Implementing Brain-Targeted Teaching Model to Enhance English Language Teaching and Learning Process

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ABSTRACT

Cognitive learning is gaining momentum in the world of education. This study aims to prove that 'Brain-Targeted Teaching Model (BTT) is an effective teaching technique that helps students improve their perceptive skills and become more creative. Hardiman (2012) initiated this method at The Johns Hopkins University, USA. The methodology used is the BTT model, a pedagogical framework, that seeks to connect research and practice by providing instructors with a cohesive structure of effective instruction based on the neuro-cognitive sciences. The findings highlight that the six targets help educators combine many elements related to research-based teaching and associate each component to what neuroscience reveals about how a human brain learns (Hardiman, 2003). The results shed insights into how the teacher has to change her attitude towards students and have a better understanding of their minds and emotions in establishing a positive relationship.

KEYWORDS: Cognitive learning, creative, concept map, motivation.

Introduction:

Brain-Targeted Teaching Model is an approach which is gaining popularity in the world of education. Knowing how students' brains work best helps a teacher create an environment that gives a learner more chances of success in learning (Prince, 2005). According to The Room 41 Team, A Blog by Concordia University-Portland (2012), current research on brain-based learning informs ideas for improved learning experiences, and a greater aptitude for success that teachers can incorporate into their teaching methods.

Brain-Targeted teaching model in ELT classrooms deal with learners' cognitive focus and enjoyment in learning. Cognitive focus is the ability to perform tasks briskly, such as scanning, inspecting, and comparing the processing of incoming visual information quickly and efficiently in an academic context (Qwbli, 2020-2021). These activities associate cognitive processing, thinking skills, focus and attention, memory skills, and sensory integration. According to Kautz et al. (n.d), assessment of cognition has been developed and refined over the past century. Achievement tests are designed to capture acquired knowledge, whereas IQ tests are designed to achieve the rate at which students learn. This understanding of cognition is now widely appreciated in the education sector. Many educational institutes use IQ tests, standardized achievement tests, and even grades as interchangeable measures of cognitive ability or intelligence. Hence, cognitive skills are of great importance in students' process of thinking.

With the advancement of technology, competition, and other associated factors in the world of education, teaching poses challenges like completing syllabus, facilitating students in the

learning process, monitoring their progress, and at the same time, maintaining discipline in the classroom. In most cases, the English curriculum comes from the institution's curriculum department, which covers the selected units, skills, objectives, and pacing. At present, most of the language teachers tend to rely on delivering content using technology and various approaches to go with the trend. In many schools in the UAE, teachers have to train students for standardized tests like IELTS, EMSAT, and TOEFL, apart from completing their prescribed syllabus on Academic English. Most vocational institutes (in the Emirates), where students are usually between 15 and 18 years of age, use laptops and iPads to read books (e-books), complete research work and collaborate digitally. According to Pickhardt (2016), adolescents have had to let go much that was of more interest in their childhood. Puberty increases their self-consciousness of physical changes which cannot be controlled. As adolescents undergo changes, relating to them can be challenging for adults. Consequently, teachers have a lot of complaints about students of this age, who are often less focused on their academics due to problems such as anxiety, insomnia, and excessive worry due to family problems.

In relation to students' involvement, on many occasions, some students tend to display negative attitude in the class despite having a positive learning environment and academic achievement. Some students are often disengaged and restless. They are always in a hurry to complete their assignment just for the sake of submission with no reflection, thoughts, and application of knowledge. Subsequently, their anxiety and disorder can affect their ability to learn.

Based on the above discussion, this study aims to have an in-depth understanding of students and their thinking process in order to make a connection with them emotionally and increase their motivation. Implementation of the Brain-Targeted teaching Model, an effective teaching technique, is of great help for students to improve their cognitive skills and be more creative. Dr. Hardiman, Johns Hopkins University, USA, has initiated this method and introduced a pedagogical framework that seeks to connect research and practice by providing instructors with a cohesive model of effective instruction based on the neuro-cognitive sciences. It is one of the most popular teaching methods which are gaining attention in the world of education.

Literature Review

In any context as an educator, it is essential to understand how a student’s brain learns. Once a teacher can comprehend how a child gathers information, it becomes easier for him or her to execute the teaching practices and make students learn better. However, the literature findings on how the human brain functions and its connection to teaching practice are challenging as the concept originates from the cognitive psychology and neurosciences (Darden, 2012).

The first book that needs to be mentioned is Amodh and Wang (2011), 'Welcome to your child's brain,' in which they clearly explained how the brain develops and how it shapes personality. A child's brain copes with school, and the child learns to react to environmental stress. Parents play a significant role in molding their children’s minds in order to prepare them for school. This reminds us of Galinsky (2010) who states that the best gift that parents can give their children is to train them to develop 'self-control.' Further, when a child can control his behavior to reach his goal, it proves that the brain's executive functions like working memory, power of thinking, have helped him in the development of the essential

brain function. Self-control underlies many aptitudes from socialization to schoolwork. If kids (pre-school) can resist temptation, it is a much better predictor of academic success than their IQ scores (Galinsky, 2010 as cited in Amodh and Wang, 2011).

