

**An Investigation into the Influence of Montessori
Method on Professional Development of EFL
Teachers and Productive Skills of Students with
Autism**

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirement for the degree of

Master of Arts
in
English Language Teaching

Eastern Mediterranean University
July 2017
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

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ABSTRACT

Educating students with special needs specifically those suffering from autism spectrum disorder is a challenging task and requires much effort, and professionalism, and employment of further strategies than those applied to normal students. However, most teachers working with autistic students do not have adequate knowledge and skills required to teach to this group of students. Therefore, this qualitative study was designed to investigate the influence of the training of Montessori method on professional development of EFL teachers. This study also aimed to explore the influence of teachers' training of Montessori method on L2 productive skills of students with autism. To this end, three EFL teachers who dealt with 10 students with autism from an educational center for autistic children in Iran were recruited to participate in a 10-week teacher training of Montessori Method. The theory and practice issues of Montessori education were introduced and discussed during four workshops which also included open discussions. While attending the workshops, Montessori Method were implemented in three English language classes of students with autism. Four instruments including approaches to teaching inventory, interviews, open discussion sessions, and observation were used to collect data. The results of the inventory indicated that the Montessori-oriented training changed the teachers' approach of teaching English to the autistic students. teachers' perceptions of their changes were characterized by adopting a role as a facilitator, extending teacher-student relationship, incorporating material suitable for students with autism, providing an opportunity to learn more independently. Teachers also perceived that Montessori Method could be effective in teaching English to autistic students and it could improve their L2 productive skills, their motivation, foster more independence,

and enhance their interaction with peers. This study yielded some implications for teachers, teacher educators and educational material developers.

Keywords: Montessori Method, professional development, EFL teachers, autism, L2 productive skill

ÖZ

Zihinsel engelli öğrencileri, özellikle de otizm spektrum bozukluğu çeken öğrencileri eğitmek zor bir görevdir ve normal öğrencilere uygulananlardan çok daha fazla çaba ve mesleki eğitimin verilmesi ve daha fazla stratejinin kullanılması gerekmektedir. Bununla birlikte, otistik çocuklarla çalışan çoğu öğretmen, bu öğrenci grubunu eğitmeye yeterli bilgi ve beceriye sahip değildir. Bu nedenle, bu niteliksel çalışma, EFL (İngilizce Dil Eğitimi) öğretmenlerinin mesleki gelişimi üzerine Montessori Metodunun etkisini araştırmak üzere tasarlanmıştır. Aynı zamanda bu çalışma, bu yöntemin otizmlili öğrencilerin ikinci dil üretme becerileri üzerine uygulanmasının etkilerini araştırmayı amaçlamıştır. Bu amaçla, İran'da otistik çocuklara yönelik bir eğitim merkezinde görev yapan üç öğretmen, Montessori Metoduna dayalı 10 haftalık bir öğretmen geliştirme eğitimine katılmıştır. Montessori metoduna dayalı eğitim ve uygulamalar içeren konular, açık tartışmaları da içerecek dört atölye çalışmasında tanıtılmış ve tartışılmıştır. Atölye çalışmaları devam ederken, diğer taraftan Montessori Metodu otistik öğrencilerin İngilizce dil sınıflarında uygulanmaktaydı. Öğretim envanteri, mülakatlar, açık oturumlar ve gözlem de dahil olmak üzere dört yaklaşım veri toplamak için kullanılmıştır. Bulgular, Montessori odaklı eğitimin öğretmenlerin otistik öğrencilere İngilizce öğretimi yaklaşımını değiştirdiğini göstermektedir. Bu değişiklikler; eğiticiye kolaylaştırıcı bir rol ile öğretmen-öğrenci ilişkisini genişleten, otistik öğrencilerin yararlanabileceği materyalleri bir araya getirerek bağımsız öğrenme için bir fırsat sağlayarak ve öğrencilerin yanlış davranışları için etkili disiplin stratejileri kullanarak karakterize edilmektedir. Bu çalışma ile öğretmenler, Montessori Metodunun otistik çocuklara İngilizce öğretimi üzerinde etkili olabileceğini, ikinci dil üretme becerilerini ve motivasyonlarını

arttıracađını, daha ok bađımsızlık sađlayacađını ve akranlarıyla olan etkileşimlerini daha da arttıracađını görmüştür. Bu alıřma; öđretmenler, öđretmen eđitimcileri ve eđitim materyali geliřtiricileri iin önemli ıkarımlarda bulunmuřtur.

Anahtar Kelimeler: Montessori Metodu, mesleki geliřim, EFL öđretmenleri, otizm, ikinci dil üretme becerileri

DEDICATION

To my family

I cordially dedicate this study to my parents.

ACKNOWLEDGEMENT

I would like to express my deepest appreciation to those who helped me throughout this study.

My honest gratitude goes to my dear supervisor Assoc. Prof. Dr. Naciye Kunt for her professional guidance.

I would also like to thank the jury members, Asst. Prof. Dr. Fatoş Erozan and Asst. Prof. Dr. İlkey Gilanlıoğlu for their constructive feedback, as well as their valuable suggestions and recommendations for improvement of the final draft of my thesis.

I am also grateful to my colleagues and also their teachers who enthusiastically participated in this study.

Finally, I would like to thank my family for their patience and support.

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Chapter 1

INTRODUCTION

This chapter firstly provides a brief background of the study. After that the problems under investigation are stated, followed by the objective of the study and research questions. Finally, the chapter presents the significance of the study and describes the key terms.

1.1 Background of the Study

The teacher professional development was developed based on the assumption that teachers can improve themselves when they are engaged in a learning process to identify their own strengths and weaknesses in their teaching practices (Richards & Farrell, 2005; Burns, 2010). Put it differently, “[teachers] ... need to systematically observe their teaching, interpret what happens in their classrooms, detect problems, and find solutions” (Roux & Valladares, 2014, p. 22). According to Yumru (2015) professional development should include in-service training and workshops; opportunities where teachers work under supervision to gain experiences; and guidance on how to teach in accordance with the expectations and needs of the students. In Guskey’s (1986) model of professional development, change is defined as a learning process for teachers which is both developmental and experiential-based. So, if students show higher achievement in response to the applied practices, the teachers’ attitudes towards those novel educational practices will change.

EFL teachers' professional development is not only a concern for teachers, but also a challenge for teacher educators and policy makers because they should develop programs which can satisfy the professional needs of EFL teachers. However, policy makers and teacher educators may not have clear vision of EFL teachers' needs because of scarcity of studies addressing this area. According to Wolfe (2012) there is lack of appropriate programs for teachers who deal with students with special needs. people who suffer from Autism, Asperger's syndrome, etc. are a group of students with special needs.

Autism Spectrum Disorder is described as a lifelong developmental disability influencing the way in which an individual communicates and interacts with people around him/her. Social interaction, communication and imagination are impaired in autistic people (Robins, Dautenhahn, Te Boekhorst, & Billard, 2004). Autistic individuals mostly have limited vocabulary and syntax; their speech may indicate strange intonation or pitch; additionally, they may have constrained or no understanding of how to carry out a conversation. They also face various challenges regarding learning L2 such as lack of motivation, poor attention, lack of communicative skills, problem with dictation and composition (Dockrell et al., 2014). Furthermore, in comparison with normal students, autistic students are less aware of the usage of English language, and the purpose of learning English language (Moghadam, Karami, and Dehbozorgi, 2015). They also learn some aspects of language with much difficulty and show gaps, misunderstandings, and hindrances to their learning ability that is more likely to have highly adverse impact on their overall performance (Carlyle, 2013). However, Práinsson (2012) conducted a study on language learning of some 16-18-year-old male teenagers with autism who had no special background in English or any connection to an English-speaking community

and concluded that all autistic learners of his study could reach an advanced level of proficiency in English, even more advanced than could be acquired by their typical development counterparts. Similarly, Alemi, Meghdari, Basiri and Taheri (2015) performed a research on teaching English to Iranian children with autism. The results of this study revealed that high-functioning autistic children do possess the capability to acquire English as a lingua franca.

Due to the aforementioned problems that autistic children have, their education requires much more effort and further strategies employed by the teachers. More specifically, Reppond (2015) indicated six major obstacles existed for teaching to English language learners who suffer from autism. These obstacles were lack of communication, lack of supportive educational environment including training, education, materials, open-minded teachers, lack of qualified personnel and understanding, time pressure, parent's engagement, and mainstreaming of students. Therefore, focusing on these issues can be the starting point of working with autistic children in the process of language learning. Furthermore, Montessori methodology can be helpful in assisting autistic children partially overcome their communication and language deficiencies, since this method is characterized by provision of further support for learning and tailoring activities to students' needs and capabilities which result in positive interaction in the classroom (Ploeg, Eppingstall, Camp, Runci, Taffe & O'Connor, 2013).

Montessori methodology establishes suitable environment which supports the natural student's interest. It assists children to fix their working habits and enables them to make decision independently. Through this system, teachers observe each and every child to get to know detailed information with respect to his/her interests, level of

knowledge, activities and problems (Rýdl, 2007). Although Montessori did not propose a particular theory for learning L2, the method and procedures can be applied to L2 with necessary adaptations. For instance, Terrell (1977) offered some guidelines that would integrate the Montessori principles including dedicating classroom activities to communication with a focus on content, not speech error-correction as well as feeling free to respond in L1. Moreover, the inclusion of visual clues in Montessori, including the use of lumpy objects and posters, can facilitate students' L2 learning (Yahya, Yunus & Toran, 2013).

In this regard, Handayani (2014) indicated that the following characteristics of Montessori should be present in order that students learn L2: educational tools which are colorful, safe and of interest for children; professional educators who are keen observers and warm in communication; well-equipped environment in which children feel convenient during the learning process; parent's engagement so that they can be aware of children advancement; learning in small groups which allows children to be free and enjoy the learning activities under the surveillance of the teacher; and iteration in learning which assists children to explore the topics several times.

Therefore, teachers of autistic children can receive training in Montessori methodology and benefit from it in their teaching practices. This highlights the importance of professional development of teachers in the context of teaching English language to autistic learners.

1.2 Problem Statement

Few studies have strived to assess autistic children's capacity to acquire a second/foreign language. It is assumed that when a child fails to acquire good proficiency in his first language, the acquisition of L2 as an older child or as an adolescent might be unsuccessful (Hamers & Blanc, 2000). This hypothesis has been disputed by some reports as a result of research which showed that students with autism possess the ability of learning English language (Þráinsson, 2012; Alemi et al., 2015). However, given the high prevalence of Autism Spectrum Disorder across the world (Scassellati, Admoni & Mataric, 2012; Pouretemad, 2011), educating autistic children has received considerable attention during the recent years.

As Wolfe (2012) stated, special education teachers experienced lack of pre-service preparation for teaching students with autism, mentoring support during their initial phase as novice teachers. In fact, most teachers working with autistic children do not have adequate knowledge and skills required to teach to this group of students.

As a result, this study is an attempt to address these problems. In accordance with this conception, within the teacher development program we should primarily seek to change the teaching method of EFL teachers, assuming that these changes on the part of teachers will induce changes in productive skills on the part of EFL students with autism.

1.3 The Objective of this Study

In the present research, it is of utmost interest to explore the influence of teacher training based on Montessori method on professional development of EFL teachers who deal with students with autism. Furthermore, in light of teachers' professional

development, another objective of this study is to elucidate the influence of teacher training based on Montessori method on the English language productive skills of children with autism.

1.4 Research Questions

To this end, the following research questions are posed:

- (1) What are the EFL teachers' perceptions of the influence of the training of Montessori-oriented English language teaching on their professional development?
- (2) What are the EFL teachers' perceptions of the influence of the training of the Montessori-oriented English language teaching on L2 productive skills of autistic students?

1.5 Significance of the Study

The scarcity of studies on training of EFL teachers who deal with students with special needs such as autism led to having not clear vision of EFL teachers' needs by policy makers and teacher educators. Moreover, Autism Spectrum Disorder has highly spread across the world. For instance, 1 out of 88 children born in the United States (Scassellati, Admoni & Mataric, 2012) and more than 30,000 Iranians who age below 19 years old suffer from autism disorders (Pouretamad, 2011). This issue resulted in paying considerable attention to educating autistic learners during the recent years. More importantly, with globalization, individuals' competence, intelligence, membership, social status, and the like are commonly evaluated by the way of using language to communicate together (Garrett, 2010) and people with autism are not exceptions. Under certain conditions, for example in terms of immigrating to a foreign country, autistic people also need to acquire and use a foreign language but this important issue has frequently been neglected in previous research.

Thus, the current study can be significant in different ways. Firstly, this study shed light on how Montessori training may equip EFL teachers with required knowledge and skills to teach English language skills to children with autism as well as how this training may contribute to professional development of the teachers themselves. Finally, the results of this study can contribute in EFL teachers' professional developments, and increase the teacher educators and policy makers' awareness of the needs of EFL teachers who deal with students with autism.

1.6 Definitions of Key Terms

Professional development workshops: According to Guskey (1986) professional development workshops aim to enhance the quality of education, and facilitate changes made in teachers' beliefs and attitudes towards their educational practices. The aim of the professional development workshops is not only to increase teachers' knowledge about student learning processes but also to provide opportunities to learn and employ teaching practices, facilitate learning processes, and efficient assessment of student performance and achievement (Guskey, 1986).

Montessori teaching method: This method gives priority to learning by means of a series of senses "from visual to stereognosis" (Montessori & Gutek, 2004), and is based on self-directed activities, self-control, self-organization, and self-correction (Montessori, 1965) in a well-prepared environment which is highly committed to the laws of nature (Havis, 2009). The lesson is frequently taught on the floor, and the teacher has the responsibility to give ownership to the student, and support the children to be responsible for their own learning process (Chattin-McNichols, 1998).

Autism: Autism is described as a lifelong developmental disability influencing the way in which an individual communicates and interacts with people around him/her (Robins et al. , 2004).

Productive skills: In the current study refer to the abilities of speaking and writing (Schmitt, 2013).

Chapter 2

LITERATURE REVIEW

This chapter deals with pertinent theories and studies on professional development, Montessori method, and autism spectrum disorder as the framework and foundation of the current study. At first, definition and purposes as well as the characteristics professional development workshops are presented. Then, environment and characteristics of Montessori classroom as well as the concept of discipline, error correction, academic development and multi-age classrooms in the Montessori educational system are presented. Following this, Montessori method techniques, teacher preparation and teaching English language using Montessori educational system are reviewed. Then, this chapter presents the autism spectrum disorder and English language and learning styles of students with autism. Finally, a synopsis of literature is presented.

2.1 Professional Development

Traditionally, professional development in education was associated with a triad of disorder, conflict and criticism (Guskey, 1986; McLaughlin & Berman, 1977) without a view towards school priorities as well as teachers' needs (Guskey, 2003a). That is why professional development is considered as a pendulum which sways in decision-making towards selecting centralized or decentralized governance in schools (Cuban, 1990). The former is oriented towards the current educational trends, theories of teacher learning and instructional change, and individual programs. Indeed, centralized governing authorities have a tendency to draw on the results of

empirical research about practices that have been found to be effective under highly controlled conditions (Corcoran, Fuhrman, & Belcher, 2001).

The predominant theory proposed by the centralized change agents' perspective is the Skinner's Behaviorist Theory. However, the major drawback of this approach is that if centralized authority has the power of controlling education, no attempt will be made by schools and teachers to make decision for school reform and professional development, which, in turn, ends up with irrelevant training workshops which are seldom related to real classroom pedagogical practices and student achievement (Guskey, 1986). However, a paradigm shift occurred during the 1980s which was characterized by the transition from centralized to decentralized control in professional development, with schools and teachers being considered as playing an important role in decision-making about school reform (Cuban, 1990). This movement was also influenced by the demands of the No Child Left Behind Act of 2001 (NCLB) and highly affected professional development and led to new models which define the school as a district, and teachers as chief partners in the context of professional development and goal setting, and evaluators of students' performance (Guskey, 1986). The current professional development models contain progression of skills, understanding of educational practices (Darling-Hammond, 1995), assessment of students, and being concerned about the setting where teaching and learning occur (Guskey, 2003a; Porter & Brophy, 1988).

