



**RELEVANCE OF DIFFERENTIATED INSTRUCTION
IN SPECIAL EDUCATION FOR ANXIETY AFFECTED LEARNERS:
A THEORETICAL ANALYSIS OF LEARNING PROBLEMS AND
SOME STRATEGIES**

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Abstract:

Students fail to attain conceived aims and objectives for a multiple reasons. In a given situation, their failure can be directly attributed to ineffectiveness of teaching. Some students might be affected by some psychological or behavioural issues which may become more crucial in due course of time if instruction is not designed to assist special learners in the area of their difficulties. Anxiety is perhaps the most important factor that may affect the learning as a process. It may be of different reasons. Learning anxiety may be related to general anxiety which becomes a serious issue if not dealt properly in time. Differentiated instruction (DI) is a designed strategy based on differentiation philosophy to handle the problem faced by diverse/special learners: able, disable or especially 'able ones'. DI gives all the diverse students an opportunity to learn the same curriculum; however, how each student learns is dependent on students' individual learning needs. This includes inclusive education and special education students. This paper studies relevance of differentiation technique for learners having anxiety, addresses some of the teaching techniques, strategies and practices deemed critical in the given context of modern time.

Keywords: differentiated instruction, anxiety, inclusive education, diverse students, strategies

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1. Introduction

Practitioners usually face issues and difficulties in the classrooms especially when they deal with special learners (with disabilities). They need to make extensive accommodations to their instruction. It has been noticed that learners with disabilities present very unique learning needs. Therefore, it becomes important to identify if learners have something in common in learning styles and characteristics, retention and retrieval related issues, strategy anxiety type, levels and many other special learning issues. It is not impossible if carefully designing instruction of target areas and sub areas. By differentiating instruction in terms of coverage and pace of syllabus, and utility of newly introduced material.

Dunn & Griggs (1990) researched on the characteristics of learning and for the study, he chose racial and ethnic groups, and concluded that different learning styles can be proved to be extremely good basis for dealing with special learners. Meeting the goal of diverse learner groups and corresponding teaching-learning strategies will make all the difference. As it is well said by Smorenberg (2014), *"We all learn in a differently and at varied pace, therefore a teacher finds it extremely difficult to deal with individual learning problem of each and every learner."*

(<http://dailyedventures.com/index.php/2014/10/16/robin-smorenberg/>)

1.1. Special Education

The ministry of Education (Kenya) defined (2009) special education as the kind of education that offers compatible adjustment in curriculum, delivery, methods of instruction, teaching resources and learning environment etc.

1.1.1. Special Learning Needs

Learners are considered 'special' if they are unable to pursue the prescribed curriculum for children of their age. Following impairment/handicap categories are related to the children with special educational needs: hearing, visual Impairment, physical , mental handicap, mal-adjustment and learning Difficulties. Hearing impairments is generally characterized by deafness; visual limitations such as blindness. In addition to these, there are many other types and categories such as emotional/behavioral disorders, autism, specific learning disabilities or multiple disorder/disabilities. In some specific scenario, talented and bright students are also considered as special/exceptional children.

1.2. Anxiety disorder: the root concept

Dwight et al (2012, p.1) defined anxiety as *“mental and physiological phenomena characterizing an individual’s perception of worry over a future unwanted event or actual situation.”*

Webster’s dictionary defines anxiety as *“state of uneasiness and apprehension, as about future uncertainties”*. Anxiety may be rightly considered as a feeling uncertainty, and fear resulting from the anticipation of future, but fanciful alarming event, causing physical impairment/disorder and behavioural activities.

1.3 Differentiation defined

Differentiation is basically an outcome of the philosophy that postulates the concept that teaching or instruction can be done by offering different opportunities to diverse learners to acquire the learning material (content), designing techniques and evolving differentiated strategies to ultimately facilitate all the students who fall under special group.