Byrnes (2008), in his book, 'Cognitive Development and Learning,' referred to Vygotsky, who described knowledge in terms of concepts and functions. Vygotsky (as in Byrnes (2008; 38), mentioned that acquisition of knowledge is described as a process of internalizing the words and actions of teachers, parents, and colleagues. Learners' brains have a way to adjust themselves on and adapt to the demands of the classroom. The three aspects of language function, namely, communicative speech, egocentric speech, and inner speech, help them to remain on track. The egocentric and inner speech focus on attention and guide them in behavior to stay 'self-regulated.' In other words, the cognitive process helps in higher order thinking because students have self-control. According to Bandura Social Cognitive Learning behavior can affect cognitive activities, and vice versa. Individual cognitive activities can change the environment, and environmental influences can alter their thought processes (Harinie, Sudiro, Rahayu & Fatchan, 2017).

Another critical role played by the human brain is language learning. The timing of speech production is determined by the maturation of the brain regions that control movement (Amodh and Wang, 2011: 90). The researchers Amodh and Wang (2011) further said that forming natural sounds requires substantial fine motor control and a lot of practice. If youngsters are exposed to both the languages early enough, they can learn more than one language with no hassles and improve their cognitive skills. Hence, students with bilingual backgrounds have an advantage for cognitive development.

If teachers try to understand how a child's brain learns, it helps them to comprehend better. According to Souza (2011), the different parts of the brain have different functions to perform. In his book 'How the Brain Learns', the author explains that the brain has the power of transfer: it can process information, enhance thinking skills, memory, retention, and learning (Souza, 2011). The author further stated that the most crucial thing is that our emotions always affect our learning memory and recall. Teachers have noticed that students' cognitive processes, such as attention, learning, reasoning, and retrieving prior knowledge, are often influenced by their emotions. If they are happy, they cooperate with their teacher, if not, it's the opposite. All these prove that students' sentiments and feelings play a significant role in learning and long-term memory retention.

To understand more about the brain and learning, it is essential to comprehend multitasking and task switching while doing natural and complicated tasks (Souza, 2011). The author further states that students' brain could not carry out two cognitive processes simultaneously. Although sometimes multitasking makes one feel good (Widrich, 2019), but many researchers counter this belief and consider this as a myth. There should not be a disturbance in a child's thinking process with too many activities. Single tasking helps students maintain an interconnection in the sequence of ideas and retain more information in the working memory to understand any text. As human beings, sometimes even teachers get confused between multitasking and task switching.

The review of brain-targeted teaching remains incomplete without taking into consideration the motivational factors. On many occasions, teachers have found that students who have the skill to do well, may not be motivated enough to do the work. According to Brynes (2008),

motivation depends on certain constructs, namely goal-related constructs, knowledge-related constructs, and metacognitive- constructs. Hence in a classroom, individual differences can be found in many of these aspects of motivation. Teacher's personality and classroom environment play a significant role in student motivation.

Hardiman (2012) propagates that Brain-Targeted Teaching Model is essential for teachers to fulfill their students' learning needs and develop their 21st-century skills. Her course book for Mind Brain and Teaching Program gives an overview of how our brain works and therefore an excellent resource for teachers and practitioners to manage students of all levels. Research in neuro-cognitive sciences has reported many findings that educators have progressively viewed this model as essential in expanding their understanding of how students learn. In this context, Hardiman (2012) has stated that educators should have more information about neuro-cognitive sciences and be strong enough to separate neuro-myth from neuroscience. Teachers should understand the brain structure and function, and establish an emotional climate for learning in the classroom.

The Brain-targeted teaching model can be associated with thinking skills and teaching framework of various other models. One such example is its alignment with Marzano (1992) 'Dimensions of Learning.' This model emphasizes that learning involves the interaction of five types of thinking, which are: (1) developing positive attitudes and perceptions about learning; (2) acquiring and integrating knowledge; (3) extending and refining knowledge; (4) using knowledge meaningfully; and (5) developing productive habits of mind.

It would be incomplete to conclude the review without the reference to Rose and Meyer (2002) 'Universal Design for Learning' (UDL). The 'universal' in UDL does not imply one standard solution for every one child. This method explains each student's unique nature and the need to accommodate differences, creating experiences that suit individual learners and maximize their ability to progress (Maya, 2008). The Brain-targeted teaching model has a connection with UDL in its three principles of Learning: 'what,' 'how' and 'why.' The aspect of multi-method engagement is similar to Brain-targeted teaching which presents content in different ways.

