

## Differentiated Instructions: Implementing Bias Reading Tasks through Cooperative Learning in Mixed-Level Classrooms

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Received: June 30, 2024

Accepted: August 10, 2024

### Abstract

Catering to the diverse needs of students in a differentiated classroom holds immense significance for language educators. This is because it can perplex second language instructors when it comes to implementing various materials and techniques tailored to individual learners' levels of preparedness, abilities, and societal experiences. This study draws on Tomlinson's (2015) differentiated instruction as a teaching strategy to prompt teachers to cater the needs of second language (L2) learners by customizing the content, process, and product of instruction. To this end, an explanatory sequential mixed method approach was adopted at two phases: Initially, bias tasks through cooperative learning (BTCL) was investigated in classrooms focused on reading comprehension. The aim was to evaluate the reading comprehension achievements of 60 learners with varying abilities, including high, medium, and low achievers. One-way ANCOVA was run to analyze the quantitative data. Following the intervention, a focused group interview was carried out during the qualitative phase to explore the educational effectiveness of the BTCL within reading classrooms. Qualitative data analysis included an in-depth content analysis of 10 EFL learners' iterative reading of transcribed interviews. The data were coded into reductionist themes in three levels of open, axial, and selective coding process. MAXQDA software was used to systematically evaluate and interpret the data. The results revealed that promoting motivation and developing meaning-building skills in reading were the most important themes for the implication of the BTCL. Notably, various subcategories emerged out of incorporating this strategy in the classroom such as decision-making, creativity, conceptualizing, understanding main ideas, to name but a few. The findings indicated that the integration of the BTCL in EFL classrooms can significantly enhance the reading abilities of learners. These outcomes have important implications for language learners and the professional development of teachers involved in their training.

**Keywords:** Bias Tasks, Cooperative Learning, Differentiated Instruction, Reading Comprehension, Mixed-Level classrooms

### INTRODUCTION

Teaching foreign language learners to read effectively in a classroom with mixed abilities is undoubtedly one of the most challenging tasks in the teaching process. Valentic (2005) defines

a mixed-ability classroom as one in which "the students being different in terms of their participation, achievement and their level of readiness for learning a foreign language" (p.20). Bremner (2008) modifies this definition

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by stating that the concept of mixed-ability classes extends beyond the presence of students with varying abilities. It also encompasses students who possess a diverse array of learning styles and preferences. In school, therefore, "differentiating the instructions for students with different range of readiness and interests is more comfortable, engaging, and inviting" (Tomlinson, 2006, p. 91). In classes where students possess varying levels of ability, novice teachers might choose to align their teaching approach with either the high or low achieving students as a coping mechanism. This means that while the high achievers will likely find the instructions more engaging and enjoyable, the lower achievers may feel frustrated or face greater challenges throughout the duration of the course (Fleischmann et al., 2023).

One way to meet learners' needs at various levels of language proficiency in a classroom is to implement differentiated instruction (DI), (Tomlinson, 1999). Originally, DI has been developed as a model to learning opportunities while addressing students' learning needs (Gheyssens et al., 2021). DI was then interpreted as a set of teaching practices or strategies with philosophical and practical components (Smale-Jacobse et al., 2019). Accordingly, differentiated instruction strategy (DIS) was proposed as a teaching strategy to satisfy learners' different demands (Danley & Williams, 2020; Gheyssens et al., 2023; Kalali et al., 2022; Chen & Chen, 2018). Tomlinson proposed that DI can be effectively incorporated at various levels, encompassing elements such as "content, process, product, and the learning environment" (p.44). In a differentiated classroom, a teacher has the ability to implement diverse materials and approaches that are tailored to the individual students' level of preparedness, abilities, social backgrounds, and various other factors. (Fleischmann et al., 2023; Ismajli & Imami-Morina, 2018; Magableh & Abdullah, 2020). To be more precise, in a classroom that embraces differentiation, an instructor employs a range of tasks to ensure that students delve into concepts and utilize their abilities at a level that aligns with their existing knowledge, while also fostering their development and progress (Gheyssens et al., 2023). As students engage

with their respective tasks, they encounter varying levels of complexity. However, they all delve into the core concepts and operate at distinct levels of cognition. Eventually, these groups converge to exchange knowledge and gain insights from one another (Smale-Jacobse et al., 2019).

Teachers employ the use of DIS to effectively engage and cater to the diverse learning needs of every student (Gheyssens et al., 2021). In their compelling argument, Bowler and Parminter (2002) assert that it may not be feasible for a teacher to utilize three distinct course books simultaneously for a single class, catering to smart, weak, and average students separately. However, when confronted with a mixed-ability class and an uncooperative course book, how can we, as educators, effectively accommodate both proficient and struggling students? (Smale-Jacobse et al., 2019). Consequently, the implementation of DI as an educational framework has the potential to inspire teachers to take initiative, necessitating alterations in curricula, pedagogical approaches, educational materials, and learning tasks. This adaptation aims to optimize learning prospects for each student within the classroom setting (Tomlinson, 2017).

