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Research Paper

## Teachers' Perception Towards Differentiated Instruction Approach in Secondary Schools of Namangan City

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### Abstract

The study investigates English language teachers' beliefs and perceptions in understanding the notion of differentiated instruction strategy in secondary schools in Uzbekistan. To achieve this, the researchers designed a questionnaire consisting of 3 parts, a question list for semi-structured interviews and an unstructured observation sheet. The instruments were used after having verified their validity and reliability. Our teachers participated in the research who took the questionnaires, 20 sub-samples were interviewed and 10 of them volunteered to conduct the classes per 2 observations, that is 20 observations in total. The results indicate that teachers have different points of view on differentiated instruction strategies based on their experience. There was a big difference among questionnaire and interview responses compared to what was observed in classes in terms of applying elements of Differentiated Instruction such as Content and Process. The analyses of data show that being familiar with DI is statistically significant toward the age, working experience, and grade currently teaching. The study recommends organizing workshops for language teachers to train them to differentiate instructions and increase their awareness of the strategies of differentiation along with organizing lesson observation of those teachers who already implement differentiated instructions in their classes.

**Keywords:** *Differentiated Instructions, Content, Process, Teacher's Perception*

### ادراک معلمان از رویکرد آموزشی متفاوت در مدارس راهنمایی شهر نمنگان

این مطالعه به بررسی باورها و ادراکات معلمان زبان انگلیسی در درک مفهوم استراتژی آموزش متمایز در مدارس متوسطه در ازبکستان می پردازد. برای دستیابی به این هدف، محققین پرسشنامه ای مشتمل بر 3 بخش، لیست سوالات مصاحبه نیمه ساختار یافته و برگه مشاهده بدون ساختار طراحی کردند. ابزارها پس از تایید روایی و پایایی آنها مورد استفاده قرار گرفت. معلمان ما در تحقیق شرکت کردند، 20 نفر با نمونه سوال فرعی مصاحبه شدند و 10 نفر از آنها به ازای هر 2 مشاهده، یعنی در مجموع 20 مشاهده، داوطلبانه کلاس را برگزار کردند. نتایج حاکی از آن است که معلمان بر اساس تجربیات خود دیدگاههای متفاوتی در مورد استراتژی آموزشی متفاوت دارند. تفاوت زیادی بین پاسخهای پرسشنامه و مصاحبه در مقایسه با آنچه در کلاسها مشاهده میشد، از نظر کاربرد عناصر آموزش متمایز مانند محتوا و فرآیند وجود داشت. تجزیه و تحلیل داده ها نشان می دهد که آشنایی با DI از نظر آماری نسبت به سن، سابقه کار و درجه تدریس در حال حاضر معنادار است. این مطالعه سازماندهی کارگاههایی را برای معلمان زبان توصیه میکند تا آنها را آموزش دهند تا دستورالعملهای متمایز را آموزش دهند و آگاهی آنها از استراتژیهای تمایز را افزایش دهند، همراه با سازماندهی مشاهده درس از معلمان که قبلاً دستورالعملهای متفاوتی را در کلاسهای خود اجرا میکنند.

**واژگان کلیدی:** دستورالعملهای متمایز، محتوا، فرآیند، ادراک معلم

### **Introduction and Literature Review**

Language classrooms are becoming more and more diverse in terms of culture, language, abilities, interests, and even ethics. The approach which takes into account individual differences has been known amongst educationalists as Differentiated Instruction (DI) (Siddiqui & Alghamdi, 2017. p.89). The importance of differentiated instruction is indisputable. Differentiated instruction is one of the approaches that provide a teaching opportunity appropriate for the students' differences and considers these differences (Karadag & Yasar, 2010). It is a key component of pedagogy and as an umbrella term that refers to instructional strategies designed to meet the needs of diverse learners (Nazzal, 2014). According to Tomlinson (2001), the most basic level of differentiation is when the teacher responds to variance among the learners by varying his/her teaching in order to create the best learning experience that is possible.

