

**The Reality of Practicing Differentiated Learning in Gifted
Classes from the Perspective of a Gifted Student and Her
Associates**

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The Reality of Practicing Differentiated Learning in Gifted Classes from the Perspective of a Gifted Student and Her Associates

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Abstract: The study aims to identify the reality of practicing and applying differentiated learning for gifted students through adopting the following: a survey descriptive approach in which a set of qualitative instruments such as interviewing a gifted student, a quantitative instrument, a questionnaire for teachers of the gifted, an observation instrument and the document analysis instrument to check what female teachers present with regard to professional practice of differentiated learning in gifted classes. From the perspective of the gifted student, practicing differentiated learning in gifted classes was not as expected. Contrary to that, teachers' responses, according to the questionnaire, showed that they did. The use of the observation instrument was to perceive the practice from another perspective. The study concluded that practicing differentiated learning by teachers was lacking, as they continued to use traditional methods of teaching. To ensure teachers' understanding of the concept of differentiated learning, the document analysis instrument was used. It was clear that the professional training offered by the school and training office was relatively good, but the real practice didn't cope with its quality.

Keywords: Differentiated learning; Gifted; Gifted classes; Teachers

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1- Introduction:

Learning, provided to all students irrespective of the group to which they belong including the gifted who have exceptional potentials, dictates using active numerous methods that cope with modern education taking into consideration students' variance pertaining their qualities, abilities, and needs. Such a thing reinforces their love for learning which enables them to actively deal with difficulties and challenges. Thus, whenever anyone goes back to the document of National Council of Teachers of Mathematics (NCTM) (2000), he finds that it assures the principle of justice which stresses on providing equal opportunities for all learners taught via differentiated learning which observes individual differences, measures previous knowledge, and cares for their desires, interests, and concerns. It should be clear that justice doesn't mean that everyone gets the suitable method of learning, or that all should be taught via the same method. Differentiated method is not a new technique or strategy for teaching the gifted, but an amalgam of several old ideas and philosophies. The term differentiation appeared for the first time in one of the books of Virgil Ward in 1961. (Blaz, 2013) pointed out that at the advent of differentiated learning, it was assigned for the students who excel in various fields, but later teachers used it for all kinds of students, irrespective of excellence.

It is noted that history of differentiated learning extends for three decades, thus consuming a long period of experimentation and implementation. Literature relevant to students' differentiated learning is still undecisive, even the idea itself generates discordant explications of practice (Olenchak, 2001). In 2010, the Ministry of Education in Saudi Arabia attempted to qualify its employees in two fields (active learning and differentiated learning). The reason behind that was to provide male and female teachers with the proficiency needed for practice to make a difference in students' results and to shun the

traditional exhausted classroom practices. In fact, the objective of the current study is to identify the impact of qualifying teachers on the needs of the gifted and the right for every student to get learning propitious for him.

Due to the accelerating changes which learning faces, that surely will influence the educational system by creating difficulties that should be solved through reconstructing that system. The reconstruction covers programs, teaching methods, and strategies that make the learning process influential and satisfy the desires of all classroom students. The Ministry of Education in Saudi Arabia ascertains that the major element of the educational process is the students (learners) and the differences among them lie in their ability to learn in compliance with their capabilities including the gifted ones who still have differences in potentials, inclinations, and needs (Plucker & Callahan, 2008). Some believe that individual differences only exit in normal classes but disappear in those of the gifted. In fact, that is not true for those differences will be more difficult to distinguish in gifted classes due to past mental and social backgrounds that differentiate one student from another. We have to notice the range of difference between one student and another in gifted classes. We have to notice the difference between a gifted student with 135 degree of intelligence and another one of the same categories whose degree is 170. This imposes the kind of method to be used in dealing with such a difference (Gentry, 2014).

Therefore, it has been necessary to adopt new techniques and methods of learning that suit the new trend of modern education which necessitates satisfying the needs of all students, including the gifted. The prioritized learning is the differentiated.

The objective of the study is to identify the real application of differentiated learning in gifted classrooms.

Therefore, the study attempts to answer the following questions:

- 1- What is the reality of applying differentiated learning in classes of gifted females from the perspective of a gifted one?
- 2- What is the reality of applying differentiated learning in gifted classes from the perspective of teachers of the gifted student?
- 3- What is the reality of teachers' practice for differentiated learning in gifted classes?
- 4- Was professional qualification provided for teachers of differentiated teaching of the gifted?

1.1 Theoretical frame work:

1.1.1 Differentiated learning

This type of learning has never been a new phenomenon. In fact, some writings, related to learning called for differentiated learning and for satisfying the various needs of learners, were found with the ancient Egyptians and Greeks. In the past, even the one-class school found its way to meet the needs of variety of students through activating different potentials. It is noteworthy that differentiated learning existed two decades ago, but it was assigned for the gifted and the mentally outstanding students. (8-10) years ago, teachers used it in special education and later was used for all kinds of students (Al-Halisi, 2012). (Kojak, et. al., 2008) reported that the idea of diversifying teaching started in 1986 when the child's rights document was proclaimed. In 1990, the international conference on education was held at Junitan, Indonesia; it was followed by Dakar Conference in 2020 which recommended teaching for differentiation and differentiation for all. The recommendations of those conferences stressed on the differences between general learners and students who learn through different methods. Therefore, it was necessary to diversify

curricula and teaching methods to enable all learners to obtain the learning that copes with their potentials and helps them to accomplish the best within the framework of their capabilities (Kojak, et. al., 2008). In fact, history of differentiation can be traced back to earlier periods as Differentiated Instruction Theory goes back to Social Constructivism for which Vygotsky laid the foundations. That theory encouraged reinforcing students' positive participation in learning and in correlating their knowledge with their ambience which involves peers (Al-Rashoud & Nofal, 2017). The general goal of differentiated learning is to take into consideration the various different levels of learners which (Attia, 2009) defined as an educational system whose aim is to achieve a uniformed educational outcome through using different process and tools. Thus, it goes along with multi-intelligence teaching strategies which is one of the strategic forms by which it is accomplished (Obeidat, & Abul-Sami, 2007) defined it as the teaching that aims at upgrading the level of all students, not only those who face problems in acquisition. It is a school policy that takes into account individual's qualities and past experiences to increase students' potentials.

