



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 9, Issue, 4(L), pp. 26343-26347, April, 2018

**International Journal of
Recent Scientific
Research**

DOI: 10.24327/IJRSR

Review Article

UNDERSTANDING OF LITERATURE REVIEW ON DIFFERENTIATED INSTRUCTION

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DOI: <http://dx.doi.org/10.24327/ijrsr.2018.0904.2041>

ARTICLE INFO

Article History:

Received 19th January, 2018
Received in revised form 21st
February, 2018
Accepted 05th March, 2018
Published online 28th April, 2018

ABSTRACT

Differentiated Instruction (DI) is one of the basic orientation of Viet Nam education after 2018. This trend has been interested, researched and used for a long time in many countries around the world. This paper presents an overview of theoretical background issues in differentiated teaching and learning: sociological theories of the teaching process; theory of the proximal development zone; theory of multiple intelligences; learning styles of students, orientation of active learning activities. Since then, having a clearer perspective look of differentiated instruction.

Key Words:

Differentiated Instruction; Multi
Intelligences; Zone of proximal
Development.

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INTRODUCTION

The orientation of Vietnam's education is to develop comprehensively and bring into full play the potentials and creativity of each individual; promoting the love of the family, the country and the people; live well and work efficiently [1]. To implement this content, DI must be considered as one of the basic orientations in the reform of general education in Vietnam after 2018 to develop the education of the country in the orientation of competency-based learning.

DI has been studied and applied in many countries in the world including the United States. Gibson (2010) noted that: "DI is not a new teaching trend and it is not a new teaching concept" [2]. DI studies have been started long ago on the basis of previous research achievements and these research findings are seen as solid foundations of the DI orientation.

Content

Sociological Theory of Teaching

Through the studies, we found out that some educationalists and educational researchers considered the sociological theory as being built by the Russian psychologist, Vygotsky (1896-1934), was the basis for the study of education, change in the classroom and redevelopment. (Blanton, 1998; Flem, Moen,

and Gudmundsdottir, 2000; Goldfarb, 2000; Kearsley, 1996; Riddle and Dabbagh, 1999; Rueda, Goldenberg, and Gallimore, 1992; Shambaugh & Magliaro, 2001; Tharp & Gallimore, 1988) [6].

The sociocultural studies of Vygotsky and later Wertsch have brought a lot of positive implications for the teaching and educational process in schools. This theory was based on the premise that every individual must be educated in a particular society and certain cultural contexts (Blanton, 1998; Flem *et al.*, 2000; MacGillivray & Rueda, 2001; Patsula, 1999; Tharp & Gallimore, 1988). Such determinate circumstances are necessary for the development of higher order functions and these functions can only be formed and developed by social factors (Blanton, 1998; Riddle & Dabbagh, 1999; Rueda *et al.*, 1992; Shambaugh and Magliaro, 2001). Therefore, the social factor is the basis for the development of awareness (Kearsley, 1996; Kearsley, 2005; MacGillivray and Rueda, 2001; Patsula 1999; Riddle and Dabbagh, 1999; Scherba, 2002). In addition, Vygotsky's theory also suggests that education is a continuous process and development rather than a product of a process (Riddle and Dabbagh, 1999) (according to [6]).

Studies on DI reflected Vygotsky's socio-cultural theory, its main principles are based on the relationship of social factors, between teachers and students. Tomlinson (2010) pointed out

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that the teacher should be trained to guide and control the learning process. By using appropriate teaching methods, teachers will help each learners reach his/ her learning potential in a given situation. Under the guidance and control of teachers, the students will be independent, self-conscious and positive awareness to gain knowledge, skills and attitudes better. The relationship between students and teachers is clearly a mutual relationship, interaction and interdependence, the joint efforts of both teachers and students will improve the quality of teaching. In contrast, the limitations in teaching skills of teachers will negatively affect students in developing their zone of proximal development.