Differentiated instruction strategy has long been a question of great interest in a wide range of fields of education such as mathematics, chemistry, biology, language learning, and including inclusive education (Chamberlin, 2011; Chen & Chen, 2017; Kousa & Aksela, 2019b; de Graaf et al., 2018; Haelermans et al., 2014; Strogilos et al., 2018; Mertoğlu, 2020; CELIK, 2019). What we know about differentiated instruction strategy is largely based upon empirical studies that investigate how it is beneficial in teaching and learning environments. A number of differentiated instruction (DI) structure researches have presented findings on the benefits of DI in a language class (Dixon et al., 2014; Karabag & Yasar, 2010; Dosch & Zidon, 2014; Siddiqui & Alghamdi, 2017; Turner et al., 2017).

According to Karadag and Yasar, a qualified language education requires taking the students' individual differences, interests, and skills into account. One of the important areas that learners show differences in language acquisition is individual (Karadag & Yasar, 2010, p.1394). Empirical studies have found that differentiated instruction leads to students' positive attitudes towards the course, learning success, and particular improvement for low achievers (Karadag & Yasar, 2010; Siddiqui, 2017; Aliakbari&Haghighi, 2014; Jing-Hua Chen & Yi-Chou Chen, 2017; Dosch & Zidon, 2014).

Aldossari states that students come to the classroom with different abilities, readiness, and interests which indicate "the multi-level differences among learners" (2018). A primary concern of differentiated instruction strategy is taking into consideration the abilities as well as interests of each learner and for this reason, it has received considerable attention within education systems and across a number of disciplines in recent years. It was revealed that the differentiated instruction approach had a positive effect on the students' interests and attitudes towards taught courses (Karadag & Yasar, 2010, p.1397). Many teachers could improve their teaching by focusing on methods to differentiate content, process, and product (Nazzal, 2011. p. 24). According to Tomlinson in a differentiated classroom, the teacher proactively plans and carries out varied approaches to content, process, and product in anticipation of and response to student differences in readiness, interest, and learning needs (2001, p.7). Moreover, differentiated instruction is an excellent guide to learner-centered learning based on content adaptation (what is taught), processes (how it is taught), and outputs (evaluation and instruction), with a view to promoting integrated learner growth (Aldossari, 2018). A teacher can be considered as a director who will operate the process. To identify the differences and individual qualities among students, the instruction must be adapted to each student's individual strengths and needs so they can more easily master their designated goals. But very few teachers could define the concept of differentiated instruction and some basic concepts that formed this concept accurately and completely (Piltan, 2016).

It is worth noticing that differentiation is a strategy of the teachers, rather than the students, to manage and direct the students (Aliakbari & Haghighi, 2014). Teachers who utilize differentiated instruction take into consideration multiple aspects of learners to best meet their educational needs (Dosch&Zidon, 2014). To differentiate within the classroom, the teacher has to engage in multitasking. The teacher must level the work to facilitate maximum understanding for the students. Indeed, modifications are never easy. In

fact, addressing different levels of student readiness, process skills, and product determination can be challenging for teachers (Dixon et al., 2014).

Literature review shows many challenges because of the wide spectrum of students' differences, needs and concerns, along with patterns of thinking (Aldossari, 2018) that make teachers struggle to implement instructional approaches to address the needs of students (Islam, C., & Park, M., 2015). These differences require teachers to respond using a variety of approaches (Aldossari, 2018). However, teachers who tried DI in their classes stated that they considered the approach applicable as it provides active learning environments, is student-centered, will influence student motivation and academic achievement positively. It is appropriate for integration classes and in terms of the structure of the instruction program (Pilten, 2016).

Tomlinson (2010) states that teachers can differentiate their instructions with regards to content, learning process, and learning product. Unfortunately, such differences do not appear to be addressed through the instructions of all teachers. Chamberlin in his article (2011) "The Potential of Prospective Teachers Experiencing Differentiated Instruction in a Mathematics Course" indicates that most teachers, including prospective teachers, struggle with addressing learner variance in the classroom (p.134).

The interface of teachers' classroom instructions and learners' abilities, interests, and levels lead to extensive research focusing on the instruction strategies. Considering the mixed ability of learners, there is a big need to implement DI strategies in secondary school classes in Uzbekistan. Few studies have systematically evaluated the use of DI strategy in EFL classes in secondary schools of Uzbekistan. Relatively little research has been carried out on teachers' beliefs and perceptions towards DI strategy and even less on its positive effect on students' achievement. This indicates a need to understand the various perceptions of DI strategy that exist among English language school teachers in Namangan city of Uzbekistan.