1.1.2 Differentiated learning: Its significance and theoretical foundations

This type of learning is based on the constructive theory. Through readings, reviewing and investigating relevant literature on the concept of differentiated learning, one can tell that there are four different types of research that shed light on the issue. They are those that tackle brain and intelligence, in addition to those of Eric Johnson on brain challenge, Steinburg's on successful intelligence, besides Gardiner's researches on multi-intelligences. The significance of differentiated education lies in helping students to solve their problems, even in differences of the following elements: home ambience,

culture, school expectations, experiences, meeting school requirements, and methods of perceiving learning (Al-Rahi, 2014).

1.1.3 Elements and procedures of differentiated learning

(Tomlinson & Allan, 2000) pointed out that elements of differentiated learning lie in three major factors which reinforce differentiation process among students as incorporated in the following:

- Content: Differentiation of the content is in fact diversifying the method used in presenting the scientific material with the addition of some sort of complexity to meet all capabilities, taking into consideration the methods students prefer.
- Procedure: It means the differentiation process which, through teaching methods and educational activities, makes students think at higher levels and interact with each other. It also includes academic environment and available technology, that will be a catalyst for student's interaction founded on learning patterns, besides students' inclination and interests.

Outcome: The differentiated outcome is associated with the students' presentation of what they have already learnt in compliance with patterns of learning. Accomplishing such a thing should be through goals and methods in order to realize evaluation for all students.

The preceding three factors through which differentiation is obtained must cope with certain procedures to be successful. These are: pre-evaluations which constitute the first step of planning as they provide the teacher with differences between students that can be identified through data collection. Second, put down the objectives to be achieved based on the variance revealed in the first step; third, meet students' needs in accordance with the identified variance and choose the teaching methods and the various activities set to be accomplished, fourth, evaluating product of the learning process.

1.1.4 The Relation between differentiation and the gifted

Differentiated education became a mode that educational systems recommend to use so as to cope with the education every student need in classroom. It also respects the needs, interests, and students' abilities to excel in education (Yatvin, 2004). Differentiated education requires teachers to take into consideration differentiated content, evaluation instruments, performance tasks, and education strategies (Chick f Hing, 2012). Some might think that individual differences only exist in ordinary classrooms and vanish in classrooms of the gifted, but that isn't true because individual differences and variance increase in gifted classes as mental abilities, social backgrounds, and past experiences are what differentiate one student from the other. How about students whose abilities are higher than average? One needs to note the range of difference that exists in gifted classes between a student with 135 degrees of intelligence and another student of 170 degrees, though both are classified gifted. One thus, needs to imagine the range of variance and the urgent need required to deal with such a difference (Gentry, 2014).

1.1.5 Methods of providing differentiation to gifted students

There are methods for implementing differentiated education among gifted students. These are enrichment and acceleration; the former implies that the individual tackles with some depth a subject such as virtual and real field trips, independent studies, contests, summer programs, and many others. Such opportunities and methods help remove learning ceiling for the gifted which combines skills in the learning process. Acceleration implies individual's transcendence of topics he already knows and proceeds to the following subject that suits his potentials in terms of complication and depth. Acceleration has different types: topic acceleration like (curriculum compression), and time acceleration such as advanced classes or college level courses. Grouping has

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numerous forms, one is time resilient year-round, and the other is that which complies with the interests and potentials of the gifted. One can say that the grouping type depends on the selected acceleration and enrichment. Table (1) that follows elucidates methods of acceleration and enrichment referred to by (Gentry, 2014). The National Association for Gifted Children (NAGC) warned in 1994 against depending only on one of these activities without the other.

Table (1): Methods of introducing differentiation to gifted students

Enrichment	Acceleration
Lists of options	Curriculum compression
Kaplan's model for degree of depth and complexity	Subject specific acceleration
Learning via problem solving	Class transcending
Free study or hobby project	Free study and aspects of verification
Graded study	Graded study
Trio-enrichment model	
Grouping	

2- Methodology

To achieve a complete analysis and to get answers to study questions, mixed methods were adopted for they combine qualitative and quantitative instruments for analyzing the data. The study also adopted the contrast parallel design which blends qualitative and quantitative data. These methods were used to provide a comprehensive interpretation for the study problem and for the contradictions in overall results (Taghipoorreyneh & De Run, 2019). One quantitative instrument and three qualitative ones were used. Reliability standards were taken into consideration for the qualitative instruments of the study as stated by (Lincoln & Guba, 2007), which were as follows:

- 1- Credibility as presented in Triangulation through eliciting data for applying evaluation to the same program from different perspectives of: an education supervisor from the gifted department, a class teacher, the person in charge of the gifted, and a gifted student so as to achieve more accurate results through comparison of perspectives.
- 2- Transferability: This instrument assures that study results can't be generalized for they are weak, but they might attract the attention to an important research issue that there is a gap in the researchers that tackled the gifted curriculum.
- 3- Dependability: It is an accurate detailed description of study procedures given for the sake of evaluation, or for future benefits.
- 4- Confirmability: This is achieved through triangulation and encouraging respondents to give their opinions. The study won't show any bias towards any opinion while processing the data.