A research inquiry has been initiated to investigate the effectiveness of various techniques employed in differentiated instruction. These techniques encompass grouping, tiered tasks, bias tasks, dynamic assessments, and other similar approaches (Alijani et al., 2021; Gheyssens et al., 2023; Smale-Jacobse et al., 2019). Bowler and Parminter (2002) identified two different learning strategies that can be utilized to effectively implement DIS in a classroom with varying levels of proficiency. These strategies include *tiered tasks* and *bias tasks*, both aimed at accommodating the diverse needs of students in a mixed-level classroom setting. A bias task is a sort of assignment draws on cooperative learning teaching principle to suit different ability levels in a class group (Bowler & Parminter, 2002). They conceptualized bias tasks as adaptive to the particular case of learners, comparing it to a pie that is divided unequally into three portions. The larger slice represents students with larger appetites or stronger abilities, the mid slice represents

students with mid abilities, while the smaller slice represents those with smaller appetites or weaker skills (i.e., students See Figure 1). Bias tasks generate outcomes that complement each other. Similar to tiered tasks, Bias tasks impose a certain level of accountability on both parties involved. These tasks comprise activities that are more demanding, intricate, and easily accessible, all aimed at fostering learners' achievements (Benjamin, 2003). Consequently, learners are expected to scrutinize their own works, enabling them to comprehend their errors and rectify similar issues in their peers' language production (Kalali et al., 2022). The bias tasks precisely offer a strategy for rectification by urging learners to assume a distinct role within the classroom environment (Alijani et al., 2021). They are interconnected activities that commence with learners' accomplishments and culminate with peer rectification (Bowler & Parminter, 2002). This approach depends on the combination of individual skills and collaborative efforts. Specifically, students assist and communicate with one another, thereby making a valuable contribution to group assignments (Russell, 2018). Consequently, students who engage in collaborative work can benefit from direct interaction with their more proficient peers (Merchie et al., 2016; Ur, 2005).

Recent studies (e.g., Alghadmy, 2019; Fleischmann et al., 2023; Hernández & Boero, 2018; Russell, 2018; Barjesteh & Niknezhad, 2020) in different educational settings have furnished classrooms with dialogic driven pedagogy for the use of collaborative tasks for DI in which students consciously consider their own language, especially by producing language-related episodes. Miller (2007) found that proficient teachers in mixed-ability classrooms effectively utilize various instructional techniques such as small-group activities, pair work, and collaborative group projects more frequently than less successful or inexperienced language teachers. As a result, this approach in allocating tasks could act as a source of motivation. It not only presents a challenge for the students who excel but also provides support and encouragement for those who struggle to actively participate in classroom activities (Danley & Williams, 2020). Teachers must acknowledge

that diverse students require varied instructional approaches to actively engage in classroom activities (Barjesteh & Niknezhad, 2020; Pierce & Adams, 2007). Teachers need to recognize that learners have unique perspectives and should therefore shift their approach from *one size fits all* style to a more adaptable and personalized method known as differentiated instruction (Tomlinson & Strickland, 2005). This transformation is crucial in order to effectively engage students with diverse learning profiles and cater to their individual differences. By employing various teaching methods, educators can foster active participation and inclusivity within the classroom (Barjesteh, 2019; Fleischmann et al., 2023; Suprayogi, Valcke, and Godwin 2017).

Foreign language teaching pedagogy in the third millennium took a critical oriented shift that changed the role of teachers, students, and classrooms to meet learners' needs in mixed-ability classes (Barjesteh, 2022). Classrooms that are characterized by diversity encompass a variety of factors, including their geographical location, grade level, and overall environment. Additionally, these classrooms exhibit a wide range of individual learners, each with their unique abilities, interests, and objectives. However, the methods employed by teachers to accommodate the diverse needs of students in mixed-ability classrooms and effectively differentiate instruction still lack clarity (Gheyssens et al., 2023). Hence, it is essential to establish a practical approach in the field of language instruction to address the dissatisfaction arising from the limited effectiveness of traditional methods in classrooms that consist of students with varying proficiency levels (Barjesteh, 2022). Benjamin (2003) proposed bias tasks in cooperative learning (BTCL) as a method of utilizing differentiation strategies to facilitate student learning across various activities (e.g., comprehension, fluency, and word prediction). In order to address the existing void, this study focuses on exploring a specific instructional strategy in a classroom that consists of students at different proficiency levels. Specifically, cooperative learning activities involving bias reading tasks are introduced in a reading course to assess learners' reading comprehension

skills and their understanding of the suggested approach.

**RQ1:** Does implementation of the BTCL improve EFL learners' reading comprehension achievement?

**RQ2:** What are learners' perceptions toward the effectiveness of the BTCL in reading classrooms?

## LITERATURE REVIEW

### Differentiated Instruction

Developed as a proactive approach in the educational framework, DI focuses on embracing the diversity of learners within the classroom to customize the curriculum and deliver instructions to the entire class (Bongco & David, 2020; Gheyssens, 2021; Nusser & Gehrer 2020; Shi et al., 2020). Tomlinson (2015) conceptualized DI as a teaching philosophy that encourages teachers to differentiate (a) *content*, (b) *process*, (c) *product* for adapting the students' needs as well as (d) the *learning environment*. Tomlinson claimed that the content of teaching should be cater to the needs of different learners. Tomlinson and Strickland (2005) clarify that differentiating the content is "to provide multiple ways to receive the facts, concepts, generalizations or principles, attitudes, and skills related to the subject matter foreign language system in an L2 classroom - as well as the materials that represent those elements" (p.7). Besides, differentiation can be implemented at the process of teaching and learning. At this stage, teachers and learners are provided with opportunities to express their opinions, concepts and facts to take the required language knowledge and skills (Tomlinson & Strickland, 2005). The third area to differentiate is the product or outputs. Tomlinson, (2006) believes that students can utilize their endeavor to illustrate what they have learned by implementing various techniques and strategies (e.g., oral presentations, playing games, writing essays or preparing a report after attending a lecture). The last area that differentiation can be applied to is the learning environment. Teachers should renovate the structure of the learning environment so as to help learners move within and between groups and create a user-friendly environment wherein students can easily

manipulate different approaches (Tomlinson, 1999).