The study aimed to address the following two research questions:

**RQ1:** Do teachers use differentiated instructions in their classes?

**RQ2:** How and why do they differentiate instructions or do not?

**RQ3:** What are teachers' perceptions about differentiated instructions?

It is important to understand how teachers actually differentiate instructions in the Uzbek context and what their beliefs about DI are.

### Methodology

The research aims to investigate what elements of differentiated instruction teachers in Uzbekistan use as well as to find out teachers' beliefs and their level of awareness of the DI strategies. Combinations of quantitative and qualitative approaches were used in the data analysis. The study was designed in a mixed way consisting of a questionnaire to explore what differentiated instruction is or is not for secondary school language teachers, lesson observations, and semi-structured interviews.

### Participants

Ten public schools located not far from the workplace of the researchers were chosen as a convenient and random sampling for the study.

One hundred English teachers of public schools in Namangan city volunteered to participate in the study and the purpose of the research was explained to them by providing an informed consent form. 10 English teachers of grade 7 were mostly recruited in the data collection process 10 of sub-samples per two classes were observed; 20 interviews were taken of which 10 were those participants whose classes were observed and the other 10 are sub-samples who agreed to be interviewed and were involved into the questionnaire process along with other 90 participants. Grade 7 students are another criterion sampling because the students at this age are able to understand and fulfill the instructions given by the teacher and participate in activities independently and actively.

**Table 1***Participants, N=100*

Years of teaching experience	Gender	Age	Grade currently teaching
	N		N
M=10.29	Male 14 Female 86	M=33.76	Primary = 16 Secondary = 22 High = 10 Combination = 42 All = 10

### Data Collection Tools

Data were collected using a semi-structured interview, questionnaire, and observation. The questionnaire was designed by adopting *A Resource Guide for Differentiating Curriculum, Grades 9–12* (pp. 14–15), by Carol Ann Tomlinson & Cindy Strickland (2005), and the participants were asked to respond using a 5-point Likert scale ranging from “never” to “always”. The questionnaire was designed to measure the following constructs: Content and Process. It contained 38 questions about differentiated instruction elements as well as demographic information about the teacher. For the purpose of determining teachers' beliefs of DI strategy semi-structured interview was conducted. It consisted of 21 questions which started from the questions that helped to create a warm atmosphere and followed the questions on using DI elements in English classes. One significant advantage of using semi-structured interviews is that “it offers a compromise” between the interviewee and interviewer (Dorney, 2007, p. 136). To find out if teachers actually use DI strategies in the current classes, observations were conducted and made necessary notes on the observation sheet created by the researchers that contained the teacher actions column and the student actions column. The questionnaire and interview were translated into Uzbek and Russian in case the teachers would like to use L1. To ensure the validity of the questionnaire and interview forms in Uzbek and Russian languages they were piloted with the participants of the project “Scholarly research and publications in ELT in Uzbekistan”. The pilot interviews were conducted informally by the trained interviewer and made changes to make interview questions valid.

### Data Collection Process

#### Observation

To better understand what DI elements teachers use in their classes one teacher per school was observed twice in order to establish the reliability of the observation. Each observation lasted 45 minutes. In total 10 teachers and 20 observations were conducted in grade 7. To confirm the validity of the process researchers took notes individually and then compared and combined their findings afterward.

#### Interview

Qualitative data were collected using a semi-structured interview that lasted 15 minutes with each teacher. The interviews were recorded and transcripts were made. In total 20 teachers were interviewed, 10 of them were the participants whose lessons were observed in grade 7, and the rest 10 who volunteered.

#### Questionnaire

Ten teachers per school, in total 100 teachers from ten schools were asked to complete the 38 question survey about DI elements to find out if they use or not in teaching. The demographic questions asked teachers' age, year of experience, current teaching grades, the place of graduation, and if they have ever studied abroad.



To preserve anonymity, the participants and their answers were coded in the codebooks as T1, T2, T3, ...T100. Participants were thanked for their time, effort, and contribution to the research.

