstrated by the researchers. Conclusion, or confirmation, represents the ultimate stage in the process of conducting information investigations. In this part, the researchers draw conclusions based on the acquired information.

3.   Results and discussions

3.1.   The concept of differentiated learning

Differentiated learning is an instructional strategy where teachers consider individual student differences while organizing and providing learning material. This involves adapting instructional methods, resources, and assessments to accommodate the diverse learning requirements of the classroom. Differentiated learning is an educational approach that recognizes and appreciates the prior knowledge and individual characteristics of students and collaboratively determines the specific instructional needs for each student (Haniya et al., 2017). The mentality involves actively involving learners in varied learning through relevant activities and real-world topics. By using this instructional approach, the objective of instruction is to successfully demonstrate enhanced comprehension, optimize subject matter expertise, and enhance the learning abilities of a diverse group of students. According to Tomlinson (1995), each student has a unique personality. There exist understudies whose primary domain of expertise lies in fields such as science, sports, music, or various other disciplines. Differentiation, in its most basic sense, refers to a teacher's effort to acknowledge and accommodate the varying needs and abilities of pupils within the classroom. Each teacher personally interacts with students or small groups to customize their teaching methods, therefore enhancing the learning experience through differentiation (Tomlinson, 2000).

Differentiated learning refers to the techniques used by teachers to address the individual needs of each student. This includes evaluating their progress, identifying their specific learning needs, and adapting teaching approaches accordingly (Masters, 2010). Differentiated learning underscores the fact that using a single teaching method will not adequately cater to the requirements of every student if the instructional style does not correspond with the learner's chosen learning style (Levine, 2002). Educators must make various changes to meet the particular needs of students and promote their growth (Thousand et al, 2007). These changes include diversifying educational activities, adjusting topic requirements, modifying assessment methods, and adapting the classroom space. Differentiating education entails the process of recognizing and addressing the diverse origins, reading abilities, language preferences, and interests of individual students in a suitable manner (Hall, 2002).

Differentiated learning refers to the process of teaching and learning in a single classroom that accommodates students with varying abilities. Differential learning refers to the practice of educators adapting their teaching materials, learning techniques, and student learning outcomes based on three key factors: (1) individual needs, (2) level of readiness, and (3) preferred learning style. Tomlinson (2000), teachers have the ability to individualize learning in the classroom by incorporating three key components: content, method, and product. Tomlinson (2000) defines content as the material that students must learn or the means by which they acquire information. Process refers to the activities in which students participate to comprehend or master the content. Products are final projects that require students to practice, apply, and expand upon what they have learned in a unit. The learning environment encompasses the overall atmosphere and functioning of the classroom. In individual classrooms, educators provide specific strategies for each individual to memorize deeply and efficiently, without assuming that one student's learning approach will be identical to that of any other student (Tomlinson, 1999). These educators recognize the importance of holding students to a rigorous standard. Students of the same age exhibit individual differences in learning, just as they do in terms of estimation, leisure activities, identity, and preferences (Tomlinson, 2001). Tomlinson et al. (2003) acknowledge learning as an adaptive learning approach that caters to the readiness, enthusiasm for learning, and learning characteristics of diverse learners. In this context, Tomlinson constructs a differential learning model in order to address the issues raised by the students in the following manner:
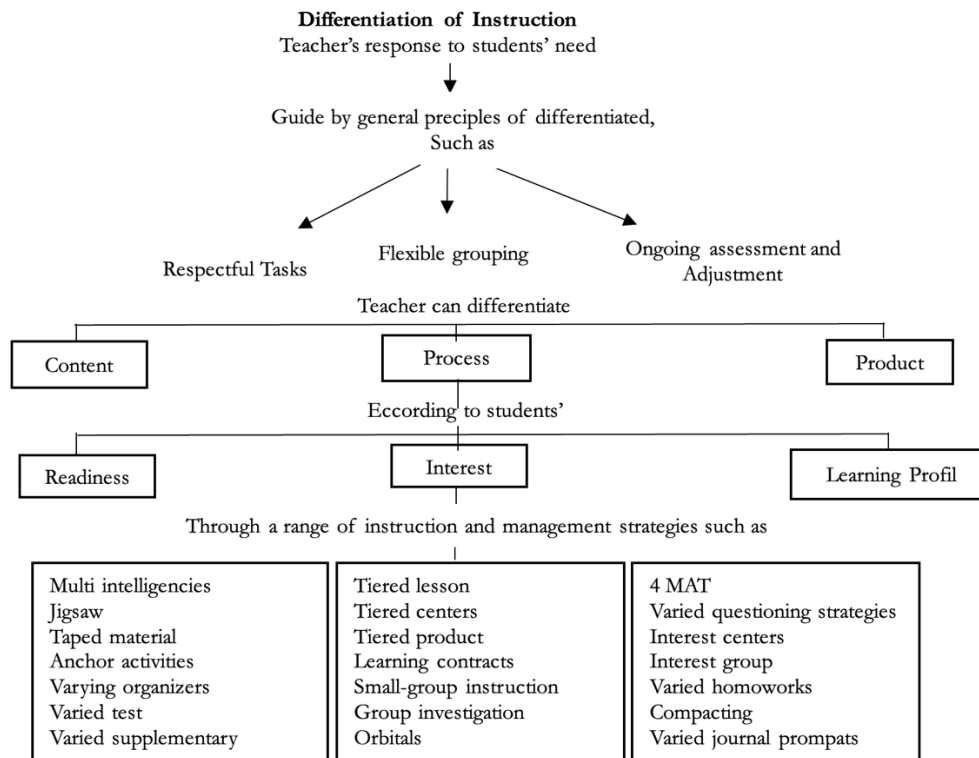
Differentiation of Instruction
Teacher's response to students' need
↓
Guide by general preciples of differentiated,
Such as