2.1 Participants and procedures

The participants were identified in accordance with standards of participation selection which stipulates that the student should be a product of the national project for detecting the gifted, besides the opinion of teachers who taught her courses. School administration gave its approval to conduct the interview with the gifted student and a time propitious for the students was set. Interview time covered one hour and the audio data were transcribed. A questionnaire was distributed to eight teachers who taught that gifted student. Teachers' performance of practicing differentiated learning by female teachers of the third intermediate level of the gifted was observed. The activity lasted for two weeks in which information was recorded by the researcher. Documents relevant to differentiated learning were investigated and the researcher was able to get some of the documents on professional qualification, class planning,

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education publications, and outer courses. Data were analyzed, results were elicited and discussed in order to come up to recommendations. Table (2) provides a general outlook about the methodology; the first column stands for study questions, column two for the sample and the third stands for the instruments used for answering the identified research questions.

Table (2): Method Overview

Research questions	Sample	Instrument
1-What is the reality of applying differentiated learning to gifted classes from the perspective of the gifted students?	One gifted student	Interviews
2-What is the reality of applying differentiated learning to gifted classes from the perspective of teachers of that gifted students?	8 teachers who actually taught the gifted students	Questionnaire which comprises (35) items under the axis of the reality of applying differentiated learning in classrooms Observation
3-What is the reality of teachers' practice of differentiated learning in gifted classes?	8 teachers who actually taught the gifted student	Observation
4-Was professional qualification provided for teachers of differentiated learning for gifted classes?	Documents of professional training, written preparation, qualification, practical experience, electronic publications	Document analysis

2.2 Setting and materials

2.2.1 Interviews

To achieve objectives of the study, the researcher used the interview instrument to identify reality of applying differentiated learning, from the perspective of the gifted student, on the study a problem to be investigated by the current study. (Lincoln & Guba, 2007) pointed out that the interview is important for collecting information from human sources. Questions of the questionnaire were designed by the researcher after reviewing literature on education. The interview comprised four basic questions on (content, processes, product, and evaluation). These are types of exploratory questions that will be addressed to the gifted student in a private session in which answers will be recorded.

2.2.2 Questionnaire

(Al-Baltan, 2017) questionnaire was used to identify the reality of applying differentiated learning, from the perspective of the gifted student associates (the teachers), to achieve objectives of the study, and to collect relevant information.

The questionnaire was verified for virtual validity by presenting it to specialized judges to ensure internal consistency through using Pearson's correlation coefficient to secure cohesion and unity of questionnaire items. The result revealed that all items were statistically significant at the function level (0.01) which indicated that correlation with the measured axis was high, thus reflecting the validity of internal consistency. As for instrument reliability, it was verified by using Cronbach Alpha coefficient which amounted to (0.93) that assures a high level of the instrument to be applied, thus securing reliable results.

The questionnaire comprises (35) items within the axis of the reliability of applying differentiated education in classrooms. Items of the questionnaire are closed to comply with (Cohen, et al., 2008) questionnaires. The four-point Likert Scale, “High”, “Medium” “Low” and “Zero”, is one of the most commonly used ones according to (Ary et. al., 2002).

2.2.3 Observation

The second instrument used in collecting data for the study was direct observation which allows the researcher to better understand the context with which people interact. Observation also provides an additional insight into classrooms through direct observation that makes the researcher more open to discovery and induction as both the researcher and the observed are in the same place which make them less dependent on previously prepared projections (Patton,2002).

2.2.4 Document analysis

The document relevant to differentiated learning of the study sample was analyzed to answer questions of the current study. The documents are: the record of training courses of sample members, outer courses, in addition to academic qualification, practical experience, electronic publications, and teachers' written preparations.

2.2.5 Processes

After preparing questions and identifying the instruments, the following processes were executed:

- 1- Participants were purposively selected. The researcher chose (8) teachers and one gifted student from Al-Faisaleya Islamic school at Al-Khubar.

- 2- An approval to meet the student was given by school administration and time propitious for interviewing the students was set.
- 3- Interview time covered one hour and audio data were transcribed in writing
- 4- Eight questionnaires were distributed to eight teachers who taught the gifted student.
- 5- An approval for observing teachers' practice of differentiated learning was secured.
- 6- Teachers' performance in gifted classes of the third intermediate level was observed for two weeks in which the researcher wrote down notes.
- 7- Collecting documents related to differentiated learning: The researcher was able to go get some related to professional qualification, lessons' planning, education publications, and outer courses to be analyzed.
- 8- Analyzing results and discussing them to elicit some recommendations.

2.2.6 Statistical analysis

The data collected from the questionnaire were statistically analyzed. Frequencies, percentages, means, and standard deviations were computed. Response options were (High= 4, medium= 3, low= 2, and zero=1) through which reality of practicing differentiated learning of teachers in gifted classes was evaluated.

2.2.7 Thematic analysis

Thematic analysis was done to determine the points that reveal the range of practice for differentiated learning in gifted classes as viewed from the perspective of one interviewed student. (Braun & Clarke, 2006) pointed out that thematic analysis is one of the qualitative methods that determine data and help identify data patterns or themes.

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The first step of analyzing interview data is to read them in depth and to re-read them more than once. The second and third steps involve data coding in pattern and theme. The fourth step is to classify the coded data into a certain theme to review and analyze students’ responses. Those are presented in table (3) that includes (axis or subject, questions addressed, and responses of sample members, in addition to researcher’s comment). A general discussion of the interview results is presented afterwards.