## Results

From Table 1 it can be seen that the sample consisted of 14 male and 86 female participants, the total is 100 with teaching experience of 5 months in minimum and 40 years in maximum (average experience  $M=10.29$ ). Table 1 also shows 33.76 years as the average age of teachers between 22 and 61 years. Questionnaire results gave us information about teachers' classes currently teaching during the experiment that some teachers have language lessons only in primary grades (1-4), some teach secondary school grades (5-8), and some teachers were conducting English lessons with high school students (9-11). Additionally, the most interesting thing for us was that some teachers had language classes with Primary and Secondary; Secondary and High; Primary and High, and even Primary, Secondary, as well as with High school grades. Furthermore, the idea that training which teachers got abroad might affect their perception about differentiated instructions was the reason to ask (training in Russia), but the number of teachers was only 2, so this is not a factor to consider (Table 2).

**Table 2**

Frequencies for Have you ever studied another country?

Have you ever studied in another country?	Frequency	Percent	ValidPercent	CumulativePercent
No	98	98.0	98.0	98.0
Yes	2	2.0	2.0	100.0
Missing	0	0.0		
Total	100	100.0		

**Table 3**

*Independent Sample T-Test Questionnaire*

	Test	Statistic	df	P	Mean difference	SE Differenced	Cohen's d
Familiar with DI	Teacher	-0.602	98.00	0.549	-0.125	0.207	-0.173
	Welch	-0.667	19.10	0.513	-0.125	0.187	-0.182

Table 3 shows the two computed t-statistics (**Teacher and Welch**). Both show that there is not a significant statistical difference between the two groups ( $p<0.5$ ) and Cohen's d suggests that this is not a large effect.

Lesson observations inform us about frequently used DI elements by English language teachers of secondary schools of Namangan city (Table 4). The observation was based on two elements of differentiated instructions out of five provided by Tomlinson & Strickland (2005).

**Table 4**

*Descriptives of Content DI Elements Observation*

	N	Mean	SD	SE
provide small-group instruction for advanced students.	1.000	1.000	NaN	NaN
provide small group instructions for students who have difficulties in learning the material.	4.000	1.000	0.000	0.000
use texts with highlighted key parts.	1.000	1.000	NaN	NaN
use video materials to supplement and support explanations and lectures.	1.000	1.000	NaN	NaN



provide a list of keywords for reference during note-taking.	6.000	1.000	0.000	0.000
provide materials for encouraging further study of topics of students' interest.	2.000	1.000	0.000	0.000
provide visual, auditory and kinesthetic materials.	4.000	1.000	0.000	0.000
use examples and illustrations based on students' interests	1.000	1.000	NaN	NaN
teach from whole to part	1.000	1.000	NaN	NaN
teach from part to whole.	1.000	1.000	NaN	NaN

The interview was conducted with 20 teachers 10 of whom were observed as well while the rest 10 sub-samples volunteered. A grounded analysis of the interviews reveals that when teachers provide materials, they utilize audios that were mentioned 13 times and visuals 15 times. The reasons for utilizing audios are such as the requirement of the authority (11 times), for improving listening comprehension (5 times), and to interest the learners (5 times) while visuals are used for explanation (9 times) and for increasing the students' interest (8 times). Whereas, the Q8 "Tell us about a typical lesson in your class. What kinds of activities do you use?" reveals that most teachers have grammar and vocabulary activities (18 times), translation exercises (12 times), organize games if there is extra time and space (7 times), devote time to ask homework (5 times) and explain the new theme (5 times) and twice listening activities were mentioned during the interview.

When the researcher analyzed participants' responses on the importance of considering learning styles in their lessons and their reasons it was found out that most teachers take learning styles into consideration (15 times) whereas the answers for the question "What is Learning Style?" were the followings:

- learning style is when students learn from reading, writing, listening, and speaking (11 times)
- somebody's learning style is learning words, grammar, translating skills, some learn by doing exercises (twice)
- teaching methodology (4 times)

Some teachers showed that they have some idea about learning styles but cannot consider it on a daily basis, for example, T 18 says "*I have difficulty in providing materials for kinesthetic learners. Maybe that is why they are mostly weak students...*", and T 13 "*... not always. Because as you can see my room is not enough large...*".

Most teachers (18 times) reported that they use grammar and vocabulary exercises and provide students with «keywords» and «grammatical formulae», as T 12 explains: *«Mostly we do vocabulary exercises. Because the more words they know in English the better he knows English, in my opinion, and I give them the list of keywords and we translate them together and also I give a lot of grammar exercises». And the materials used in the classroom are said to be chosen according to the theme provided in the curriculum (20 times) and only in some cases according to the learners' acquisition abilities or interests (3 times)*

In the question on accounting for gifted students, 16 responses were about giving them more difficult tasks, 11 were about providing them extra tasks, 11 were about working with them mostly in the same way and 6 responses revealed that teachers provide extra classes for gifted ones. While Tomlinson says in her (2001) "How to differentiate instruction in mixed ability classes" that it is just tailoring that is often just not enough (p.3).