1.3.1. Importance of Differentiated instruction

In a given context of multiple disabilities, diverse learning background and special education case, DI will be of greater significance in order to cater to the needs. It has been contended by Chapman & King (2005) via Differentiated assessment strategies when he focused on the idea that one tool doesn’t fit all. Therefore, different techniques are needed for different kinds of learning needs. Mitchell (2010) also defended the concept of imparting the type of Education that fits. This will enable the instructor to yield maximum results to meet the objectives conceived prior to the learning process.

2. Review of Literature

“The biggest mistake in teaching in the past has been considered as treating all the learners as the same, thus feeling justified in teaching them in the same way.” (Howard Gardner, 1994)
Different children have different issues and learning styles, therefore, one has to apply specific technique to make a specific learner study and attain objectives. Carbo, Dunn & Dunn (1986) investigated teaching students in accordance with their learning styles, and eventually found this technique quite useful.

2.1 Disabilities vs Difficulties

There is no single definition of the terms 'learning difficulty' and 'learning disability'. The context is perhaps quite important in making a definition and making it

operational. Difficulty may be related to a hurdle or an obstacle while 'disability' is something that incapacitates. In other words, Disability may be permanent which difficulties may be removed. In this connection, Baker, Kame'enui, & Simmons (1998) are of the opinion that most learning difficulties are the effect of differences in certain inborn and environmental factors: memory, knowledge, vocabulary knowledge and coding of language. On the other hand, Mann & Brady, (1988) contended that many disabled students encounter problems and challenges in remembering.

A. Anxiety Disorder and Types

There are many types of anxiety disorders, however four most common ones are: panic disorder, social phobia, generalized anxiety, social phobia and compulsive disorder. Each type has different attributes which affect individuals in many ways.

B. Disorders VS Strategies

Once students are diagnosed with disorders in general and special disorders in particular, there becomes a need to evolve a combating strategy to sort out existing problem to the extent it is possible for the pedagogues. Differentiated instruction may be one of them.

2.1.1. Differentiated Instruction: A fruitful strategy for diverse learners

As mentioned earlier that Differentiated instruction is basically a philosophy that leads to teaching strategy. According to Tomlinson (cited by Ellis, Gable, Greg, & Rock, 2008, p. 32), "*Differentiated instruction is a process that offers opportunities which students grab and learn. All these three aspects of what, how and in what ways are related to three dimensions of different instruction: readiness level, interests, and preferred mode of learning*". The concept of 'Differentiation' stems from beliefs about differences among learners. (Anderson, 2007). Fountas & Pinnell (2001) found that most primary teachers differentiate reading instruction through guided reading.

2.1.2 Conditions for differentiation

A. Readiness

It is initial interest and sheer the capacity to learn new learning materials. A good task for a student's readiness level utilizes student's previous knowledge in order to check the starting point. And, if there is any gap, the instructor is supposed to fill in to take a student out of their comfort level. There are many ways to use differentiation technique to ensure readiness among the special learners. Following are some examples of readiness among learners that a differentiation instructor may take into account:

- Use various books and online resources on a particular subject;
- Give the option to do an extension activity beyond the curriculum;

- Give tiered home assignments based on different difficulties;
- Use a graphic organizer to show the progress if any.

B. Interest

It is somewhat a desire that a student shows towards learning a material to pursuing a course/program of study. DI can create and retain the interest level of the diverse learners. The idea of differentiating through interest is to "hook" a student on an area of study to keep their interest, which typically increases on task behavior and improves performance/achievement.

Following are some ideas to create and maintain interest among learners according to Tomlinson (2001):

- Use the Jigsaw technique;
- Apply "real life" situation;
- Create a website;
- Write a song, and try to perform;
- Take a photo, or draw a picture;
- Write a story, poem or nonfiction piece;
- Build a model or display;
- Ensure group and cooperative learning;
- Use Literature to read, understand and discuss interesting topics.

2.1.3. DI: Content, Process and Products

Following suggestions were offered regarding the selection of 'content' by Tomlinson (2001).