Guskey's (1986) model of professional development is still a popular theme in the pertained research literature. In his view, professional development starts with the teachers creating goals which contribute to and facilitate achieving the desired learning outcomes. In this model, since teachers are involved in the goal setting

process, they possess an individual investment, and this encourages them to participate in the workshops, and subsequently, implement whatever they have learned in the classroom. The second major point in Guskey's model puts stress on teacher change, and defines change as a learning process for teachers with two main characteristics: first, it is developmental, and second, it is experiential-based. To elaborate, if students show higher achievement in response to the applied practices, the teachers' attitudes towards those novel educational practices will change. Accordingly, beliefs that teachers hold about their instructional practices are worthwhile and motivate them to sustain employing the recently learned instructional practices. To further explain the importance of Guskey's model of professional development and its relevance to the current study, the next section deals with attributes and role of workshops in professional development of teachers.

2.1.1 Definition and Purposes of Professional Development Workshops

Professional development of high quality is a major constituent of approximately each proposal aiming at enhancing education (Guskey, 1986). The professional development workshops aim to facilitate alteration or change for improvement (Roettger, 2006) in teachers' beliefs and attitudes towards their educational practices. To this end, the workshop should be carefully designed, and intend to (a) increase teachers' knowledge about student learning processes, (b) develop opportunities to learn and apply pedagogical practices, and facilitate the learning processes, and (c) direct teachers to efficiently assess student progress and achievement (Guskey, 1986). The next section specifically deals with attributes that professional workshops should have.

2.1.2 Characteristics of Professional Development Workshops

Workshops held for professional development of teachers should have the following attributes.

District and School Support: Obtaining support from the school district prior to the beginning of the professional development workshop series is the first step to the implementation of the workshops because the success of teacher change relies on the presence of a collaborative school culture with emphasis on development (Guskey, 1986). Since learning and, at the same time, applying the newly acquired strategies and skills is a complicated and challenging task, teachers certainly need support from the district and school's governing manpower (Darling-Hammond, 1995). In this line, McLaughlin and Berman (1977) define school principals as "gatekeepers of change." Indeed, principals should guide, facilitate, and control the process of change (Guskey, 1986; Roettger, 2006).

Participants: Professional development workshops would be effective provided that teachers be keen to learn new instructional practices which have high potential to facilitate student learning, volunteer to take part in the professional workshops rather than being obliged to attend (Duke, 1990).

Teachers own control over their professional development is, in fact, an individual investment which results in immersion as well as reflection. At the school, the principal also attends all workshops to not only gain access to the content but afford to provide support to the teachers as they apply new instructional practices in their classrooms; they take part in this process and also in the process of evaluation as

change agents. One aspect of school reform is characterized by effective teacher-principal relationship (Roettger, 2006).

Duration: According to Guskey (2006) an extended period of time allocated to professional development that is designed meticulously and applied rationally, involves educators in different activities to lead to desirable outcomes. The duration of a professional workshop should be determined based on the goals of the workshops, the training and practices, and additional planning and activities. It has been shown that activities designed to be implemented over a longer duration yield more subject-specific content, offer more chances for active learning, and are more in accordance with teachers' current beliefs and practices (Birman, Desimone, Porter, & Garet, 2000).

Coherence: One of the major criticisms made to most of professional development programs by the education experts is the discrete presentation of activities; yet, "an activity is more likely to be effective in improving teachers' knowledge and skills if it forms a coherent part of a wider set of opportunities for teacher learning and development" (Birman et al., 2000. p. 31). For instance, the results of a study by Spillane (2002) indicated that the professional development generally included short-term activities with little coherence. In another study, Birman et al. (2000) investigated more than 1000 teachers who participated in professional development program and found that the coherence of professional development was largely dependent on elevated teacher learning and improved classroom practice. Accordingly, continuous workshops are required to be held at well-ordered intervals during the time allocated to professional development in a coherent manner so all the sessions in a series of a workshop are established on one another. It is also important

to consider a sufficient time for clarification of content provided in more detail during the prior workshops and modifications made to satisfy certain teacher's needs.

Collaboration: Collaboration between peers and principals throughout professional development with teacher-change as one of its major objectives (Duke, 1990), is of utmost importance. During collaboration, teachers have the opportunity to discuss concepts introduced to them throughout the professional workshops, and questions and issues raised following the application of the recently learned strategies in the classroom. Collaboration enables teachers to combine the new information with other dimensions of their instructional content, to exchange typical curriculum materials, courses, and assessment conditions. Moreover, collective participation is more likely to become a common professional culture where teachers in a school strive to develop a shared understanding of the educational objectives, methods, issues along with solutions (Guskey, 2003b).

Order of the Content: The arrangement of content introduced in the workshops highly depends on 'backward planning' proposed by Guskey (2003a). Planning by staff developers is an event-driven activity besides being just process-based; that is, what teachers should do and how to do it need to be planned. Guskey (2003a) argues that in order to satisfy the conditions of No Child Left Behind Act (NCLB), staff developers plan back towards the starting point that launches with the identification of student learning objectives. This preliminary step is expected to be a joint effort in shaping the objectives that student wants to attain. Professional development has been shown to be effective when it has been oriented towards results that can be described in terms of student achievement (Guskey 2003a). To attain student learning goals, teachers need to have access to explicit instructional practices, knowledge, as

well as skills. Thus, it is necessary for teachers to gain a comprehensive understanding of content and how children should learn when they will be taught to new standards by applying the recently learned strategies in their classrooms (Birman et al., 2000). This suggests that workshops should involve not only presentation of theories but also practical implications of these theories by providing feasible practices that lead students during the learning processes.

Reflection: A teacher may spend a certain predetermined amount of time performing their teaching responsibilities, and then seldom finds time for written reflection. If teachers really intend to enhance their instructional practices, during the workshops they realize their strengths and weaknesses and what they need to make them more qualified regarding successful teaching. Once teachers have made a choice to monitor their teaching practices, the realization of their own strengths and needs assists them to improve. Therefore, teachers' monitoring plays a pivotal role in this process (Darling-Hammond, 1995).

Assessment: To evaluate student learning goals set in the primary phase of the professional development workshops, an assessment that orients towards concerning specific instructional practices should be made. The findings obtained from assessments are considered as valuable sources of information for students. The outcomes of student assessments have considerable impacts on change in teachers' instructional practices. Guskey's (1986) model also shows that teachers' beliefs and attitudes towards new instructional practices are expected to alter if they find positive student learning outcomes.

Active Learning: Teachers who favor chances for active learning throughout the professional development commonly observe development in their knowledge and skills along with changes in classroom practices. Active learning involves opportunities to observe and to be observed while practicing teaching in similar conditions, designing classroom performances through directed practice, and active engagement in group discourse (Birman et al., 2000). Professional workshops are to enable the participants to become active learners by providing them with sufficient time to practice new instructional strategies through collaboration with peers, and to design exact lessons for their classrooms.

The next section deals with professional development of teachers in a certain method called Montessori.

2.2 Montessori Method

Montessori Method is named after Maria Montessori, a physician and a psychiatrist in Italy. Realizing that children affected by a mental deficiency showed a pedagogical need instead of chiefly a medical condition, and could indeed benefit from certain education which was different from education that healthy children get, Montessori (1965) proposed a pedagogical theory which was based on ideas obtained from anthropology, education, as well as medicine. She believes that each and every child should be taught prior to making him/her carry out a task (Montessori, 1912) in a specific scientific manner and continuously leading the children to work in their natural surrounding (Lillard, 2005).

2.2.1 Environment of Montessorian Classroom

Generally speaking, the environment of Montessori system has special characteristics which make it different from that of the traditional system. The following table encapsulates the distinction between these two types of classrooms.

Table 1: Difference between the Montessori environment and the environment at the traditional classroom (Md Amin, 2014)

Montessori classroom	Traditional classroom
Prepared kinesthetic materials with incorporated control of error and specially developed reference materials	Textbooks, pencil and dittos/worksheets
Working and learning social development	Working and learning matched to the children without emphasis on social development of the child
Unified, internationally developed curriculum	Narrow, unit driven curriculum
Integrated subjects	Individual subjects
Uninterrupted work cycles	Block time, period lessons
Multi-age classrooms	Single-graded classrooms
Students are active and talking with periods of spontaneous quiet-freedom to move	Students are passive and quiet in desks
School meets needs of students	Students fit mold of school
Process-focused assessment (skills report cards checklist, mastery benchmarks)	Product-focused assessment

In this method, the learning environment should include physical objects, other children, as well as the adult personality (Browder et al., 2014). Likewise, John Dewey (1897), a constructivist theorist, shed light on the significance of the environment in the process of learning. Montessori contains practical life materials that take into account care for oneself, the environment, as well as social graces. Moreover, the chief characteristics taught to children of a Montessori environment include respect, body movement, as well as polite language.

2.2.2 Characteristics of Montessori Method

Montessori Method is characterized by provision of further support for teaching and improving independent learning in children, in addition to a theory which implies that education serves as life itself (Havis, 2006a). Moreover, achieving independency is significant for students with autism, because “difficulties in independent functioning also create challenges for young people with ASD in school” (Hume, Loftin, & Lantz, 2009, p. 1330). One of the most notable characteristics of Montessori teaching with regard to validation is that students learn in various ways and at different speeds that suit them, and conform to their intrinsic guidance of nature (Havis, 2006a). In other words, in Montessori Method *peace* and *harmony* serve as two key components of learning. It is noteworthy that tailoring activities to students’ needs and capabilities elicit more positive interactions and are especially suitable for people with no fluency in English (Ploeg, Eppingstall, Camp, Runci, Taffe & O’Connor, 2013)

In reality, the Montessori Method needs the control over and the preparation of the learning surrounding without any control over the child. Indeed, the child is viewed as a natural spiritual being that is expected to react and respond in accordance with the environment which has been made ready for the process of learning. The Montessori Method enhances the learning of children by means of guiding and increasing the use of physical objects along with flourishing their nurturing ability of care and respect for one another besides their natural environment. A child in a Montessori environment shifts towards learning and practicing of self-control, self-organization, and self-correction.

The last characteristic is adult personality which points to the teacher in the classroom who is supposed to observe and direct the learning process. In fact, what teacher does is referred to a person-centered approach in which “the teacher considers the student’s preferences, goals, and future needs” (Browder et al., 2014, p. 26). In a study Trigwell, Prosser and Waterhouse (1999) concluded that students learned better in classes where teachers changed their teaching approaches and adopted more student-focused approaches. On the other hand, students in the classes where teachers focused on transmitting knowledge were less likely to learn the lesson deeply. Martel (2009) also stated that student-centered strategy is very beneficial for students with behavioral and academic difficulties, and those with mental disabilities who have limited understanding of their own behavior and its subsequent influence on other students. He also explained that student-centeredness serves as self-monitoring because it makes students track their own progress and check their own behavior.

2.2.3 Concept of Discipline in Montessori Method

Montessori beliefs necessitate a response to children’s misbehavior through modification of the environment. To this end, it is recommended to remove the detrimental impacts surrounding the child, and thereby to come up with modification of the environment in question. Furthermore, the Montessori Method avoids control over the child so a certain behavior happens by force, which is a common approach in a non-Montessori environment (Lillard, 1996).

In the Montessori system, the concept of discipline presents differently. Discipline gets its origin from liberty, implying that the discipline itself is to essentially active. The generally-accepted view towards discipline defines a disciplined individual “as artificially silent as a mute and as immovable as a paralytic”. This person appears as “an individual annihilated, not disciplined” (Montessori, 1912, p.

86). On the contrary, the Montessori approach regard a person disciplined as he is master of himself, thereby regulating his own conduct. Accordingly, the teacher needs a special technique to guide the child throughout the path of discipline all his life and to proceed indefinitely towards perfect self-mastery. This discipline is not only restricted to the school environment but also includes society. To this end, the liberty of the child should have the collective interest; that is, the teacher must look in the child “whatever offends or annoys others, or whatever tends toward rough or ill-bred acts” (Montessori, 1912, p. 87). Furthermore, the teacher must develop both the capacity and the desire in order to observe natural phenomena. This view of the discipline gives the teacher the role of observer; the activity has roots in the phenomenon.

2.2.4 Correction of Errors

The correction of errors may sometimes induce adverse effects or other times be associated with constructive alterations. Knowing about which style is comfortable for our learners will assist teachers to question concerning whether they should be corrected and how error correction could promote their L2 proficiency (Martinez, 2006).

2.2.4.1 Error Correction in EFL/ESL

There are two types of feedback, including implicit and explicit error correction. Explicit correction is the process of providing overt forms of feedback. Teachers can explicitly show the error in the L2 learners’ utterance. Indeed, they draw their attention to the erroneous point and correct forms (Carroll & Swain, 1993).

On the other hand, implicit correction describes the process where the learner is provided with indirect and simple forms of feedback. According to the existing

evidence, learners notice that this form of their utterance leads to the comprehension issues (Varnosfadrani & Basturkmen, 2009). The disadvantage of the implicit feedback may be related to misinterpretation of the learners as to a continuation of the conversation. In this case, explicit correction may also be more effective due to direct feedback. Furthermore, implicit correction can misguide the students since sometimes the erroneous point is not determined by teachers and the students may not finally realize in which the correction is required. As a result, they probably change other parts that are completely right (Martinez, 2006).

Another practical and effective way of feedback is involvement of the learner instead of teacher correction through an inductive method whereby the student is asked to provide the correct form by himself (self-correction) and realize on which element is wrong. In so doing, the learner finds a good opportunity to conduct an error processing which subsequently comes up with further retention of the right form in his/her mind. This kind of error correction may be implemented in another effective way. It is as if the teacher act as a moderator or guide in the L2 classroom and wait until the students accomplish the right answer (Martinez, 2006).

2.2.4.2 Error Correction in Montessori Method

In Montessori method, children are able to work independently in the same way, while there is no teacher. Indeed, the materials make able the children to find errors on their own and then correct themselves. Montessori (1965) stated:

The self-correcting material suggests that the control of the error lies in the material itself, and the child has concrete evidence of it. The desire of the child to attain an end which he knows leads him to correct himself. It is not a teacher who makes him notice his mistake and shows him how to correct it, but it is a complex work of the child's own intelligence which leads to such a result. (p. 70–71)

Inserting the correction of error within the material allows the teacher to step back and provide an opportunity for children to learn on their own. In this situation, they observe, compare, and proceed at their own pace and proportionate to their own interests. Additionally, children establish a firm understanding of the absolute nature of reality; they learn that each object has an exact nature and acts in a specified way, so that they notice the presence of a certain order in the world. They also learn that to be successful they have to comprehend what things are, how they behave, and how they correlate to other things. Rand (1970) argues that the material teaches the student there is one solution to the answer and he cannot change the answer by his whims. Also, he should learn that answer cannot be found by referring to his feelings, rather by paying attention to the nature of the problem. This is, in fact, a cognitive step required for him to understand that “nature, to be commanded, must be obeyed” and “this becomes a thoroughly automatized rule of his mental functioning” (p. 871).

2.2.5 Academic Development of Students in Montessori Classes

Additionally, in Montessori, every child has a capable and willing intrinsic guidance which provides opportunities for self-direction, and leads to responses in accordance with the prepared environment. That is, children who employ their own self-direction in a prepared environment are expected to respond by means of an inner guidance for true self-directed normal development (Havis, 2009). Academic development is of extreme significance for children, with the results being measured through standardized assessments in school; however, Montessori substantiates that true measurement considers the success of a child changed into an adult (Lillard, 1996). The academic development in a Montessori environment necessitates a well-ordered arrangement of self-teaching materials that children employ to learn freely and alone. When it comes to a non-Montessori context, the environment is exemplified by a

mechanical environment in which each person is carrying out the common tasks at the same time while children practice learning the similar material with the same approach.