According to Hardiman (2012), The Brain-targeted teaching model has six targets, namely: 1) The Emotional Climate, 2) The Physical Environment, 3) Big Picture, 4) Mastery of Content, Skills, and Concepts 5) Application of Knowledge, and 6) Evaluation and Assessment. All six targets are interrelated. This model is an organic system that guides and informs an approach to instruction in the classroom and as a unifying school-based system.

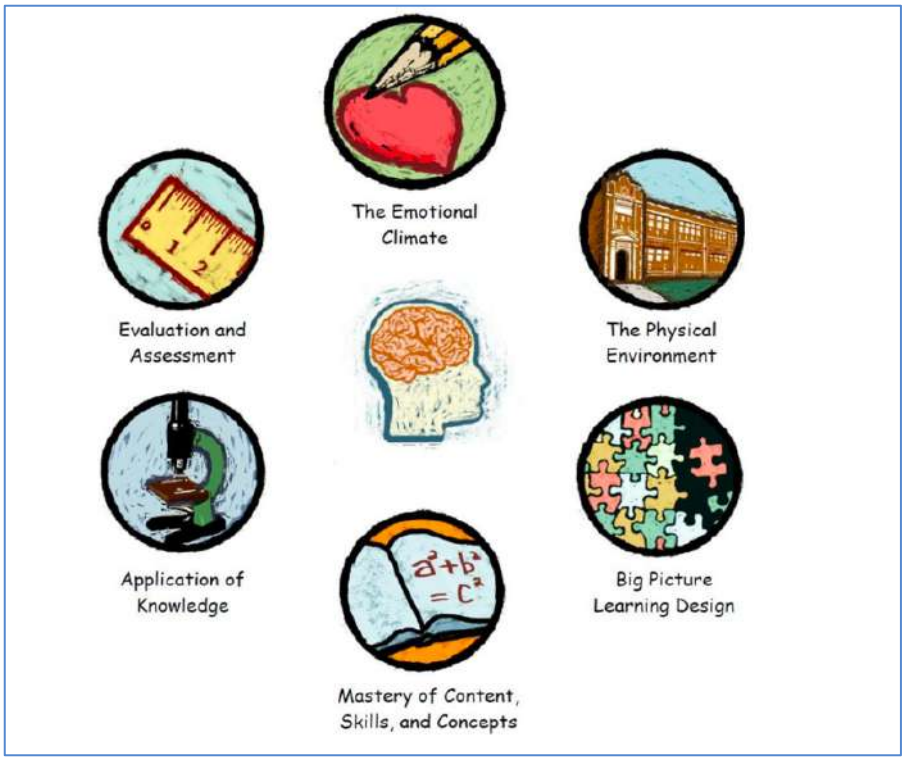


Figure 1. Overview: The Brain-Targeted Teaching Model for 21st Century Schools

Methodology

The Brain-Targeted teaching model was chosen for action research to increase students' cognitive focus while enjoying learning as per the objectives stated at the beginning. This model is a pedagogical framework, based on six components known as **Brain Targets** (BT), which is explored to provide the teacher with an organized structure of effective instruction based on the neuro-cognitive sciences. This approach focuses on applying educational and cognitive neuroscience principles into classroom settings through an academic framework.

The participants were 24 boys from the Institute of Applied Technology, UAE. The students' age was between 15 and 16 years and they were in Grade 1. Their level of English proficiency is between intermediate and upper-intermediate. The curriculum was designed by the curriculum department of the school and the medium of instruction is English.

The data collection procedure was mainly through class assignments, homework, students' portfolios through ClassDojo, and other technology applications for summative and formative tests as well as messages from parents. The resource used was a learning Unit 'Transport' in the book prescribed by the curriculum department (Westbrook, 2014).

Details of the BT teaching units
Learning Unit: 'Transport'
Subtopic: Dubai Transport
Grade: 10
Time: 2 weeks (each week nine periods)

Overarching Goal of the Unit: The primary language skills focused in this section are academic reading, writing, and speaking, with particular reference to language system, like 'use of linkers' in academic writing.

BRAIN-TARGETED TEACHING LEARNING UNIT

Name: Banani Roy Chowdhury **Dates (Allocated Time):** 2 weeks

Unit Topic:/Title: Dubai transport 9 periods a week and each period is of 45 mins

Grade Level: Grade 10

Content Standard(s) {OR Key Performance Indicators used in our school}:

- Can predict content using visuals
- Can expand ideas by providing details
- Can discuss solutions to problems
- Can judge and evaluate opinion (content) in text
- Can expand ideas by giving examples from own experience
- Can propose ideas with justification around a topic
- Can read/understand topic related articles and discuss solutions to a problem
- Can distinguish advantages and disadvantages from spoken text
- Can propose different ideas around the topic
- Can discuss solutions to problems
- Can talk about achievements, challenges and goals
- Can speak about environmental issues caused by transportation
- Can construct an essay that outlines a problem and its solutions
- Can write sentences that describe advantages and disadvantages of each solution to the problem