Content						
Audio / Video	Cornell Notes	Curriculum Compacting	Highlighted Material	Mini-lessons	Varying Texts	Vocabulary Lists
One can use Audio/Video as a way to expand the knowledge of gifted learners by integrating technology.	It is beneficial for visual learners which assists in note taking difficult.	The contents can be "compacted" for those who have mastery of the material to enhance activities such as independent study for knowledge expansion.	Provides material with highlighting main points which can reduce the time and stress. Learners can focus on the main points of the content.	Re-teaching parts of a lesson to those students who struggled with the content will target those who face some issues.	Using various texts, or supplemental texts of different levels. Web resource can also be relevant.	Struggling students can be overwhelmed by new vocabulary. Providing a list, or a fill in the blank, allows the student to focus on the words.
Source: (Tomlinson, 2001)						

A. Process

Process is the mean for students to interpret the content and ideas that are outlined in the curriculum. Each student needs time to think about new material and make sense of it.

Activities - The activity portion of a lesson allows time for the students to make sense of the information that has been presented. Providing time to complete an activity allows the student to process and internalize the information. It is important to ensure that the activity is meaningful and is promoting new learning at an appropriate level for the students. This means it should match a student's readiness level. The activity portion of a lesson is a great time to tap into different learning styles.

Group Work - Talking and interacting with peers allows information to be processed and can tap into higher learning as the discussion progresses.

The following is a list of strategies to focus on processing in the classroom as suggested by Carol Ann Tomlinson (2001):

<ul style="list-style-type: none"> • Creative problem solving • Cubing • Graphic Organizers • Interest Groups 	<ul style="list-style-type: none"> • Jigsaw • Labs • Learning Logs • Literature Circles 	<ul style="list-style-type: none"> • Making Models • Philosophical Chairs • Role Play • Think-Pair-Share
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B. Product

Product is the assignment that shows what the student learned over the course of a unit. In order to attain the aim related to the product of differentiation following are some tips offered by Tomlinson (2001)

- Build a power-point or webpage;
- Conduct an experiment;
- Create a game/ a model;
- Draw a cartoon;
- Give a speech;
- Make a brochure/a photo collage/ a poster;
- Write a newspaper story/an essay/ journal entries/ song or poem.

2.1.4. Traditional treatment of students with disabilities

Traditional teaching methods are often ineffective in a special class simply because of the reason that the learners need special treatment while the teachers employ generalized approach of teaching.

2.1.5. Multiple Intelligences: A solution to minimise anxiety disorder

Howard Gardner's interest in brain function and the potential of the mind, led to his theory of multiple intelligences, which revolutionized the way educators look at learning. His theory challenged the way that intelligence was perceived by those who considered IQ to be the measurement standard. Gardner's theory broadened the scope by which intelligence was measured. By measuring the IQs, one can integrate appropriate syllabus, evolve suitable strategy and reach closer to the learners as per their mental level. Many techniques can be developed based on intelligence theories.

2.2. Differentiation Strategies and Techniques for Special Needs Students

Differentiated instructors need to differentiate teaching techniques to deal with special students. In this process, assessment is a key factor.

2.2.1 Assessments

Assessment is an integral part of a differentiated classroom in order to see if the content delivery is good and process of instruction is in accordance with the need of diverse learners. The instruction can create a rubric as a tool of assessment. In addition, performance can be assessed in indirect ways by incorporating activities related to posters making, models, performances, and drawings/charts/pictures etc.

2.2.2 Assistive Technology

Silver-Pacuilla (2007) worked on assistive technology and its uses, and found it extremely important. Nowadays, thinking anything without 'Technology' may not be effective. Utilisation of computers, screen readers, voice related software, videos, CDs can help many special need students.

2.2.3 Collaborative Activities

It has recently been studied that students being diverse learners can learn in different under the supervision of instructors and in collaboration with peers. Collaboration is a skill that must be implemented in a differentiated class. It helps learners to answer some basic questions in a proposed collaborative activity based classroom. However, the teacher has to monitor the collaborated group to ensure proper functioning.