Results

In answering the first question: “What is the reality of applying differentiated learning ...?” The explanatory analytical method was used to interpret responses of sample members as presented in table (3).

Table (3): Questions, responses, and researcher’s comment

Responses	Questions addressed to the gifted student	Student’s response	Researcher’s comment
Domain			
Content:	Do you have any idea of what the concept of differentiated learning mean?	In fact, I don’t know what you mean, but the word differentiation means variance. To enable the student, continue the interview a willingly, the researcher explained it regarding meaning and application	The answer reveal that the gifted student doesn’t have any background about the issue which contradicts with teachers’ responses it the questionnaire that they explained differentiated learning.
	Has the subject material been introduced in a way that suits your abilities, patterns of learning, and interests?	The content presented is just ordinary textbooks with nothing special. Only two books on math and science from king Abdul Aziz foundation for giftedness and creativity were added.	The books used were the regular ones assigned by the Ministry for this age group. Only two books of students who passed the project of detecting the gifted were added.

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Responses	Questions addressed to the gifted student	Student's response	Researcher's comment
Domain			
	Does the academic ambience change to meet the objective of knowledge given, or just for the sake of change like going to lab, library, or garden?	Sometimes yes, and others no because the science teacher might not be ready or when we want to don an experiment in the lab, we find it occupied so most work is done in class.	Place of learning is very important as it psychologically prepares the student for the learning process.
	Do teachers introduce or try to change methods of presenting knowledge to meet your learning methods or interests?	In fact, I don't know the method according to which I learn, but teachers present the material in a routine way: explain the material, and do some exercises. As for interests, they don't care about any of them for they might consider that to be personal or has nothing to do with the lesson.	It sounds that learning has become a routine issue that lacks enthusiasm. Gifted learning obligates providing education that satisfies students' needs and interests.
	In team work, are groups assigned tasks or activities that suit their abilities and interests, or just aimlessly distributed by the teacher?	There are no permanent team works, but just temporary ones. Forming groups is done by the teacher without any consideration for abilities. In math and science classes set by king Abdul Aziz Foundation, the topic choice is optional so we can choose the activity we like to do.	It is noted that using teamwork strategy is periodic and forming groups is left for the teacher in classes of the gifted who are free to choose the exercises they like to do.

Responses	Questions addressed to the gifted student	Student's response	Researcher's comment
Domain			
Processes:	Do you feel that the strategies used suit the activities you do in class?	Sometimes a strategy is used because of presence of the supervisor. Some teachers never use any strategy. If there is a dialogue, class will be out of control so the teacher puts an end for it. Math teacher uses PowerPoint, but teacher of Arabic always uses binary groups.	It is noticed that strategies are occasionally used for certain reasons, but the traditional method, in which the students is just a receptor, is the one used.
	Has any of the following strategies been used in class (flexible groups, problem solving, cooperative learning, graded activities), if yes, in which subjects was it applied?	Never, as I told you, just binary groups or large ones to do the exercises, but the rest never use any strategy.	The student's answer reveals that none of the strategies was used except for the binary or large groups.
	Do you feel that teachers encourage thinking or memorization and what and how do you feel about it?	The teacher heavily relies on memorization which we love as we care for mark, but some teachers care for understanding and memorization, pending on the course.	It is noticed that the teachers care more for memorization than understanding as the former will be the measurement for knowledge acquisition.
	Do teachers encourage discussion and asking questions to reinforce self-confidence?	Yes, some do, but in the middle of the discussion they stop all because class becomes out of control, and because time is short.	The students indicated that there might be some sort of dialogue which later turns into class control.

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Responses	Questions addressed to the gifted student	Student's response	Researcher's comment
Domain			
	In general, how is the atmosphere of the semester? Is it quiet with a rigid control, or are there activities which need concentration for dialogue?	In general, students abide by laws and regulations to shun speech and annoyance which ends the minute the teacher is through with the lesson.	It is noted that there are laws by which they abide and that implies using traditional methods, but never differentiated
	Do teachers provide advanced examples from the curriculum that suit your abilities? If yes, mention some.	Nothing was provided in all courses. More than that, teachers expect us to get high scores and more discussions from our part, but I feel that math and science courses are challenging.	It is noticed that no advanced examples whatsoever were provided. Despite that, they expect us to do better. Contrary to that course for the gifted made them feel that they are challenging.
	Do you associate what you have already learnt to life situations, how?	Rarely, except when we are asked to. In courses like math, we still find difficulties since learning was theoretical. Therefore, when life examples are given, we can't relate them to what we already learnt because we got accustomed to theory, not to practice.	It is noticed that learning is theory oriented that is why students can't associate real life situations to the knowledge acquired
	Are you allowed to use special methods of teaching instead of searching for knowledge?	In fact, we didn't try, but follow teacher's instructions. In math, the teacher gives us an opportunity to use our own methods, pending the result be correct and explainable.	It is noticed that students follow teacher's instructions without any attempt to change even when they are given the chance to use their own methods. They still follow the instructions by explaining the result they came up to.

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Responses	Questions addressed to the gifted student	Student's response	Researcher's comment
Domain			
	Have sources of learning been diversified by presenting images and visual and audio devices to cope with the variety of students in classrooms.	There no other sources except for board and projector. Most teachers present the material using PowerPoint through which sometimes images and others videos are presented.	It is noticed that the sources to be used are available in class, teachers need to activate them.
Product:	What kind of products are required from curricula?	In fact, there is no final product expected, or have a final project for language and social subjects because the students present a material that has nothing to do with these two courses.	It is noticed that the final product has nothing to do with academia and that reduces importance of gifted students.
	Are you given the chance to choose the product in accordance with the objectives set and explained by the teacher?	We have no options as grade distribution and type of project are set by the teacher.	It is noticed that what determines type of the product is viewed from teacher's perspective.
	Are there product standards?	Teachers do not put down any standards or condition for work; just do it and get the grade.	It is noticed that perspective impacted students thus for?? them to do the thing just to get the grade.
	How do you feel at providing a product?	I don't' feel anything. For example, when I search for a biologist in Arabic, I need teacher's help so as to get a good grade.	It is noticed that teacher doesn't explain to them the reason behind that from the beginning so they do their search to get the grade.