Further questions were about students who struggle with learning and the answers such as "They are mostly not interested in the subject" (6 times), "It should be an extra explanation for them" (5 times), "to encourage them I put a bit high marks" (5 times), "I provide extra classes for them" (4 times) were gathered and T 11 exclaims "when you schedule extra classes for them, believe me, they never come..."

**Table 5**  
*Descriptive of Process DI Elements Observation*

	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>
give students time to think and reflect before answering.	2.000	1.000	0.000	0.000
make task directions more detailed and specific for some learners and more open for others.	1.000	1.000	NaN	NaN
provide materials to students in their native language who are learning the second language.	9.000	00	0.000	0.000
provide homework based on students' readiness.	1.000	1.000	NaN	NaN
vary the pace of student work.	3.000	1.000	0.000	0.000
use interest-based working groups and discussion groups.	2.000	1.000	0.000	0.000
allow students to specialize in aspects of a topic that they find interesting and to share their findings with others.	2.000	1.000	0.000	0.000
encourage students to work together or individually.	8.000	1.000	0.000	0.000
balance competitive, collegial, and independent work arrangements.	1.000	1.000	NaN	NaN

Another important finding related to interaction patterns such as group work, pair work, and individual work that are considered as elements of Differentiated Instruction are utilized in English classes (3 times), and T 13 says "*We try to have pair works, group works, for example, today in Grade 9we had a debate lesson to give every pupil the same opportunity to speak*".

The questions about using L1 in EFL classes, its purposes and the approximate time L1 used was answered positively by 17 participants for explanation purposes (12 times), so that students could understand (14 times), for translation (5 times) and the average time L1 used during the lesson is 20-29 minutes out of 45 minutes which is the length of the lesson in Uzbekistan. Thus, it can be interpreted that learners lack an English environment for improving their English. This can be proved by the observations as well. As in almost all observed lessons teachers provided explanations to students in their L1 which is considered Uzbek.

Another question of the interview that required teachers to think if all students in a class need the same activities and instruction or different students (even in the same class) can have different needs was answered "the same according to the textbook"(11 times); "extra «support» to weak students (11 times) such as extra tasks, extra time, extra help, easy tasks, ask them more often; and extra support to strong students (6 times) such as difficult theme, difficult task, more tasks, and less time. When it was asked about managing students in the same class with different reading abilities 14 teachers responded as "*The same text to everybody*" and some of 14 teachers (6) commented, "*I ask them to read the same text, if they read incorrectly, I correct their pronunciation*".

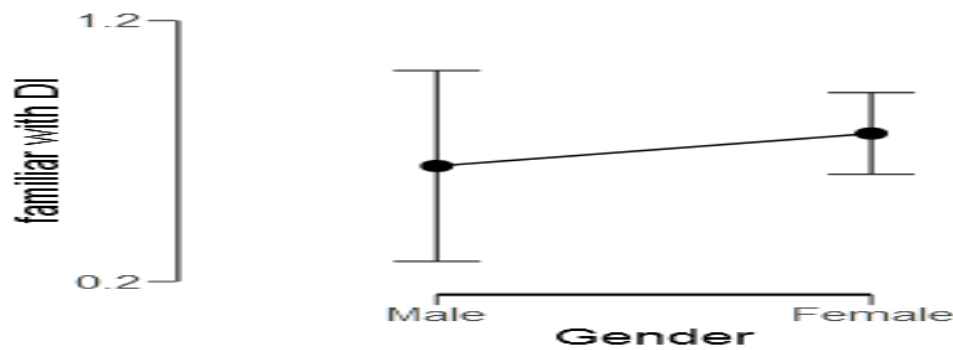
It also was observed that during the lessons students were encouraged to work together or individually often (Table 5) while teachers provide materials according to students' learning styles sometimes to provide small-group instructions for struggling students (Table 4).

The correlation between familiarity with DI and gender was tested using an independent t-test (Table 6).