Respectful Tasks   Flexible grouping   Ongoing assessment and
                                                      Adjustment

Teacher can differentiate

| Content | Process | Product |

Eccording to students'

| Readiness | Interest | Learning Profil |

Through a range of instruction and management strategies such as

Multi intelligencies	Tiered lesson	4 MAT
Jigsaw	Tiered centers	Varied questioning strategies
Taped material	Tiered product	Interest centers
Anchor activities	Learning contracts	Interest group
Varying organizers	Small-group instruction	Varied homoworks
Varied test	Group investigation	Compacting
Varied supplementary	Orbitals	Varied journal prompats

Figure: 1. Model of differentiated learning (Tomlinson, 2001)

The model of differentiated learning highlights teachers' capacity to adjust to the unique requirements of learners through applying the three primary learning principles: assigning activities that foster reverence, adopting flexible grouping tactics, and conducting ongoing assessment and adaptation. Teachers employ differentiated instruction by customizing the content, methods, and outcomes to align with the students' levels of readiness, preferences, and learning profiles. Gaining expertise in design and utilizing various learning techniques may encompass a wide array of learning methodologies and strategies. Teachers have the advantage of using many approaches and strategies to facilitate learning.

3.2. Elements of differentiated instruction

Differentiated instruction is an instructional approach that takes into account and adapts to the varied learning requirements and preferences of students in the classroom. The objective of this is to offer students a range of possibilities to gain knowledge, express comprehension, and engage in learning activities. Various aspects are linked to distinct commands, including: (1) Readiness. Tomlinson and Imbeau (2010), readiness refers to a student's present level of knowledge, comprehension, and abilities in relation to specific requirements. They caution that readiness and ability are distinct; for instance, exceptional teaching results in consistent fluctuations in readiness. The objective of readiness differentiation is to provide tasks that are a little beyond the current abilities of learners and then provide the necessary help for them to successfully overcome the increased level of difficulty. (2) The concept of interest. Interest is a state of being that arouses a student's attention, curiosity, and active involvement (Tomlinson & Imbeau, 2010). Individuals who possess a genuine interest in a certain subject tend to exhibit higher levels of motivation to acquire knowledge about it, resulting in enhanced learning results. The objective of interest differentiation is to facilitate students' interaction with novel information, knowledge, and abilities by establishing connections with subjects that already captivate, engross, pertain to, and hold significance for them. (3) Learning Profile. A student's learning profile refers to their inclination towards assimilating, investigating, and articulating information (Tomlinson & Imbeau, 2010). There are four aspects that contribute to the formation of your learning profile: The factors that influence individuals' characteristics and abilities include gender, culture, learning styles, and IQ. Gardner's theory of multiple intelligences categorizes learning or thinking preferences into verbal, logical, mathematical, bodily-kinesthetic, interpersonal, intrapersonal, musical-rhythmic, spatial, or naturalistic domains. The aim of differentiating learning profiles is to instruct students on the most effective ways to learn and broaden their repertoire of effective learning methods.

3.2.1.   Plan lesson differentiated by readiness, interest, and profile

Tomlinson (2001) recommends three student attributes for differentiation: readiness, interest, and learning profile. These three traits will form the foundation for teachers when developing differentiated learning. The extent of student readiness significantly impacts the instructional capacity of teachers. Each learner demands a unique degree of teacher readiness. The teacher must modify their instructional planning to match the various levels of readiness between students A and B. Teachers create tasks that closely match and correspond to the students' proficiency and understanding of a specific subject. The learning method will enhance comprehension, allowing students to properly grasp the material or topic. To customize learning based on students' readiness, teachers can utilize the concept of an "equalizer" as a method for creating differentiated classrooms (Tomlinson, 2001).

The term "equalizer" refers to the fluctuation in students' readiness to learn. Teachers can change the way students learn based on their readiness level and the types of learning they need. They can move from basic to advanced, from real to abstract, from simple to complex, from one aspect to multiple aspects, from small steps to big steps, from more control to more freedom, from less independence to more independence, and from slowly to quickly. At times, when a learner comes across a new idea, they desire further knowledge to fully understand it. Furthermore, learners typically need a firm grasp of fundamental factual information prior to advancing to more abstract or theoretical ideas. Students occasionally necessitate a particular formula or framework in order to grasp a subject. If one wishes to get a deeper understanding, they would actively pursue more complex information. The transition takes place from singular aspects to multiple aspects, from small increments to significant advancements, from increased organization to enhanced flexibility, from reduced reliance to heightened autonomy, and from sluggishness to swiftness.