Figure-2: Brain Targeted Teaching Learning Unit

Brain Target-1

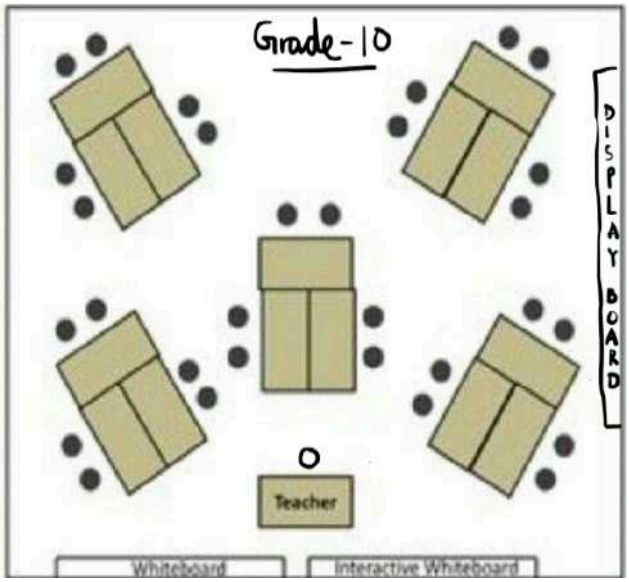
The first target is the emotional connection in which the teacher established a personal relationship with the students. In this class, the teacher personalized the lesson through inquiries on how the students get to school every day. They discussed different modes of transportations and explained why they used them. The teacher also used technology and artistic displays to help the students become more passionate about the topic. The teacher sent them a preliminary question through www.socrative.com and asked students to make a list of the different types of transport (air/water/sea) that they were familiar with and the most popular one. The teacher analyzed students' responses electronically (displayed the retrieved file on the OHP) and gave general feedback. Students then discussed and shared their knowledge about the city transport, how it was before and how it is now, with the class.

The teacher played a video and instructed them to compare and contrast Dubai transportation to encourage students to reflect, predict, and appreciate global transport systems. Each one of them shared their ideas, opinions, and comments. After school, they visited the school library to enhance their knowledge of the topic by reading books and magazines.

Brain Target-2

The second target is Physical Environment that enhances the novelty in the classroom and increases students' attention level. The teacher delegated students to organize the class environment. Students arranged the desks in 5 clusters for group activities that added up to the novelty of the classroom and can comfortably viewed the OHP. Students suggested that basic stationeries for each group to be kept on the table. Each one of them prepared their name card and placed it on the table. They further selected a color for their group and shaded their name cards for easy recognition. The teacher made the class look visually appealing with displays of charts and artwork related to public transport traffic rules and traffic jams. Students used pictures as prompts, preferably 3D printouts to think of solutions. The teacher sticked quotes on safe driving around the class in a creative way. Students are encouraged to bring indoor plants to decorate their classroom which would also add up to the oxygen level of the room.