2.2.4. Graphic Organizers

Some students are not good organizers. Therefore, organizing ability always poses challenges to the students with special needs. Disabled students are often considered as visual learners who are good at responding to graphic and visual presentations. It can

be a very effective learning strategy. Some items and learning tools can facilitate special learning such as [concept maps](#), [diagrams](#), [charts](#), [Story Maps](#) etc.

2.2.5. Peer Tutoring

Peer tutoring has emerged as a novel approach of solving out learning issues in a very friendly manner. It leads to self-learning strategy. Students with special needs can mutually tutor or assist instantly whenever they face difficulties in learning. Peer tutoring can also create study tools, editing written assignments through collaborative activities. (<https://sites.google.com/site/lrtsas/differentiation/differentiation-techniques-for-special-education>)

2.3. Implementing Differentiated Instructional Strategies

With a purpose of extending help and assistance to each individual student maximize his learning potential and capacity special teachers should try [differentiated instruction strategies](#) which are based on diverse learners' background. These educational techniques adjust and incorporate each student's learning style, readiness, and other essential requirements such as learning profiles or learning styles. The ultimate aim of 'differentiation' is to engage all the students in the learning process by assigning tasks in accordance with the principles.

Following are some of important DI strategies:

2.3.1. Flexible Grouping

This is one of the methods of teaching that allows students to work in groups with peers who are diverse learners. In order to make this method a success, teachers must conduct continuous assessment, and group them to master required skills.

2.3.2 Learning Centers

Learning centers are places which contains different kinds of materials which may be found appropriate for students to practice skills on their own. Humans are naturally flexible, and with a little adjustment, they can explore effective style to differentiate teaching or learning to accomplish prescribed educational tasks. Teachers can design centers with different levels of difficulties in different subjects.

2.3.3. Tiered Assignments

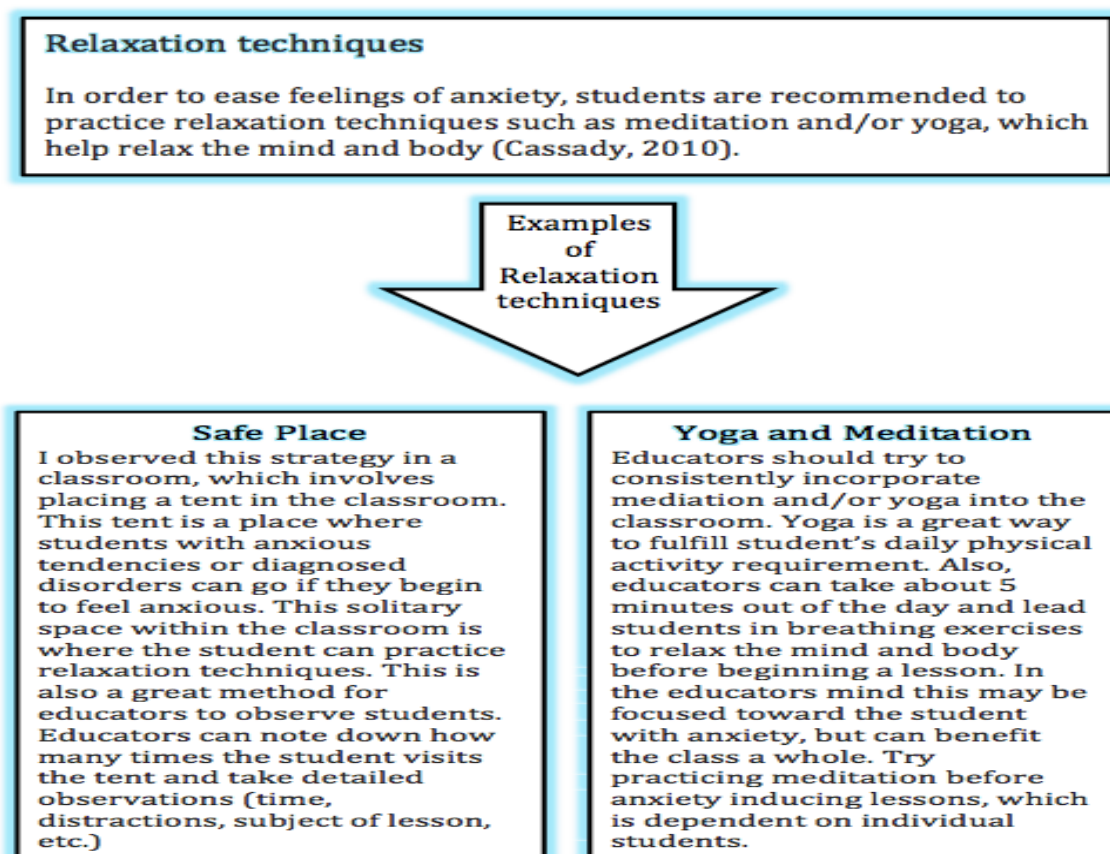
As Differentiated instruction focuses on diverse learners or different ability learners, it is suggested that 'Tiered assignments' can cater to the need of individual needs. The activities are grouped and tiered in accordance with the students' readiness level and