2.2.6 Multi-Age Classrooms in Montessori Educational System

Schools across the world traditionally consisted of the one-room schoolhouse with children from different age levels and teachers who stayed with the same groups of children for many years (Seldin, 2009). In Montessori Method, however, children who age differently and present mixed abilities attend the same multi-age classrooms for at least three years. This special setting significantly improves what traditional schools were assumed to reach. In such multi-age period, interaction, socialization, problem-solving, and child-to-child teaching and learning are aligned together. Children pose some challenges to themselves based on their abilities, and work in a pace that suits them in an environment where has been made ready in an attempt to enhance learning from their peers and to provide opportunities to take part in peer teaching. In fact, peer-tutoring as one of the strategies employed in student-centered classes, encourages positive student interaction and it fits mixed classes containing students with different skills (Martel, 2009). Numerous scholars pointed to the importance of peer-interaction for enhancing L2 language learning (Allwright, 1984; Swain, Brooks, & Tocalli-Beller, 2002; Watanabe, 2008). For instance, Watanabe (2008) found that students' interaction in a mixed-level classes (with higher- and lower-proficiency peers) could enhance L2 language learning. More importantly, Peer-Assisted Learning Strategies (PALS) and peer-tutoring strategy could develop English language learning of students with learning disabilities (Sáenz, Fuchs and Fuchs, 2005; Handayani, 2014).

2.2.7 Montessori Method Techniques

Montessori Method has 10 basic physical techniques incorporated to provide control over the environment. These physical interaction techniques should be incorporated in sequence. They are:

- 1) Eye contact: "...teacher and child looking in each other's eyes implies no negative judgmental expression" (Havis, 2006b, p. 33);
- 2) Proximity: "...teacher moving physically closer to or further away from a misbehavior scenario..." (Havis, 2006b, p. 34);
- 3) Distraction: "If there is some child who persistently annoys the others, the most practical thing to do is to interrupt him..." (Montessori & Claremont, 1969, p. 254);
- 4) Clear direction: "...teacher telling child to do something..." (Havis, 2006b, p.32);
- 5) Repetition: which refers to the act of doing again and in a natural way that suits children to learn (Hardinge, 1994);
- 6) Patient waiting: "The teacher must be quiet and passive, waiting patiently and almost withdrawing herself from the scene..." (Montessori & Claremont, 1969, p. 240);
- 7) Reflective language: "...the teacher repeating back the same language given initially by the child..." (Havis, 2006b, p. 34);
- 8) Questioning: "...teacher asking the child something... often used to resolve fantasy behavior" (Havis, 2006b, p. 34);
- 9) Cooperative touching: "... teacher doing something with child that requires some element of physical contact with child..." (Havis, 2006b, p. 32); and

Imagination – pre-visioning: “.... an intending Montessori teacher must keep her imagination alive... she sees that single normalized type” (Montessori & Claremont, 1969, p. 252).

These physical techniques are more effective if implemented in combination with the 20 applicable protocols which address how to make the environment ready and provide a solid guide for the application of distinct physical techniques. These protocols of the Montessori Method include (International Montessori Society, n.d., “Montessori Workshops,” n.p.):

- 1) well-being of total environment;
- 2) least amount of adult involvement;
- 3) present moment;
- 4) no negative attention to misbehavior;
- 5) do not correct child;
- 6) basis of interest (ask; touch/look);
- 7) model good behavior;
- 8) eye contact before talking;
- 9) do not interrupt concentration;
- 10) be friendly – get acquainted;
- 11) enhance independence;
- 12) no rules for children;
- 13) emphasize main points – isolate variable;
- 14) child watching;
- 15) same routines all the time;
- 16) take out everything;
- 17) from the shelf;
- 18) lay out randomly;
- 19) simplify complexity – hint; and
- 20) confirm accuracy – clarify/expand.

It is necessary for Montessorian teachers to constantly bear the objectives of the Montessori in mind (Lillard, 2012).

In employing these techniques and protocols, it is of utmost significance to apply “safe words” particularly when encountering a complicated misbehavior condition. These types of words appear frequently hard for adults who have produced negative

language such as “no” and “don’t” as facing children’s misbehavior (Havis, 2006a, p. 7). To cite an example, the following statements show how to incorporate useful safe words:

“Come over here. Let me show you something.” “What do you think?” “Where does this go?” “Who else can help you with that?” (Havis, 2006a, p.7).

2.2.8 Teacher Preparation in Montessori Educational System

Teachers in a Montessori school should receive extensive training in child development. They are not clearly defined as specialists of any area however the concentration shifts towards child development. A Montessori teacher serves as a generalist who intends to utilize life experiences for assisting students to learn the subjects taught in a traditional school context on the whole and this role is significantly different from that of a traditional school teacher. Moreover, the teacher practicing the Montessori Method acts as a voluminous generalist who encourages student to apply purposeful learning experiences and implement them into his/her life as well as the world. The subjects learned are capable of being applied to routine life (Salazar, 2013).

Training for Montessori certification necessitates participation in certain hours of the program according to the level of training. Training for a Montessori teacher involves an understanding of the Montessori theory and philosophy, actively working on how to make the learning environment ready for all students, and learning the role of being the adult personality, which, in turn, guides the learner (Houston Montessori Center, 2013). Teachers also learn about classroom management, practice the application of safe words, and focus on how to put control over the environment but never the child. Additionally, teacher preparation consists of learning and practicing how to employ

the Montessori materials in order for teachers to promote their skills in providing a practical presentation of the materials (Salazar, 2013).

The Montessori Method can be divided into different levels and offered in different stages because “human development does not occur in steady, linear ascent but in a series of formative planes” (Lillard, 1996, p.4). Montessori referred to the formative level as planes of development or planes of education (Montessori, 2004). These levels determine the age span where children’s development suits the education and their progress should be studied in light of such developmental period. Planes of development in Montessori Method involve:

- 1) early childhood – birth to 6 years;
- 2) childhood – 6 to 12 years;
- 3) adolescence – 12 to 18 years; and
- 4) young adulthood – 18 to 24 years.

The definition of development levels plays a pivotal role in teacher preparation and necessitates that teachers realize the developmental period that the target group of students are experiencing if teachers intend to solidify the experiences for the students. It is important to note that child development in normal children is different from autistic children; therefore, in the adolescence level of development which is between 14 to 17 years of age, normal students get their primary education and attend in first, second, third, fourth, and fifth grade whereas autistic children, although getting their primary education, may need to attend different grades. During the plane of childhood, children move from being relied on their sensory exploration to being social explorers (Lillard & Jessen, 2003). Throughout preparation, a teacher is taught to understand that in a Montessori classroom, she/he is not considered as the central

point of a classroom environment but rather *the guide*. Additionally, the Montessori classroom does not possess a teacher desk and the lesson is frequently taught on the floor. These specific attributes, imply that she/he has the responsibility to give ownership to the student, and support the children to be responsible for their own learning process (Chattin-McNichols, 1998).

2.2.9 Learning English Using Montessori Educational System

Montessori approach can also be applied to learning a foreign language. Traditionally, most studies applying the Montessori Method concentrated on the development of a mother tongue or first language. However, the method can also be applied to learning English as a second language (ESL). Learning a foreign/second language (L2) by means of the Montessori Method has posed a formidable challenge for educationalist since the didactic materials first developed had foundationally been cultivated for speakers of a first language (L1) and thereby needed adaptation. It is noteworthy that when it comes to the teaching field, two distinct approaches to teaching language in foreign Montessori schools are raised. The first popular approach is to present the language, and its pertinent grammar and structure through explorative classes which aim to attract children's attention. The second one, on the other hand, refers to full immersion in a target language, implying that all materials are taught in L2 to the children in such a way that they become bilingual and fluent in L2 (North American Montessori Center [NAMC], 2009).

Moreover, Montessori method gives priority to learning by means of a series of senses "from visual to stereognosis" (Montessori & Gutek, 2004, p. 163), which end up with the child being able to categorize objects surrounding them and to have experience of the outside world on their own because every child has enough of opportunity to accept the world not through the mouth, but through the senses. Also,

in Montessori educational system it is believed that manipulation of things results in a more effective understanding of the unknown circumstances. In agreement with this theory, Lightbown and Spada (2006) also acknowledge that the comprehensible learning languages involve learning via the sense “to see” (p. 24).

Throughout the sensitive period, more attention is drawn to the human senses. Young children are greatly aroused by interest in their environment; for instance, they initially listen and see, and subsequently touch and taste, afterwards, they try to give names to different objects in their surroundings (Birková, 2017). In this regard, Montessori and Gutek (2004) maintain:

A special opportunity for training in clear and exact speech occurs when the lessons are given in the nomenclature relating to the sensory exercises. In every exercise, when the child has *recognized* the differences between the qualities of the objects, the teacher fixes the idea of this quality with a word. (p. 70)

Therefore, applying senses can afford to utilize learning of a foreign language; put it differently, seeing the distinction between things, touching them, tasting real food, or listening to different sounds strengthen the learnt vocabulary when the learning environment is replete with the target language (Birková, 2017).

During the 19th century, the French physician, Edouard Seguin established a special three-period lesson in order “to increase children’s cognitive abilities and believed in the importance of developing their self-reliance and independence” (Montessori Services, n.d.). Relying on this lesson which is based on an instinctive communication between the instructor and the student made in a friendly way and environment, Montessori proposed a natural immersion approach to learning a target language to a feasible extent. Indeed, the preferred situation, which is the second

teaching approach introduced above, would be teaching all the materials in L2. The immersion programs facilitate and potentiate bilingualism.

The three-period lesson has three stages:

- Introduction (Naming)
- Identification (Recognizing)
- Cognition (Remembering)

In this lesson (or process), the instructor presents an object (that is, he/she holds it) and pronounces its name accurately and easily without further words. Making connection between the object and the word is of utmost significance. In the second stage, the educator says the word and asks the child to point to an object that it represents. Thereafter, the educator validates the child's understanding until the child attempts to correct it himself/herself. When the child encounters any difficulty, the instructor can allow the child to put off the learning until another day. The last period addresses an ultimate confirmation from the teacher by requiring a reply to the question "What is it?" This stage might be iterated many times. In other words, if the educator notes that learning is difficult for the child, the educator is recommended to satisfactorily postpone the further steps related to that special learning (Montessori & Gutek, 2004, p. 158).

2.3 Foreign Language Teaching

As mentioned earlier, Montessori did not propose a particular theory for learning L2 but it was suggested that the method and procedures can be applied to L2 with necessary adaptations. What described in the following is in accordance with the Montessori concept of learning L1.

2.3.1 Language Areas Related to Productive Skills

2.3.1.1 Teaching Vocabulary Through the Montessori Method

Manipulation of the surrounding things or employing visuals, as explained by Lightbown and Spada (2006), showed promising outcomes in the development of L2 vocabulary. The teacher presents the basic vocabulary which is applied by the students in their first language. Flashcards and booklets can be used to facilitate the memorization of new vocabulary. This language learning practice strengthens the vocabulary ranging from easy-to-understand words to more complex phrases. It is of high importance to consider some physical movement along with spontaneous communication to the lessons based on a three-period lesson way.

L2 vocabulary development has a significant effect on speaking and writing of students (Nation, 2001). The inclusion of visual clues including the use of lumpy objects and posters specifically contributed to students' vocabulary learning. Visual-spatial language, as characterized by print and visual supports can facilitate their L2 learning (Yahya, Yunus, Toran, 2013). Yahya et al. (2013) found that using visuals can facilitate L2 vocabulary learning by ESL students with autism. Rao and Gagie (2006) also in a study concluded that modification of abstract concepts into more concrete ones, resulted in more tangible and easier to learn by autistic students.

2.3.1.2 Teaching Pronunciation Through the Montessori Method

Pronunciation is one of the elements to achieve the proper accent of L2. A Montessori process known as "linguistic gymnastics" can be effective to correct pronunciation defects. In this regard, the instructor pronounces the word clearly and slowly. Correct pronunciation has a lowering effect on anxiety levels during the natural learning process, and gradually enhances in future (Montessori & Gutek, 2004).

2.3.1.3 Teaching Writing Through the Montessori Method

Reading and writing in the mother tongue are taught prior to writing in a second language. Some aspects of writing such as preparation for handwriting are taken into account as the start of the Montessori Method for Practical Life (Montessori, 1912). While young children can utilize the Movable Alphabet, older children are usually more creative and can write their own stories, anecdotes, and so forth.

It is noteworthy that although students with autism face difficulties in acquisition of writing skill, this experience is of high importance because “they [writing skills] can be used in a variety of contexts to express ideas and subsequently access reinforcement” (Pennington & Delano, 2012). Some studies revealed that explicit writing instruction help students with autism to learn writing (Dockrell, Ricketts, Charman, & Lindsay, 2014; Pennington & Delano, 2012).

2.3.2 Second Language Acquisition and the Montessori Method

Besides emphasizing the pivotal role in extending language in childhood specifically in a family and a friendly environment, Montessori (1912) pointed to the crucial evolution taken place in the early stages of human lives. Her discussion was consistent with that of Chomsky, Piaget and Vygotsky, who stressed the value of creating a caring learning environment in a child’s life (Lightbown & Spada, 2006).

Montessori Method is also in line with Krashen’s theory (1981) which points to the importance of developing an environment which fits with needs of the learners’. Krashen describes that target language as “comprehensible input” can be learned in a situation with low anxiety, conveying the messages that students really would like to hear. Such approaches do not compel early production in L2, they rather permit students produce the language when they are ready, ensuring that progress arises

from providing communicative as well as comprehensible input, not from pushing and correcting production (Krashen, 1981). His perspective relates to the natural development during the learning process which is also encapsulated by Terrell (1977) offering three common guidelines that would incorporate the Montessori principles. These guidelines maintain that “all classroom activities should be devoted to communication with a focus on content, no speech errors should be corrected, and students should feel free to respond in L1” (p. 331). Therefore, both Montessori and Krashen give priority to acquisition in the classroom rather than conscious learning. Other researchers such as Andrews (1999) and Field (2010) indicated that provision of sufficient amount of input for L2 language learning is very important. This is specifically vital in case of students with autism since they have concentration and verbal production problems (Frith & Happe, 1994).

The Montessori Method has a tendency to teach specific skills in the child’s sensitive periods in which children have a strong desire for comprehensive knowledge as well as for learning languages since they are able to simply achieve native pronunciation and intonation along with confidence and fluency in L2. To date, few studies have tried to address L2 development by children and the available studies have used qualitative procedures to investigate this topic. In one of these studies, Handayani (2014) attempted to develop bilingualism among children in Singapore where English is taught as the second language using the Montessori Method while all four skills of listening, speaking, reading, and writing were practiced. English language serves as the second language. Data, obtained through the interview with teachers, students, and parents and observations of the events and learning activities, indicated that children had an innate desire to learn and explore in association with parent, peers and environment and this, in turn, enhanced the quality of learning. Based on

the findings of this study, the researcher concluded that to bring up a bilingual, creative, competent, and socially responsible child, the following characteristics should be present: educational tools which are colorful, safe and of interest for children; professional educators who are keen observers and warm in communication, and so forth; well-equipped environment in which children feel convenient during the learning process; parent's engagement so that they can be aware of children's advancement; learning in small groups which allows children to be free and enjoy the learning activities under the surveillance of the teacher; and iteration in learning which assists children to explore the topics several times.

More recently, Birkova (2017) investigated the feasibility of the teaching and learning of the English language at lower secondary schools by the Montessori Method in Brno, Czech. In this qualitative study, a total of 30 observations in two different schools were made and two teachers were also interviewed. The findings of the study showed that the Montessori principles provide support to the natural growth of each human being within a learning process. Nevertheless, the learning and teaching of the English language through the Montessori system becomes a challenging alternative for the teachers. That is, these processes appear too complicated to implement in lessons. In the long run, they concluded that implementation of the genuine vision of the Montessori Method is virtually impossible to accomplish at the present Czech schools.

