Promoting Social Interaction through Total Physical Response Method for Autistic Students

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Abstract

English teacher feels the challenge of meeting autism spectrum disorder needs because the limitation of social interaction. These students cannot learn at an average rate from the instructional resources, texts, workbooks, and learning materials that are designed for the majority of students in the classroom. Thus, the current research identifies a method for teaching autism spectrum disorder by using the total response method to promote autistic social interactions. The sample is autistic students from Al-Entisar private primary school in Baghdad, therefore the age of the students are between (6-12) years. It is hypothesized that there is no statistically significant difference between pre and post-observations. This study has adopted the experimental design with pre and post-observations and social interaction checklists. As a result, it was determined that instruction based on the proposed method had a “strong” effect on social interaction. And it has significant contributions to the learning process (promoting social interaction, increasing active participation, learning by having fun, cooperative learning, etc.) and learning outcomes (word learning, correct use, listening comprehension, etc.), and motivation in learning have been determined.

Keywords: Social Interaction, Total Physical Response Method, Autistic Students, Promoting Social Interaction, English Foreign Language, Teaching Methods

Introduction

Autism spectrum disorder (ASD) as special needs learners need special instructional pacing, frequent feedback, corrective instruction, and modified materials, all administered under conditions sufficiently flexible for learning to occur. Special needs learners usually have low IQ; also their most obvious characteristic is a limited attention span and lack of social interaction compared to more able students. Keeping these students actively engaged in the learning process requires more than the usual variation in presentation methods (direct, indirect), classroom climate (cooperative, competitive), and instructional materials (films, workbooks, cooperative games, simulations). If this variation is not part of your lesson, these students may well create their variety in ways that disrupt your teaching. Other immediately noticeable characteristics of special needs learners are their deficiencies in basic skills
(speaking, reading, writing, and mathematics), their difficulty in comprehending abstract ideas, and most disconcerting, their sometimes unsystematic and careless work (Santrock, 2001:32).

Thus, the current research tries to promote the social interaction of autistic students through using TPR. Instead of wasting students' time and effort by having them memorize letters, words, and ideas which are abstract concepts, the study replays these words, and concepts with performance and action to increase their attention and social interaction.

Borah (2013) states that autism spectrum disorder are normal students but the problem is that they are simply not interested in studying under the traditionally accepted system of education. What teachers ought to know is that slow learners can learn all that is required in their course as long as they put in extra effort to help them. Teachers must therefore be innovative in course management to facilitate the learning of these students as well as moderate and fast learners (Borah, 2013:139-143).

Teaching English to autistic students is challenging for teachers because they require more preparation and patience to create comfortable and enjoyable teaching. It is also not easy to do because the teacher should know the effective ways of teaching, such as employing appropriate tricks and treats, creating students' interest, and making them pay great attention to the learning process in the classroom (Ummah, 2017: 421–428).

As (Savi, 2014) notices children seem to learn the language quickly and thoroughly when the brain and body work together. Another popular mnemonic strategy used for teaching foreign language vocabulary is the Total Physical Response (TPR) developed by Asher (1966)(Savi,2014: 447–454. When using this method, the teacher gives a number series of commands in the target language (e.g., jump, clap your hands..), while learners are expected to respond with whole-body movements (e.g., to jump while clapping their hands). TPR is supported by several theoretical approaches to learning situations (Khorasgani, 2017: 90–100). The physical aspect of the TPR learning process makes it possible to integrate physical exercise and play into language teaching quite naturally and to enhance children’s physical activity and engagement outside classes, contributing not only to their linguistic but also to their physical development and movement. In the English teaching and learning process, the use of TPR involves movements that the students can actively do in the classroom. In teaching, the teachers can use a song, storytelling, or role-play in which there are commands to enable students to carry out instructions to act. Teachers act as parents who instruct the message to their children. For example, the teacher says "run". Then the teacher instructs by giving commands to the students to take this action then all the students run. These activities can be done repeatedly. After that, the teacher asks the students to repeat the words as they are doing. In the lessons, teachers can change the position of the class into a circle. This method allows the students in the class should perform the actions and listen to the commands given by the teacher. This is believed that the students who can perform the actions also have a learning process in improving listening skills. It is a language teaching method that focuses on physical (motor) activity through commands and responses of the body. Physical activities are meant to reduce the stress people or learners feel when studying a foreign language. Having fun makes language learners interested in learning and it is going to be more effective (Nurani & Yohana, 2015:63–68).