The current teaching practice shows that teachers are no longer in front of the class to present from the beginning to the end what students need to study anymore. They must teach the students self-learning methods. Teachers must find a way to make learning a part of their daily lives. This new approach suggests that students learn by participating in learning activities, gaining new knowledge and skills based on what they already know (Dennis, 2000) ([4]). The student himself dominates this knowledge and then uses it to continue acquiring new knowledge. They know how to turn their learning into a self-study process in a way that suits them. To meet the needs of all students and encourage them to promote their strengths and advantages, teachers need to conduct differentiated instruction.

Theory of Zone of Proximal Development

In general, teaching in a certain extent is intended to contribute to the development of students, but teaching is considered the best if it provides the best development for learners. Vygotsky (1896 - 1934), said that teaching is best if it goes ahead the development and accompanies the development. The basis of this view is the theory of the zone of proximal development - ZPD. The concept of ZPD is rooted in the fact that, with the help of others, the child can complete a learning task that he or she has not previously accomplished. Vygotsky describes the ZPD as the difference between the level of actual development and the level of development that can be achieved. On the one hand, the students can develop well in the teaching process when the teacher promotes the role of the organizer and facilitator, alleviating difficulties for students in the process of cognition and encouragement. Students actively participate in cognitive activities. On the other hand, for students to develop their minds, there is no other way to operate on their own, to act in a positive and self-conscious way. That is the nature of the dialectical relationship between teaching and learning, between activity and development.

Through intellectual activities, students gradually develop from low to high level. Therefore, the educational measures of the teacher must be changed to suit each step of the development. According to Vygotsky's theory, the initial level of students corresponds to the "zone of proximal development" This level allows students to acquire the knowledge that is closest to their previous knowledge to achieve a new level of development. Vygotsky called it "the zone of proximal development" (ZPD). Then the teacher needs to organize learning activities and help students to move to the new "zone of proximal development" and then it will return to "the current development zone." This process will keep going so the development of students from one level to another higher level.

Vygotsky also pointed out that the zone of proximal development varies in different children, and how much the ZPD of each child will develop depending on the level and competence of the teacher. Therefore, it can be said that ZPD is the theoretical foundation for conducting DI. The teaching content, the teaching process and the way the student demonstrates what is learned when conducting DI should be appropriate to the individual's proximal development zone.

Educators also point out that a student will develop his or her closest developmental area and consequently learn independently if that person is first instructed by a teacher or education specialist (Blanton, 1998; Kearsley, 2005; Riddle and Dabbagh, 1999; Rueda *et al*, 1992). Accordingly, the positive teaching process recognizes what the learner knows before a new skill or knowledge is introduced (MacGillivray and Rueda, 2001). Learner skills can only be expanded and developed through the instructor's intended purpose or teacher. (Blanton, 1998; Riddle and Dabbagh, 1999; Rueda *et al*, 1992). The teacher's role is to become a facilitator and instructor with the aim of teaching students to develop their nearest development area. (Blanton, 1998; Rueda *et al*, 1992) (according to [2]).

Theory of Multi Intelligences

American psychologist, Howard Gardner developed the theory of multiple intelligences and recognized that people have different wisdoms and learn in different ways. According to Gardner's theory the schools must consider students to be central (student-centered based curriculum) and have curriculum that fits their child's intelligence.

Theories on how students learn, what they learn and what they plan to teach have been discussed by educators (Burton, 2000; Guild, 2001; McIlrath and Huitt, 1995). These studies have shown that individual students do not learn in the same way (Fischer and Rose, 2001; Green, 1999; Guild, 2001; Mulroy and Eddinger, 2003). At the same time, the enhancement of the knowledge base on the diversity of learners has had a positive impact on teachers in reviewing teaching activities, curriculum changes and assessment techniques (Brooks, 2004; Cohen, McLaughlin and Talbert, 1993; Davis *et al*, 2000; Fischer and Rose, 2001; Green, 1999; McIlrath and Huitt, 1995; Mulroy and Eddinger, 2003) (according to [2]).