A different method for distinguishing learning entails taking into account student interests in addition to evaluating discrepancies in student readiness. An insightful teacher recognizes that the key to successful education rests in creating a method to engage and actively immerse learners in the subject matter being taught. (Tomlinson, 2001). Student interests and student choices are key factors that impact participation in the learning process (Bess, 1997; Brandt, 1998). The presence of authentic curiosity in a learner enhances the probability of the learner actively participating in effective learning. However, it is essential to recognize that the learners in the class have varied interests, thus requiring the use of differentiation techniques. Teachers can use student preferences to differentiate content, procedure, and product, covering the entire range of possibilities.

Each student in a class possesses a specific tendency, which involves a strong desire to interact with instructional resources. Some students have a strong inclination towards the arts, sports, social sciences, mathematics, and science. Expressiveness mode involves a larger cohort of students engaging in many forms of communication, such as spoken, written, design, visual, abstract, and service activities. Ignoring these discrepancies would hinder the process of customizing learning approaches according to individual preferences. Due to the potential to improve the effectiveness of instruction in the classroom. In addition to differentiating learning based on preparedness and interests, teachers should also consider student learning profiles.

Learner has an individualized learning profile. Pashler et al. (2009), learning style refers to the concept that individuals absorb information in unique and specific ways. Acquiring aural, visual, audiovisual, and kinesthetic skills may be a challenge for students (Mahmud et al., 2019). Some students have a proclivity for participating in collaborative study sessions, employing cognitive strategies, and seeking a serene and cozy learning atmosphere, while others place a higher value on intellect (Tomlinson, 2001). These differences facilitate the implementation of learning in a unique and diverse way. Teachers face challenges in implementing a uniform teaching method in a classroom when students have varying learning characteristics. Customizing the differentiation of approaches is essential to aligning with the unique learning profile of each student. Tomlinson (2001), students demonstrate differences in their approaches to learning.

The students have a preference for learning in a group setting, which can be categorized as independent or self-oriented, group or peer-oriented, adult-oriented, or a combination thereof. Certain students also have a propensity for learning based on their cognitive style, intelligence preference, and specific learning surroundings characterized by tranquility, low temperature, mobility, adaptability, and either a bustling or minimalistic atmosphere. Teachers are encouraged to determine students' learning profiles before arranging classroom instruction due to the variations in these profiles. Teachers must examine the students' profiles through initial learning evaluation and learning process assessment in order to make necessary adjustments.

3.2.2.   Differentiating Content, Process, and Product

Upon assessing the student's degree of readiness, the teacher proceeds to distinguish based on three specific aspects: (1) Content matters. Content encompasses the information, comprehension, and abilities that students must acquire in order to learn (Tomlinson &Imbeau, 2010). It is crucial to keep in mind that these learning objectives should be consistent for all students in a differentiated classroom. Teachers can customize the content they teach by adapting it to the particular techniques that students use to access and comprehend vital information.

Teachers have been able to deliver information in multiple formats within the classroom setting (Tomlinson and Imbeau, 2010). (2) Procedure. As defined by Tomlinson &Imbeau (2010), the term "process" refers to the way in which students comprehend and develop an understanding of academic material. The process of differentiation involves designing purposeful activities that enable students to internalize knowledge, allowing them to recognize its significance and practicality in the real world beyond the confines of the classroom. (3) Item. Products serve as a means for learners to showcase their knowledge, comprehension, and application of concepts gained during an extended period of study (Tomlinson &Imbeau, 2010). This offers teachers a rich environment for implementing differentiation strategies. Students have the opportunity to propose their preferred visual appearance to us. Teachers have the power to present learners with two alternatives and engage in discussions to reach a compromise for a third option.

The final outcome of these three factors of difference is that content pertains to the material that the student must acquire and the manner in which they will obtain it. The procedures encompass the actions in which the student will partake to comprehend and proficiently grasp the subject. The products require the student to engage in practical application and further develop the knowledge acquired within a unit (Tomlinson, 2000). Following the presentation of diverse content, the educator should consider the instructional procedure. The procedure also pertains to the strategies that educators should select for implementation in the classroom. Teachers should assess students' readiness, demands, and profiles as a way to ascertain the most appropriate learning approaches or methods for them. Product pertains to the knowledge and skills acquired by a student during the process of learning. The teacher's primary goal in the learning process is the end result. To effectively integrate seeking, comprehension, and skills, it is essential to contemplate the implementation of a differentiated product (Tomlinson, 2001). Students have the ability to produce diverse and distinct products using a range of mediums, such as composing essays, conducting experiments, engaging in photography, creating literary works, undertaking projects, and more. The preparedness, preferences, and characteristics of the students determine the resulting product format. Teachers are unable to compel pupils to generate a learning outcome for every student by finishing a single instructional module or at the conclusion of the educational period within one semester.