This term is used because those who suffer from autism symptoms often look like people who live alone. Autistic students face difficulties to involved in social interaction. They seem to live in their world and are detached from the social contacts around them. Autistic students have difficulties concentrating, memorizing words, understanding a complex sentence, building
communication, and interacting with others, show less confidence, and usually avoid making eye contact with the interlocutor (Sari, 2015: 34-46.).

The Aim of the Study
The study aims at identifying scientifically the effectiveness of total physical response method in teaching English as a foreign language for autistic students.

The Hypothesis of the Study
The study has adopted the null hypothesis that there are no statistical differences between the mean score of autistic students at social interaction in pre and post-observations in teaching English as a foreign language.

The Value of the Study
The study has the following values, they are:
1. Shielding the light on the autistics students who need special methods for teaching English as a foreign language.
2. Encouraging the autistic students to interact with the teacher and the students and use English as a foreign language.
3. Modifying the way of teaching English as a foreign language from the traditional to active learning.
4. Delivering the teachers with total physical response method of teaching English as a foreign language.
5. Paying attention to special needs students who have abilities to learn but many English teachers disregard them.
6. Assisting the autistic students to be more effective in their classrooms and society by giving them the chance to learn in active method of teaching English as a foreign language.
7. Adoption the administrator, teachers, parents another method for teaching English as a foreign language to change the way of dealing with special needs students.

Definitions of the Basic Terms

Autistic Student
Griffin (1978) refers to slow learners as pupils who fail to learn at the same rate as the majority of other pupils because of social lack of interaction. Brennan (1974) however elaborated on the definition of a slow learner. According to him, slow learners are pupils who are unable to cope with the normal school work for their age group and cannot be explained by the presence of any handicapping condition defined in the ten categories of handicapped children. Autistic students are described as slow learners as those who have problems with abstract thinking and often have a short attention span and lack of social interaction. They also stated that being a slow learner is a lifelong problem and a slow learner child has a low IQ which causes them complications in keeping up in the classroom.

Social Interaction
Dawson and Gettys define Social Interaction as “it is a process by which men interpenetrate the minds of each other” (Sari, 2021: 35).
According to Merrill, “Social interaction is the general process whereby two or more persons are in a meaningful contact, as a result of which their behavior is modified however slightly” (Savi, 2014:33).

**Related Studies**

Sadiq (2017) studied TPR with Down syndrome learners in teaching the English language with 3 learners from (3-5) years through TPR entitled “Total Physical Response in Teaching English Foreign Language for Iraqi Slow Learners”. The study aimed to investigate the effect of physical total response in teaching English Foreign to Iraqi slow learners.

Nuraeni (2019) The researcher conducted her research, entitled “Using Total Physical Response (TPR) Method on Young Learner English Language Teaching at Panti Asuhan Yauma Jakarta”. This study aimed to investigate what so-called Total Physical Response (TPR) method in teaching English vocabulary. This research describes the environment of English language teaching activities at the level of young learners and its possible application in a young learner classroom.

Göçen (2020) this study used TPR, especially for students between the ages of 7-11, children learn better when they see and learn by doing, so movement is the basis for their learning. Beginner students can physically react to the commands given. It is expected that students who actively learn and use their physical intelligence will show more success. It is a method in which both the right and left parts of the brain work actively at the same time. There is not much material to use in the classroom. The important thing is the competence of the teacher and the ability to use body language. Teaching a foreign language to young learners or children differs from teaching adults, especially because it involves fun with movement and physical participation.