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Responses	Questions addressed to the gifted student	Student's response	Researcher's comment
Domain			
	Can providing a product or a project be a touchstone for passing the course?	Never, because passing the course depends the final which is given (30) points, but the project is given (5).	It is noted that are given (5) pointes which makes them not so important for the gifted as the final that is given (30) points.
Evaluation	Are you given a pre-test for the academic courses you will take? and what are their types?	None of that happens	It is noticed that no pre-tests are given for set courses.
	Has evaluation been continuous, i.e., have there been pre-, mid- and final tests?	As I mentioned before, there are no pre-tests; grades are distributed one three tests: first after one month and a half from semester onset, second, one month before end of the semester, and final.	It is noted that no pre-tests were given and evaluation grades are given to two exams throughout the semester and for the final with, grades allotted for participation and projects, if there is any.
	How is evaluation administered: individually, in groups, self-assessment, or according to perspective of colleagues?	It is done individually, due to the exam method used.	It is noted that evaluation is done through self-assessment, due to the method of evaluation adopted.
	Are you given different assignments, being a gifted student?	None of that	It is noted that though the students are gifted, yet no different assignments are given to her.

On the basis of what preceded, questions of the study will be discussed with regard to the following:

- Content

From responses of the sample, it is apparent that the curriculum adopted by public and some private schools relies on books set by the ministry of education with only two books added to schools with gifted students that have partnership with king Abdul Aziz foundation for giftedness and creativity. The books contain various types of knowledge which differ from those provided to public schools, being distinguished for depth and correlation with other fields of knowledge. Moreover, school and class ambiances in particular help, to a great extent, in the process of learning as students feel more at ease. Therefore, availability of the preceding issues are important for differentiated learning. Thus, identifying students' types of learning and interests which need to be determined at the pre-test assessment period before practicing differentiation with the gifted students are what distinguish content relevant to their interests.

- Processes

From answers of the sample, one can elicit that the teacher is still the source for knowledge presented in a traditional method which might not suit the gifted, and might have a negative impact on them. Strategies' concept is still limited to small and large groups, but none of them is used for differentiated learning. Because learning evaluation is still measured by written exams, students totally depend on memorization that teachers care for. One of the issues the teachers don't do is relating real life to theoretical courses. In addition, there are other hurdles that limit practicing differentiated learning. These are: lack of activating dialogues by teachers, abiding by strict rules throughout the semester, and using specific sources in classroom teaching.

- Product

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According to the sample's response, this important issue which reinforces skills and knowledge has no existence within place limitation of the study. Moreover, the marks assigned for it are very low and that doesn't encourage students to adopt it, but instead they go with teachers' options that the product is just one of the set courses, but is never considered an issue to be bypassed.

- Evaluation

The sample's response revealed that the evaluation process is limited and one of the major steps for differentiated learning, the pre-test, was never applied. Marks are distributed to midterm exams and a final. In addition, evaluation is done individually and that doesn't comply with differentiated learning for the gifted students.

In answering the second question "What is the reality of differentiated learning ..."? arithmetic means, standard deviation, frequencies, and percentages were computed to interpret results in accordance with Likert's scale as presented in the following table (4):

Items	High	Medium	Low	Zero	Mean	Standard deviation	General evaluation
	Percentage						
I make sure that students understand the issue, but I never concentrate on memorization.	6 75%	2 25.0%	-	-	3.750	0.462	High
I encourage self-confidence and allow the student to express his opinion and discuss issues raised by the teacher.	8 100%	-	-	-	4.000	0.000	High
I create a lively and active atmosphere inside classroom.	7 87.5%	1 12.5%	-	-	3.875	0.353	High

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Items	High	Medium	Low	Zero	Mean	Standard deviation	General evaluation
	Percentage						
I provide students with examples they need in proportion to their knowledge of the subject.	8 100%	-	-	-	4.000	0.000	High
In class, while teaching, I take into consideration numerous differences in students' interests and patterns of learning.	7 87.5 %	1 12.5%	-	-	3.875	0.353	High
I exchange opinions with my students and encourage them to take part in the discussion of the raised issue.	7 87.5 %	1 12.5%	-	-	3.875	0.353	High
I care about diversity of learning (classroom, lab, library) in accordance with methods of teaching used to activate learning process.	2 25.0 %	4 50.0%	2 25.0 %	-	3.000	0.755	Medium
I use different evaluation instruments (exams, observation, experiments, files, achievements).	2 25.0 %	4 50.0%	2 25.0 %	-	3.000	0.755	Medium
I adopt a constant evaluation process (pre-in-and post teaching).	5 62.5 %	3 37.5%	-	-	3.625	0.517	High
I help the students to apply what they learnt to life situation to assure comprehensibility	6 75%	2 25.0%	-	-	3.750	0.462	High