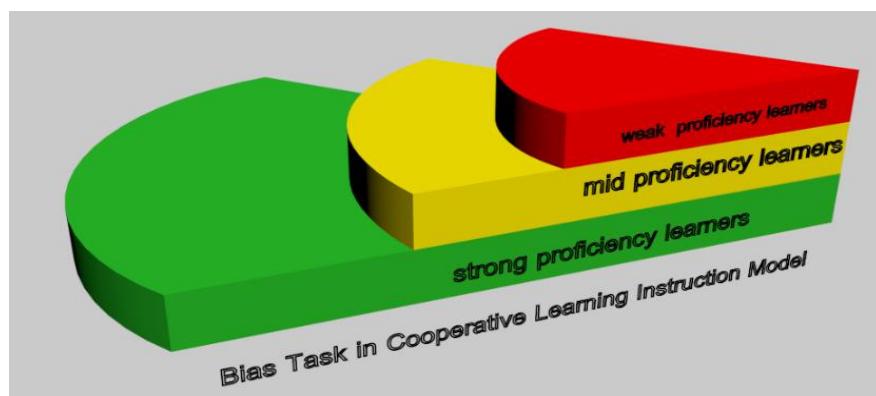
Buchs and Maradan (2021) put forward the concept of cooperative learning (CL) as a viable approach to address the challenges of DI. This method emphasizes collaborative efforts among learners to collectively accomplish group objectives, proving to be highly effective in enhancing students' abilities in cooperation and communication. In CL-based classrooms, students are encouraged to openly share their thoughts and ideas in order to successfully accomplish the assigned tasks. Learners are required to collaborate in groups, supporting one another to achieve specific learning objectives.

### Bias tasks in mixed-ability classrooms

The *labeling hypothesis* argues that classrooms with students of varying abilities have a positive impact on the academic self-perception of those students who struggle academically, as it helps them break free from negative stereotypes associated with their performance (Oakes, 2005). The *contrast hypothesis* presents the opposing view that students with lower academic achievement may experience negative effects on their self-concept when placed in mixed-ability classrooms (Marsh, 2023). This negative impact is believed to stem from the act of comparing oneself with peers who achieve greater success. The mixed-ability classroom, therefore, is one of the biggest challenges every language teacher most likely faces (Fleischmann et al., 2023). Bowler and Parminter (2002) put forward the idea that incorporating *tiered tasks* and *bias tasks* in the educational setting can effectively involve learners in the process of teaching and learning. A bias task is designed to cater to the diverse range of abilities present within a class. Bowler and Parminter embody an example of a language learning activity called a jigsaw gap-fill, in which a song is utilized to engage learners from diverse linguistic backgrounds. Advanced-level students participate in listening exercises that involve more difficult gaps, while students with lower proficiency undertake the task of filling in the lyrics with simpler words (Figure 1). The bias tasks are prepared beforehand, ahead of the actual classroom session, with the

objective of acquainting students with the concept of tiered tasks. In contrast to a bias task, these activities utilize the same original text but prompt different responses at varying proficiency levels. In this particular case (as mentioned by Bowler and Parminter), an illustration is provided with a similar reading passage. Subsequently, three separate sets of comprehension queries are allocated to three cohorts of students with

different aptitude levels. Bias tasks commence with the accomplishments of each individual and culminate in the rectification by peers. While bias tasks heavily depend on the capabilities of individuals, they also emphasize the learners' aptitude for collaborating in pairs and groups. Subsequently, the acquisition of language can be enhanced through the facilitation of collective learning among individuals. (Bozavli, 2012).



**Figure 1**  
*A model of bias tasks in cooperative learning (Bowler & Parminter, 2002)*

Consequently, the following research questions were composed to attain the goals of the study:

## METHODOLOGY

### Participants

To accomplish the purpose of the study, a total of 60 students were selected through non-random purposive sampling. They were selected from a group of English as a Foreign Language (EFL) learners. Their proficiency in general English language considered to be at an intermediate level with varying abilities (i.e, high, medium, and low). This assessment was made based on the scores they obtained in a placement test, which is regularly conducted as part of the admission process in private English language academies in Babol and Amol, Iran. Precisely, five experimental groups ( $n_1= 6$ ,  $n_2= 6$ ,  $n_3= 6$ ,  $n_4= 6$ ,  $n_5= 6$ ,  $N= 30$ ) and one control group ( $n= 30$ ) selected from both male and female Iranian EFL learners at the age range of 18 to 30 years. To assure the normality of the sample, a Kolmogorov-Smirnov Z test was performed on the scores obtained from the placement test ( $KS=1.48$ ,  $p=.96 >.05$ ). Therefore, it was assumed that the scores were legitimate.

### Instruments

#### ***The Preliminary English Test (PET)***

The PET reading comprehension test was applied in the study as a pretest and post-test followed by twenty-six reading comprehension multiple-choice items. The texts used in the test consisted of 100 to 180 words and the number of T units ranged from 14 to 26. At first, learners look at very short texts, such as signs and messages, and notes, and then select one of the correct items (A-C) on their answer sheet. The participants answered the questions for this part for 45 minutes. The reliability coefficient of this test was .69, which was based on Alpha Cronbach, indicating an acceptable reliability coefficient

#### ***Paper-Based Test (PBT): TOEFL Proficiency test***

A BPT TOEFL test was used to measure the proficiency level of the participants in the experimental group. The test had 41 items. It consisted of 12 listening comprehension items, 15 structure and written expression items, and 14 reading comprehension items. The experimental group of learners who scored more than 30 were identified as having high (strong)

proficiency levels. The others that scored between 20 and 30 were mid-proficiency level. Learners who scored under 20 had weak proficiency levels. The reliability coefficient of the test was .76, which was based on Alpha Cronbach, indicating a high and acceptable reliability coefficient.

### **Focus Group Interview**

A focus group interview was conducted at the end of the semester (treatment) in order to keep a record of ten (mid and low proficiency level) participants' perceptions towards the BTCL instructional type and the development of the identification of the main ideas when reading. Ten English learners in the experimental groups were chosen purposefully according to their active participation. As the qualitative data collection instrument "the focus-group interview questions" were developed by the researcher, it was required to validate the instrument. The content validity of the interview was verified through skilled judgment validity criteria (Creswell & Clark, 2017). The researchers validated the focus-group interview questions through an expert view by sending the draft of the interview questions to improve and finalize the questions. After the interview, the transcriptions were made and saved in a folder to promote access. The gathered data was analyzed through *open* coding, axial coding, and selective coding to identify a core category integrated with two categories to answer the qualitative research question. The framework for performing the interview was based on Dörnyei's (2007) guidelines.