Sari (2020) this study is investigated TPR and the number of Indonesian autistic children in reached in teaching a foreign language to these students, the teacher needs to have strategies, such as using modeling, visual support for instructions, providing instructions in both languages, etc. These are important to attract the student’s attention and keep them motivated during the learning session.

**The Advantages Total Physical Response Method**

This method has many advantages as the following: (1) Total Physical Response is fun, so many children enjoy in teaching and learning process, (2) Total Physical Response can help the students remember English words and expressions, (3) Total Physical Response can be applied in large and small class, (4) Total Physical Response is not only appropriate for young learners but also adult learners, (5) Total Physical Response is suitable for active students in class (Rokhayati, 2017: 75–80).

Handoyo (2005) listed eight advantages of using the TPR approach. The advantages are:

a. TPR is a lot of fun as learners enjoy it and it can lift the pace of a lesson and the mood;

b. TPR is a memorable activity as it assists students to recognize phrases or words;

c. It is good for kinaesthetic learners who are required to be active in class;

d. It can be used both in a large class or in a small class because as long as the teacher takes the lead, the learners will follow

e. It works well with mixed-ability classes because the physical actions get across the meaning effectively so that all learners can comprehend and apply the target language;

f. There is no requirement to prepare a lot of preparation or materials. The most important part is being competent in what you want to practice;
g. It is very effective with teenagers and young learners; and
h. TPR involves both left and right-brained learning.
The advantages of using Total Physical Response in English teaching and learning activities:
(1) is fun, so many children enjoy participating in this type of teaching and learning process,
(2) can help the students remember English words and expressions, (3) can be applied in large
and small class, (4) is not only appropriate for young learners but also adult learners, (5) is
suitable for active students in class (Rokhayati, 2017: 75–80).

Total Physical Response Method Activities
TPR involves the teacher’s commands to which students respond physically, demonstrating
comprehension. The following are some example TPR activities based on commands:
(1) Depending on the theme of the lesson, the teacher could prepare commands that will
strengthen vocabulary teaching using hand movement to manipulate any set of pictures or
flashcards: Point to / Touch / Pick up (your mouth / your cheek / an orange/ a strawberry).
(2) For lessons outside the classroom, more action can be introduced with commands like Run
forward. Jump. Take three steps to the left then two steps to the right. Jump up and down.
Throw the ball. Raise your hands.
(3) At the same time, the method covers many teaching techniques, including drawing, music,
games, role-playing, storytelling, competition, etc. Children are more likely to remember
words associated with a fun game, an interesting picture, a song, or an absurd situation.

Teachers’ Role in TPR
A teacher plays a significant role in teaching using the TPR method. The teacher selects what
to teach, how to model an act, and picks the supporting materials to use in the class (Shi,
2018). Therefore, teachers should prepare the lesson plan before they enter the classroom.
They should have a comprehensive lesson plan, such as writing down the words or commands
they are going to use, and be ready for fast-moving action from the students. It is to make
sure the lesson runs well and as predicted. A teacher has the responsibility to provide more
opportunities for learning to students than merely teaching them verbally. It can be done by
directing students to interact with their peers and asking them to give their peers commands
as modeled by the teacher beforehand. The teacher also has to control the input of language
received by students; the teacher has to ensure that the students understand the basic rules
of the language (Larsen-Freeman, 2003: 83-85). The teacher needs to make sure the speaking
ability develops in the students according to the natural pace of the students themselves.
Teachers have to avoid underestimating the difficulties involved in learning a foreign
language, which will result in progress at a speed that is too fast and fails to provide a gradual
transition from one teaching stage to another. During and after the learning process, the
teacher needs to provide feedback to the students to help them learn from the mistakes they
made. By learning from feedback, students will prepare themselves to start to speak(Raya,

Learners’ Role in TPR
TPR Students in the TPR method have the primary role as listeners and players. They listen
thoughtfully and respond physically to the instructions given by the teacher or their peers.
The instructions given by the teacher are to be acted on individually or collectively. In this
method, firstly, students will imitate any acts modeled by the teacher, this is followed by a
student practice giving a command to his/her peer, and the peer needs to act based on the
command given. This can be done in pairs or groups (Larsen-Freeman, 2003: 83-85). In this method, students will be able to observe and assess their achievements. Students should have enough vocabulary and understanding of the basic rules of the language before they are ready to speak (Raya, 2019:67-68).