'skill' that they need to acquire. Tiered activities can be designed for small groups or individuals.

3. Specific strategies for anxiety affected learners

There can be many strategies which can be suitably employed to deal with anxiety related issues, and lessen the learners' burden for better outcomes. Following are some pertinent ones.

3.1. Relaxation techniques



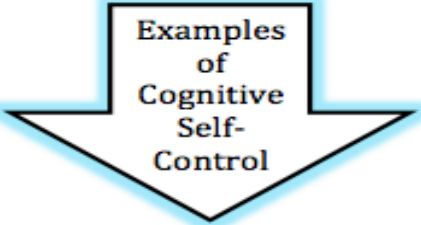
3.2. Cognitive self-control

This model was developed by Cassady (2010). It focuses on the self-power to combat anxiety:

Cognitive Self-control

This involves students developing the will power to override feelings of anxiousness (Cassady, 2010).

Examples
of
Cognitive
Self-
Control



Safe Place

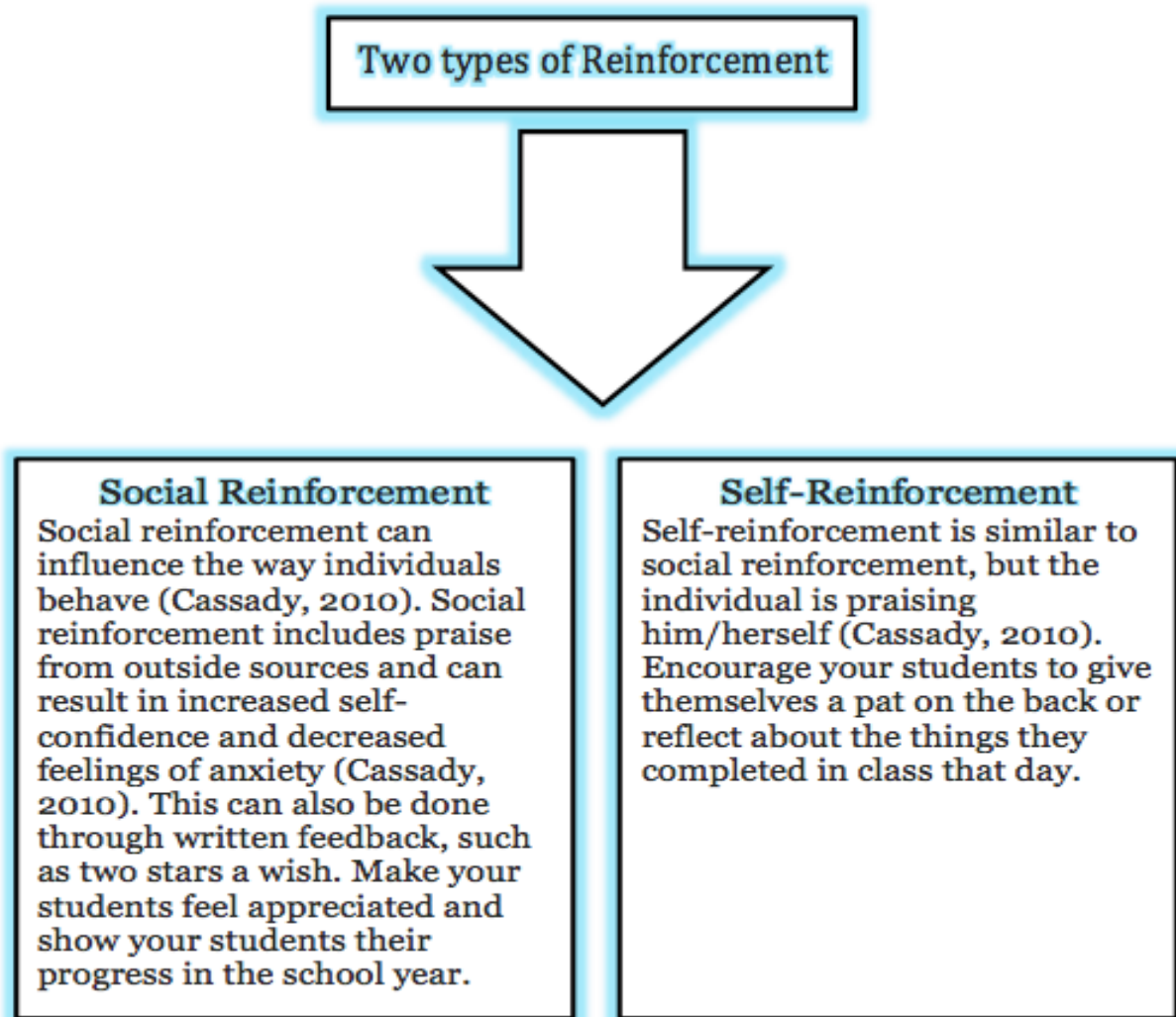
Refer to relaxation techniques for a detailed overview. Incorporating a safe place into the classroom is a strategy you can use for this technique. The anxious student(s) would then have a place to override their feelings of anxiousness without distractions in a safe and relaxed environment. If students can override feelings of anxiousness in certain situations, they can alleviate their overall anxiety.

Self-instruction

Self-instruction takes the form of self-talk that can gradually become natural and unconsciously generated within the mind (Cassady, 2010). Students can verbally meditate and relax themselves in certain situations.

3.3 Reinforcement technique

Reinforcement or motivation is very crucial in learning. Students in a country like India are socially as well as personally reinforced for different reasons. Such reinforcements factors can cause anxiety as well as reduce because it gives a healthy feeling the education is not a simple achievement. As a result, students feel relaxed at a point despite the fact that they live alongside anxiety which could be a mixed pleasure.



4. Conclusions and suggestions

4.1. Conclusions

It has been found that learners can't be of same mental level, interest, readiness, backgrounds. Therefore, the pedagogues and instructors are supposed to utilize the concept of differentiated instruction in order to cater to the needs of diverse learners and students suffering from some kinds of disabilities. Zeichner (1992) has concluded about successful teaching approaches for diverse populations. In addition, Corley (2005) studied Differentiated instruction's role in the process of adjusting to the needs of all learners. DI can be implemented in the case exceptional children also because they are superior to their counterparts, and needs special attention. However, it is felt that the teachers need to be trained in special education strategies for effective use and maximum results.

4.2. Suggestions for further studies

An empirical study is needed especially in the Indian context where such researches are not very common in general education context.