Figure -3 Sitting arrangement of the students



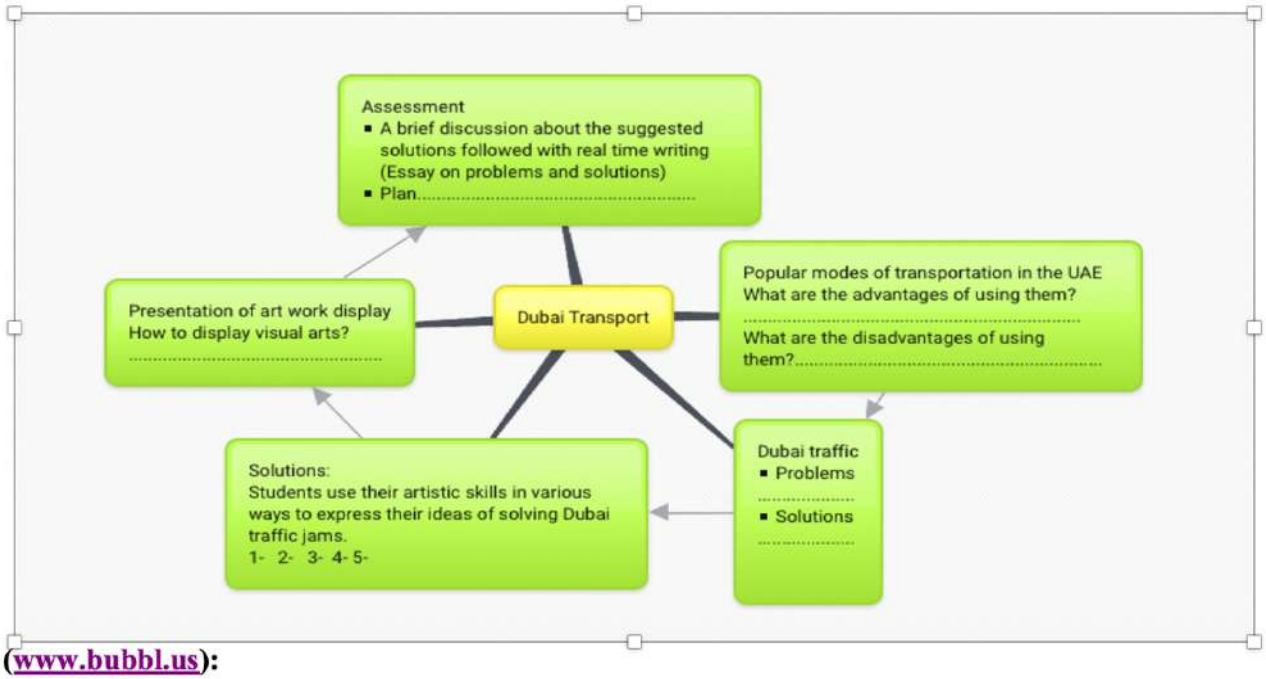
Brain Target-3

The third target is the Concept Map in which the teacher sent a pre-defined mind map to the students to use and record their facts, refer to it at every stage, and update the content. The 'big picture' connected their prior knowledge and led them to research inquiry and discussion on problems and solutions of UAE Traffic. Students were recommended to read the passage on their recommended book, 'Masdar: The future of Cities' (Westbrook, 2014), to further reinstate content about the advantages and disadvantages of traffic. The teacher checked their understanding of the main ideas and supporting details through peer discussion and comprehension questions. At this stage, students' knowledge in the language system and their

writing skills were reinforced through numerous activities. They could use their artistic skills and use their creativity to generate their ideas.

Figure 4: Concept Map on Dubai Transport

Brain Target #3 Concept Map / Advanced Organizer
Time: 4 periods (each 45 mins)



(www.bubbl.us):
Learning Goals:

-To help students activate their schemata and also to get an overview of the unit.

-To help students reflect on what they know (prior knowledge) and what they are going to learn through these activities.

-To discuss and write the advantages and disadvantages of the UAE transport.

-To get students identify their learning experiences with each bubble and have a global understanding of the content.

-To assist students focus on the main concept 'problems and solutions of Dubai traffic'.
Refer to page 73/78 of UNLOCK-3, Reading and Writing

-To help them decide on the forms of arts they want to use in order to express ideas.

-To use the content map as a reflection and draft an essay plan.

Brain Target-4

The mastery of knowledge was the following brain target stage in which the teacher checked their acquisition of knowledge in various ways. The teacher did it through academic activities like asking thought-provoking questions, testing understanding of the content through comprehension, and artwork. Students practiced in role play, gave presentations, debate, and group discussions on the given topic. All these helped them to research the topic and gain mastery over the matter. The objectives were as follows:

Brain Target #4
Time: 4 periods + extended work beyond school time
Learning Goals:

-To help them reinforce their reading skill for better understanding of content.

-To help them think critically and decide, select what, when, how they would present their ideas.

-To get them use time in the best possible way to organize their content.

-To support them discover ways to execute their idea in groups.

-To help them research on the topic, use artwork and perform repeated rehearsals.

-To encourage them use recyclable materials (to do their models cars/bridges/ collage/charts etc.).

-To help them gain mastery over the content through their artwork.

-To practice speaking skills for better communication.

Figure-5 Objectives: Teaching Mastery of Declarative/Procedural Knowledge

Brain Target-5

Extension and application of knowledge were under BT-5, in which students enhanced their cognition, divergent thinking, creativity, critical analysis, and mastery of content through application in creative ways. In this unit, 'Dubai Transport', students were encouraged to decide whether their suggested solutions on traffic problems would be feasible. They had to get involved in activities with problems and solutions and come out with exclusive ideas related to traffic problems in the city which is the main idea of the unit. They were expected to understand the importance of their solutions and find out the disadvantages of executing them. Additionally, they were encouraged to invite teachers and other staff to watch seminars, presentations, and debates conducted during class hours. Discussions were carried out on which solution would be good or better. They were expected to collect ideas and draft a skeleton plan of their essay based on the knowledge acquired if time permits. Eventually, they had to write an academic essay on the topic suggested. The teacher reminded them of the structure and the language needed for writing the essay.

Structure of the essay

Introduction: 1 paragraph

Body: 3 paragraphs

Conclusion: 1 paragraph

Word Count: 250

In consequence to the above order, the teacher managed to reach the last part of the unit and achieved all the lesson objectives.