**Types of Social Interaction**

According to Young and Mack, there are two types of social interaction between people and societies mentioned by Ghani et al (2020), they are

Direct or Physical Interaction: it involves physical action among the individuals. Beating, biting, thrashing, pulling, pushing, killing, scratching, boxing, wrestling, kissing, etc. are examples of direct interaction. Two teams playing a match and a war between the forces of two countries are also examples of this interaction. This Type influences others by physical action in different ways.

Symbolic Interaction: There are different types of relationships between people. It involves the use of language and symbols. It means communication through a common language is a symbolic process. This is the most common method in human societies. Human beings convey their ideas through language and it is completed by reciprocal response. The methods of communication devised by man are sharper and more effective than those of animals. All cultures develop, expand, and change only through language-symbolic interaction. Without language, no culture can live. There is no culture in animals since there is no common language among them. Through language, man stores his previous experiences and transmits them to the following generation with a change. Man uses instruments to facilitate this. Telephone, wireless, telegraph, postal system, rail, road, sea, and air services all are various means of communication and transportation. Gestures are also symbolic ones. Deaf and dumb convey their ideas through voice, and gestures of hands and eyes.

**Method of the Study**

The method of the research adopted an experimental design with the null hypothesis that there are no statistical differences between the mean score of autistic students at social interaction in pre and post-observations. Thus, the using of the TPR method is effective or not in teaching the English language among the students’ social interaction. The researcher conducted the study in the private primary school Al-Entesar in Baghdad. The sample consisted of 12 autistic students. Their ages were around (6-12) with 4 females and 8 males. Before, the study the researcher applied a pilot study on 8 autistic students from the same school to make sure of the suitability of the method and the activities and to check the measurement tool of social interaction. The research took 1 (one) month, starting from 1st September to 1st October 2022. Furthermore, the procedure of data collection in this research was obtained by observations. In the observation, the researcher observed English Language Teaching learning activities by implementing the TPR Method for autistic students. The researcher conducted two observations pre-observation at the beginning of the study and post-observation at the end of the study. The researcher observed how the teacher taught them by using the TPR method in the whole English Language Teaching (ELT) activities. The same setting of the classroom is adopted (the autistic students learn with the normal students). The researcher used the instrument of assessment to measure the effectiveness of the Total Physical Response (TRP) method usage with a social interaction checklist according to their response.
Instructional Materials

The use of commands in the main teaching techniques of TPR is crucial for the teacher because, in this method, students will do lots of movements. Larsen-Freeman (2000) said that the teacher modeled the command and took appropriate actions to clarify the meaning. Students carry out orders (action-based exercises) with the teacher, with friends, individually, and in groups. When they start talking, they express orders to the teacher and each other. Commands that are present are sequential, but as suggested by Asher (1988), there should be no exact repetition of the same sequence, and the teacher might vary the practice every time to avoid memorizing a fixed sequence of behaviors. The command should create a funny situation to make the learning process fun and not tense.

The students first listened to nursing English songs during the first lessons. The group of autistic students took one hour of learning English lessons daily for the whole period of the experiment. The second lesson of teaching showed the English letters, sounds of animals ..... Table 1 shows the description of the lesson plan.

The teacher must also plan the sequence of commands that are in progress to maintain the speed of the lesson. The commands are used to communicate all grammar features and hundreds of vocabulary words. They are as follows:

Warming up In this part, a teacher gives warming up by singing a song, for example, Head, Shoulder, Knees, and Toes. This song is related to the vocabulary lessons about parts of the body which will be delivered to the students.