Many students in the English-speaking countries such as the US are immigrant and may not know the English language well (Carlyle, 2013). Thus, it is of high significance to know more regarding challenges faced by the English language learners (ELLs). Given that there are barriers to language and culture, these students

often have an unpleasant time understanding what is going on in their surroundings; this subsequently can lead to considerable confusion and frustration. Carlyle (2013) has provided a list of general problems that ELL students may struggle with:

- The expectations coming from the class, project, or assignment
- The instructions provided for an assignment
- The classroom schedule defined for the day or even normal routine
- Picture as well as content
- Lack of knowledge providing an opportunity for the child to connect to the assignment, book, or arguments
- General language or informal English
- Academic language or formal English
- Difficulty of interacting with other students and peers. ELLs have a tendency to come together into a group or isolate themselves.
- Eating various foods and also dressing specially denote a minor distinction between students.
- Having restricted access to resources at home which might be associated with low-income communities. The parents of the ELLs who immigrate to a new country may be under financial pressure and fail to protect their children financially during the academic life owing to language and cultural gaps.
- Being labeled as “dumb”, since ELLs’ academic performances are largely affected by their inability to comprehend the language applied for implementation of the assignment or test. Therefore, the resultant grade is not properly indicative of their ability.

It is also noteworthy that sometimes, the ELLs' problem is not that they cannot speak or say words; indeed, the major challenge is that they cannot effectively convey their message and make others understand their message. This aspect of language is called pragmatics, which is a key concept in language communication (Kasper, 2001). Indeed, "Communication systems must have a pragmatic function: that is, they must serve some useful purpose. Examples of functions of human language are include helping individuals to stay alive, influencing others' behavior, and finding out more about the world" (The Ohio State University Department of Linguistics, 2007, p. 18).

2.4 Autism Spectrum Disorder

Autistic disorder as one type of autism spectrum disorders (ASDs) is also called classic autism. The spectrum disabilities of autism are prevalent across the globe. It has been reported that one out of 88 children born in the United States suffers from autism (Scassellati, Admoni & Mataric, 2012). Of note, it has also been reported that more than 30,000 Iranians who age below 19 years old have autism disorders (Pouretamad, 2011). Those diagnosed with ASD frequently lack the communicative skills which are acquired by their normal peers. Autism is known as socially debilitating medical condition whereby a person becomes unable to establish communication effectively within his/her environment. As Happe (1998) argues, autistic children may show some language while they may be unable to communicate. Indeed, they use words or phrases in idiosyncratic way, just repeating after hearing a phrase with no perception about it. Moreover, those who suffer from this disorder fail to learn language by the conventional ways as normal peers do it; indeed, they have intellectual disabilities. According to Samadi, Mahmoodizadeh, and McConkey (2012), 6.26 per 10,000 children are found to have typical autism in Iran, which is significantly lower than those reported from some western countries. Seung,

Siddiqui, and Elder (2006) found that 30 to 60 per 10,000 children were identified with autism in the US.

Some of the most important characteristics of people with autism are lack of cognitive flexibility (Geurts, Corbett, & Solomon, 2009) and seeking predictable routines, so they may be uncooperative during a transition from a condition to another condition, since they may face difficulty to adjust themselves with the new condition or situation (Wire, 2005). In order to increase cognitive flexibility in autistic students, Spiro, Feltovich, Jacobson, and Coulson (1991) suggested that learning environments should be flexible and allow the same items to be presented and learned in different ways. Lu, Petersen, Lacroix, & Rousseau (2010) also in a study concluded that creative sand-play could engage the students with autism. Wire (2005) also pointed to the importance of dedicating extra time to autistic students to get familiar with the new situation.

Core clinical manifestations of autism consist of poorly-integrated verbal and nonverbal communication, socialization, and self-stimulatory behaviors. The communication deficits in autistic cases include delays in speech-language development with peculiar difficulties for such children especially those who reside in bilingual homes (Seung et al., 2006).

Considering both autism and English as a second language, a child affected by a social pragmatic disorder associated with a language barrier faces with formidable challenges to overcome. In other words, an autistic child generally possesses more language problems, that is, slow or poor ability to develop vocabulary and grammar, poor interpretation of social cues, improper comprehension and behavior (Reppond,

2015). Both children and adults with pragmatic difficulties appear less interactive in the social chain as compared with their normal peers; moreover, peers usually avoid forming any form of conversation or interaction with these types of children as communication with them requires much effort to make themselves understood. Typically, people with the following symptoms are most likely to face with difficulty with social pragmatics:

- say inappropriate or unrelated things during a conversation
- tell stories in a disorganized way
- have little variety in language use (Suffolk Center for Speech, 2015, “Pragmatic Speech,” para. 4).

When an individual has failed to master the rules for social language, called social pragmatics, they are more likely to encounter difficulty communicating with others. According to American-Speech-Language-Hearing Association [ASHA] (n.d.), there exists three major communication abilities related to social pragmatics:

- Applying language for various objectives:
 - greetings (hello, goodbye)
 - informing (making a comment, suggesting, giving meaning, asking questions for clarity)
 - demanding (saying what will be done or will be given)
 - promising (giving intention to do or bring about)
 - requesting (utilizing polite questions to gain what desired)
- Altering language (based on to the needs of the listener or circumstance)
 - talking in a different way to a baby than an adult
 - Providing background information to a stranger

- speaking in a different manner in a classroom than on a playground
- Conforming to rules (for both conversations and storytelling)
 - knowing when to start and finish a turn in a conversation
 - presenting topics into conversation
 - staying on the subject under discussion
 - rephrasing if misunderstood
 - employing verbal and nonverbal cues
 - where to stand to someone when speaking
 - how to use body language.

2.4.1 Learning English Language of Students with Autism

It has been shown by Carlyle (2013) that English language learners as well as students with autism possess some common features in learning.

There are some common characteristics with respect to the appearances and needs of autistic ELLs and students; for instance, barriers to effectively interact and communicate with peers, which alienates these children within the classroom, and particularly outside of the classroom. Moreover, such difficulties cause poor understanding of what other classmates used for talking to them in the classroom. The other problematic issues are comprehending directions, connections to the outside world, other class materials, or the peer's individual life.

Lack of motivation, poor attention, lack of communicative skills, problem with dictation and composition are some challenges which students with autism face (Dockrell et al., 2014). Dockrell et al. (2014) also indicated that writing was so challenging for the autistic students because they were not interested in the writing activities. Moghadam, Karami, and Dehbozorgi (2015) indicated that normal

students, as compared to students with autism, were more aware of the usage of English language, and the purpose for which they wanted to learn English (e.g. to communicate with English-speaking people). Teachers and speech therapists who work with autistic individuals should be aware that they need more time and effort to learn a foreign language than normal students (Moghadam et al, 2015). Carlyle (2013) explained that students with autism can learn better through repetition, since they have difficulty in learning some aspects of language. Moreover, they cannot sit and listen to the teacher for a long time, so teachers should be patient and encourage them to learn English (Moghadam et al, 2015). In this regard, Wire (2005) also mentioned that autistic students can better progress in foreign language classes which are highly disciplined and structured, since students with autism are not flexible and prefer routines.

Owing to cultural, emotional, and cognitive obstacles, which all autistic students lack in general, attending and learning in the conventional classroom appears difficult for ELL autistic students. They learn some aspects of language with much difficulty and show gaps, misunderstandings, and hindrances to their learning ability that is more likely to have highly adverse impacts on their overall performance. It is notable that these students should struggle to keep up with the pace of the normal peers (Carlyle, 2013).

Due to the aforementioned problems that autistic children have, their education requires much more effort and further strategies employed by the teachers. In response to the question concerning ‘how English as a second language (ESL) and Special Education (SPED) teachers can effectively work together with help of parents to guarantee that a fully-developed learning environment is provided to ELLs with

the autism spectrum', Reppond (2015) indicated six major obstacles existed for teaching to ELLs who suffer from autism. These obstacles were lack of communication, lack of supportive educational environment including training, education, materials, open-minded teachers, lack of qualified personnel and understanding, time pressure, parent's engagement, and mainstreaming of students. Therefore, focusing on these issues is to the starting point of working with autistic children in the process of language learning. Teaching to students with autism as Browder, Wood, Thompson and Ribuffo (2014) stated requires "partnerships between families and educators to work together toward common goals" (p.46). "Students should learn to gain attention, initiate interactions, develop social closeness, request or share information, and engage in typical social exchanges" in order to be able to interact with their peers (Browder et al., 2014, p. 34). The connection among parent, peers and environment could enhance the quality of learning and make students motivated (Pomerantz, Moorman, & Litwack, 2007). In a study, Seung et al. (2006) investigated teaching English as a second language to a child with ASD. Intervention consisted of a bilingual Korean-English speech-language for 24 months. The results of this study showed that the child could accomplish receptive and expressive language in both languages and bring the final assessment to an end in English. Moreover, he demonstrated improvements in non-verbal communication, eye contact, social affect, and behavioral interaction. Sofronoff, Jeanie, Sheffield and Attwood (2011) investigated the relationship between affectionate behavior in children with autism and variables likely to influence its expression (e.g., social ability and sensitivity) and concluded that children understood the purpose of affection. So, people with impaired ability are able to recognize, communicate their emotional state, and progress in what they are

supposed to do. Hue (2016) also indicated that receiving love, affection, and companionship in Chinese children with autism made them more positive about school and facilitated their learning. According to Denning and Moody (2013), one of the benefits of building positive relationship with students is that it allows teachers to talk to students in order to discover their interests, and to plan how to deal with their needs in the classroom. It is obvious that a positive relationship could facilitate the process of learning particularly in case of autistic learners who cannot listen to the teachers for a long time (Moghadam et al., 2015). Wentzel (1998) in a study, have concluded that teachers' supportive relationship with student can increase students' motivation, interest and social responsibility. In Robertson, Chamberlain, and Kasari's (2003) study, the paraprofessional training helped teachers to build more positive relationship with autistic students. Therefore, more attention to students' affective needs can lead to their educational progress.

In another study, Þráinsson (2012) studied language learning of some 16-18-year-old male teenagers with ASD who had no special background in English or any connection to an English-speaking community. Some interviews were organized with both children and their supervisor. All documents relevant to their academic work, personal information, language acquisition history, and Icelandic as well as English proficiency were collected and reviewed. It was found that the participants with autism commonly had difficulties in L1 acquisition whereas their L2 proficiency was considerably better than their normal classmates. It was concluded that proficiency in L1 is not a foundational prerequisite for L2 learning.

More recently, Alemi et al. (2015) examined the effect of employing a humanoid robot as a teacher assistant in order to teach L2 (English) to autistic children in Iran.

In this regard, four male children aged 7-9 years were recruited. The researchers found a difference between the learning gains of the high-functioning and low-functioning children. Indeed, high-functioning autistic children had the ability to learn L2 through technology-assisted processes.

The role of teacher preparation for teaching English to autistic students is highlighted by various scholars. For example, in a study by Clement et al. (2012), the teachers who intend to provide their students with the best practices explained that persistent professional development programs of high quality and intensive workshops with the purpose of updating teachers' knowledge and increasing their skill repertoire which consequently lead to improved student outcome is vital. Murphy (2016), in a study on a two-day professional development program for special education teachers of students with autism which general knowledge of autism spectrum disorder and the related teaching strategies concluded that significant changes in teachers' perceptions of students with autism, their increased knowledge of autism, and employment of strategies which satisfied the needs of these students. In another study, Wolfe (2012) concluded that special education teachers experienced lack of pre-service preparation for teaching students with autism, mentoring support during their initial phase as novice teachers; and reciprocating community throughout their careers.

2.4.2 Learning Styles of L2 Learners

Learning styles refers to a set of characteristics coming from biological factors and developmental stages which make the similar teaching method for acquisition or learning of a new language pleasant for some and yet terrible for others (Dunn & Griggs, 1988). L2 learning style depends on sensory preferences and personality types. However, there are other influential factors such as biological differences and desired degree of generality, which respectively deal with biological disparity such

as sustenance and location, as well as main idea with the learner who focuses on details (Oxford, 2003).

- ***Sensory preferences:*** It covers four main areas including visual, auditory, kinesthetic (movement-oriented), and tactile (touch-oriented). Indeed, sensory preferences are physical, perceptual learning channels whereby the learner like to be taught. For instance, visual subjects are more comfortable when read or exposed to visual stimulation. On the contrary oral directions and other classroom interactions in role-plats fit auditory learners. Interestingly, those activities with lots of movement or tangible objects excite kinesthetic and tactile students (Reid, 1897). Reid (1987) indicated that Asian L2 learners are comfortable with visual input. Hispanic learners tend to be highly auditory.

- ***Personality types:*** Four strands constitutes psychological type: extraverted vs. introverted; intuitive-random vs. sensing-sequential; thinking vs. feeling; and closure-oriented/judging vs. open/perceiving. Ehrman and Oxford (1990) have studies the relationship between personality type and native English speaker's proficiency. Extraverts enjoy interaction with people or, on the whole, the external world while conversely introverts with a few friends look for solitude. These two types of students learn in the L2 classrooms in such a way that working on deadline maintains extravert's enthusiasm to a manageable level whereas introverts seek for classroom opportunities such as leading small group discussions to flourish their L2 abilities.

Intuitive-random learners adopt the way of thinking that is abstract, very modern, and well-arranged. Moreover, they prefer to be in control of their learning to build

new and sudden insights. When it comes to those with sensing-sequential characteristics, they live in the reality and seek facts instead of theories. To them, teachers play a guiding role and confer specific instruction. Therefore, teachers are to provide them activities that have multiple options enriched with different tasks for the former group and yet a highly organized structure for the latter. Thinking learners are not influenced by emotions and pursue the stark truth that might be unpleasant to some people. They attempt to create a competent character out of themselves. On the contrary, feeling learners voice their concern, empathy, and compassion for other people. Their personal contributions in difficult situations turn them into a respected character. Teachers can balance learners' behaviors and orient them towards learning through team working so that thinking learners unravel their compassion whereas their feeling peers attenuate their emotional expression. On the other hand, judging students aim at completion rapidly and seek clarity. Peculiar tasks with predefined time limits highly suit this type of personality. Open learners, however, view learning as a fun or game. They hardly stick to deadlines, and dislike closure and hard effort. In the similar manner, both types of students can benefit from developing cooperative groups soaking in fun and closure (Oxford, 2003).

2.4.2.1 Learning Styles of Autistic Learners

The pertained literature has indicated three types of learning style for autistic children, including *Specialized Brains, Learning and Communication Styles*, and *Visual, Auditory, Kinesthetic Learning Styles* (VAK). In this regard, two behavioral theories have been proposed to have an influence on learning, Theory of Mind Thinking (ToM) and Positive Support Behaviors (PBS) (Colorosa & Makela, 2014).

- ***Specialized Brains***: Grandin (2006) highlights three types of specialized brains for those inflicted with ASD, including visual thinkers, music and math thinkers, and verbal logic thinkers. This classification comes from years of study on families and individuals with autism. Indeed, these persons usually think in details in such a way that conform to the three basic categories of specialized brains. However, some may have more than one category. These classes deal with how a person thinks and processes information. Moreover, she addressed possible career options denoting each way of thinking.

Visual thinkers: Think in photographic images. They dislike those tasks with lots of math or short-term memory recall; long-term memory recall is pleasant.

Music and math thinkers: Be better than others in math, chess, and computer programming. Patterns and relationships draw their attention. They mostly play music by ear, and can afford to manage numbers, facts, and music. Written language does not fit pattern thinkers.

Verbal logic thinkers: They enjoy love history, foreign languages, weather statistics, and stock market reports. They possess strong long-term memory. Also, words, lists, and numbers constitute their preferences (Grandin, 2006; Grandin & Duffy, 2004).

- ***Learning and Communication Styles***: Communication style initially identified by Wolf, Brown, and Bork (2009). According to this style, students should be aware of their learning style to boost education. Wolf et al. (2009) suggest two learning styles, verbal as well as visual, and two communication styles, explanation and written as well as demonstrations, flow chart and guides (wolf et al., 2009, p. 11). They note

that the learning styles “should not be goals in and of themselves, but should provide a baseline, with the ultimate goal of enabling the student to independently apply the steps and procedures identified in each setting he may encounter” (p. 178).