Brain Target-6

Evaluating learning was done in BT-6. Students were given immediate feedback for better performance. The assessment was done through quizzes, classwork and homework in which they are constantly evaluated on their learning. In this unit, students were assessed on their acquisition of knowledge and their academic skills like reading, writing, and speaking in relation to the unit. In the end, students did a project, presented their artwork, performed a role play, and took a quiz on the content of the topic, City Traffic. The teacher used rubrics to evaluate students' presentation skills and other activities.

Score	10	8	6	4
Attractiveness of artistic display	Display is exceptionally attractive	Display is good	Display is satisfactory	Display needs improvement
Logical reasoning of solutions	Reasoning is logical creative, and consistent	Reasoning is mostly logical complete, and consistent.	Reasoning contains some elements of logic and insight	Reasoning is illogical and inconsistent
Presentation skills	Eye contact: Good Language skills: Excellent	Eye contact: Fair Language skills: Good	Eye contact: Not much Language skills: Satisfactory	Eye contact: No Language skills: Unsatisfactory
Team work and participation	Participates actively with responsibility	Participates actively, but not much with responsibility	Participates with less responsibility	Lack of participation

Figure -6 Rubric to evaluate presentation skills (artwork presentation)

	Outstanding = 10	Good =8	Fair=6	Needs Improvement=4
Task Response	Addresses all parts of the task. Presents relevant main ideas but may be inadequately developed.	Addresses the task only partially. Presents some main ideas but they are limited.	Responds to task only in a minimal way. Presents some main ideas but they are difficult to identify.	Does not adequately address any part of the task. Presents few ideas, which are undeveloped.
Coherence and cohesion	Arranges information and ideas coherently.	Presents information with some organization.	Presents information and ideas but these are not arranged coherently.	May use limited range of cohesive devices.
Lexical Resources	Uses adequate range of vocabulary for the task.	Uses limited range of vocabulary, but this is minimally adequate for the task.	Uses only basic vocabulary, which may be inappropriate for the task.	Uses only a very limited range of words and expressions with very limited control of word formation.
Grammatical range and Accuracy	Uses a mix of simple and complex sentences forms/makes some errors in grammar and punctuation.	Uses only a limited range of structures. Inaccurate complex sentences. Makes frequent grammatical errors in grammar and punctuation.	Limited range of structures with only rare use of subordinate clauses. Faulty punctuation.	Attempts sentence forms but errors in grammar and punctuation predominate and distort the meaning.

Figure -7 Rubric to evaluate academic writing (adapted from IELTS rubric)

Findings

Overall, students were able to predict content using visuals, and expand ideas with justifications. They were able to read and understand topic related articles and discuss the problems and solutions in a much easier way. While inspecting the concept map (in the form of mind map), the teacher had an opportunity to differentiate and determine the strengths, weaknesses, needs of every individual and their progress. It was evident that this method helped the shy students to participate as individuals in artwork, group discussions, and role-plays. Since artistic production helped students to express their identities, develop ideas and skills, and explore the culture (Freedman, 2003), it worked well with the students in BT-3. The activities that were based on kinesthetic responses like arranging the classroom, organizing debate and group discussions in BT-3 and BT-4 nurtured students' creativity. Most of their essays and graphic organizers were collected electronically on various apps. The most used app was www.ClassDojo.com. There was an overall improvement in the performances of the students in their formative and summative assessments. Parents were happy with their children's progress. The following graph showed the progress in the formative (diagnostic and SBQ) and summative (SWQ) assessment in term-1 when the teacher used the BTT model.