About the authors

Dr Intakhab Alam Khan, an internationally acclaimed educationist and trainer, is currently associated with King Abdulaziz University, Jeddah-Saudi Arabia. He has almost 25 years of experience in teaching/training/research at various universities. An author of a dozen of academic and research books, and around 65 papers in different international online and print journals, Dr Khan has taught medical/health/business English in Saudi Arabia. His presentations at international conferences have already been published in ISI indexed proceedings. He is honorary chief editor/associate editor/asst. editor of many online educational journals published worldwide.

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References

1. Baker, S., Simmons, D., & Kame'enui, E. (1998). *Vocabulary acquisition: Synthesis of the research*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement, Educational Resources Information Center
2. Cara, F. S (2011), *The Best of Corwin: Response to Intervention*, p. 51
Carbo, M., Dunn, R., & Dunn, K. (1986). *Teaching students to read through their individual learning styles*. Englewood, NJ: Prentice-Hall.
3. Chapman, C., & King, R. (2005). *Differentiated assessment strategies: one tool doesn't fit all*. Thousand Oaks, CA: Corwin Press.
4. Corley, M. (2005). Differentiated instruction: Adjusting to the needs of all learners. *Focus on the Basics*, Vol. 7, Issue C: March. Available at: <http://www.ncsall.net/?id=736>.

5. Dwight L. Evans, Edna B. Foa, Raquel E. Gur, Herbert Hendin, Charles P. O'Brien, Martin E. P. Seligman, and B. Timothy Walsh (Ed) (2012) *Treating and Preventing Adolescent Mental Health Disorders: What We Know and What We Don't Know. A Research Agenda for Improving the Mental Health of Our Youth* (P.1)
6. Gardner, H. (2006). *Multiple intelligences: New horizons*. New York: Basic Books.
7. Mann, V. A., & Brady, S. (1988). Reading disability: The role of language deficiencies. *Journal of Consulting and Clinical Psychology*, 56(6), 811-816.
8. Mitchell, D. (2010). Education that fits: Review of international trends in the education of students with special educational needs. University of Canterbury, for the Ministry of Education. Retrieved May 14, 2014 from http://www.educationcounts.govt.nz/publications/special_education/education-that-fits/chapter-eleven-inclusive-education
9. Mitchell, D. (2010). Education that fits: Review of international trends in the education of students with special educational needs. University of Canterbury, for the Ministry of Education. Retrieved May 14, 2014 from http://www.educationcounts.govt.nz/publications/special_education/education-that-fits/chapter-eleven-inclusive-education
10. Republic of Kenya (2009). Final draft the national special needs education policy framework Ministry of Education, (p.6)
11. Silver-Pacuilla, H. (2007). Getting started with assistive technology. Focus on the Basics, Vol. 8, Issue D: November. Available at: http://www.ncsall.net/fileadmin/resources/fob/2007/fob_8d.pdf.
12. Smorenberg(2014) (<http://dailyledventures.com/index.php/2014/10/16/robin-smorenberg/>)
13. Willoughby, J. (2012). Differentiating instruction: Meeting students where they are. Retrieved May 14, 2014 from http://www.glencoe.com/sec/teachingtoday/subject/di_meeting.phtml
14. Tomlinson, Carol Ann. (2001). *How to differentiate instruction in mixed-ability classrooms?* Alexandria, VA: Association for Supervision and Curriculum Development
15. Tomlinson, C.A., Brighton, C., Hertberg, H., Callahan, C., Moon, T., Brimijoin, K., Conover, L., & Reynolds, T. (2013). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. *Journal for the Education of the Gifted*, 27 (2/3), 119-145.

16. Torgesen JK, Wagner R, Rashotte C. Test of Word Reading Efficiency (TOWRE) 1999.
17. Willoughby, J. (2012). Differentiating instruction: Meeting students where they are. Retrieved May 14, 2014 from http://www.glencoe.com/sec/teachingtoday/subject/di_meeting.phtml
18. Zeichner, K. M. (1992). *Educating teachers for cultural diversity*. East Lansing, MI: National Center for Research on Teacher Learning.

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