- ***Visual, Auditory, and Kinesthetic Learning Styles (VAK)***: Lisle (2007) maintains that “the use of learning style assessments and consequential synchrony with learning opportunity can help remove obstacles to learning generally and can be beneficial to and supportive for adult learners with intellectual difficulties” (p. 24). On one hand, the VAK deals with visual, auditory, and kinesthetic styles of learning to improve a number of modalities of the learner, such as visual learners, auditory, and kinesthetic. It, on the other hand, assesses the different styles of learning for adult individuals who have intellectual difficulties. Lisle (2007) concluded that among learning styles, individuals with autism and ASD show tendency towards learning preferences of kinesthetic (“active listeners, prefers practical tasks and activities”), visual (“prefers images, diagrams, charts and other visual information”), then auditory (“uses aural communication, sounds, dialogue, discussion, rhythmic patterns and reading materials”) (p. 30). To this end, Roberts (2010) found that when a person with ASD has the characteristics of a kinesthetic learner and intends to participate in a lecture, he/she may fail to learn as much. In this case, “hands-on” activities along with the lecture can enhance learning.

The teachers in the Montessori approach have a valuable goal to nurture and guide children, and participate in an activity with them. Carefully prepared, aesthetically pleasing environments contribute to this method with special attention to the curriculum and respect for children. Moreover, constructive interactions between teachers and parents have high values in this approach. Indeed, the Montessori

teacher acts like an *unobtrusive* director in the classroom because children in person or at times in pairs or small groups take part in self-directed activities. Having observation of the children, the teacher attempts to create an atmosphere of *productive calm* for children in order to smoothly progress in their learning (Oppenheimer, 1999). In this approach, the teachers also aim to help and encourage the children to establish confidence and inner discipline to such an extent that virtually no intervention is required as the child develops. Stopping children during their purposeful activity poses interference at their momentum, interest, and inner workings of thought (Greenwald, 1999). The teacher provides the young child with enough of close contact with reality by means of a sensory investigation and practical activity, thereby depending on the child's unfolding inner program of curiosities and sensitivities to make certain that the child will learn what he or she needs. The teacher behaves actively with the younger students, displaying how to use materials and engaging them in activities following an assessment of the child's requirements. All objects in the classroom such as books and toys are carefully selected to meet refined quality and natural materials. Books, as an example, open a window to the real world through beautiful images, and further establish fantasy until age 5 or 6. The children move along at their own pace and rhythm based on their personal capabilities. The school community, including the parents, is responsible for the integration of children's body, mind, emotions, and spirit that are indispensable elements of holistic peace education (Edwards, 2002).

Chapter 3

METHODOLOGY

This chapter is presented the overall research design, the context of the study, research questions, the demographic features of participants and sampling method, the background and experiences of researcher relating to the study, data collection instruments, data collection procedure, and data analysis procedure. A graphic overview of methodology is also presented in Appendix A.

3.1 Overall Research Design

This study was conducted in an educational center for autistic children named Ava center, in Iran. Three English language teachers participated in this study and implemented the Montessori method in their classrooms with total 10 students.

This study has a qualitative case study design and aims to investigate the influence of training of the Montessori method on professional development of EFL teachers of autistic students and how this teacher training improves autistic students' L2 productive skills. Case study is “an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources” (Baxter & Jack, 2008, p. 544).

The study utilized the triangulation of data (Patton, 2002), and data was obtained from multiple sources including teacher observations, teacher approach to teaching inventory, teachers' individual interviews, and small group discussion. The

qualitative data explored: (a) the association of professional development workshops with the quantity and quality of the teachers' application of those specific methods in their instructional practices, (b) the association of professional development workshop with teachers' perception of autistic students' participation as well as their challenges and experiences of implementing Montessori method in their classrooms, and (c) the association of professional development workshop with teachers' belief and approach to teaching.

3.2 Context of the Study

The province of Razavi Khorasan has 120 autism centers and the capital city, Mashhad, where the current study was administered, has 12 autism centers. Of all the autism centers in this city, three autism centers provide English language classes for students with autism. The head of only one autism center known as Ava educational center for autistic children agreed to cooperate with the current study. This center is private and nearly 100 autistic students, aged 3-18 are enrolled in it. The educational curriculum for the autistic students is developed based on their age, comorbidities (presence of one or more additional disorder), the intelligence and their verbal ability. This center is distinct from the other centers since autistic students enrolled in this center receive as much as education that normal students receive. According to the head of the center, the educational plan has two subdivisions, morning classes are related to governmental education. Evening classes, on the other hand, include extracurricular classes such as music therapy, English as a foreign language and gardening. Three English teachers with specialty in dealing with autistic students work in evening classes which offer extracurricular activities for 11 autistic students.

3.3 Research Questions

This study aims to answer the following questions:

- (1) What are the EFL teachers' perceptions of the influence of the training of Montessori-oriented English language teaching on their professional development?
- (2) What are the EFL teachers' perceptions of the influence of the training of the Montessori-oriented English language teaching on L2 productive skills of autistic students?

3.4 Participants

All three English teachers working in Ava educational center for children with autism participated in the study. The participants of this study have taught English language to the students with autism for 3-5 years. They were given permission from the head of the center and parents of their students with autism to implement Montessori educational system in their English teaching classes of students with autism. The participants did not participate in any professional development program related to teaching English method to students with autism, and their age ranged from 26-31 years old (Table 2).

Table 2: Profile of the teacher

Participants	Gender	Age	Education	Years of teaching English	Years of teaching English to autistic students
Teacher A	Female	29	Teaching English language BA/ psychology MA	3	1
Teacher B	Female	31	English literature BA	5	3
Teacher C	Female	26	English translation BA	4.5	2

At the time of the study, ten out of 11 students with autism studying English language as extracurricular activity in Ava center were enrolled in this study during the spring semester of 2017. The parents of these students completed the consent form in order that their children are allowed to participate in the study. Furthermore, the inclusion criteria for participating in English language classes was selected by the head of the center and the speech therapist of the center, including not having limited verbal ability as well as severe medical conditions such as mental retardation, impulsivity, hearing and visual impairments. The students ranged in age from 14 to 17 years old. The profile of the autistic students including age, co-occurring disorder as well as level of knowing English language were extracted from their documents and provided in Table 3.

Table 3: Profile of autistic student participants

Participants	Gender	Age	Age of diagnosis	Other co-occurring disorder	English language level
Student A	Male	14	4	None	Second semester
Student B	Female	15	3	ADD*	First semester
Student C	Female	17	5	None	Second semester
Student D	Male	14	4	ADHD **	First semester
Student E	Male	15	5	None	Second semester
Student F	Female	15	3	None	Second semester
Student G	Male	16	3	ADD	First semester
Student H	Female	17	5	None	Second semester
Student I	Male	14	4	ADD	First semester
Student J	Male	14	3	ADHD	First semester

* attention deficit disorder: having a persistent pattern of inattention that interferes with functioning or development. For instance, making careless mistakes in schoolwork or with other activities, having trouble holding attention on tasks or play activities, being easily distracted, etc.

** attention-deficit hyperactivity disorder: showing a persistent pattern of both inattention and hyperactivity-impulsivity that interferes with functioning or development. For instance, leaving seat in situations when remaining seated is expected, being unable to play or take part in leisure activities quietly, talking excessively, blurting out an answer before a question has been completed, having trouble waiting his/her turn, etc. (American Psychiatric Association, 2013).

3.5 The Researcher

The researcher of this study, a master’s candidate in ELT, already holds a master’s degree in clinical psychology and has some experience of working with autistic people. Her other qualifications include attending courses relating to autistic people which addressed emotional and educational problems and Montessori method (see Appendix B). She has also acquired knowledge of language studies and English teaching method and teacher development during her educational experience in Eastern Mediterranean University of Cyprus. Indeed, the knowledge of both fields, ELT and psychology, helped the researcher to address this interdisciplinary issue.

3.6 Instruments

Data for this study was collected through the following instruments (Table 4):

- 1) Guiding Questions for Open Discussion; 2) Observation Report; 3) Teacher Interview; and 4) Approaches to Teaching Inventory.

Table 4: Data Collection Instruments and Variables

Instruments	Developed by	Sections
Guiding Questions for Open Discussion	<ul style="list-style-type: none"> • Reppond (2015) • Daycare Checklist (2016) • Ministries of Education in Africa (2016) (modified in accordance with the context by the researcher)	<ul style="list-style-type: none"> • Student participation • Uptake issues
Observation Report	<ul style="list-style-type: none"> • Fries (2015) (modified in accordance with the context by the researcher)	<ul style="list-style-type: none"> • Type of relationship to autistic students • Classroom management strategies Observation skills • English language teaching techniques
Teacher Interview	<ul style="list-style-type: none"> • Gonzalez (2016) • Abe (2011) (modified in accordance with the context by the researcher)	<ul style="list-style-type: none"> • General beliefs about EFL teaching • Effect of Montessori-oriented teaching experience on your professional development

Approaches to Teaching Inventory	<ul style="list-style-type: none"> • Trigwell, Prosser, & Ginns (2005) (modified in accordance with the context by the researcher) 	<ul style="list-style-type: none"> • Teacher Demographic Information • Approaches to Teaching Inventory Reflecting on your approach to teaching
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3.6.1 Guiding Questions for Open Discussion

This instrument is composed of 16 open questions on teacher’s challenges and experiences of implementing Montessori method in their classrooms as well as their performance in order to increase student participation during the professional development training based on Montessori Method. Considering the objectives of the study, the pertinent guiding questions were adopted from the ‘Special Education (SPED) Educator’s Questions’ (Reppond, 2015), ‘Teacher Self-evaluation’ module (Ministries of Education in Africa, 2016), and ‘Child Care/Center Interview Checklist’ (Online Professional Child Care Referral Service, 2016) and then were adapted to fit the context of this study (to see the initial form of guiding questions for open discussion refer to Appendix C). Of the 16 open questions proposed, 3 questions were taken from the ‘Teacher Self-evaluation’ module comprising of four open questions on the topic of understanding students which were related to the ‘Uptake Issues’ section. However, item 11, ‘What ill effects do you sense can come from this deficiency?’ was further omitted. Nine questions were adapted from ‘Daycare Checklist’ for both the ‘Uptake Issues’ and ‘Student Participation’ sections. Three further questions were adapted from ‘Student Oriented Questions’ on Special Education (SPED) Educator’s Questions’ form. Moreover, one more question, ‘How does Montessori Method contribute to English teaching to the autistic students?’, was added to the guiding questions list by the researcher, with the final list containing 16 questions relevant to teachers’ uptake issues. On the whole, all items were partially

altered in order to match the context. This group discussion was aimed to establish an amicable environment for teachers in order to argue different aspects of EFL teaching and student-related learning issues, and to assess the success of the Montessori Method of Teaching that the EFL teachers implemented (refer to Appendix D).

3.6.2 Observation Report

This instrument was adapted from ‘Montessori Integrity Evaluation’ (Fries, 2015) (Appendix E) containing three sections and 27 items which are selected from the list by administrators who look for evidence of implementing the Montessori Method into classroom because teaching students with autism necessitates cultivation of an effective relationship as well as implementation of peculiar management strategies in English language classrooms. The first section of it is called ‘Type of relationship to autistic students’ which aims to identify how teachers communicate with children. Communication involves different items asking about teachers’ listening skills, positive coping strategies, token of respect and rapport. The items in the second section called ‘Classroom management strategies’ are related to teacher’s skills and features, namely, environment awareness, expectations, problem solving, body language, and time management. ‘Observation skills’ is the third section and contains questions related to autistic students’ behavior and needs. The last section is ‘English language teaching techniques’ which aims to detect how teachers introduce new materials, respond to probable problems, and enhance learning environment.

The 27 items included in the original questionnaire were modified and one more section was added to the questionnaire. The modifications included the omission of the items related to adults from the questionnaire. The finalized ‘Observation Report’ consisted of four sections including 1) type of relationship to autistic students (8

items) which deal with the quality of the relationship between the teacher and the students, 2) classroom management strategies (10 items) which address the effectiveness of classroom management strategies, 3) observation skills (2 items) which focus on autistic students' behaviors and needs, and 4) English language teaching techniques (11 items) which were added by the researcher and dealt with the techniques currently used by the teachers to teach autistic children. (Appendix F).

3.6.3 Teacher Interviews

The fourth instrument, a semi-structured interview, containing 12 open-ended questions was designed by the researcher which aimed to elicit information regarding teacher's general belief about EFL teaching and the effect of Montessori-oriented teaching experience on teacher's professional development. The questions were adapted from the existing instruments proposed by Gonzalez (2016) and Abe (2011) containing both open- and closed-ended questions. The initial questionnaire has two main sections aiming to elicit information about teacher's general belief and experience during the professional development program (Appendix G). However, the modified version used in the current study contained only two major sections and only open-ended questions. The first section aims to elicit information on teacher's general beliefs about EFL teaching during this professional development training and their feeling about teaching in the context of EFL for autistic children (8 items), the second section focuses on the contribution of Montessori-oriented teaching experience to teacher's professional development (4 items). The first part includes eight items which scrutinize teacher's feeling about teaching in the context of EFL for autistic children. The next part with four open-ended questions regards the

effectiveness of the techniques of Montessori on empowering teachers to improve autistic students' achievement in English learning (Appendix H).

3.6.4 Teacher's Approach to Teaching Inventory

The original version of the Approaches to Teaching Inventory (ATI) was developed by Trigwell, Prosser and Taylor (1994) to collect data on teachers' approaches to teaching as a measure of teaching quality. Moreover, Trigwell et al. (1994) proved that this instrument lends itself to modification to match teachers' intentions (including concept development, conceptual change, information transmission, concept acquisition), and their teaching strategies (student focused, teacher-focused, teacher-student interaction). The preliminary version has 16 items and mainly deals with two distinct approaches: a student-oriented approach (conceptual change/student focus) with an orientation towards student learning and a more teacher-oriented approach with information transmission goal (information transmission/teacher focus). Cronbach alpha values were 0.75 for the first approach and 0.73 for the second section (Trigwell & Prosser, 2004).

Later on, Trigwell, Prosser and Ginns (2005) expanded this version to a new one including 22 items in order to better reflect the changing needs and to better identify teachers' approaches to teaching (Appendix I). According to these researchers, there are two key approaches to teaching: (a) conceptual change/student-focused approach, and (b) an information transfer/teacher-focused approach, with each approach having 11 items. Cronbach alpha values were reported 0.86 for the conceptual change/student-focused factor and 0.83 for the information transfer/teacher-focused factor. The revised 22-item version has been used as a useful tool to provide a complete framework of the change in approaches to teaching for teachers in different

studies (Trigwell et al., 2005; Prosser & Trigwell, 2006). The inventory also had six open-ended questions focused on teacher's approaches to teaching.

For the purpose of the present study, some minor revisions were made to the second version of the ATI, leading to an 18- item new version of ATI supplemented with six open-ended questions related to EFL teachers' approach to teaching English and any further information which teachers would like to explain (Table 3.7). Of the initial 22 items, items 5, 6, 10 and 14 were omitted because they dealt with normal students with upper level who are able to take note, discuss the lessons, and express their ideas. Of open-ended questions, items (second, fifth and sixth) were substituted more relevant questions. Besides, ATI form contained 10 questions to obtain demographic features from the teachers (Appendix J).