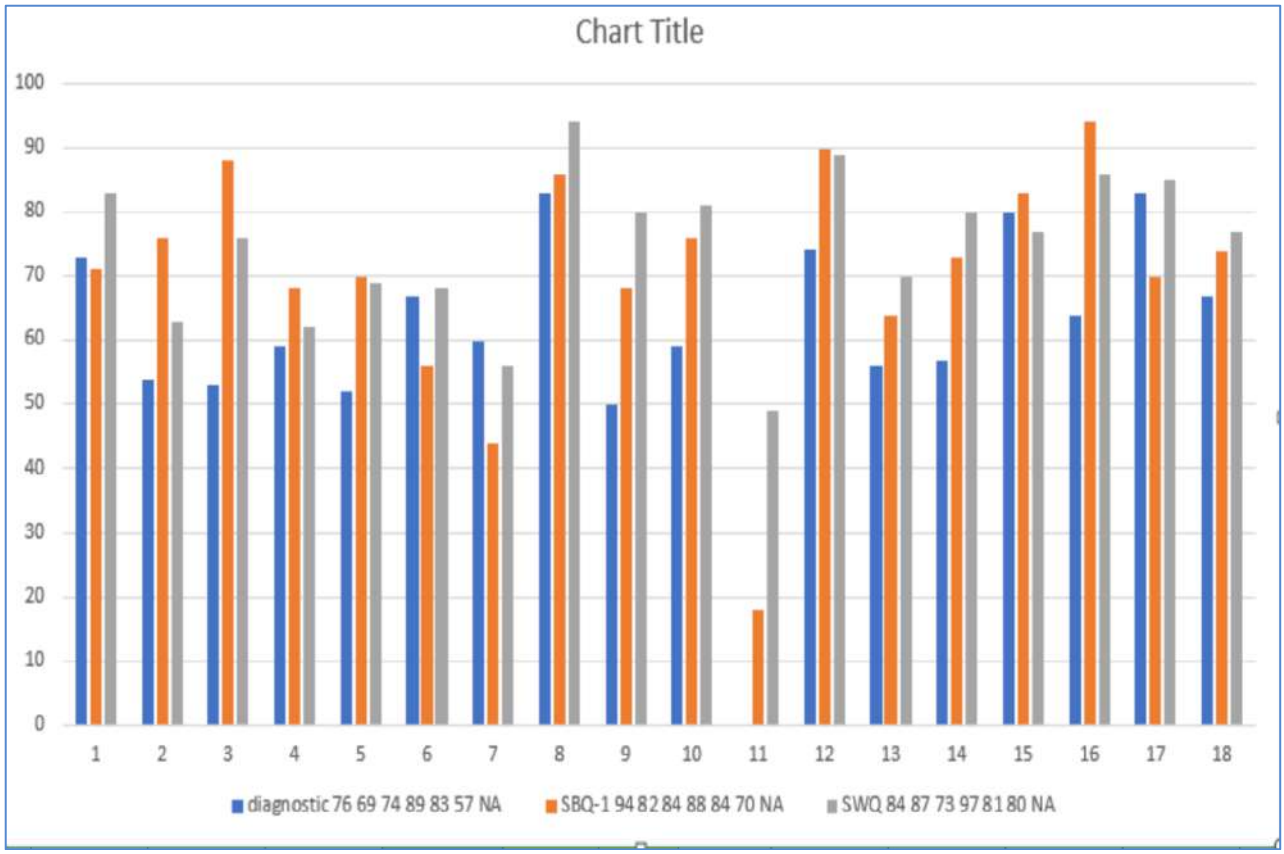


Figure 8: Progress in Learning Performance

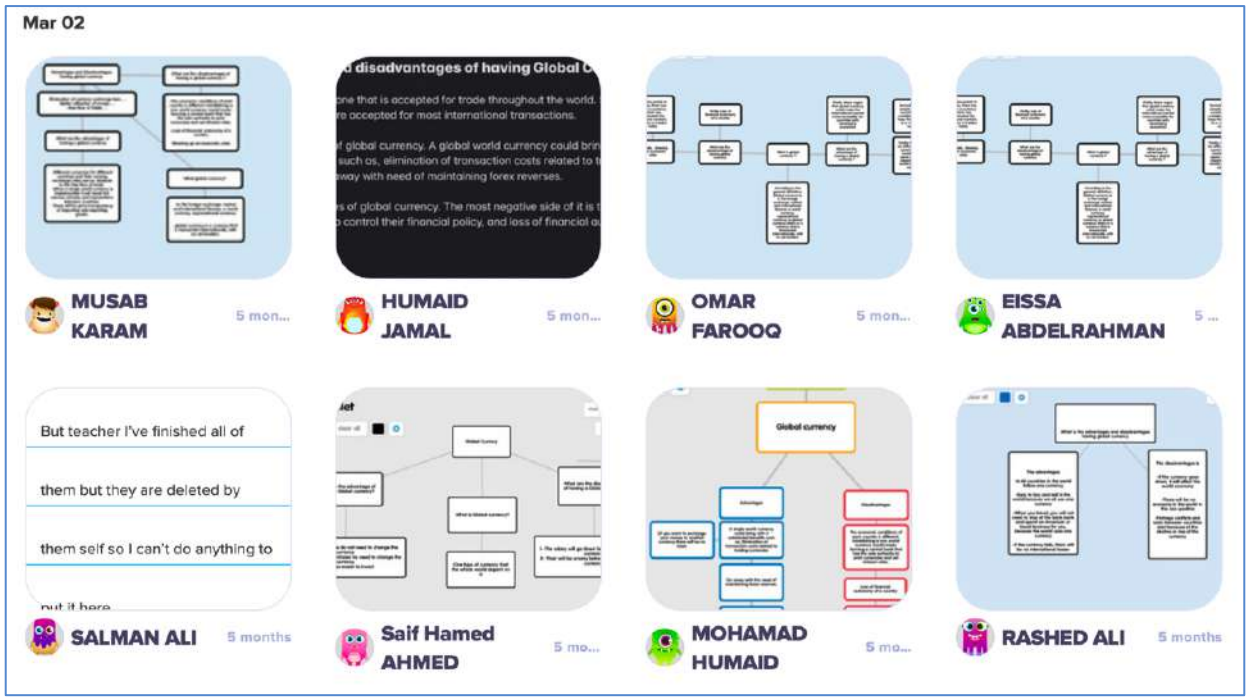


Figure 9: Submission of concept maps

Discussion

With lots of thought, the Brain-targeted teaching model was executed in class, and the brain-friendly approach worked well with the students of Grade 10. The physical environment made them happy, and they enjoyed sitting with their peers and working together whole-heartedly. The sitting arrangement also helped the teacher to have better control over the students. This finding corroborated well with the study of Bennett (2006) where the author mentioned that sitting arrangement and spaces that are skillfully planned offer students the opportunity to act in a certain way and cause a positive impact on behaviour and social relationships between them. It also verified that the plan of a learning space based on the recognition of its social dimension allows learners to handle the socialization positively (Cantero, Mira & López-Chao, 2016). The teacher further had the opportunity to refer to the key performance indicators that are usually used in the curriculum to assess students' progress in the UAE.

Overall, students were able to predict content using visuals, expand ideas with justifications. They were able to read and understand topic related articles and discuss the problems and solutions in a much easier way. The learning unit was meant to develop students' cognition and help them in knowledge acquisition. It also helped the teacher better control students' emotions as they were all engaged with full enthusiasm. This proved the research of Fredricks, Bulumenfeld, and Paris, (2004) that learners who are better engaged in the learning process are better behaved, easy to manage by the teacher and tend to perform considerably higher academically. Students had an opportunity to discuss, read and understand the various means of transport in this country (UAE) and, at the same time, find out feasible solutions to the traffic problems in the different Emirates of the UAE. They researched, examined, and used their creativity and artistic skills to generate ideas on various modes of transport. These ideas would reduce traffic jams and help motorists experience smooth traffic flow. They also discussed the advantages and disadvantages of possible solutions. While inspecting the concept map (in the form of mind map), the teacher had an opportunity to differentiate and determine the strengths, weaknesses, needs of every individual and their progress. The teacher had to give instant feedback from time to time on students' production. This validates Brown (2017) concept that after analyzing the students' strengths and weaknesses, a teacher can develop a plan to help him.

Students learned to work in groups to complete their models (basic structure of academic essays). They had more opportunities to think critically and use their knowledge to justify their ideas. This authenticated the concept that a strong critical thinking pedagogy encourages learners' critical knowledge, skills, and improve students' academic success (Karbalaei, 2012). They practiced speaking about the advantages and disadvantages of the possible solutions and had a quick debate. Each group exhibited their artwork with a brief presentation to explain their ideas of possible solutions of the traffic in the cities of the UAE.