Hall (2002) offers a succinct elucidation of the essential elements of content, procedure, and product: Employing a variety of features and materials enhances instructional information. These encompass diverse components, including behaviors, thoughts, abstractions, fundamental truths, mindsets, and skills. 2) Verify that tasks and objectives align with the planned learning results. Ensuring that tasks align with instructional goals and objectives is vital, according to the designers of differentiated instruction. Principles support and guide the instruction based on concepts. 3) The instructional concepts should encompass a broad range of topics and not focus on specific specifics or an excessive amount of content. Teachers should priorities the development of conceptual knowledge, fundamental principles, and practical skills in their instructional approach. In order to accommodate the wide array of learners in the classroom, the instructional content should cover the same topics for all students, but at varying degrees of complexity.

The term "process" refers to the systematic use of adaptable categorization. The execution of tactics for adaptable grouping is crucial. Learners are expected to actively participate in interactions and collaborative tasks as they acquire new knowledge. Teachers can initiate whole-class discussions on important themes, which can subsequently be followed by smaller group or paired tasks. The configuration of students is not permanent. The process of categorizing and re-categorizing must be adaptable in order to facilitate individualized teaching that is tailored to the specific topic, assignment, and continuous assessments. 2) Classroom management is beneficial for both students and teachers. To effectively administer a classroom implementing differentiated education, educators must consider organizational and instructional delivery approaches.

One of the main issues regarding the product is the need to conduct both initial and ongoing evaluations of student readiness and advancement. 1) It is essential to carry out both initial and ongoing evaluations of student readiness and advancement. 2) Students demonstrate proactive and responsible behavior as they actively participate in exploration. Teachers recognize that each exercise provided to the learner enhances crucial understanding and abilities by being intriguing, absorbing, and easily understandable. 3) Revise the anticipated outcomes and requirements for student responses. Students can demonstrate their expertise and understanding by answering personalized questions. There are two perspectives to consider when it comes to differentiating content. Content can be customized based on a student's level of preparedness, preferences, or learning characteristics (Tomlinson, 2001).

3.3. Gap and historical development of theory
3.3.1.   *Research developments on differentiated theory*

From a philosophical standpoint, Piaget and Vygotsky's cognitive constructivism serves as the foundation for the theory of differentiation. Piaget's constructivist model posits that knowledge is not a mere replica of reality. Acquiring knowledge about an object or event involves more than just observing it or creating a mental replica or

representation of it. Acquiring knowledge about an object involves taking action on it. Knowing involves modifying and shaping the item, comprehending the process of conversion, and thus comprehending the object's construction (Piaget, 1964). Social constructivism refers to a theoretical perspective that emphasises the role of social interactions and cultural contexts in shaping individuals' understanding of the world. Vygotsky underscored the significance of cultural and social influences in shaping cognitive development. He underscored the significance of social interaction in the formation of cognitive capabilities. Cognitive development refers to the process by which children acquire cultural values, attitudes, and problem-solving skills through collaborative conversations with more informed individuals in society (Vygotsky, 1986). Below is a summary of the theoretical framework for understanding the steps of instructional differentiation.
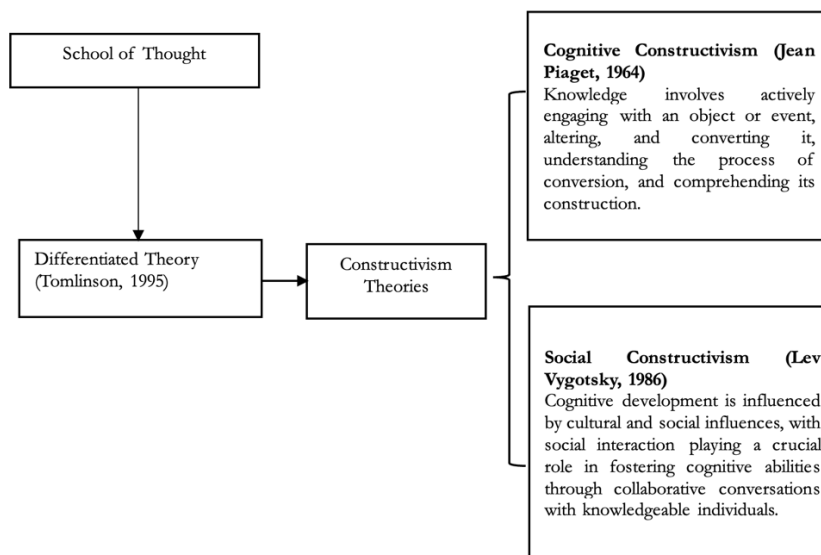

Figure 2. School of thought differentiated learning theory

The idea of constructivism posits that students assume an active role in the learning process, necessitating teachers to take this into account while promoting learning (VonGlaserfeld 1989). The fundamental principle of the constructivist approach to learning is that learners are not recipients of knowledge from external sources but rather actively generate it (Sjoberg, 2007). Every student possesses a distinct history and approach to obtaining an education. Each student is diverse, individual, and comes from various cultural backgrounds, languages, and habits. The teacher should adapt the learning process to the student's needs, serving as a facilitator. Carol Ann Tomlinson developed the theory of differential learning in 1995, based on the principles of constructivism and diverse circumstances.