3.7 Data Collection Procedures

Prior to the study, the ethical committee of the Institute of Graduate Studies and Research "Doğu Akdeniz Üniversitesi Bilimsel Araştırma ve Yayın Etiği Kurulu" granted approval for this research study on 24.03.2017 determining there were no known risks involved for the human participants (Appendix K). Moreover, the permissions were obtained from the head of Department of Foreign Language Education to conduct the study(Appendix L), and from Ava Autism Center in order to conduct professional development workshops for the teachers to provide training in L2 productive skills (speaking and writing) that support their autistic students and collect primary qualitative data which includes teacher observations, teachers' approach to teaching questionnaire, teachers' individual interviews as well as small group discussions (Appendix M). furthermore, teachers' consents for participation in the teacher professional development program, interview as well as completion of

questionnaire were collected, and they were instructed how to complete the questionnaires (see Appendix N). The three teachers in this study volunteered to take part in a professional development workshop series and agreed to implement the instructional strategies presented in the workshops in their classes. Furthermore, parents' consent was collected from autistic students' parents before the implementation of Montessori Method in their classrooms (refer to Appendix O).

The intervention and data collection last over a ten-week period of the spring semester in 2017. The program consisted of four workshops that the EFL teachers were required to attend in order to acquire and discuss about strategies and difficulties regarding L2 speaking and writing skills in autism cases. At the same time, the workshops designed based on the Montessori workshops of International Montessori Society (n.d.) and the book of "The Montessori Method" (Montessori,1912), and set up by the researcher served as a platform for defining certain classroom activities, as well. Accordingly, these classroom practices were employed in actual instruction in EFL teachers' classes and further altered to best fit the initial theoretical concept. The format for the following workshop descriptions is: (a) identification of the workshop, time, place, and participants, (b) description of the purpose(s) of the workshop, (c) description of workshop instruction and related activities, and (d) concluding remarks and instruction.

The first workshop was held at the center after two introductory classroom observations as well as performing the first interview and completing the teacher's approach to teaching inventory followed by three more workshops. The discussed issues of each workshop are explained as what follows:

Workshop 1: After introducing the Montessori educational system from historical and theoretical point of view, the importance of a rich prepared environment as well as the key principles of Montessori Method including the concept of students' freedom in the classroom, self-error-correction, and observation as a main tool of assessing student's learning were explained. Self-error-correction relates particularly to activities with one-to-one correspondence, such as puzzles or knobbed cylinders, to give examples of specific Montessori materials for the younger children which call upon the child's problem-solving skills of trial and error (Salazar, 2013). Next, teaching Language as an important part of the entire Montessori curriculum and sensitive periods of learning language in children (e.g. writing usually comes before reading) were clarified.

In workshop 2, key strategies of Montessori teaching language techniques besides methods to implement it were introduced. For instance, objects in the environment and classified cards for vocabulary enrichment, part wood tiles with objects, pencil holders and movable alphabet for writing (to see samples of activities, refer to Appendix P). The possible problems that the teachers might face in teaching students with autism were discussed.

In Workshop 3, practical methods for increasing student participation were taught through open discussion. This workshop also dealt with EFL teacher questions regarding their problems in implementing Montessori Method in their classes and uptake issues. In this workshop, the naming game, one of the key teaching tools of the Montessori approach for helping children learn names of objects or other qualities such as colours, were explained and discussed.

Workshop 4, as the final one provided space for summarizing the preceding workshops and sharing experiences of the project.

Throughout the program, the EFL teachers were participated in the workshops, and their implementation of Montessori method in their classrooms was observed within the framework of our research. Observations were made of all participating EFL teachers prior to and following the program. Comparison of observations before and after the program allowed to find whether there had been a change in classroom. All workshops included collaborative discussion on how to achieve the enhancement of speaking and writing in classrooms. Specific methods of instruction realizable in the classroom were planned. Suggestions were put forward by both the researcher and the teachers, who reflected on how to apply already-known methods to speaking and writing. Between workshops, the teachers tried to incorporate the program material into their teaching. Small group discussion focused on whether the materials had been understood and implemented correctly by the EFL teachers. These discussions were also used for planning the next lesson. Baseline observations on weeks 1, 2, and 3 were conducted prior to the first professional development workshop, to grasp the quantity and quality of the instructional practices that were currently being implemented. The Observation Report was utilized for the three baseline observations. On the other hand, observations of regular classes were held during the weeks following each professional development workshop. After each workshop, the teachers were given sufficient time to develop lessons based on the newly introduced instructional strategies, and incorporate them into their classes.

Table 5: Summary of data collection

Timeline of study	Qualitative data	Workshops	Duration
1 st week	Classroom observation		Every teacher 30 minutes
2 nd week	Classroom observation		Every teacher 30 minutes
3 rd week	Teacher's approach to teaching questionnaire/ teachers' interview	1 st workshop	2 hours
4 th week	Classroom observation		Every teacher 30 minutes
5 th week		2 nd workshop	1 ½ hours
6 th week	Classroom observation		Every teacher 30 minutes
7 th week	Open discussion – first part	3 rd workshop	1 ½ hours
8 th week	Classroom observation		Every teacher 30 minutes
9 th week	Teacher's approach to teaching questionnaire/ teachers' interview/ Open discussion – second part	4 th workshop	2 hours
10 th week	Classroom observation		Every teacher 30 minutes

3.8 Data Analysis

This qualitative study yielded four data sources: (a) classroom observations data, (b) teacher interviews data, (c) teacher approach to teaching inventory data, and (d) open discussion data. First of all, the observation data collected through the Observation Report Checklist and field notes, was analyzed by the researcher. As mentioned before, every session, the researcher observed every class for 30 minutes and completed an observation report in order to identify any changes in teachers' 1) relationship with autistic students, 2) classroom management strategies, 3) observation skills, and 4) English language teaching techniques.

Second, the audio-recorded and transcribed data obtained from two instruments, that is, open discussions and the teacher interviews were subjected to content analysis. Using the interview questions and open discussion questions as a guide, the researcher codified the data and classified the topics and the themes that were emerged. The researcher identified the topics that would emerge from the discussions and interviews.

Third, Teachers' Approaches to Teaching Inventory provided both qualitative data. The open-ended questions were analyzed qualitatively. However, the first part of the inventory containing some close-ended items were analyzed by descriptive statistics (mean, standard deviation and percentage) to capture any changes made to teachers' teaching approaches at the end of the intervention compared with the beginning of the study.

Chapter 4

RESULTS

This chapter aims to present the results extracted from the data collection instruments. Firstly, the results of classroom observations are described. Then, the results of approaches to teaching inventory and teacher interview are presented. Finally, the results of open discussion are explained.

4.1 Results of Classroom Observations

The researcher made six 30-minute classroom observations; meanwhile, she completed the observation report and wrote field notes in every session. The first classroom observation aimed to introduce the teacher and students with the researcher as the observer in the classroom. The second and last classroom observations were conducted prior and post to the workshops to determine the level of change in teachers' performance and practices. Furthermore, following every workshop a classroom observation was conducted to make sure that the Montessori Method can be implemented in the classes and to observe the process of change in teachers' performance.

4.1.1 Observation Report

The observation report aimed to explore whether the three teachers implemented the Montessori Method and the pertinent strategies following participation in workshops held for this purpose. The observation report used to assess teachers' performance in the classroom contained 31 items with four divided parts: type of relationship to autistic students, classroom management strategies, observation skills and English

language teaching techniques, the results of which are presented below. The observation report of first and last sessions is provided as a sample in the Appendix Q.

4.1.1.1 Type of Relationship to Autistic Students

The first section of the observation report had 8 items identifying how teachers of autistic students communicated with them. The 8 items addressed the use of listening skills, positive coping strategies to solve problems in the classroom, token of respect, rapport, and any further comments by the teachers.

During the observation session, it was found that all the three teachers protected hyperactive autistic students from sounds, smells, and lights that may disturb them. The students were also allowed to show up in the classroom with the objects they were deeply attached to and were rewarded according to their interests. The relationship also included some kind of physical attachment, for instance, the teachers hugged the students, smiled at them, and used kind words such as ‘dear, sweetie, my darling, my son/daughter’ when referring to them. The teachers also used some appropriate encouragements such as clapping, giving sweets as rewards, singing songs with them, and sitting beside them. The teachers also repeated the lessons several times using gestures and movements.

As far as listening skills were concerned, Teacher A and B looked at the students’ eyes and nodded their head as a sign of understanding, and check students’ understanding, while listened to them. However, Teacher C was found to ignore the students when listening to them. For example, teacher C was writing on the board without looking at a student who was talking with her. She also interrupted another student when he was answering a question and completed his sentence. Another

instance of the teacher's deficiency in listening skills was related to a student who tried to repeat the name of the city where the researcher was from with a song she had just learned in the class said "I am from Mashhad, Mashhadiam man" while the teacher asked her to "sit down" without any effort to understand and correct her sentence. Teacher C also lacked suitable coping strategies to solve the problems. For example, two students were crying and fighting over a toy car, and the Teacher C's approach to solve this problem was punishment by shouting at them, putting the toy on the shelf, and asking them to keep quiet.

Generally, since building a positive and effective relationship with students was the focus of most workshops, all the teachers showed improvement in their listening and when they wanted to talk or listen to a student, tried to bent to reach the child height, have more eye contact with them, hold them, and speak more slowly and clearly so that they can establish stronger ties and a more intimate and friendly interaction with the children.

4.1.1.2 Classroom Management Strategies

The second section of the observation report deals with teacher's skills and strategies in classroom management with 10 items which address environment awareness, expectations, problem solving, body language, and time management.

According to the results, the teachers rarely moved around the class and were mostly sitting at their tables at the first of the intervention. Sometimes, their problem-solving strategy in dealing with autistic students' misbehaviors such as shouting or crying, was to ignore them or redirect them by using their favorite objects. However, an effective strategy used by all the teachers was that when they worked with individual students, they paid attention to the other students at the same time and encourage

them to work on their activities. Students were also allowed to leave the class in case of need. The teachers also had a good time management and allocated reasonable amount of time to different parts of the lesson plan. Their teaching plan started with a review of previous lessons as a warm up to introduce the new lesson (e.g. if the new lesson was fruit names, the previous taught vocabulary would be reviewed), teaching new lesson, repeating in a group, repeating individually.

Teacher A tried to engage other students in error correction of their classmates. For example, when a student was subject to a question, if he or she did not know the correct answer, Teacher A asked others to answer and correct their classmate. On the other hand, Teacher C did not let others collaborate when she asked a student individually. Teacher B rarely asked individually, she usually asked in a group.

Overall, observing teachers' behavior over a semester showed that participation in the Montessori workshops helped teachers to adopt new strategies. A major strategy adopted by the teachers was that they did not sit at their tables, but tried to move around the class. Moreover, punishment gave its place to encouragement and an attempt was made by them to prevent autistic students' misbehaviors by presenting them with interesting and engaging activities. They also engaged the students in group work more than before, but Teacher C's class had less peer collaboration in comparison with others.

4.1.1.3 Observation Skills

The third section of the observation report had two items dealing with how teachers identify autistic students' needs through valid observation. Although it was relatively evident that all the teachers could realize students' emotional needs and respond properly, there was not enough evidence showing that they are assessing their

students' educational needs especially at the first of the intervention. Teachers A and B were observing students properly and when a student showed the signs of restless, they comforted students before the students started to cry. Although Teacher C could realize students' emotional needs, she answered the students' needs after they started misbehaving or crying. On the other hand, regarding the educational needs. Regarding the educational needs, they sometimes ignored students' questions which were not related to the lesson. For example, Teacher C ignored a student's question about the color of animal pictures while teaching the name of animals. This issue was same in other teachers' classes. Furthermore, in teacher A's class, a student felt bored with the lesson about animal names, pointed to the numbers and started counting them. During the observation, it was found that all the teachers apparently followed the same pre-planned syllabus. For example, they taught five names of fruit in one session and five names of animals in the next session.

In the sessions following the Montessori training the teachers were taught about the Montessori theory, it was explained that Montessori-oriented teaching is characterized by provision of further support for learning development and improving independent learning in children. More importantly, they were taught how to guide students, since they learn in various ways and at different speeds (Havis, 2006a). the classroom observation of the following sessions revealed that the teachers presented activities and lessons in various ways for different students. For instance, in Teacher A's class, three autistic students were sitting at the roundtable with their favorite objects (a boy with two toy cars, a girl with a plastic spoon and plate, and a girl with a plate), when the teacher also joined them and sat at the tables. Then, the teacher put some plastic fruits on the plate of the third student and asked her to close her eyes and guess and name the fruit in English, while the two other students also

became interested in this game, and the teacher played with them changing the toys to vehicles (bus, motorcycle, car) based on the students' interest. As the autistic students showed progress, the teacher added more objects to the game.

4.1.1.4 English Language Teaching Techniques

The last section of the observation report contained 11 items on English language teaching techniques including how teachers provide and introduce new teaching materials to autistic students according to their individual differences, respond to probable problems, and enhance learning environment using various teaching materials and technology.

During the classroom observation, it was observed that teacher A provided the students with multiple media including flashcards, and pictures and musical videos. Teacher B also used flashcards and musical videos in her classroom. Teacher C provided pictures and songs for students and rarely used videos. Generally, they played videos containing songs for teaching vocabulary (animals, emotions, verbs, etc.) while the students imitated the video by clapping, singing, jumping, and walking around the class. Their teaching involved the use of body language, for example using gestures of sad and happy when teaching emotions. Moreover, all the teachers provided instruction in the students' native language, Persian, and corrected students' errors explicitly and asked the students to repeat the correct form several times. As an example, in Teacher A's classroom a student pointed to the picture of a dog but call it cat. To correct her error, the teacher said "no, this is dog" and showed the picture to all the other students and said in Persian "this is a dog, what is it?", (in dog hast, chie?) and all the students together answered "dog". The same process continued with each individual student until all the students produce the correct word

several times. The same process of error correction took place in other situations and other teachers' classes. Therefore, after teachers taught a lesson and practiced it in a group, they worked individually (for maximum 15 minutes) with each student.

Teachers A and B usually reviewed previous related lessons then played a related video as warmup. For example, in lesson about animals, the Teacher A firstly reviewed the previous names of animals which the autistic students had previously learned them. Then, she played a video containing a song about animals' name. Teacher C taught the new words using flashcards or pictures and asked the students to repeat the name of animals and show their pictures. When the teachers taught the new words, they asked individual students to find a correct picture of animal among others, for example dog, among three or four pictures of animals. However, teacher B did not ask individually, rather she extended the time of repetition of new vocabulary in a group. Teacher A showed not only the picture but also the written form of the vocabulary to the students, while other teachers rarely presented the written form of the vocabulary.

More importantly, they did not present a wide range of vocabulary and grammar in one session and repeated the lessons and the newly-learned items several times. Teacher B repeated the vocabulary in a group rather than individually, and the students in her class showed more misbehaviors and restlessness specially her students with ADHD who did sit at the table for a long time and did not want to repeat the vocabulary for a long period of time. On the other hand, Teachers A and C dedicated different period of time to working with each student individually, for example if a student could not memorize a word, they would spend more time on working with that student and sometimes it made the other students feel bored. While

Teacher A solved this problem with providing interesting activities including painting the alphabet, teacher C shouted at the students to sit down. The next problem was that some students did not show interest in some topics and preferred to work on other topics. For example, some of autistic students did not answer the questions about colors and did not listen to teacher when she was teaching colors. When Teacher A asked the students what color was the picture of ball, the students said ball and showed the other pictures on the wall and said the name of objects in English or Persian. The last problem was lack of pair and group work for students. Group works were limited to the class repeating the new vocabulary and sentences after the teacher.

After attending the workshops, the teachers observed every individual student and when he or she could complete an activity without any assistance of teacher or other students, they provide more challenging activity. For example, after a student could write a letter in the sand-tray with presenting a pattern, the teachers asked them to write without any pattern. Furthermore, they tried not to force a student to sit on the chair, look at the board or imitate them. They adopted more implicit and self-correction approaches to error correction of the students. The students could self-correct their errors either by receiving feedback from the Montessori designed materials for providing instant feedback (e.g. in case of error, the puzzle remains unsolved), or by observing peers or the teacher doing the same activity in the correct way. Thus, the teachers allowed the students to identify their own errors and correct themselves. Moreover, teachers started modifying some of their teaching techniques including working more with each student and incorporated more pair work activities. For instance, in Teacher B's class, two students took turn to practice the English alphabet with one student pointing to a letter on the wall and the other one

telling the name of an object starting with the same letter such as ‘dog’ and imitated it.