Moving the whole body or parts of the body, such as asking students to ‘stand’, ‘walk’, ‘jump’, ‘run’, ‘sit’, etc.

Moving things, such as giving students directions to ‘write an A on the blackboard’, ‘touch your nose’, etc.

Moving abstractions or pictures such as placing the picture of a cat above the word cat on the book, placing the picture of the pilot on the picture of an airplane, giving a happy birthday card to a friend, etc.

Point to / Touch / Pick up (your mouth / your cheek / an orange/ an apple. For lessons outside the classroom, more action can be introduced with commands like Run forward. Jump. Take three steps to the left then two steps to the right. Jump up and down. Throw the ball. Raise your hands.

Action sequences are based on everyday activities, such as eating lunch, washing dishes, etc. The command for each activity is broken up into several sequences and commands, for example, take your sandwich using both hands, eat the sandwich, stop, grab your drink bottle, drink the water from the bottle, and so on TPR activities, namely Spelling Body. These teaching-learning activities are divided into three steps, they are pre-teaching, teaching, and post-teaching. Here, the teacher used bilingualism to teach students.

Saying one word e.g. the teacher encourages the students to say the word by pointing to objects, saying “Good morning” “Hi”
Table (1)  
*The Plan of Experiment*

<table>
<thead>
<tr>
<th>The lesson</th>
<th>The description of the lesson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Listening to English songs with pointing English letters, parts of the body, things...)</td>
</tr>
<tr>
<td>2</td>
<td>The teacher gives the learners commands and did them (one or two words) Animals, sounds of animals</td>
</tr>
<tr>
<td>3</td>
<td>The teacher gives the learners commands and did them (more than two words). Parts of body, colors, shapes, things...</td>
</tr>
<tr>
<td>4</td>
<td>The teacher gives the learners more complex commands and asks for interaction Things in the class, pictures</td>
</tr>
<tr>
<td>5</td>
<td>The teacher gives the learners the commands and asks for interaction responses. English letters, colors, shapes, Animals, sounds of animals</td>
</tr>
<tr>
<td>6</td>
<td>The teacher gives the learners the commands and asks for interaction responses. Parts of the body, colors, shapes, things, things in the class, pictures</td>
</tr>
</tbody>
</table>

The study was applied to 8 students as a pilot study after experimenting. thus, the whole sample of the study is 20 autistic students. Some modifications have been adopted in the final experiment.  
The research has used an observation tool to collect the information and data of the research. As Genesee & Upshur (1998: 77-79) show observation is the basic to assess human skills and behaviors. Observation is an important aspect of foreign language research. Through observation teachers assess what students have and have not learned; they assess the effectiveness of particular teaching strategies and methods. It refers to purposeful examination of teaching and learning events through systematic processes of data collection and analysis (Carter & Nunan, 2002:114).  
In highly structured observations, the researcher often utilizes a checklist or rating scale. A structured observation can facilitate the recording of details such as when, where, and how often certain types of phenomena occur, allowing the researcher to compare behaviors through the experiment (Gass& Mackey, 2005: 175). The sample of the research was observed 2 times before the experiment and after the end of the experiment. They have observed according to the rating sheet (Appendix 1) from 0-5. Also, the observations were recorded to allow the researcher to score the same observation again after 1 week. Reliability refers to consistency, (Ibid: 128). Reliability is a matter of degree and is usually expressed by indices ranging from 0.0 to 1.00. (Genesee & Upshur, 1996:62). The reliability of the first rating and second rating of the same observation is (89.4) by using the recorded video camera. This indicates the high reliability of the observations.  

**The Results**  
The results of observations have been analyzed, to determine whether there are significant differences among the scores of the sample. The results have shown that there are significant differences among the observations. This indicates that total physical response is an effective method for improving the social interaction of autistic students. The sample has shown
remarkable development in social interaction between the teacher and the students and students with other students.