The inception of differentiation theory was signaled by the release of Tomlinson's 1995 study titled "Deciding to Differentiate Instruction in Middle School: One School's Journey." Tomlinson published this study in the scholarly journal Gifted Chile Quarterly, Volume 29, Issue 2, during the spring season of the same year. She highlighted that, during that period in America, there was an emphasis on fostering or cultivating a predilection for a uniform curriculum and teachers who made little adaptations to their instructional approaches. Implementing customized instructional approaches that address the unique requirements of students and advocating for academic inclusivity are essential measures for schools to effectively interact with diverse student populations (Tomlinson, 1995). In the same year, Tomlinson published a paper titled "How to Differentiate Instruction in Mixed-Ability Classrooms". She focuses on the specific analysis of how teachers differentiate their instruction in classrooms with students with diverse abilities.

She addressed the important topic by explaining the concept of a differentiated classroom and the various aspects of differentiation that education leaders strive to create in such a classroom. In 2023, Tomlinson released the most recent version of her articles on differential learning, titled Differentiation: Making Curriculum Work for All Students through Responsive Planning and Instruction. Tomlinson formulated this theory specifically for middle school students and implemented it in the context of social, science, and language classes. Tomlinson effectively implemented this notion in the typical classroom setting. Tomlinson's approach extends beyond English classes, whether they are taken as a second language or as a foreign language. Furthermore, Tomlinson has failed to offer comprehensive guidance on how to strategically build settings, procedures, and products that cater to individual students' readiness, interests, and learning profiles in the English as a Foreign Language (EFL) classroom.

Later, scholars and researchers in the field of languages adopted and implemented differential learning in the EFL classroom widely, such as Ortega et al. (2018), who studied learning differentiation from the theoretical

and practical aspects of language classes. However, they only focus on providing content-area classroom teachers and English language teachers with a solid understanding of what differentiated learning entails by learning about its key characteristics and fundamental reasons for the use of differentiated learning within the classroom context. This analysis uses a qualitative approach with a systematic design of literature reviews. Naka (2018) identifies differentiated instruction used in English foreign language classes in the Faculty of Philology and Faculty of Education at the University of Gjakova Fehmi Aganiin Gjakovo/Kosovo, examines the factors that cause mixed ability classes, and investigates the current situation of EFL learning based on individual needs, learning styles, and the importance of differentiated instruction as a helpful tool to create an effective learning environment. El Khdar et al. (2019) used a case study to look at the impact of differential learning on reading learning in the EFL classroom. They tend to focus on differentiating content and processes for improving student reading skills. The same research was conducted by Saleh (2021) and Sahril et al. (2021) which applied differential learning with a focus on content design and psychoses in reading learning classes using quantitative and qualitative research approaches.

Further, Ayuningtyas et al. (2022) identified that differentiated instruction in online learning can enhance language skills like reading, speaking, listening, and writing. Their research focuses on process aspects using differential online learning methods. Furthermore, differentiation of content and processes based on readiness, interest, and learning profiles of students can improve student grammatical learning outcomes, encourage student active participation in class, teachers have a good understanding of and attitude towards differentiated learning as well as the differentiation strategies, and students have positive feedback on their experiences and found that when the teachers implemented differentiated instruction strategies in their classes (Nagy, 2022; Loanna & Konstantinos, 2023; Melka & Jatta, 2023; Astuti et al., 2023). Furthermore, process differentiation can increase student confidence in speaking, improve teacher experience in evaluating students, increase teacher agency in using appropriate methods based on needs and student learning styles, and differentiated strategies can improve student English learning outcomes (Arianto & Juhana, 2023; Gustian et al., 2023; Hidayati & Sujarwati, 2023).

Other research related to differential learning was carried out by Maulana and Oktavia (2023) which focused on high school students' perceptions of the implementation of differentiated learning in English language classes based on independent curricula. This research focuses only on student perceptions of differential learning. They don't see how differentiation of content, processes, and products affects students' learning outcomes. His follow-up, Mardhatillah & Suharyadi (2023), saw contribute a small summary of differentiated learning in the context of EFL to provide context and illustrate the need to implement differentiated learning in the classroom to ensure that students learn languages successfully using qualitative study approaches.

3.3.2. *Research gaps on differentiated learning on EFL classroom*

Tomlinson's research on differentiation theory (1995, 1999, 2000, 2001, 2023) shows that there is a theoretical gap in differential theory. He hasn't specifically explained how the content, process, and product differentiation in the English classroom are based on student readiness levels, interests, and learning profiles. Furthermore, scholars and other researchers such as Ortega et al. (2018), Naka (2019), El Khdar et al. (2019), Saleh (2021), Sahril et al. (2021), Ayuningtyas et al. (2022), Nagy (2022; Nagy, Loanna & Konstantinos (2023), Melka & Jatta (2023) adopted differential learning and practiced it in the EFL classroom. However, there is a practical knowledge gap and a methodological gap.