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Items	High	Medium	Low	Zero	Mean	Standard deviation	General evaluation
	Percentage						
I use inductive questions to detect students' multiple opinions.	4 50.0 %	4 50.0%	-	-	3.500	0.534	Medium
I use different methods of teaching that meet students' interests.	4 50.0 %	3 37.5%	1 12.5 %	-	3.375	0.744	High
In teaching the students. I use various methods which go along with differences among them.	6 75.0 %	1 12.5%	1 12.5 %	-	3.625	0.744	High
I divide class time in a resilient maner to organize work in class.	6 75%	2 25.0%	-	-	3.750	0.462	High
I benefit from some strategies to diversify methods of teaching such as: (flexible groups, cooperative teaching, multi-intelligences, problem solving, and graded activities).	6 75%	2 25.0%	-	-	3.750	0.462	High
I put down teaching objectives to achieve through a set of activities and strategies.	5 62.5 %	3 37.5%	-	-	3.625	0.517	High
In evaluating differentiated products, students' levels are taken into consideration.	6 75.0 %	1 12.5%	1 12.5 %	-	3.625	0.744	High
I conduct evaluations for learning products to assess outcomes.	4 50.0 %	4 50.0%	-	-	3.500	0.534	Medium

Items	High	Medium	Low	Zero	Mean	Standard deviation	General evaluation
	Percentage						
I diversify objectives of the lesson in accordance with learners' levels (individually, groups, and class level).	7 87.5 %	1 12.5%	-	-	3.875	0.353	High
I keep files for every student's activity.	5 62.5 %	2 25.0%	1 12.5 %	-	3.500	0.755	High
I use diverse methods for evaluation (individual, group, teacher's, self-assessment, or colleague's) taking into consideration students' differences.	6 75.0 %	2 25.0%	-	-	3.750	0.462	High
I plan lessons taking into consideration students' differences.	3 37.5 %	4 50.0%	1 12.5 %	-	3.250	0.707	Medium
I allow students to learn with an acceleration that matches with their potentials and readiness.	7 87.5 %	1 12.5%	-	-	3.875	0.353	High
I benefit from my colleagues' experiences and impressions about students.	7 87.5 %	1 12.5%	-	-	3.875	0.353	High
I conduct a pre-test to evaluate students different potentials, inclinations, and patterns of learning before I start teaching.	4 50.0 %	3 37.5%	1 12.5 %	-	3.875	0.744	High

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Items	High	Medium	Low	Zero	Mean	Standard deviation	General evaluation
	Percentage						
I classify students in light of pre-test results in accordance with common qualities in the same group.	3 37.5 %	3 37.5 %	2 25.0 %	-	3.125	0.834	Medium
I assign each group activities that suit their potentials and interests (project, manual activities, problem solving, Brainstorming).	3 37.5 %	5 62.5 %	-	-	3.375	0.517	Medium
I use various technological means for education (aural, visual, digital) in compliance with lesson objectives and types of learners.	7 87.5 %	1 12.5 %	-	-	3.750	0.770 7	High
I diversify sources of learning allowing students to opt for what suits their readiness and potentials.	6 75.0 %	1 12.5 %	1 12.5 %	-	3.625	0.744	High
I give students an idea about differentiated teaching which makes them feel that they take part in learning.	3 37.5 %	1 12.5 %	2 25.0 %	2 25.0%	2.625	1.302	Medium
I give students the opportunity to participate in planning, activities and tasks.	4 50.0 %	3 37.5 %	1 12.5 %	-	3.375	0.744	High
I specify lesson content and present it in various	5 62.5 %	1 12.5 %	2	-	3.375	0.916 1	High

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Items	High	Medium	Low	Zero	Mean	Standard deviation	General evaluation
	Percentage						
forms and levels such as: drawing, computer programs, etc.			25.0 %				
I sometimes compress lesson content for the gifted explaining what is new allowing them to complete it by themselves.	3 37.5 %	4 50.0%	-	1 12.5%	3.125	0.991	Medium
I assign a notebook to jot down special notes for each student's performance in class.	3 37.5 %	3 37.5%	1 12.5 %	1 12.5%	3.000	1.069	Medium
Contrary to assigning one homework to all students, I assign variety of homework propitious to everyone's potentials	4 50.0 %	2 25.0%	2 25.0 %	-	3.250	0.886	High
General average					3.546		

The 35- item table shows that the arithmetic mean ranged between (2.62-4.00) and the general average was (3.546) which indicated that the use of differentiated education by teachers of the gifted student was generally “High”. Teachers of gifted students use of the items included ranged between “Medium” and “High”; practice of (25) items ranked “High”, while (10) ranked “Medium”. No item ranked “Low” or “Zero”. Items “2” and “4”. I encourage self-confidence...” and I provide students with examples...”, ranked the highest regarding practice with a (4.000) mean, followed by items: (3) “I create a lively and active atmosphere...”, (5) “in class while teaching...”, (6) “I exchange opinions...”, (19) “I diversify ...”, (23) “I allow students to learn...”,

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(24) “I benefit from (28) “I use various...” all ranked “High”. Items (7) “I care about diversity...” and (8) “I use different evaluation...” were the lowest in the high rank gradation. The following items: (18) “I conduct evaluations...” (22) “I plan lessons...”, and (33) “I sometimes compress...” all ranked “Medium”.

Results pertaining question (2) agree with those of (Hobson, 2008) which pointed out that there were teachers who used methods and strategies of differentiated learning differently. Results of (Marotta, 2011) also revealed that applying differentiated strategies was also “High”. There were other studies that came up to contrasting result among them were (Kelly, 2004) which unveiled that still there were teachers who practice regular methods of teaching, but never use the strategies. The study of (Al-Omari & Al-Saleem, 2018) unveiled that practicing differentiated learning by teachers of the intermediate level was “Low”. The researcher attributes what she came up with to the experience of teachers of the gifted, their mastering of subjects, and the desire of the Ministry of education to practice differentiated learning. To reinforce that desire, institutions started annual workshops on differentiated learning for teachers by defining meaning of differentiation, its strategies, and trial lessons on applying differentiated learning. (7) female teachers out of (8) joined the 3-year period of the workshop. This result contradicts with that of the first question, regarding applying differentiated learning, from the perspective of the gifted students.