### **Procedure**

The study aimed to investigate incorporating of the BTCL with the hope to foster learners' reading comprehension achievements and their perceptions toward the efficacy of the proposed model. The experimental (bias task) groups were taught through the BTCL. However, traditional instruction was applied to the control group. A PET test was applied as a pre-test on groups. Following Tomlinson's (2015) DI as a teaching philosophy, The BTCL method was employed in the bias task groups. They took a PBT TOEFL test with the aim to divide them

into three types (i.e., strong, mid, and low proficiency level). Drawing on learners' PBT scores, they classified into five groups of six learners (i.e., each group consisting of two strong, two mid, and two weak learners).

The bias task groups received three kinds of bias tasks with respect to their language proficiency levels. More precisely, they were administered as top, middle, and weak bias to meet learners' level of language proficiency accordingly. The reading passage of the course book (i.e, American English File 3) was given to the bias task groups in ten sessions. Following guidelines in the bias task at the mixed-level classroom, the bias task groups were invited to answer the reading comprehension questions at different phases. More precisely, each participant was inquired to reply the questions individually on their papers at the initial phase. Next, they were invited to share their answers within their groups with the hope to work collaboratively. Finally, each reply is checked with the teacher to come up with the correct answer. Then all the subjects took the reading comprehension posttest in order to find out whether the BTCL procedure leads to any improvement in participants' reading achievements.

For the qualitative phase, a focused group interview was conducted. The interviews were focused with 5 questions, which were developed based on a thorough literature review. Next, an interview guide was developed with the core questions probing mid and low proficiency learners' perceptions toward the pedagogical efficacy of the BTCL in reading classrooms and strategies employed in fostering the reading comprehension in the classroom. The interview questions were piloted and revised based on the comments received by the experts in the field. To assure the credibility of the interview and to follow Creswell (2018), six PhD holders in applied linguistics confirmed the validity of the interview items. To pursue the interviews, Strauss and Corbin's (1998) approach was adopted. Precisely, the interviews initiated with greetings, then gradually directed from general to specific questions to unveil learners' perceptions towards BTCL. The interview was focused in a group of 10 mid and weak learners. They were audio recorded and conducted individually in

Persian as the research has shown that informants are more willing and able to communicate their knowledge using their native language (Hatch, 2002, p. 98). The data were subsequently transcribed verbatim and back-translated into English. To screen the accuracy of the translation, a professional translator was requested to check the translation during the interview, attempts were made to minimize biases and limitations that were likely to impact their decision-making process. Accordingly, the participants were requested to provide their perceptions with a sense of freedom (Creswell, 2018). To increase with the trustworthiness and the accuracy of the findings, Cutcliffe and McKenna's (1999) techniques were employed. More practically, the final summary of their replies to the interview questions was administered to the participants to screen the extracted themes and subcategories were in line with their perceptions.

### Data Analysis

An exploratory sequential mixed-methods type was adopted to analyze the data. For such a method design, quantitative data are collected and analyzed first, then qualitative data are collected and analyzed to help explain quantitative data (Halcomb & Hickman, 2015). For the purpose of this study, in quantitative phase, descriptive statistics and analysis of covariance were run to screen the incorporation of the BTCL on EFL learners' reading comprehension achievement. In qualitative phase, interpretative phenomenological analysis (IPA) was conducted using an interpretive procedure for analysis (i.e., content analysis) to identify the pedagogical efficacy of the BTCL from the lens of mid and weak language learners. Specifically, a bottom-up approach for analysis in IPA was adopted. In so doing, iterative reading of the transcripts was coded into reductionist themes and categories (i.e., open coding, axial coding, and selective coding). After coding the data, MAXQDA software was employed to analyze the data. MAXQDA is a software that allow researchers to systematically evaluate and interpret qualitative text. MAXQDA can record the researchers' thoughts and emotions while summarizing and organizing the data for

the next phase (Strauss & Corbin, 2015). Following Corbin & Strauss, guidelines, the interviews were transcribed and segmented into keywords and phrases concerning the learners' perceptions toward the pedagogical efficacy of the BTCL. In the axial codes, some categories were developed by determining the interconnectedness among the extracted concepts in the open coding phase. Finally, selective coding was conducted to uncover the main themes.

### RESULTS

The purpose of the first research question of the current study was to see whether implementation of the BTCL improves EFL learners' reading comprehension achievement. To investigate this research question, analysis of covariance was applied. The scores on the pretest are dealt as a covariate to control for pre-existing differences between the groups.

ANCOVA assumes that the following assumptions are met: no influence of treatment on covariate measurement, reliability of covariates, no strong correlations among covariates, normality, and linear relationship between dependent variable and covariate, and homogeneity of regression slopes (Tabachnick & Fidell, 2013). Since the covariates were measured prior to the treatment, they could not be influenced by the treatment. Therefore, this assumption was not violated. In addition, there was only one covariate in each ANCOVA analysis. Hence, the assumption of correlation among covariates was not applicable. To check the assumption of the reliability of covariates, Cronbach's Alpha was checked. Results showed that the covariate was measured reliably ( $r = .842$ ).

Table 1 represents the skewness and kurtosis and their ratios over the standard errors for reading comprehension scores on both pretest and posttest. According to Field (2009), the ratios of skewness and kurtosis over their respective standard errors are analogous to standardized scores (z-scores) that can be compared against the critical values of  $+/-.196$  at .05 levels. Since all ratios were within the ranges of  $+/-.196$ , it was concluded that the assumption of normality was met.