On the practical knowledge gap. Previous research focuses more on two elements: the content element and the process element. Content differentiation encourages students to improve their English learning outcomes and understanding of the material. Currently, process differentiation is designed to use varied learning methods to boost learning effectiveness, increase student learning motivation, and increase student interest based on student readiness, interest, and learning profile. However, research has not focused comprehensively on the product elements, which are the outputs generated in the learning process. While the product element is one of the elements of differentiation that cannot be separated in differential learning implementation, Moreover, previous studies have not described in detail the practical steps of how differentiation of content, processes, and products is designed to prepare learning in the EFL classroom.

The methodological gap. The research methods Tomlinson, scholars, and previous researchers employed are limited to experimental research, descriptive qualitative research, and case studies. They have not yet used other designs, such as ethnographical studies, to look at cultural aspects in the EFL classroom. More clearly, gap research on differentiation theory in the EFL classroom can be described as follows:
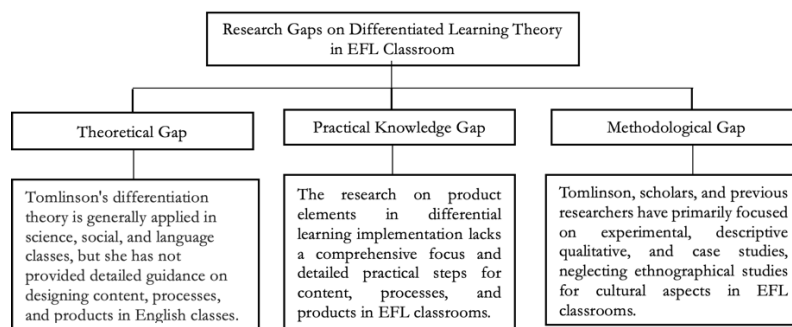
Figure 3. Research gaps on differentiated learning in EFL classroom

Figure 3 above illustrates that there are three research gaps on differential learning theory in the EFL classroom found based on literature studies on articles accessed online through Google scholar and Cross-reference indexing, using the Published or Perish 8 application. Three of these gaps include: (1) Theoretical gaps that exert pressure on the application of the theory to specific research difficulties in order to provide novel insights. (2) The practical knowledge gap refers to instances where professional activity or practice does not align with study findings or falls outside the scope of research. (3) Methodological gaps in research methodologies are necessary for generating new ideas or avoiding misleading findings, and these gaps tend to vary.

3.4. Conceptual framework

Building upon the research gaps highlighted earlier, the researchers proceeded to enhance and expand the conceptual framework in the following manner: (1) Applying differentiated instruction in the EFL classroom, specifically by developing strategies to customize the content, process, and outcomes for students. (2) The approach of differentiated content, process, and product focuses on four language skills (writing, speaking, reading, and listening) based on the individual readiness, interest, and learning profiles of students. (3) Researchers use qualitative research methods, specifically ethnographic design, to observe the cultural aspects of students and teachers during teaching activities that incorporate differentiated learning in the EFL classroom.
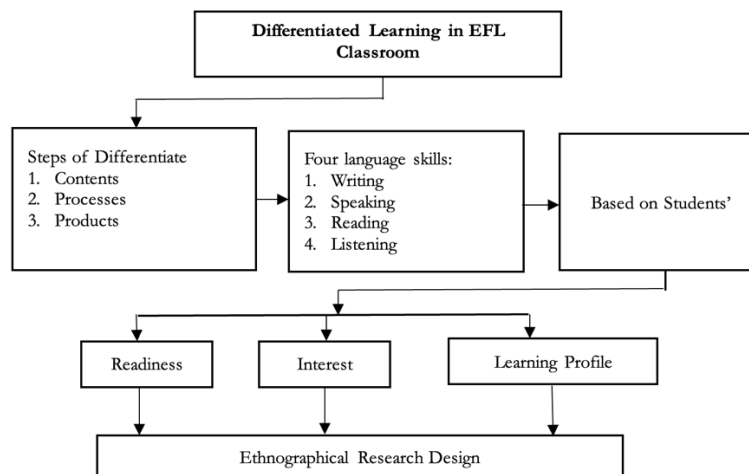

Figure 4. Conceptual framework

In detail, the conceptual framework above shows that research by implementing differential learning in the EFL classroom begins with designing measures to differentiate contents to be used for learning, differentiating processes to guide learning activities in class, and products as results that can be achieved by students or as learning outcomes. This study uses a qualitative approach with an ethnographical design to look at the learning culture that arises as a result of the implementation of differential learning in the EFL classroom.

4. Conclusions

The differential learning theory was born as one of the solutions to tackling learning with the one-size-fit for all concept, facing heterogeneous groups with cultural diversity, language, student habits, and student uniqueness. This theory has existed about two decades ago, and has been developed by various scholars and researchers in this field widely. Differential learning has also been implemented in the EFL classroom globally. However, there are still limits in the development of the theory. Based on analysis of articles and books published

online through Google scholar, Crossref, and Scopus indexing, it was found that there were three research gaps related to the implementation of differential learning in the EFL classroom: (1) Theoretical gap, (2) Practical knowledge gap, and (3) Methodological gaps. Thus, this research recommends a conceptual framework for its subsequent research as an attempt to look from a different perspective.