In answering the third question: “What is the reality of teachers’ practice...? teachers of the gifted were under observation for two weeks to monitor their practice of differentiated learning. The results showed that practicing the strategy was lacking. They continued using traditional strategies of teaching that are based on lecturing. The teacher in such a case is the only source of knowledge. In some courses, binary groups were used to do the

exercises making use of available devices like projectors and the board. Most teachers adopt differentiation only in the questions they address, while others allow students to choose the questions they want to answer. According to such observations, one can tell that practicing differentiation by teachers of the gifted was rare. This result agrees with that of the first question, but contradicts with that of the second which unveiled a positive result of practicing differentiation. The result also agrees with that of (Marotta, 2011) which unveiled that teachers gave high marks to items of the questionnaire, though the observation instrument revealed the opposite.

In answering question four: “Was professional qualification provided...?” the collected information gained from analyzing the school available documents emphasized on the following:

Teacher’s electronic preparation: Because the school of concern is one of those of a company for education and training, preparation should be electronic and implemented through a site. Preparation elements for differentiated learning must be executed in the classroom.

Educational publication on differentiated education: The company for education and training should provide a publication on differentiated education and send it via email to all employed teachers and should be sent again every semester.

Annual internal and external courses: The annual schedule for qualifying teachers plays a role in differentiated learning. The school documents that were examined showed that sample participating teachers were given three courses in summer during the last three years. An external course on differentiated education was also given by the training office of education at Al-Khubar. This might be explained through the following table (5).

Table (5)

<http://dx.doi.org/10.29009/ijres.5.4.11>

Respondent Number	Academic qualification	Experience	Internal courses			External courses	
			2016	2017	2018	Differentiated teaching	
1	B.A Islamic studies	9 years	✓	✓	✓	⊙	⊙
2	B.Sc. Physics M.A gifted education	2 years	✓	✓	✓	⊙	Strategies of teaching science Mawhiba Foundation
3	B.Sc. Chemistry	2 years	⊙	⊙	✓	⊙	⊙
4	B.Sc. Math	7 years	⊙	⊙	⊙	⊙	⊙
5	B.A History	15 years	✓	✓	✓	⊙	⊙
6	B.A Arts	10 years	✓	✓	✓	⊙	⊙
7	B.A English	11 years	✓	✓	✓	⊙	A course on differentiated teaching CEITA course
8	B.A Arabic	7 years	✓	✓	✓	⊙	⊙
			✓ Course attended			⊙ course not attended	

The data in the previous table reveal that the professional training offered by the school and training office was relatively good. There was professional support given to teachers to apply differentiated learning, but the practice was not done the correct way. This result agrees with that of (Marotta, 2011), by coming up to the same conclusion, and with that of (Hobson's, 2008) which pointed out that training of the employees didn't have any impact on the number of practices of differentiated education, but contradicts with the result

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of (AL-Omari & Al-Saleem, 2018) which unveiled that training courses influenced teachers' practices in that field.

Discussion and conclusion

Results of the study reveal that there is a negative relation between what teachers mentioned with regard to using differentiated learning in teaching the gifted, and what was really observed in the classroom. Those teachers were adequately trained in differentiated learning, but they misunderstood the method of applying it.

Based on teachers' answers in the questionnaire, one can conclude that they were conversant with the various elements of differentiated learning. The question anyone poses is that why didn't they practice that type of learning despite being trained and qualified for it? The basic point the current study concluded with is teachers' inability to practice that learning in classrooms of the gifted irrespective of extant professional training.

The researcher believes that differentiated learning was not practiced due to fears of associating theory with practice that suits teaching the gifted. This type of students needs a challenging curriculum which meets their needs and interests (Howley et. al., 2009). When the students are not given a different curriculum, teachers won't be able to satisfy their academic capabilities. Therefore, every educational institution and people in charge, especially supervisors of teachers of the gifted have to keep an eye on applying what those teachers learnt from the courses they were trained in (Van Tassel-Baska et al., 2008). The teachers also need to cooperate among themselves to provide the gifted with the education they deserve. What is interesting is what the results revealed that the teachers who were trained to practice differentiated learning in gifted classroom never did that for no single reason. Consequently, training

never left any impact on teachers, though it was repeated throughout semesters without any benefit to gain (Gusky, 2000).

In conclusion, one might say that teachers face obstacles in implementing diverse curriculum for the gifted. The obstacles might be caused by challenges of associating theory with practice, or might be related to lack of correct understanding for the concept of gifted differentiated leaning. It is also necessary to have a constant control over teachers' performance in order to implement ideas and strategies they have already learnt from courses on professional training. It is noted that people learn through practice, meaning, participative learning, and through constant control and orientation for teachers of the gifted to fill the gap between theory and practice.

Recommendations

In light of what the study came up to, the researcher would like to recommend the following:

- 1- To provide an academic classroom environment to apply differentiated learning for gifted classes in public and private schools.
- 2- To develop study plans for all academic courses of the gifted to cope with differentiated learning.
- 3- To put down clear procedures for the supervisor to monitor teachers' application of what they learnt from training courses.
- 4- To help students who spend great efforts to practice differentiated learning.
- 5- To conduct a study to figure out the impact of a proposed training program of differentiated learning on teachers at all levels of education.
- 6- To conduct a study on obstacles that stand in the way of differentiated education from the perspective of supervisors and teachers.