Table (2)
Pre and post-tests Scores at social interaction checklist

<table>
<thead>
<tr>
<th>No.</th>
<th>Pre-test social interaction</th>
<th>Post-test social interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table (3)
The Mean, Standard Deviation, and Errors Mean of the Sample

<table>
<thead>
<tr>
<th>One-Sample Statistics</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>social interaction per-test</td>
<td>12</td>
<td>1.00</td>
<td>.739</td>
<td>.213</td>
</tr>
<tr>
<td>social interaction post-test</td>
<td>12</td>
<td>3.67</td>
<td>.492</td>
<td>.142</td>
</tr>
</tbody>
</table>

The X Mean of the sample for the pre-observation is 1.00 and the standard deviation is 0.739 while in the post-observation the X mean is 3.67 and the standard deviation is 0.492. The t-test of the pre-observation is (-83.367) While the t-test of the post-observation is (-102.815) under degree freedom of 11 and significance of degree is 0.00. Thus, there is a significant difference between the pre and post-observation of the sample.

The results indicate that using TPR in teaching the English language promotes the social interaction of autistic students. From the researchers’ point of view, the study has promoted responses in an interesting way which leads to better eye contact and social interaction in the sample. The social interactions between the teacher and the students and the students with themselves. The sample used non-verbal as well as verbal language by pointing, touching, showing, and saying the names of the objects. Also, giving, and taking the objects which are the tools of social interaction.
Table (4)

T-Test Value for The Sample

<table>
<thead>
<tr>
<th>One-Sample Test</th>
<th>Test Value = 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
<td>t</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>social interaction per-test</td>
<td>-83.367</td>
</tr>
</tbody>
</table>

The results of the study are matched with Sadiq, Baan (2017), Nuraeni, Cicih (2019), Göçen (2020), and Sari (2020) these studies investigated TPR with many samples all of them showed improvement in learning the English language according to this method. However, the main difference in this study is that it has improved social interaction instead of vocabulary. Autistic students have a lack of social interaction which affects their improvement of understanding of the subjects. Social interaction improvement of autistic students through commands has developed autistic children reached in teaching a foreign language, the teacher needs to have strategies, such as using modeling, and visual support for instructions, providing them and using this method.

Conclusions
The research has concluded that total physical response is suitable for improving the social interaction of autistic students and it has an effect on acquiring English foreign language. autistic students can learn English through TPR as well as develop their skills for better social interaction. The sample has observed, imitated, and responded to the teacher as well as the students.

Recommendations and Suggestions
The research recommends TPR for teaching learners especially autistic students to improve their social interaction. Also, the results of the research have shown amazing development in acquiring the English language through using TPR therefore, the Iraqi Ministry of Education could be recommended to teach English to this neglecting sample and show little respect to the slow learners who can learn and could be an effective member of Iraqi society. The research has suggested conducting other research on this sample of autistic students because they are neglected by TEFL. Also, the researchers might be investigated using other methods in teaching English to autistic students.

Acknowledgments
My appreciation is paid to the head of Al-Entisar Private Primary School in Baghdad, without her support throughout the study, this research would never have been completed. Special thanks to my lovely kid who shied the light for this research and other studies tackling the special needs learner while I am trying to explore solutions to his problems.
References


Appendix (1)
Observation sheet for Rating the Sample Response of Social Interaction

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Item Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Excellent response with face, signs and oral repetition, social interaction</td>
</tr>
<tr>
<td>4</td>
<td>Appropriate response to audience/situation/social interaction</td>
</tr>
<tr>
<td>3</td>
<td>General appropriate response to audience/situation/social interaction</td>
</tr>
<tr>
<td>2</td>
<td>Somewhat appropriate response to audience/situation/social interaction</td>
</tr>
<tr>
<td>1</td>
<td>General inappropriate response to audience/situation/social interaction</td>
</tr>
<tr>
<td>0</td>
<td>No evidence that functions were preformed or there is social interaction</td>
</tr>
</tbody>
</table>