Declaration of conflicting interest
The authors declare that there is no conflict of interest in this work.

References
Aljohani, M. (2017). Principles of "constructivism" in foreign language teaching. Journal of Literature and Art Studies. . 7 (1), DOI 97-107/2018.02.0

Arianto, S. R., Juhana, Rumida. (2023). Building students' confidence in speaking English through differentiated Instruction. *Lectura: Jurnal Pendidikan.* 14*(2)*, pp 276-287: DOI: https://doi.org/10.31849/lectura.v14i2.14806.

Astuti, F.Y., Syafei, M., Suryani, B.F. (2023). English junior high school teachers' and students' perspectives of differentiated instruction practices in kurikulum merdeka. *SIMPLE: International Journal of English Education.* 1 *(1),* pp 30-34.

Ayuningtyas, L. P. S., Suwastini, N.K.A. & Dantes, G.R. (2022). Differentiated instruction in Online Learning: Its Benefits and Challenges in EFL Contexts. *Jurnal Pendidikan Teknologi dan Kejuruan.* 20 *(1)*, pp 80-94.

Bess, J. (1997). Teaching well and liking it: Motivating faculty to teach effectively. Baltimore, MD: The Johns Hopkins University Press.

Brandt, R. (1998). Powerful learning. Alexandria, VA: Association for Supervision and Curriculum Development.

Denzin, K. N. & Lincoln, A. Y. (2009). Handbook of Qualitative Research. Sage Publication.

El khdar, A., Rguibi, R., Bouziane, R. (2019). A case-study of differentiated instruction in the EFL reading class in one high school in Morocco. *International Journal of English, Literature and Social Sciences (IJELS).* 4 *(6),* pp 1861-1868. DOI:10.22161/IJELS.46.38.

Elo, S., &Kyngäs, H. (2008). The qualitative content analysis process. Journal of advanced nursing, 62(1), 107-115.

Fernando, YJN.S, &Marikar, F. MMT. 2017. Constructivist Teaching/Learning Theory and Participatory Teaching Methods. Journal of Curriculum and Teaching. 7 (1). Pp.110-122.https://doi.org/10.5430/jct.v6n1p110.

Gustian, K., Hermagustiana, I., Sunggingwati, D. (2023). Exploring the teacher agency regarding to the implementation of flipped differentiated learning in the context of EFL learners. *Journal on Education.* 6 *(1)*, pp. 8181-8199.

Hall, T. (2022). Differentiated instruction: Effective classroom practices report. *National Center on Accessing the General Curriculum* (NCAC). US.

Haniya, S., & Roberts, L. S. (2017). Differentiated learning. E-Learning Ecologies: Principles for New Learning and Assessment. 9781315639215-8.

Hidayati, L & Sujarwati, L. (2023). The differentiated learning strategy in implementation merdeka belajar curriculum to improve students' learning outcomes of English lesson in elementary school. *Cendikia: Media Jurnal Ilmiah Pendidikan.* 13 *(5)*, pp 724-733.

Krippendorff, K. (2004). Content Analysis: An introduction to its methodology. Sage Publications.

Levine, T. (2002). Stability and change in curriculum evaluation. Studies in Educational Evaluation, 28, 1-33.https://doi.org/10.1016/S0191-491X(02)00010-X

Loanna, T. & Konstantinos, M. (2023). Differentiated learning and proposed strategies for teaching a foreign language. British Journal of *Multidisciplinary and Advanced Studies: Education, Learning, Training&Development.* 4 *(2),* pp 8-27.DOI: https://doi.org/10.37745/bjmas.2022.0124

Mahmud, F. A., Koda, F., Sadek, R., Hamia, N. 2019. Learning styles perform based on sex perspective at secondary school Islam Terpadu Nurul Hasan Kota Ternate, Indonesia. International journal of scientific & Technology Research: 8 (04) PP 93-99.

Masters, G. (2010). Teaching and learning: School improvement framework. Brisbane: State of Queensland (Department of Education and Training)/Australian Council for Educational Research (ACER)

Maulana, H., & Oktavia, W. (2023). Indonesian EFL students' perceptions on implementing differentiated learning in learning English. *Journal of English Language Teaching.* 12 *(3)*, pp 694-702. DOI: 10.24036/jelt.v12i3.124763

Mardhatillah, M., Suharyadi, S. (2023). Differentiated instruction: Challenges and opportunities in EFL classroom. *Journal of English Language Teaching and Linguistics.* 8 *(1),* pp 69-77. DOI: http://dx.doi.org/10.21462/jeltl.v8.i1.1022.

Melka, G. Y & Jatta, B.I. (2023). Investigating the effects of differentiated instruction on high school students' grammar learning achievement in an Ethiopian EFL context, Addis Ababa University, Ethiopia. *East African Journal of Education Studies.* 5 *(1),* pp 246-253. DOI: https://doi.org/10.37284/eajes.5.1.636.