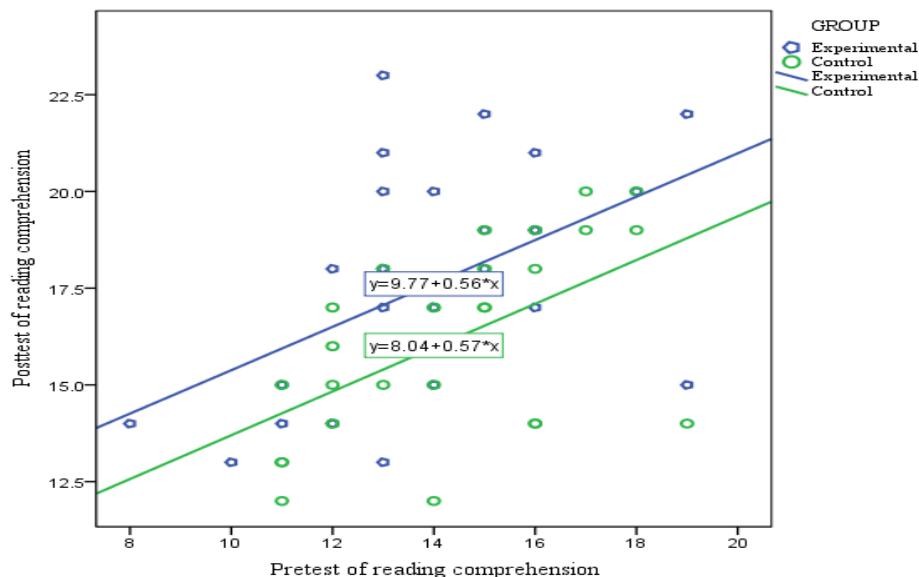
**Table 1**

**Skewness and Kurtosis Test of Normality for Reading Comprehension Scores on both Pretest and Posttest by Group**

Time	Group	N	Skewness	Std. Error	Skewness Ratio	Kurtosis	Std. Error	Kurtosis Ratio
Pretest	Experimental	30	.109	.427	.256	.744	.833	.894
	Control	30	.223	.427	.523	-.678	.833	-.814
Posttest	Experimental	30	.134	.427	.313	-.848	.833	-1.018
	Control	30	-.047	.427	-.110	-.881	.833	-1.058

The assumptions of linearity of the relationship between dependent variable and the covariate, and the homogeneity of regression slopes were also checked. Figure 2 examined the linearity assumption, which assumed that the relationship between the dependent variable

(posttest reading comprehension) and the covariate (pretest reading comprehension) was a linear one. As seen in the scatterplot, the three lines were straight, so it can be concluded that the requirement of linearity is fulfilled.



**Figure 2**  
*Scatter plot of pretest and posttest of reading comprehension*

Table 2 reflects that the significant value associated with Levene's test (.29) exceeded the selected significant level (.05) and so the

homogeneity of variance assumption was not violated for reading comprehension scores in the groups.

**Table 2**

**Levene's Test of Equality of Error Reading Comprehension Scores by Group**

Levene Statistic	df1	df2	Sig.
1.117	1	58	.295

The next assumption relates to homogeneity of regression slopes. As set forth in Table 3 below, the results indicated that the significance level of the interaction (Group \* Pretest) between group and the pretest of total reading comprehension

was above .05 ( $F_{(1, 56)} = .12, p = .89, p > .05$ ) and, therefore, not statistically significant. This means that the pretest and posttest of reading comprehension scores in the groups enjoy the assumption of homogeneity of regression slopes.

**Table 3**  
**Homogeneity of Regression Slopes for Reading Comprehension**

Source	Type III Sum of Squares	DF	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	131.331	3	43.777	8.808	.000	.321
Intercept	122.228	1	122.228	24.593	.000	.305
Group * Pretest	.002	1	.002	.124	.891	.000
Error	278.319	56	4.970			
Total	17445.000	60				
Corrected Total	409.650	59				

Since all assumptions were met, the research of this study was justified to use one-way ANCOVA.

The number of students, mean, standard deviation, and standard error of means for the scores in the experimental and control groups were calculated (Table 4) before explaining the results of ANCOVA. Table 4 shows that the

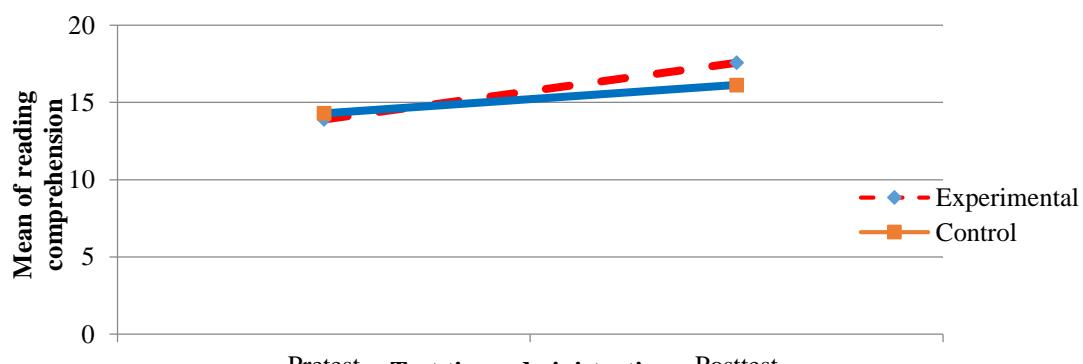
mean of reading comprehension in the experimental group ( $M = 13.90, SD = 2.43$ ) and control group ( $M = 14.30, SD = 2.25$ ) are close to each other on the pretest; however, the mean of reading comprehension in the experimental group ( $M = 17.57, SD = 2.79$ ) is much higher than the mean in the control group ( $M = 16.13, SD = 2.30$ ) on the posttest.