Furthermore, the modification of environment in Montessori approach to teaching is highly important, so the teachers redesigned the environment and changed some materials. The result of classroom observation concerning the comparison of the environment prior and post to the intervention is presented as what follows.

4.1.2 The Observation of the Environment

Based on the observations of the researcher, at the first of this study very few pictures and posters of animals, numbers, and other shapes were hung on the walls. The classes also contained a board, a projector connected to a computer, a locked cabinet including some toys such as cars, dolls, puzzles, plastic spoons and plates, plastic fruits as well as some chairs and tables for students in rows. The class door was always locked in Teacher C’s class to prevent students to run out of the class. Following the first workshops in which teachers were instructed how to prepare a classroom environment which fosters learning in autistic children, teachers removed the locked cabinets and placed some shelves instead, put a big lumpy label of English name of every object on it (e.g. car, spoon, plate, ball), changed the tables which were in rows with a roundtable with some chairs around them, put lumpy pictures of alphabet on the walls which could be easily touched by students, changed the puzzles with Montessori materials and provided a space for autistic students to move freely and choose their favorite activity. The teachers’ chair and table were also removed and the teachers also functioned as a member of the class community. In such an environment, Teachers A and B could engage students’ attention and encourage them to do the activities, however, Teacher C frequently faced problem. For example, the door of her classroom was open during the instruction and autistic students had a

tendency to leave the class. Furthermore, the door kept open during the class, and students frequently looked out of the class and were distracted from the activities or felt restlessness. This feeling of the students, however, was ignored by teacher C for two sessions. On the other hand, Teachers A and B encourage students with the suitable activities for approximately ten minutes until they engaged in the activities again. Generally, the researcher observed the students did not cry and feel restless, teachers and students interacted more and seemed happier in comparison to the first of the study.

4.1.3 The Observation of the Students

At the beginning of the semester, all the students were classified based on verbal ability in Persian and English languages and also according to their medical conditions according to the assessment of Ava center. The observation of the students highlighted three improvements in the students' L2 productive skills. First, peer collaboration led to more interaction and L2 production among the students. To elaborate, while almost all the interaction occurred in the classroom was between the teacher and each individual student prior to the incorporation of the Montessori Method, changing the classes to blended-English proficiency level and mixed-age ones promoted collaboration between younger and older students on the activities. More importantly, the students started to engage in group activities rather than only single activities in comparison with the past. Through this collaboration the older autistic students were teaching vocabulary to the younger autistic students which they had known, and it was a further practice and production of L2 for both older and younger students. For instance, two younger students were taught vocabulary by a student who take on the role of the teacher and showed them different objects and named them, while the teacher herself was an observer in such situation.

Second, incorporation of the Montessori Method helped the students to produce two-word and in some cases three-word phrases. However, before the implementation of this method, the students' production was limited to using single words and naming the objects. For instance, the upper-level students learned to name objects with their colors (e.g. blue car, red car, red apple, and yellow apple).

Third, some improvements were observed in the students' writing skill. As the teachers explained, prior to the application of the Montessori Method, a few students were interested in writing and their progress was minor. After the incorporation of this method, however, the students who had stuck in writing only one or two letters appeared to learn writing more letters. In Teacher A's class, for instance, one student could write B, D, E, L, R, and U letters. Moreover, it was found that the incorporation of a student's interested object in writing activity (putting some coins in sand tray) encouraged him to write more in Teacher C's classroom. Another autistic student in Teacher B's class, was able to write A and B letters with her fingers in the sand tray without any assistance by teachers or peers.

4.2 Results of Approaches to Teaching Inventory

All the three teachers completed the approaches to teaching inventory prior and post to the workshops. The completed forms of questionnaires are provided in Appendix R. This inventory had 24 questions, classified into 2 sections. The first section containing 18 Likert-type questions aimed to identify changes, if any, in teachers' approaches to teaching English to autistic students (teacher-focused and student-focused approaches) before and after the Montessori Method training, the second section contained 6 open-ended questions exploring teachers' perceptions of their approach to teaching English, the changes required to be made to their approach as

well as the differences between the approaches they use for normal students and autistic students.

Of 18 items, 9 items of the inventory (1,2,4,7,8,9,12,15,18) deal with the teacher-focused approach, for example:

Item 1: In English language class, autistic students should focus their study on what I provide them.

Item 2: It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.

Furthermore, 9 items (3,5,6,10,11,13,14,16,17) are related to the student-focused approach, for example:

Item 3: In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.

Item 5: I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.

Each item is scored on a scale ranging from 1 to 5 (1=rarely, 5=always), and the total score in each approach would be a number between 9 and 45, so the higher score of an item shows the stronger commitment to the specific approach. Table 6 shows the percentages of teachers' answers to the items prior to the intervention.

Table 6: Teachers' answers percentage prior to the interventio

	<i>1- Never</i>	<i>2 - Sometimes</i>	<i>3- Half of the time</i>	<i>4- Frequently</i>
	<i>5- Always</i>			
				Percent

		1	2	3	4	5
1	In English language class, autistic students should focus their study on what I provide them.	0	0	0	66.3	33.3
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	33.3	33.3	33.3	0	0
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	66.3	0	33.3	0	0
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	66.3	0	33.3	0	0
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	0	66.3	0	33.3	0
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	33.3	33.3	33.3	0	0
7	I structure my English teaching to help autistic students to pass the formal assessment items.	0	66.3	33.3	0	0
8	I provide the autistic students with the information they will need to pass the formal English assessments.	0	0	66.3	0	33.3
9	I should know the answers to any questions that autistic students may put to me during teaching English language.	0	0	33.3	33.3	33.3
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	0	0	33.3	66.3	0
11	A lot of English teaching time should be used to question autistic students' ideas.	0	0	0	100	0
12	My English language teaching focuses on the good presentation of information to autistic students.	0	0	0	66.3	3.33
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	0	0	66.3	33.3	0
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	0	33.3	33.3	33.3	0

15	My teaching English to autistic students focuses on delivering what I know to them.	0	0	33.3	33.3	33.3
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	0	66.3	33.3	0	0
17	Teaching English to autistic students should include helping them find their own learning resources.	0	100	0	0	0
18	<i>I present material to enable autistic students to build up an information base in English language.</i>	0	0	33.3	66.6	0

As it can be seen in the above table, the teachers tended to answer half of the time, frequently and always to the items related to the teacher-focused approach including items 8, 9, 15 & 18.

Furthermore, two teachers (66.3%) answered frequently, and one teacher (33.3%) answered always to the first and twelfth questions dealing with the teacher-focused beliefs that students should focus their study on what the teacher provides them and the teacher focuses on the good presentation of information to the students. On the other hand, they tended to answer never, sometimes and half of the time to the teacher-focused items dealing with the classroom objectives based on formal assessment (items 2 & 7), and presenting a lot of facts to the students so that they know what they have to know in order to learn English language (item 4).

Regarding student-focused items, the teachers mostly tended to answer never, sometimes and half of the time to the items 3, 5, 6 and 16. They also answered half of the time and frequently to items 10 and 13 related to the changing understanding of English language in students and developing new ways of their thinking in

English. Furthermore, all teachers (100%) answered frequently to the item 11 “A lot of English teaching time should be used to question autistic students’ ideas.” And 100% of teachers also answered sometimes to the item 17 “Teaching English to autistic students should include helping them find their own learning resources.” The Table 7 shows the percentages of teachers’ answers to the items post to the intervention.

Table 7: Teachers’ answers percentage post to the intervention

	<i>1- Never</i> <i>5- Always</i>	<i>2 - Sometimes</i>	<i>3- Half of the time</i>	<i>4- Frequently</i>		
	Percent					
		1	2	3	4	5
1	In English language class, autistic students should focus their study on what I provide them.	66.6	33.3	0	0	0
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	66.3	0	33.3	0	0
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	0	33.3	0	66.3	0
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	0	0	33.3	33.3	33.3
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	0	66.3	33.3	0	0
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	0	0	33.3	66.3	0
7	I structure my English teaching to help autistic students to pass the formal assessment items.	100	0	0	0	0
8	I provide the autistic students with the information they will need to pass the formal English assessments.	0	66.3	33.3	0	0

9	I should know the answers to any questions that autistic students may put to me during teaching English language.	0	66.3	0	33.3	0
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	0	0	0	66.3	33.3
11	A lot of English teaching time should be used to question autistic students' ideas.	0	0	0	0	100
12	My English language teaching focuses on the good presentation of information to autistic students.	33.3	33.3	33.3	0	0
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	0	0	66.3	33.3	0
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	0	33.3	66.3	0	0
15	My teaching English to autistic students focuses on delivering what I know to them.	33.3	33.3	33.3	0	0
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	0	33.3	0	33.3	33.3
17	Teaching English to autistic students should include helping them find their own learning resources.	0	0	0	0	100
18	<i>I present material to enable autistic students to build up an information base in English language.</i>	0	33.3	33.3	33.3	0

As it can be seen in the above table, the teachers mostly tended to response never, sometimes and half of the times to the teacher-focused items including items 1, 2, 8, 12 and 15. All the teachers (100 %) answered never to the item 7 “I structure my English teaching to help autistic students to pass the formal assessment items.” Regarding presenting a lot of facts to the students so that they know what they have to know in order to learn English language (item 4), only one teacher (33.3%) answered half of the time, 33.3% answered frequently and 33.3 % answered always.

Furthermore, teachers mostly tended to answer half of the time, frequently and always to the items related to the student-focused including items 3, 6, 10, 13, 14 and 16. All the teachers (100 %) answered always to the items 11 “A lot of English teaching time should be used to question autistic students’ ideas.” and 17 “Teaching English to autistic students should include helping them find their own learning resources.” On the other hand, most of the teachers (66.3 %) answered sometimes to the item 5 regarding encouraging the students to restructure their knowledge in terms of a new way of thinking about English language.

Table 8 shows the teachers’ mean scores and standard deviation of the teachers’ responses to the inventory prior to the Montessori Method training as far as the focus of their approach to teaching English to autistic children is concerned. Regarding item 9, while 66.3 % of teachers (2 teachers) answered sometimes, 33.3 % (one teacher) answered frequently. One teacher (33.3 %) also answered frequently to item 18, while the others answered sometimes and half of the time.

Table 8: Teachers’ approach to teaching English to the autistic students prior to the intervention

Teachers	Focus	Mean	Std. Deviation
Teacher A	Teacher-focused	3.44	0.88
	Student-focused	3.11	1.26
Teacher B	Teacher-focused	3.00	1.00
	Student-focused	3.55	0.88
Teacher C	Teacher-focused	4.33	0.86
	Student-focused	2.55	1.33
TOTAL	Teacher-focused	3.59	0.91
	Student-focused	3.07	1.15

As can be seen in the above table, the mean of the teacher-focused approach is higher than the student-focused approach ($M = 3.59$ vs. 3.07) in the pretest, and the standard

deviation of the teacher-focused approach is .91, while the stand deviation of the student-focused approach is 1.15.

With regard to each individual teacher, Teacher A is more teacher-focused than student-focused (3.44 vs. 3.11) in her approach to English teaching. The distribution of mean is SD = .88 in the teacher-focused approach, and SD = 1.26 in the students-focused approach. Similarly, Teacher C scored much higher in the teacher-focused approach (M = 4.33) than the student-centered approach (2.55), and SD was .86 in the teacher-focused and 1.33 in the student-focused approach. Regarding Teacher B, the mean score was higher in the student-focused (M = 3.55) than the teacher-centered approach (M = 3.00), and the SD was lower in the student-focused than the teacher-focused approach (.88 vs. 1.00).

After conducting Montessori-oriented workshops, all the three teachers completed the inventory again to explore if changes had been made to their approaches to teaching English to autistic students. Table 9 shows the teachers' mean score in inventory post to the intervention.

Table 9: Teachers' approach to teaching English to the autistic students post to the intervention

Teachers	Focus	Mean	Std. Deviation
Teacher A	Teacher-focused	2.11	1.05
	Student-focused	3.77	.97
Teacher B	Teacher-focused	1.44	.52
	Student-focused	4.22	.83
Teacher C	Teacher-focused	3.00	1.22
	Student-focused	3.11	1.16
TOTAL	Teacher-focused	2.18	.93
	Student-focused	3.70	.98

As can be seen in the above table, the total mean score of the teacher-focused approach was lower than the student-focused approach ($M = 2.18$ vs. 3.70) post to the intervention. The standard deviation of both teacher-focused and student-focused approaches were approximately the same ($.93$ & $.98$, respectively).

Concerning every individual teacher, Teacher A scored higher in the student-focused than teacher-focused (3.77 vs. 2.11) in her approach to English teaching after the Montessori intervention. The standard deviation of the student-focused approach was lower than that of the teacher-focused approach ($SD = .97$ vs. 1.05). Similarly, teacher B had a higher mean score in the student-focused approach ($M = 4.22$) than the teacher-centered approach (1.44), and the SD of the teacher-focused approach was lower than that of the student-focused approach ($SD = .52$ vs. $.83$). Regarding teacher C, the difference was very minor, yet, the mean score was higher in the student-focused ($M = 3.11$) than the teacher-centered approach ($M = 3.00$), and the SD in the teacher-focused approach was higher than that of the student-focused approach ($SD = 1.22$ vs. 1.16).

Furthermore, teachers had to provide answer to open-ended questions according to the five approaches which were classified by Trigwell et al. (1994) to explore the teachers' intentions (including concept development, conceptual change, information transmission, concept acquisition), and their teaching strategies (student focused, teacher-focused, teacher-student interaction).

Approach A: Teacher-focused strategy with the intention of transmitting information to students.

Approach B: Teacher-focused strategy with the intention that students acquire the concepts of the discipline

Approach C: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline

Approach D: A student-focused strategy aimed at helping students develop their conceptions

Approach E: A student-focused strategy aimed at helping students change their conceptions.

The results of open-ended questions of the approaches to teaching inventory are presented as what follows.

Two questions, 19 (Which of the five approaches best describes your teaching to the autistic students?) and 20 (Given the context of autistic students and your teaching of English language, is this the best approach? Are they related to teachers' teaching approach to autistic children?)

The results of the teachers' approach to teaching English to the autistic children in the pre-test and posttest is presented in Table 10.

Table 10: Teachers' approach to teaching English to the autistic children in the pre-test and posttest

Teachers	Approach	
	Pre-test	Posttest
A	Approach B	Approach E
B	Approach C	Approach D
C	Approach C	Approach D

According to Table 10, two teaching approaches were selected by the teachers. Teacher A chose approach B (Teacher-focused strategy with the intention that students acquire the concepts of the discipline), while Teachers B and C selected approach C (A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline). The teachers mentioned that discipline is one of the important issues teaching to autistic students, Teacher A also commented that:

not only autistic students should acquire the concept of discipline, but also, they need to have a class based on discipline, because discipline help them to know the class's rules and what is expected from them.

Teacher B also commented that:

not only autistic students but also teachers should have discipline.

Moreover, Teachers B and C stated they had the best approach which suit to the context of autistic students, while teacher A commented:

The best approach would be teacher-student interaction. But I think the aim of EFL teachers should be developing the autistic students' concepts, if we want to broaden our horizons toward teaching English to autistic students, discipline will not be enough.

One the other hand, changes were made in teachers' teaching approaches in the post-test with Teachers B and C selecting approach D (A student-focused strategy aimed at helping students develop their conceptions), and Teacher A selecting approach E. Overall, the results indicated a move from more teacher-focused approach to a more student-focused approach. Moreover, all the teachers believed that their selected approach was the best approach to teaching English to autistic students. To further explain, Teacher C pointed that:

I prefer establishing my authority in the class, then gradually allow the autistic students to interact in their learning process.