Teachers seemed to be aware of elements of DI strategy and claimed that they use differentiated instructions, in particular with weaker students. They also maintain that they are familiar with differentiated instruction teaching strategies; however, when reference is made to their classroom practice, the participants seemed to demonstrate inadequate knowledge and tend to use a rather limited repertoire of teaching strategies.

**Table 6**  
*Group Descriptive*

	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>SE</b>
familiar with DI	Male	14	0.643	0.633	0.169
	Female	86	0.767	0.730	0.079



An independent t-test showed that females and males have almost the same opinion and beliefs about DI strategy  $t(98)=0,6$ ,  $p<0.54$ . Cohen's  $d(-0.17)$  suggests that this is not a large effect. However, there is a big difference in the number of male and female participants.

Paired sample T-tests were used to analyze the relationship between being familiar with DI and working experience, age, gender, teaching grade, and training (Table 7).

**Table 7**

*Paired Samples T-Test Questionnaire*

	<b>W</b>	<b>P</b>	<b>Hodges-Lehmann Estimate</b>	<b>Rank-Biserial Correlation</b>
familiar with DI - Teaching Experience	1.500	< .001	-9.000	-0.999
Familiar with DI - Age	0.000	< .001	-32.000	-1.000
Familiar with DI - Gender	622.000	0.162	-2.263e-5	-0.754
Familiar with DI - Training in Russia	NaN			
Familiar with DI - Gradelevelcurrentlyteaching	34.500	< .001	-3.000	-0.986

Note. Wilcoxon signed-rank test.

<sup>a</sup> Variance = 0 in Training in Russia

Paired Sample t-test (Table 7) shows that the Wilcoxon W-statistic is highly significant,  $p<0.001$  in terms of experience, age, and grade level currently teaching. However, paired t-test between familiarity with DI and gender is not significant, additionally; the variance of getting training in Russia is zero. Rank-Biserial Correlation shows a trivial effect size of all pairs.

## Discussion

The purpose of the current study was to determine school teachers' beliefs and perceptions towards a differentiated instruction approach. The study also sought to clarify the reasons for utilizing DI strategies





during the classes to find out if teachers use and understand why they do so. This study has found that generally, teachers are not so much aware of DI; teachers are textbook oriented; teachers assume that they are conducting lessons in a communicative approach but in reality, it can rarely be observed. The research has also shown that teachers mostly utilize the Grammar-translation method using L1 a lot and in consequence, learners do not have access to English; there is little opportunity for students to interact; grammar and vocabulary are taught at word level or in sentence-level rather than in context. Also, it can be seen that teachers seldom experienced differentiated instructions in their teacher preparation programs reason this is believed pre-service teachers were almost never encouraged to differentiate by education professors, university supervisors, or master teachers and had few if any, opportunities to see multi-tasking classrooms (Logan, 2011). For differentiated instruction to be able to be applied more effectively pre-service teachers should receive efficient education before graduating from the university and teachers should attend in-service training (Yenmez & Özpınar, 2017). What is curious about the study result is that being familiar with the DI strategy is statistically significant in terms of teachers' experience, age, and grade level currently teaching. However, the findings of the current study do not support the previous research.

The study results conducted by Moosa and Shareefa (2019) showed that knowledge of DI does not necessarily increase with a number of years of teaching experience, nor with the number or level of qualifications obtained by teachers. In research from Kousa and Aksela(2019), we also can be informed that teachers use a considerable number of differentiated methods and materials already in order to support the diversity of students, although teachers believe that they are not sufficiently educated in order to meet the needs of students. On the other hand, the responsibility of implementing differentiated strategies does not fall only on teachers, but joint and coordinated efforts are required from all stakeholders of middle schools to make it possible. Teachers find it toilsome to implement differentiated instructions due to classroom management issues where discipline is the main problem (Aftab, 2016).

The evidence from this study suggests that based on the comparison of questionnaire, interview, and observation results, it is felt that more training and experience with the technique will be helpful. Carol Ann Tomlinson advised that teachers simply cannot differentiate for every student, which is known as individualized instruction; they plan differentiated instruction on a particular time or "zone", depending on students and their needs so that students cluster beneficially (Nazzal, 2011). Although changing teachers' instructional habits requires time (Smit, 2012), teacher efficacy and professional development is important to teachers in the process of differentiating instructions (Dixon, 2014).

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