**Table 4**  
**Descriptive Statistics of Reading Comprehension Scores on Pretest and Posttest by Group**

Test	Group	N	Mean	SD	SEM
Pretest	Experimental	30	13.90	2.43	.443
	Control	30	14.30	2.25	.410
Posttest	Experimental	30	17.57	2.79	.509
	Control	30	16.13	2.30	.420

In order to depict the results of both pretest and posttest for both groups in terms of reading comprehension, a Line Chart (Figure 3) was made. As it's observable from the Line Chart, the means of reading comprehension in the

experimental and control groups are almost at the same level on the pretest, still, on the posttest, the mean for the control group is considerably higher than the experimental group.



**Figure 3**  
**Line chart for two groups' means of reading comprehension (pretest & posttest)**

Table 5 summarizes the results of the ANCOVA. After adjusting for the reading comprehension scores on the pretest, there was a significant difference among the reading

comprehension means of the groups on the posttest ( $F_{(1, 57)} = 8.39, p = .004, p < .01$ , partial eta squared = .13). Besides, as it is evident from Table 5, there was a strong relationship between

the pre-intervention and post-intervention scores on the total reading comprehension ( $F_{(1, 57)} = 20.58, p < .05$ ). This means the reading comprehension scores gained on the pretest

affect the reading comprehension scores gained on the posttest. Additionally, Table 5 shows that the partial eta squared (effect size) value is .26.

**Table 5**  
*Tests of Between-Subjects Effects on Reading Comprehension*

Source	Type III Sum of Squares	DF	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	131.328	2	65.664	13.448	.000	.321
Intercept	123.318	1	123.318	25.255	.000	.307
Pretest	100.512	1	100.512	20.585	.000	.265
Group	40.953	1	40.953	8.387	.004	.128
Error	278.322	57	4.883			
Total	17445.000	60				
Corrected Total	409.650	59				

The second research question addressed mid and low proficiency level learners' perceptions towards the BTCL. In so doing, a focus-group interview was conducted among ten mid and weak learners from the bias task groups. For analyzing the focus-group interview, the researchers used the grounded theory approach. Three coding procedures (open, axial & selective) were applied to determine the units of analysis and identify the themes and the core category following grounded theory. Following Strauss and Corbin's (1998) guidelines for the analysis, the data from the transcriptions of the focus-group interview were analyzed using open coding. Precisely, it was approached through line-by-line analysis to have a closer examination of phrases, sentences, or even single words. Accordingly, a

master list was developed to keep track of all commonalities and patterns that appeared during the analysis. The master list represented a primitive outline reflecting the alternate regularities or models in the study (Merriam, 2009). Subsequently, the researchers utilized a matrix to reduce data and create code families. As for this part, a number of key components (i.e., *creativity, preferences, perceptions, reading performances, and understanding the main idea*) were extracted from the data followed by the grounded theory procedure. Then axial coding was carried out to inter-connect among the categories and sub-categories by reducing the number of groups and categorizing the concepts (Strauss & Corbin, 1990).

**Table 6**  
*The Themes Emerged from learners' perceptions on BTCL*

Dimension	Sub- categories
Fostering motivation towards reading	Decision-Making Creativity
Developing meaning-building skills in reading	Conceptualizing Understanding Main Ideas

Finally, to identify the core category, a process of selective coding developed to systematically relate categories to other subcategories and validate relationships with the purpose of generating a summary line to conceptualize the central phenomenon under study (Strauss & Corbin, 1998). After having reduced and analyzed data, the researchers pinpointed the core

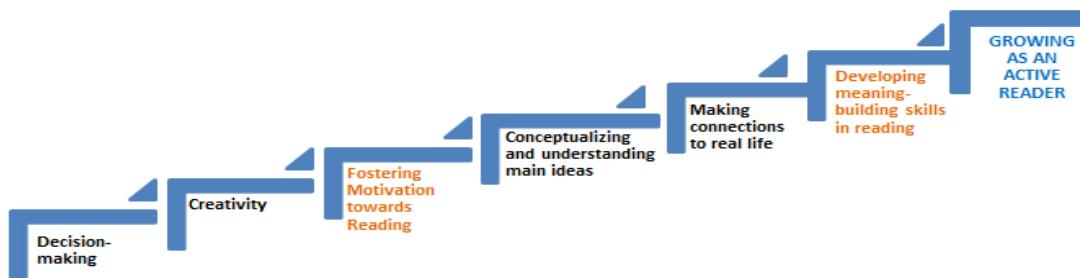
category: **Growing as an active reader**. Reading comprehension is a process of growth that takes place over time. During this time, readers are active in constructing meaning through the processes of interacting with what they read and integrating knowledge with what they already know (Blachowicz & Ogle, 2008). In this case, the implementation of the BTCL allowed

participants to undergo a new reading experience making decisions, understanding main ideas, making connections and consequently growing as active readers.

From this core category, two sets of themes: "**Fostering motivation towards reading**" through decision making and creativity and "**Developing meaning-building skills in reading**" by conceptualizing and understanding main ideas emerged out of the content analysis. Table 6 illustrates the apparent themes and the subcategories of learners' perceptions toward the pedagogical efficacy of the BTCL.

In determining the core category "Growing as an active reader", the conditional relationships

among the categories provided the researchers with the necessary understanding to move to the final interpretation of the theory. As such, "Growing as an active reader" integrated each of the categories and their properties to build up this process of growth in the participants' reading comprehension by means of the bias tasks. Such a process started with the **decision-making** made by the participants when selecting their reading tasks papers, and after answering their papers to represent the main ideas. Then this possibility of choice led them to be more **creative** in the presentation of tasks. As a result of this, the mid and weak participants exhibited higher motivation towards reading.