Gardner's theory of multiple intelligences is derived from the view that intelligence is a measurable unit. Gardner's theory focuses on eight mental capacities and highlights the need to meet the intellectual diversity of each child. A teaching technique or curriculum depends a lot on one of these thinking competencies (Amstrong, 2009) (according to [2]). Different thinking competencies are seen as tools to study and solve problems (Campbell *et al*, 1999; Green, 1999), providing opportunities for all students by enriching the classroom activities through a variety of techniques and forms of assessment (Campbell *et al.*, 1999; Gardner, 1999; Green, 1999) (according to [2]). The reason for this is because Gardner's theory states that each of us has at least eight different types of intelligencies. From the beginning of school, every child has shown a tendency to develop his or her specific intelligence. There are children who are strong in mathematics, logic thinking, others develop language intelligence, etc. DI instead of "grouping" the children in each individual

intelligence will focus on enabling them to promote their "strengths", helping them to find success even for the weakest or the worst students in the class. This is the humanity of the DI principles that educators are always aiming for.

The needs of learners' awareness

Educational researchers share the same view that students are increasingly diverse (Gable *et al.*, 2000; Guild, 2001; Hall, 2002; Hess, 1999; McAdamis, 2001; McCoy and Ketterlin Geller, 2004; Sizer, 1999; Tomlinson, 2004; Moon, and Callahan, 1998). It is a fact that a class may have different types of students including ones with disabilities, students with different mother tongue languages, some students with autism and gifted students. The diversity seems to be growing (Mulroy and Eddinger, 2003; Tomlinson, 2001, 2004). Classroom teaching is influenced by gender, culture, experience, ability, interest and especially teaching approach (Guild, 2001; Stronge, 2004; Tomlinson, 2000, 2010) (according to [2]). Most children in a class consider that they are not the same while some have strengths in sports, others may be interested in learning the academic subjects. (Tomlinson, 2000 [5]). This is the basis for different cognitive needs (Tomlinson, 2010 [8]). Participating in the DI process, each student will be given more opportunities to reach their learning goals on the basis of individual preference (Fischer and Rose, 2001; Mulroy and Eddinger, 2003; Stronge, 2004; Tomlinson, 2000) [7]. So the issue is that teachers need to understand the differences between individual students in a classroom (Guild, 2001; Mulroy and Eddinger, 2003; Tomlinson, 2001c, 2002). Brighton, 2002; Fischer and Rose, 2001; Griggs 1991; Guild 2001; Tomlinson (2010) pointed that "Today's classes should be built on the basis of the different needs of students" [8].

Practice shows that not all students have the same learning styles. It is clear that the different learning styles of students are an important means of understanding the different elements and helping them to have progress. (Strong, Silver, and Perini, 2001). Model of DI based on students' learning styles help teachers plan the lessons and curriculum which suit the students best (Strong *et al.*, 2001). Thanks to the ability to define the relevant learning style of students and appropriate teaching methods, teachers can help students achieve better results and improve their attitude towards learning (Green, 1999). Finding out the student's learning style helps teacher to take advantage of students' strengths and help them deal with their weaknesses (Green, 1999). Fine (2003) has shown that students get positive academic performance when they have accessed the appropriate learning styles. Their academic performance has significantly improved thank to the relevant teaching strategies compared to the traditional teaching methods. Moreover, students' attitudes have been improved when their strengths have been taken into consideration in the classroom (according to [5]).

The preferences of students are often different, these interests of students can become effective tools to support learning in the classroom. Tomlinson, 2010 [8] found that the interest of students is considered a strong motivation that a teacher can take advantage of DI. Teachers should find ways to proactively motivate their learning by exploring what interests them, and how they relate to what is going on in the classroom. Activities and discussions built around the students' interests and their

experience of life will make the content of teaching more meaningful (Bosch, 2001; MacGillivray and Rueda, 2001; McBride, 2004; Tomlinson, 2010) [8]. Most students, even disable ones, have their own capacity and passion. Therefore, it is necessary to create opportunities for them to discover and express their interests, which will overcome the feeling of failure before.