References

- Al-Baltan, I. A. (2017). The reality and requirements of science teachers' use of differentiated teaching and the obstacles to its application from their point of view. *Shaqra University Journal: Shaqra University*, 7, 61 - 102. Retrieved from <http://search.mandumah.com.sdl.idm.oclc.org/Record/890049>
- Al-Halisi, M., & Al-Sharif, F. (2012). The effect of using the differentiated education strategy on academic achievement in the English language course for sixth graders of primary school (unpublished master's thesis). Umm Al Qura University, Makkah. Retrieved from <http://search.mandumah.com.sdl.idm.oclc.org/Record/736892>
- Al-Rahi, A. (2014). The effectiveness of the differentiated education strategy in teaching mathematics on the acquisition of mathematical concepts and the tendency towards mathematics among the seventh-grade students (Master's thesis published). The Islamic University, Gaza, College of Education, Curriculum Department.
- Al-Rashoud, J., & Nofal, M. (2017). The effectiveness of a training program based on the theory of differentiated education in academic achievement in science, self-concept and parallel thinking among third-grade intermediate students. *Studies - Educational Sciences: University of Jordan - Deanship of Scientific Research*, 44,249-270. Retrieved from <https://search.mandumah.com/Record/861200>
- Al-Omari, N. M.& Al-Saleem, M. A. (2018). The practice of mathematics teachers in the intermediate stage strategies of differentiated education. *Educational Sciences: Cairo University - Faculty of*

- Graduate Studies of Education, 26, 1, 320 - 366. Retrieved from <https://search.mandumah.com/Record/928622>
- Attia, M. (2009). Comprehensive and new quality in teaching. Amman: Dar Safaa for Publishing and Distribution.
- Ary, D., Jacobs, L., & Razavieh, A. (2002). Introduction to Research (6th ed.). Belmont: Wadsworth.
- Blaz, D. (2013). Differentiated instruction: A guide for foreign language teachers. Routledge.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
doi:10.1191/1478088706qp063oa
- Broderick, A., Mehta-Parekh, H., & Reid, D. K. (2005). Differentiating instruction for disabled students in inclusive classrooms. *Theory into practice*, 44(3), 194-202.
- Chick, K., & Hong, B. (2012). Differentiated instruction in elementary social studies: Where do teachers begin. *Social Studies Research and Practice*, 7(3), 112-121.
- Cohen, L., Manion, L., & Morrison, K. (2008). *The Methodology of Educational Research*. Athens: Metaichmio.
- Gentry, M. (2014). Total school cluster grouping and differentiation: A comprehensive, research-based plan for raising student achievement and improving teacher practice. Sourcebooks, Inc.
- Guskey, T.R. (2000). *Evaluating professional development*. Thousand Oaks, CA: Corwin Press.
- Hobson, M.L.(2008) *An Analysis of Differentiated Strategies used by Middle School Teachers in Heterogeneously Grouped Classrooms* ,

- Unpublished master's thesis 'University of North Carolina
Wilmington.
- Howley, A., Rhodes, M., & Beall, J. (2009). Challenges facing rural schools: Implications for Gifted students. *Journal for the Education of the Gifted*, 32, 515-536.
- Kelly, T.(2004) A Study of the Teaching and Learning of Mathematics through Multiple Intelligences and Differentiated Instruction with Selected Third Grade Teachers, Doctoral Dissertation, Union Institute and University Cincinnati.
- Kojak, H. K. & El-Sayed, M. M.& Khader, S.& Faramawy, M.& Ayyad, A. A.& Ahmed, H.& Fayed, B. A (2008). Diversification of teaching in the classroom A teacher's guide to improving teaching and learning methods in schools in the Arab world. Beirut. UNESCO Regional Office.
- Lieberman, A. & Mace, D.P. (2010) Making practice public: Teacher learning in the 21st century.*Journal of Teacher Education*. 61, 77-95.
- Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? trustworthiness and authenticity in naturalistic evaluation. *New Directions for Evaluation*, 2007(114), 11-25. doi:10.1002/ev.223
- Marotta-Garcia, C. (2011). Teachers use of a differentiated curriculum for gifted students (Order No. 3477957). Available from Education Database. (901460589). Retrieved from <https://search-proquest-com.sdl.idm.oclc.org/docview/901460589?accountid=142908>
- Nenational Council of Teachers of Mathematicise (NCTM). (2000). Principles and standards for school Mathematicise. Reston: VA.

- Obeidat, T., & Abul-Samin, S. (2007). *Teaching Strategies in the Twenty-First Century Teacher and Educational Supervisor's Guide*. Amman: Dar Al-Fikr.
- Olenchak, F. R. (2001). Lessons learned from gifted children about differentiation. *The Teacher Educator*, 36(3), 185. Retrieved from <https://search-proquest-com.sdl.idm.oclc.org/docview/220625291?accountid=142908>
- Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Plucker, J. A., & Callahan, C. M. (2008). *Critical issues and practices in gifted education: What the research says*: Prufrock Press.
- Taghipoorreynh, M., & de Run, E. C. (2019). Using mixed methods research as a tool for developing an indigenous cultural values instrument in Malaysia. *Journal of Mixed Methods Research*. 1558689819857530.
- Tomlinson, C. A., & Allan, S. D. (2000). *Leadership for differentiating schools & classrooms*: Ascd.
- VanTassel-Baska, J., Feng, A., Brown, E., Bracken, B., Stambaugh, T., French, H., McGowan, S., Worley, B., Quek, C., & Bai, W. (2008). A study of differentiated instructional change over 3 years. *The Gifted Child Quarterly*, 52, 297-312.
- Yatvin, J. (2004). *A room with a differentiated view: How to serve all children as individual learners*. Heinemann Educational Books.