**Figure 4:**  
*Integration of Categories*

As indicated in the table 6 fostering motivation towards reading and developing meaning-building skills in reading were two main themes highlighted by language learners. The findings are categorized based on learners' perceptions toward the pedagogical efficacy of the BTCL. Each theme is supported by the interview extracts and the relevant literature in what follows:

#### **Category1: Fostering motivation towards reading**

The participants expressed they were motivated to read after implementation the BTCL in the classroom. Worthy and McKool (1996) postulate that teachers should allow "students to make choices about their reading activities increased the likelihood that they would engage more in reading" (p.26). This clearly corroborates what Tomlinson (2012) who believe that "students learn more efficiently if allowed to acquire knowledge and express their understanding through a mode of their choice" (p. 5). They pinpointed that they would like to read more to

answer better. Accordingly, such engagement could motivate learners to perform better when understanding main ideas and making connections to their real lives recognizing reading themes, and constructing meaning. Therefore, these perceptions depicted traits of motivation to reading as an effect of the BTCL implementation. Actually, based on the data analysis conducted so far, such traits of motivation can be labeled as creativity and decision-making which enclose these motivational insights and simultaneously become the sub-categories within this category.

#### **Subcategory: decision-making**

This subcategory emerged from what students expressed in the interviews. As the participants had the opportunity of choosing what to do and how to do it, they felt free to take control over the development of their products and the materials they wanted to explore and use. Therefore, the perceptions portrayed a decision-making process as part of motivation to reading. The importance of this issue is reflected in the

following extract illustrate students' perspective regarding motivation toward reading:

*Teacher: Why did I choose that task to represent the main ideas?*

*Student4: because I feel at liberty because I do what I want to represent the main idea*

*Teacher: How does what I have been doing help me in reading?*

*Student4: that can help me because I want to read more to answer better*

#### ***Subcategory: Creativity***

Another important construct pinpointed by the participants was Creativity. More specifically, they state that BTCL help them develop meaning-building skills in reading. In this regard, they highlighted that creativity is an element that they considered relevant when selecting their tasks. Notably, they considered creativity as a motivating factor which facilitate the representation of the main ideas. Batey (2012) uses the word capacity to conceptualize creativity, which is the capacity within learners to foster ideas with the aim to solve problems and. This idea is also advocated by Lehrer (2012) who pinpoints that creativity is not a trait to be inherited but it can be developed as a skill within an individual. Heacox (2002) specified that "promoting creativity through DI affords each student the opportunity and motivation to truly demonstrate their learning, skills, and abilities" (p. 78). The following extract illustrates learners' perception towards what they do to get the main idea of the text.

*Teacher: What did I do to represent the main idea of the text?*

*Student 7: I made a desert scene with sand dunes, rocks, and cactus (imagination was the main component)*

*Teacher: Why did I choose that task to represent the main idea?*

*Student 7: Because I thought it was going to be funny.*

#### **Category 2: Developing meaning-building skills in reading.**

This category pinpoints the effects that the implementation of the BTCL had on intermediate learners' reading comprehension process. These effects were given in terms of the development

of meaning building skills such as conceptualizing and understanding main ideas and making connections to real life. These sub-categories reflected how the BTCL benefited the reading comprehension process helping the participants identify the main ideas and extract reading themes as central messages related to their own lives (Graesser, Pomeroy, & Craig, 2002). Accordingly, the development of these meaning-building skills happened through the interaction among the participants, the text and the bias tasks, and when reading and activating prior knowledge and experiences to understand what they were reading.

#### ***Subcategory: Conceptualizing, Understanding main ideas***

Some of the participant's tendency to be creative led them to decide on a task that represented the main idea as clearly as possible. Creativity could be perceived as an influential factor for participants when determining their products to illustrate their understanding of main ideas. Based on the following expert, this participant's perception towards a main idea was modified as a result of the development of the bias task. Tomlinson (1999), a leading expert on differentiation, asserts that differentiated strategies applied to reading may be designed to help students learn a range of skills including comprehension (Tomlinson, 1999, p. 56). In this case, the implementation of the BTCL helped participants distinguish between a summary and a main idea by understanding that these two reading skills are different. Actually, in the sample, this student made a clear distinction between these two concepts when he said that main ideas are not long paragraphs like summaries.

*Teacher: What did I learn about reading when answering your tasks?*

*Student 2: I learn that a main idea is different from a summary.*

*Teacher: How does what I have been doing help me in reading?*

*Student 2: These tasks helped me that main ideas are not long paragraphs because before this I made huge main ideas like summaries.*

Certainly, the changes observed and analyzed by the researchers and experienced by the

participants in terms of reading comprehension when identifying main ideas demonstrated that the BTCL was an effective tool to help students overcome comprehension difficulties. The following extract show learners' perception towards the BTCL.

*Teacher: How did you feel doing these tasks?*

*Student 9: I feel very happy because it seemed fun and educational at the same time and I love reading and these tasks lead me to read more.*

## DISCUSSION

The current mixed-method study explored the possible effects of the BTCL through DI on EFL learners' reading comprehension achievements, and their perceptions towards BTCL. The implementation of the BTCL proposes a prominent DIS that satisfied the different needs of all students in mixed-ability classrooms. The results of the pretest and posttest analysis showed that BTCL had a significant effect on students' reading skills. This was in line with the research conducted by Magableh and Abdullah (2021) which found that differentiated learning had an impact on reading comprehension.

It is supported by implementing the three aspects of DI: process, content, and product. These three aspects are evidenced to help students grow and develop reading skills. The first aspect is the differentiation of content. At this stage, teachers can choose several variations of texts, such as authentic texts from reading books or the internet that suit students' interests. By utilizing different types of inquiries from the same reading texts, students can be more engaged and interested in reading. It will increase students' motivation and interest in learning (Heningjakti & Surono, 2023). It is critical to understand students' interests when implementing this strategy. Knowing students' interests will help teachers plan lessons and encourage more useful learning.