According to [2], DI considers the classroom as an exchange environment, in which there are both similar and different elements (Bosch, 2001; Brimijoin, Marquissee, and Tomlinson, 2003; Lawrence, 2004; Tomlinson, 2003). DI allows creating an environment in which all students can succeed (Lawrence, 2004; Tomlinson, 2000 [5]). Students are different on Readiness, interest and learning styles. In the differential class, teachers are obliged to understand these differences to maximize the learning potential of each student in the class.

DI also pointed out that teachers should plan their teaching content and teaching activities to suit the style of students. Furthermore, DI can provide opportunities to promote group learning and provide options for individualized learning. Teachers who have a clear understanding of the learning needs of the students will be able to make the best choices about the best learning methods, and this will also enable them to prioritize tasks to develop the learning experience of each student. Students with their individualized learning plans can be instructed to complete tasks in order to pass, develop and train the skills they need while teacher engaged the package of curriculums or independent topics. (according to [2]). DI enables teachers to conduct teaching based on topics, bringing relevant and meaningful knowledge into the teaching process.

In addition, students in the same class often have unequal cognitive levels, especially in the present context [5]. DI develops successful learning opportunities for students. Teachers need to be able to differentiate their cognitive abilities so that the teachers can provide appropriate teaching tasks, not too difficult or too easy for each subject.

Tomlinson (2000) [7] identified DI as a teaching philosophy based on the premise that students learn best when teachers adjust the teaching process to suit their readiness, interests and learning styles.. DI's main goal is to "maximize student learning competencies". In addition, Tomlinson pointed out that DI can be done in different ways and if teachers are willing to use this teaching philosophy in the teaching process, the learning needs of students will be more responsive. "DI is not just a teaching strategy, nor a formula for teaching, but a new way of thinking about teaching and learning," says Tomlinson [7].

The limitations of teaching simultaneously

Today's teachers need to know how to respond to the diversity that is emerging in teaching (Fischer and Rose, nãm 2001; Flem *et al.*, 2000; McCoy and Ketterlin Geller, 2004; Mulroy and Eddinger, 2003; Sizer, 1999; Tomlinson, 2004).

The use of a single program and the same teaching method for all students will no longer meet the needs of the majority of students. (Forsten, Grant and Hollas, 2002; McBride, 2004; McCoy and Ketterlin Geller, 2004; Tomlinson, 2000; Tomlinson and Kalbfleisch, 1998 (theo [2])). Conducting

lectures through a unique teaching and learning approach, ignoring the different facets of student interest in learning styles, levels, and interests will result in monotonous and boring lessons. (Fischer and Rose, 2001; Forsten *et al.*, 2002; Guild 2001; Tomlinson and Kalbfleisch, 1998, Balliro 1997 (theo [2])).

In addition, meeting the learning needs of students will promote the motivation of learning and promote the positive learning of students (Stronge, 2004; Tomlinson, 2004 (according to [2])). Ignoring these fundamental differences can lead to the situation that some students become boring, lethargic and left behind (Tomlinson and Kalbfleisch, 1998 (according to [2])). Good students can become overloaded when teachers try to cram more knowledge (Tomlinson and Kalbfleisch, 1998 [2]). It is clear that students will learn more effectively when the tasks given to them are not too easy or too difficult (Tomlinson, 2004 [2]).

DI see what happens in class is responsible not only of teacher but also of students. Based on this view, Mulroy and Eddinger (2003) added that DI is increasingly becoming meaningful in the context of increasingly diverse types of students. In the DI environment, teachers and related forces create the best teaching conditions for students. These materials share the same view that in this environment, each student can develop his or her own strengths when given the opportunity to demonstrate skills through the DI assessment techniques (Mulroy and Eddinger, 2003; Tomlinson, 2000; Tomlinson and Kalbfleisch năm 1998; Tuttle, 2000) (according to [2]).