Mitchell, L.& Hobson, B. (2005). One size does not fit all: Differentiation in the elementary grades. Paper presented at the Beaverton School District Summer Institute, Beaverton, OR

Nagy, K. A. (2023). Differentiated instruction in the EFL classroom: An interview study on Hungarian primary and secondary school EFL teachers' views and self-reported practices. *Journal of Adult Learning, Knowledge and Innovation.* 6 *(1)* pp 33-46. DOI: 10.1556/2059.2023.0007

Naka, L. (2018). Differentiated instruction in English foreign language learning in undergraduate studies. *Journal of Literature, Languages and Linguistics.* 42, pp 102-112.

Ortega, P. D., Cabrera, M. J., & Benalcazar, V. J. (2018). Differentiating instruction in the language learning classroom: Theoretical considerations and practical applications. *Journal of Language Teaching and Research.* 9 *(6),* pp 1220-1228. DOI: http://dx.doi.org/10.17507/jltr.0906.11

Pashler, H., McDaniel, M., Rohrer, D., Bjork, R. (2008). Learning styles: Concepts and evidence. Sychological Scienein the Public Interest. 9 (3) DOI: 10.1111/j.1539-6053.2009.01038.x

Piaget, J. 1964. Cognitive Development in Children: Piaget Development and Learning. Journal of Research in Since Teaching. Vol. 2, pp. 176-186.

Sjoberg, S. (2007). Constructivism and learning. In E. Baker, B. McGaw and P. Peterson, (eds.), International Encyclopedia of Education (3rd edition.). Oxford, Elsevier.

Robinson, L., Maldonado,N., &Whaley,J. (2014). Perceptions about implementation of differentiated instruction. presented at the Annual Mid-South Educational Research (MSERA) conference November 7, 2014 Knoxville, Tennessee.

Sahril., Aulianti., Safar, N., M. (2021). The impact of differentiated instruction on students' performance in critical reading. Eralingua: *Jurnal Pendidikan Bahasa Asing dan Sastra.* 5 *(1),* pp 275-283.

Saleh, H. A. E. A. (2021). The effectiveness of differentiated instruction in improving Bahraini EFL secondary school students in reading comprehension skills. *Journal of Research and Innovation in Language.* 3 *(2)*, pp 135-145. DOI: https://doi.org/10.31849/reila.v3i2.6816.

Suhendi, A. &Purwarno. (2018), "Constructivist learning theory: The contribution to foreign language learning and teaching" in The 1st Annual International Conference on Language and Literature, KnE Social Sciences, pages 87–95. DOI 10.18502/kss.v3i4.1921 P

Siyoto, S. &Sodik M. A. (2015). Dasar metodologi penelitian. Sleman: Literasi Media Publishing.

Singh, Y. K. (2006). Fundamental of research methodology and statistics. New Age International (P) Ltd., Publishers.

Thousand, J., Villa, R., & Nevin, A. (2007). Collaborative teaching: Critique of thescientific evidence. In L. Florian (Ed.). Handbook of special education research(pp. 417-428). London, England: Sage Publishing *(4) (PDF) Collaborative teaching for teacher educators—What does the research say?.* Available from: https://www.researchgate.net/publication/222743195_Collaborative_teaching_for_teacher_educators-What_does_the_research_say [accessed Dec 15 2023].

Tomlinson, A. C. (1995a). Deciding to Differentiate instruction in middle school: One school's journey. *Gifted Child Quarterly.* 39 *(2)* pp 77-87. DOI:10.1177/001698629503900204

Tomlinson, A. C. (1995b). How to differentiate instruction in mixed-ability classrooms. Alexandria, VA: Association for Supervision and Curriculum Development. USA.

Tomlinson, C. A. (1999). The differentiated classroom: Responding to the needs of all learners. Alexandria, VA: Association for Supervision and Curriculum Development. USA.

Tomlinson, A. C. (2001). How to differentiate instruction in mixed-ability classrooms (2nd ed.). Association for Supervision and Curriculum Development Alexandria, Virginia USA.

Tomlinson, A. C. (2000). Differentiation of instruction in the elementary grades. Association for Supervision and Curriculum Development Alexandria, Virginia USA.

Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., & Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. Journal for the Education of the Gifted, 27(2-3), 119-145.

Tomlinson, C. A., & Imbeau, M. B. (2010). Leading and Managing a Differentiated Classroom.

VonGlaserfeld, E. (1989). Constructivism in education. In T. Husen and T.N. Postlethwaite (eds.), The International Encyclopedia of Education, Supplement. Oxford/New York, Pergamon Press.

Valiande, S. &Tarman, B. (2011). Differentlated teaching and constructive learning approach by the implemetation of ICT in mixed ability classrooms. The 4th International Computer and Instructional Technologies Symposium in Konya, Turkey that is held on 24-26 September, 2010.

Vygotsky, L. (1986). *Thought and Language.* (A. Kozulin, trans. & ed.). Cambridge, MA: The MIT Press. (Original work published in 1934.)

Willis, S., & Mann, L. (2000). Differentiating instruction: Finding manageable ways to meet individual needs. curriculum update. Alexandria, VA: Association for Supervision and Curriculum Development.

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