It was evident that this method helped the shy students to participate as individuals in artwork, group discussions, and role-plays. Since artistic production helps a student express his identity, develop ideas, skills, and explore the culture (Freedman, 2003), it worked well with the boys in Brain Target-3 as they enjoyed working using graphic organizers. The activities that were based on kinesthetic responses like arranging the classroom, organizing

debate and group discussions in Brain Target-3 and Brain Target-4 nurtured students' creativity. Overall, there was an improvement in students' self-control as the teacher did not have to discipline them unlike the initial days. Students were highly motivated, and classroom management was exceptional.

Conclusion

Based on this study, it was observed that students remained focused in class throughout the period. They developed more interest in participating in class. They were highly motivated to complete their task on time and receive their grades. The teacher was able to manage students in an efficient way and with less stress.

Apart from providing variety and encouraging a positive relationship between students and teachers, learners had the opportunities to develop reasoning skills, intrapersonal and interpersonal skills developed through this approach. According to Hardiman (2012), students' have improved on their perceptive skills and became more creative which is the core of the approach, which led to a stronger independent learning progression besides the enhancement of critical thinking skills. Students are compelled to self-regulate their behaviour as they became emotionally connected, and understood their interactions, and attitude. Brain-Targeted Teaching Model creates a safe and exciting place for the students to work in. Teachers connect research and practice with a cohesive model of effective instruction based on the neuro-cognitive sciences.

Despite some challenges, this teaching model was considered a huge success. It helps students to think out of their box and improves intellectually. Apart from developing their reasoning skills, which is essential in any ELT classroom, it also helps the teacher to change her or his attitude towards students in order to better understand their mind and emotions, and establishing a positive relationship with students. The language learning environment becomes interesting, making students get engaged in finding real-world applications for what they have studied. It also helps them to develop self-control so that they remain focused on their academics, which eventually aid them to acquire more knowledge and prosper academically. Understanding the stages of the Brain-targeted teaching model is not very difficult. It is hoped that the structure explained here will motivate teachers to change their attitude towards their students and create a successful, harmonious learning environment for better learning. Finally, more brain-based lessons should be conducted in different settings to find similarities and differences in relation to adopting this approach. This would eventually add up to the possible adoption of Brain-Targeted Teaching model in the wider world of education.

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