DI offers the best solutions to address the diversity of students, avoid the avoid the limitations of teaching simultaneously (McBride, 2004); and in developing different cognitive abilities and learning styles (Lawrence, 2004; Tuttle, 2000) (theo [2]). DI provides an important foundation for all teachers and creates the opportunity for all students. Classes need to balance the learning needs of all students with the specific needs of each object. DI can release children from being labeled, providing each child with the best learning opportunity.

According to Tomlinson (2010) teachers need to change their mindset in completing their curriculum and motivating them to meet their individual needs. It allows the teacher to focus on the same basic elements of all students, but in the process of teaching, the speed and volume of knowledge for the students will be individualized. DI makes it possible for students to recognize the fastest, remember as long and as deeply as possible. DI instructors will often find that they can use their time and resources in a flexible and creative way, helping to create a collaborative atmosphere in the classroom [8].

The orientation of active learning

A basic principle of DI is that the teacher must involve all students in the teaching process. Subban (2005) pointed out studies of Coleman, 2001; Guild, 2001; Hall, 2002; Sizer, 1999; Strong *et al.*, 2001 both affirmed that curriculums should be designed to engage the join of students and connected to real life and have positive effects to promote students' progress [2]. Teachers need to have certain knowledge about the cultural background and knowledge of students (MacGillivray and Rueda, 2001). This allows the teacher to find out the strengths of his students and help them make a progress.

According to Jerome (according to Tomlinson, 2000), when the learning needs and interest of students are exploited, the ability of self-learning and activeness of students will develop [5]. In a classroom, students often have a certain "difference in culture, class, gender, cognitive ability, flexibility, and learning style" (Tomlinson and Imbeau, 2010) [7]. In order to help the teaching process to be more effective and to promote the students' positive learning, the researchers said that teachers must "find practical solutions in the form of organizing and managing the classrooms, encourage, motivate all students to study better" [8].

In terms of education, DI is seen as an active teaching and learning approach. DI model requires teachers to change, adjust teaching plans, teaching content and other factors to suit students' needs instead of expecting changes to suit the teaching content.

DI is associated with ensuring the implementation of the principles of education and teaching principles in primary school as: Principle of promoting positive, active and creative students; the principle of ensuring uniformity and differentiation; the principle of ensuring the unity between the commonality and individuality in teaching; The principle of ensuring attention to psychological age characteristics and individuality in the education process (theo [2]).

When conducting DI, it initially appeared that students are the driver of the teaching process (theo [2]). However, it is a fact that the teacher's role in the DI classroom is seen as an experienced mentor. After assessing students, teachers create different exercises, activities, teaching contents depending on the level of awareness of students in class. As Tomlinson (2000) shown in [7] "these lessons should inspire learning and engage all students involved in exploration." After that, students can decide what to do and get started. This will give them the responsibility to complete the job and the confidence that students in a traditional classroom may not have.

DI allows the creation of an environment in which the students is at the center of the teaching process. This teaching environment encourages independent thinking and activeness in the children. In that environment, students are required to complete certain tasks or activities at their own pace and, according to Michael (2007), "Each child has their own pace, so they need to be given certain space in the classroom to complete their learning activities" (theo [2]). This will make learning more enjoyable and meaningful for students. It is important to remember that "whenever possible, the ideas of the students should be added as the basis for the learning content" (theo [2]). The more knowledge students have about learning content, the more interested they are. Teachers need to set specific goals to facilitate the students to participate, cooperate and learn but the students are the ones who implement and develop these learning outcomes.

CONCLUSION

In short, "effective teaching is a flexible, creative combination of a variety of teaching methods with a rich understanding of individual learners and their needs at every moment of the teaching process" [3]. DI classroom must be organized in which teaching and learning can be conducted in a flexible way

to meet the individual needs of students and help them achieve the best learning outcomes based on their own competencies.

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How to cite this article:

Le Thi Thu Huong.2018, Understanding of Literature Review on Differentiated Instruction. *Int J Recent Sci Res.* 9(4), pp. 26343-26347. DOI: <http://dx.doi.org/10.24327/ijrsr.2018.0904.2041>