The second aspect is the implementation of a differentiation process that is student-centered. Teachers can organize students into individual or group discussions. Implementing group discussions has been proven to train students' abilities in socializing, critical thinking, and

creativity (Heningjakti & Surono, 2023). It allows students to cooperate and collaborate with others by sharing their comprehension of the reading text. In addition, group discussions also make them actively involved in discussing the reading material while improving their reading skills. The differentiation process can be achieved by creating lessons tailored to students' interests, utilizing simulations related to the material, and providing opportunities for students to solve interesting challenges (Rigianti, 2023). In this application, teachers can improve students' reading skills by giving special attention to students who need deeper learning. A study performed by Tilamsari et al., (2023) supports that differentiation of process can help students absorb, organize, and process learning information more easily. It allows teachers to accommodate students' learning styles by providing appropriate inquiries that are neither easy nor difficult so that they can effectively understand the information in the text.

The last aspect is the application of differentiation of products, where teachers allow students to be creative by creating learning products based on their interests and creativity. Students can freely use various materials, and tools that will help produce a product. Teachers can give students assignments such as making mind maps, journaling, and making graphs of their comprehension of the text. In submitting the assignment, teachers can also give students the option to make a video, or present the product in front of the class. As stated by Rigianti (2023), they can also give students the option to make posters, and videos according to their abilities and interests. This strategy also helps students discover their interests and talents. As Maulana and Oktavia (2023) explained, students are happy when they have the freedom to express their creativity through learning products that they have designed based on their learning styles, interests, and abilities. This activity involves their enjoyment and motivate them to be more interested and excited, thus helping them improve their reading skills deeply.

The DIS also helps teachers face the challenge of students' English reading in the classroom. Suprayogi et al., (2022) recommended

applying this strategy to help students face learning challenges and get a better education. This strategy can help recognize students' challenges in reading, such as difficulty in understanding texts, reading limitations, and lack of motivation to read and help them overcome reading difficulties. This strategy can be applied in secondary schools, especially in the Independent Curriculum learning (Mukhibat, 2023). It will make it easy for teachers to provide learning that helps students achieve their potential social, emotional, creative, and intellectual skills (Dapa, 2020). It is designed to help students identify and manage their emotions, supporting their development in creating a learning environment. If the learning environment is peaceful and comfortable, it can support comprehensive learning and improve reading skills. This approach also helps students to learn at their own pace and creates a more inclusive learning environment. Implementing this strategy will also help sustainable learning activities for all stakeholders, both teachers and students, to face the challenges of reading in the world of learning, whether inside or outside the classroom.

This study also found that DI has a long-term impact on students. Implementing this strategy has obvious benefits, particularly in terms of enhancing students' capacity for learning (Hasanah et al., 2022). One benefit is increasing students' learning satisfaction because they are fully engaged during learning, and the contribution of learning needs and accommodations is also in accordance with their abilities and preferences. This finding is supported by research by Liou (2023), which found that differentiated learning can effectively improve students' learning outcomes and satisfaction with their learning. Therefore, it is essential to design learning that recognizes and accommodates the students' diverse needs, giving them attention, support, and satisfaction throughout the learning process.

This research also was aimed at exploring intermediate learners' perceptions of the reading, and their identification of the main ideas through the implementation of the BTCL. The core category "Growing as an active reader" disclosed how the implementation of the BTCL

enhanced the reading comprehension process by first 'Fostering Motivation towards Reading' as participants depicted certain motivational features to reading that came up as a result of learners' freedom to choose and develop their bias reading tasks according to their individual preferences. These motivation factors were decision-making and creativity. In fact, participants felt more motivated and engaged in reading and finding the main ideas as they could select their tasks to represent such ideas by exploring different materials and being as creative as they wanted. As a consequence, instructors should provide tasks that are based on learners' proficiency levels. This tasks motivate learners to participate in their groups and the reading exercises. According to Merisuo-Storm (2006) "One has to know what texts appeal to students to be able to motivate them to continue reading." (p.7).

Additionally, the results indicated that BTCL was useful tool to foster perceptions in the participants when reading. It supports the study of Romanda (2020) that learners' motivation for 12 reading developed with corroborating peers about the understanding of the text. According to Kamil, Manning, and Walberg (2002), "motivation is not a mere auxiliary to the process of reading comprehension, motivation actually fuels reading achievement" (p. 149). In other words, these tasks triggered motivation toward reading helping the students find the main ideas and improve reading comprehension. On a closer look, the implementation of the BTCL proved to be an effective strategy to foster reading comprehension achievements and motivation. To sum up, the present research indicated that the BTCL may have a main role in intermediate EFL learners' reading improvement, because of the findings that using the BTCL was better than traditional teaching in improving learners' reading comprehension achievements.

## CONCLUSION

The research aimed to explore the effect of BTCL through DI on students' reading skills. The learning focused on addressing students' different needs that could affect their reading skills significantly. The results reveal the students' reading skills improved after implementing the

strategy, meaning that differentiated learning was effective. This implementation focused on the aspects of process, content, and product that help students improve their reading skills. Teachers can prepare different types of inquiries, incorporate various activities, and enhance students' learning experience by selecting reading assignments that suit their interests and levels.

The application of BTCL can also aid in helping students overcome reading challenges, and facilitating long-term learning. Thus, it is suggested that English teachers implement this strategy in their lessons. It may contribute to developing more effective, equitable, and inclusive learning methods based on the student's needs and capabilities. Future research is suggested to explore students' difficulties while implementing differentiated learning.

From what has been claimed above, the researchers concluded that the implementation of the BTCL during reading instruction enhanced the participants' identification of main ideas by fostering motivation toward reading, and subsequently boosting the reading comprehension process. In this case, the use of the BTCL as a way to differentiate reading instruction helped students grow as active readers able to identify main ideas and activate their schemata. However, the size of the sample is limited, and the sample size represents students from two institutes therefore, the findings cannot consider the whole population of EFL learners. Future research should address a large sample size to obtain persistent findings in order to represent the total population of EFL learners in Iran.

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