Questions 21 and 23 aimed to elicit information about the required, perceived changes that need to be made to the teachers' existing approaches to teaching English to the autistic students. Question 22 also aimed to explore the differences in the teachers' approaches to teaching English language between normal and autistic students. These questions are:

Question 21: If you wished to change your English language teaching approach to autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and possible ways of overcoming these barriers).

Question 22: If you teach a normal group of students, do you select an approach to teaching English language which is different from that used for teaching English to autistic students? If so, Why?

Question 23: What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

To answer these two questions in the pre-test, although all the teachers confessed that they had never thought about it before, Teachers B and C mentioned that their current teaching approaches completely suited the context of autistic students in which they were working, Teacher B stated that:

Autistic students are not able to decide what would be useful and beneficial for them, they are not even aware why they need to learn second language. Teachers can only take into the account their opinion upon the possible reward to encourage them.

In this line, Teacher C also mentioned that:

because upon giving more freedom to the students, they would be out of control and would not pay attention to the lessons anymore.

She further commented that:

I do not feel restricted in this institute, in fact, I believe that the syllabuses made by the policy makers is the best option for them.

On the other hand, Teacher A stated that:

If I could change anything, I would have a blended class in which more-proficient students could assist the teacher in conveying the concepts of some English vocabulary and disciplines to the less-proficient students. The classes with all less-proficient learners are very burdensome... of course, I would like to allow [autistic] students to act more freely, because through action I can teach them new English vocabularies and phrases, such as close the door, throw the ball, and the like. I think these activities are more authentic, what my current approach to teaching English to autistic students lacks.

However, after being exposed to the Montessori Method throughout the semester, all the teachers showed a tendency to modify their approaches as they reported in the post-test. They were predominantly interested in Montessori-based practices and games; however, similar to their opinions in the pre-test, they believed that they cannot give freedom to the autistic students as much as the Montessori educational system prescribes. To support this idea, Teacher B explained that:

because they [autistic students] are not familiar with this form of teaching... I mean you cannot incorporate this Method in one class, such as foreign language class, only because students show resistance and it makes them confused to have freedom in one class but not in the others, so it would be more beneficial if all the classes use this approach.

Teacher A also stated that

If I could, I would change the whole educational system of this institute. Autistic students should be aware of their own capabilities... they should understand that they can be independent in learning, especially in learning a new language.

Lastly, to identify the perceived differences between the teachers' approach to teaching English to normal and autistic students, the teachers provided answers to the following question:

The teachers' responses to Question 22 regarding the selection of different approach to teaching English to the normal and autistic students in the pre-test was "yes". They specifically noted that they would give more freedom to normal students and may take into account their opinion about teaching. Teacher C exemplified that

Sometimes, my normal students ask me not to work on book, then we decide to play an English game.

Also, as a further comment on this issue Teacher A stated that:

Communication with the family of an autistic child is of great importance because we can share with families what students are learning in the class and explain them how they can cooperate with us in teaching English to their children, furthermore, it also could an opportunity for families to discuss on learning difficulties of their children.

Teacher B also mentioned:

Having a good relationship with these children is crucial. If you cannot make a good relationship at the beginning, the autistic student will not obey and listen to you in the following sessions. But making a positive relationship should go in parallel with authority.

On the other hand, in the post-test, all the teachers stated that with Montessori educational system, their approach would be more student-focused in the context of autistic students. Teacher A also stated that:

Two of the major differences in the two contexts is that normal students can be given more freedom and independence and, their opinions can be taken into consideration and affect the classroom practices, however, it cannot be the case of normal students

Teachers were also asked to add any further comments with respect to teaching English language to autistic students. All the teachers generally believed that knowing about autism spectrum disorder is the first step in teaching English to them. More specifically, familiarity with each autistic student's characteristics, interest, and disabilities is crucial for teaching them in the best possible way, and this also affects how to punish and encourage them.

4.3 Results of Teacher Interviews

Two individual interviews were conducted before and after the workshops in English language. Five out of 12 questions (questions 4,5,6,8 and 9) of the interview deal with teachers' perceptions of their professional development that will be presented in this section (refer to Appendix S). The first interview aimed at eliciting the teachers' opinion about characteristics of a "good" English teacher for autistic students, strengths and weaknesses of themselves as an EFL teacher for autistic students, and the main reason why they have chosen to teach English to students with mental disabilities. The goal of the second interview was to ask teachers to reflect on their Montessori-oriented teaching experience and explain its contribution to their professional development. The results of first and second interviews are presented as what follows.

4.3.1 Results of the First Interview

The first interview was held prior to the Montessori Method training workshops. The first three questions of the interviews dealt with the English lesson plan for students with autism:

Question 1: Do you modify your English lessons for autistic students?

Question 2: What teaching methods and materials do you find useful and use for instructing autistic students?

Question 3: What teaching methods and materials do you find useful and use for instructing autistic students?

In response to these questions, the teachers primarily stressed that since autistic students should see an object or gesture, or how to communicate in order to learn English language. For instance, Teacher C mentioned that:

I think we should modify the lesson because autistic students have special needs, for example, they need more repetition. The abstract concept should be presented by visual materials that make the meaning more concrete for them.

Furthermore, the teachers explained that their lesson plan contained the repetition of words and simple sentences such as “I am from Iran”, and asking simple questions such as “where are you from?” and “what is it?” as the main learning techniques and checking students’ comprehension to make sure that they understand the meaning of what they have produced. Moreover, the teachers stated that what specifically makes teaching English to the autistic students different from the normal students is cognition. The students may produce some language, but they do not know the meaning of what they have produced. In fact, their lesson plan should contain activities that target students’ cognition such as asking the students to do what the teacher says (e.g. axe dog ro bede be man which means “give me the dog picture”).

Teacher A further explained that

Since the learning of English should be parallel with the governmental educational policy, the educational materials should be provided as the complementary components of the public education. Our lesson plan also contains the items which are provided in governmental educational materials.

Teacher B stated that:

Typically, the lessons have six groups of vocabulary including 5 colors, 5 animals, 5 foods, 5 common verbs, 5 common words, and three simple sentences related to the students' identity.

According to the explanation of teachers, the vocabulary groups contained colors (red, blue, yellow, white, black and pink), animals (dog, cat, chicken, cow, horse and monkey), foods (Apple, orange, banana, grape, tomato and potato), verbs (sit, stand, close, open, fly and swim), common words (door, chair, book, ball, car and table) and simple sentences (My name is..., I am from ..., and I am ... years old.).

The grammar part also includes the first subject pronoun (I), simple imperative sentences (e.g. open the door, close the book), and simple present (e.g. I sit, I swim).

Before attending the workshops, regarding the useful teaching methods and material for students with autism, Teacher B stated that

The students' activities included singing the songs, looking at the pictures of vocabularies and answering to me in group and individually.

Teacher C also stated that

my methodology is that the students should listen to me and perform what I ask them, and also watch different related video clips and use flashcards. I think his way of teaching was effective for the autistic students.

Similarly, Teacher A stated that

I use video-clips, songs, flashcards as much as I can, this is very helpful with them. For example, if I want to teach the word dog to students, I will show the picture, imitate the sound of dog, ask students to show me the picture of dog among other pictures on the wall.

Regarding what makes an EFL instructor a "good" instructor for autistic students (Q4), all the teachers commonly believed that 1) a good EFL teacher should have sufficient information about autism, 2) be familiar with autistic students' behavior

and interest, 3) be able to establish a positive and effective relationship with autistic students. In this line, Teacher A commented:

A good teacher should love autistic students and be patient with them, he should not have high expectations from autistic students, because they suffer from poor concentration or attention deficit. they also have sensory problems.

Regarding Questions 5 and 6 which focused on the teachers' strengths and weaknesses as an EFL instructor of autistic students, they stated that they had never been reflected on their actions and practices so that they can realize their positive and negative characteristics in their current professional positions. Then, Teacher A pointed to her education in psychology discipline as a merit contributing to her profession as a teacher of autistic children. As she expressed it:

My strength is my education in psychology which helps me to be aware of autistic students' needs and feeling as well as how to make an effective relationship with them... my weakness is that I do not have an up-date knowledge about new teaching methods or effective English teaching approaches to autistic students.

Similar to Teacher A, Teacher B also believed that her weakness was her outdated knowledge of the new English trends; however, she believed that this weakness was due to lack of professional development programs set by the institutions in which they worked.

Realizing no specific weakness, Teacher C just pointed to her perceived strength:

My strength is that my communication with autistic students is not limited to the classroom environment, I also spend time with them outside the class, and also communicate with their families.

When asked about the motive underlying their selection of the current profession, all the teachers stated that they had started working as an EFL teacher for autistic student

accidentally, but after engaging in this profession for some time, they had become interested in it and decided not to leave it. As Teacher A explained:

I came to this institute for internship in psychology. At first, I disliked working with autistic students, but soon I became interested after I could establish relationship with the autistic students. I used to teach English to normal students when I found that this offers English teaching as extracurricular program and applied for it.

Teacher B who also used to teach to normal students stated:

I was asked by the head of this institute who knew me to work here. This is a demanding job, but the result is very interesting for me. When an autistic student can learn even one word, I feel satisfied. Now, I prefer teaching these children more than normal students.

Teacher C also stated that:

I came to know about this institute by a relative and I decided to start working here to examine my own abilities in teaching English, but after some time, I find this job very satisfactory. Even if the autistic students cannot understand the sentences they produce, this is considered as a progress for them. I believe that they finally internalize these sentences.

Question 7 addressed the challenges that autistic students usually encounter while learning English language and specifically while learning the productive skills.

As Teacher A stated:

Most of autistic students are not interested in learning English, since it was demanding for them to learn a new language. One of the obstacles in acquiring a second/foreign language by these students is that they do not have imagination power and thus, cannot understand the meaning of some abstract words and concepts even in their first language.

Teacher B also stated that:

The autistic students cannot develop a large vocabulary size, because they do not have imagination power. As a result, some words and sentences with abstract meaning is difficult for them to understand.

In this line, Teacher C mentioned that:

They [autistic students] rarely have a complete understanding of what they have produced. This problem is related to the lack of cognition.

As far as the writing skill is concerned, based on the teachers' recognition, the autistic students had problem with both in dictation and composition; that is why for a long period of time, their writing was limited to practice writing the letters. In this line, Teacher A stated that :

Sometimes autistic students cannot read what they have written, and sometimes they read even what I write, but cannot understand the meaning. As you know, we cannot completely separate the skills, it is important for the students to read and understand what they write.

Moreover, as autistic children have deficiency in establishing social interaction and thereby, have poor oral skills, interaction should be taught and practiced. For instance, Teacher C explained that

When I want teach them how to introduce themselves, I ask them, for example, where are you from, but they just repeat my question instead of answering it. Some of them do not know what interaction is

Poor attention was another reported drawback impeding the autistic students learn the English language, as Teacher B explained:

Some of the [autistic] students cannot concentrate on two languages at the same time, for example, after they learn the name of a fruit in English, they may forget its equivalent in their first language.

Teachers also pointed to teaching of each specific language area. In terms of grammar, teachers expressed that students learn imperative structures before affirmative, while normal students learn affirmative firstly. This is because of the importance of gesture and the ease of asking students to do what they are asked. In this line, Teacher A explained that:

Students should not get used to rote learning. We should be make sure that autistic students know what the meaning of produced sentences are, and this can be achieved by acting out whatever they produce.

Teacher C added that:

The imperative structure is easier to learn for autistic students, since they have problem in matching subject and verb. For example, they may say she go or I goes.

Moreover, autistic students learn concrete words more than abstract words. In this regard Teacher B stated that:

The simpler we speak, the better the students understand and learn.

4.3.2 Result of the Second Interview

In the second interview which was held after the Montessori Method workshops, teachers' opinions about the topics of the first interview which are the lesson plan for autistic students, characteristics of an EFL teacher of autistic students, and their strengths and weaknesses plus their Montessori-oriented teaching experience and its contribution to their professional development were addressed. The results of second interview are as follows.

Post to the intervention, in response to Questions 1, 2, and 3 related to the lesson plan for teaching English language course to autistic students, regarding L2 productive skills, and any required modifications to be made to the lesson plans for autistic students, teachers stated that what the Montessori Method adds to the current plan is inclusion of materials which are more interesting for the autistic children. For example, as Teacher C explained:

Instead of showing picture of letters to students, they can easily touch the letters on the walls or even play with the movable alphabets.

In this line, Teacher A stated that

My method is providing opportunities for students in order that they encourage to learn English through involve themselves in their processes of learning. For example, when they do not feel interested in playing with them anymore, they can continue practicing the letters with a different material

such as sand tray. In fact, they can practice the same content through different materials which reinforces what students have already learned.

They also pointed out that careful observation of the students with autism is very important in order to assess their needs and progress.

Post to the intervention, teachers' opinions about a "good" EFL instructor were changed. Teacher C believed that:

a good EFL teacher should be flexible and creative. He should take into consideration what can be helpful for individual student with autism and constantly monitor himself.

Teacher B also in this line stated that:

They should provide the students with opportunity to work independently, that is, they should try to understand by themselves, self-correct, and make decision.

Teacher A comment also supported this view:

A teacher should not push students to learn since they have the inner drive which guides them in learning, moreover, they may learn a subject at different speeds, so the instruction should go hand in hand with the students' curiosity and their ability learning ability.

Teachers' answers to Question 9 which asked them about the result of their reflection on their Montessori-oriented teaching experience and its contribution to their professional development, were relatively similar. Teacher B stated that:

I believed that workshops helped me with the recognition of autistic students' right of independence, and the ability of select and participate in their own learning process.

Teacher A explained that:

These workshops change my attitude toward teaching English to autistic students, I think I could teach them not only English, but also life skills such as decision-making, independency, and being respect others. For example, a student should wait patiently if he wants to work with a material which another student is working with.

Teacher C also stated that:

I learned how to observe autistic students for teaching them, for identifying their needs and for assessing their performance. I learned that observation is the most important instrument of EFL teacher for autistic students.

Three questions (10, 11 & 12) dealt with teachers' opinions about the effect of Montessori Method, its influence on English language learning, in general, and the productive skills of autistic students, in particular.

The teachers had similar attitudes towards the Montessori Method. Firstly, they found it applicable for students in general; they believed that this method can facilitate the students' learning processes of learning. According to Teacher A:

Montessori Method give students the opportunity to learn with their own desire, I think students use the Montessori-based materials with the intention of playing, and simultaneously learn what they are supposed to learn.

Teacher C added:

In this [Montessori] system, students do not have to prepare themselves for any official exam, teachers assess them indirectly, I mean with the observation, so it can facilitate the learning of various skills, specially speaking. I think it this method is specifically effective for students with language anxiety.

Teacher B also mentioned that:

Since [in this method] all senses are involved and active, I mean since students can touch, smell and even taste, and listen, it suits to students with various learning style.

All the teachers answered yes to the last question:

Question 12: Do you think that Montessori education would improves L2 productive skills of the autistic students? If so, how? If not, why not?

On the basis of the teacher's perceptions, Montessori Method can improve the students' L2 productive skills. Teacher B stated:

My students speak more than before, for example, when they are working with an activity, they frequently repeat the name of objects, it can help them with memorizing the vocabulary and understanding their meaning

In this line, Teacher C also stated that:

Their productive skill improved since they can work and produce English language independently and without pushing them.

Similarly, Teacher A stated that:

I can realize it through the autonomy, I mean the extent to which the students can successfully finish an activity without any assistance from others, can be the representative of students' progress in productive skills. It showed me that Montessori could be beneficial method for my class. For example, in case of the sand tray, two of my students can write some letters without my help.

4.4 Results of Open Discussion

Considering the objectives of the study, open discussion was held as part of the third and fourth workshops in which teachers discussed in English language about the issues related to discipline, comfort and autistic students' engagement in Montessori-oriented classes, as well as how they put the Montessori Method into practice and the related experiences and challenges in implementing Montessori Method. Ten out of 16 guiding questions (questions 2, 3, 6, 7, 8, 9, 10, 11, 15 & 16) deal with the teachers' perceptions of the influence of the training of Montessori-oriented English language teaching on their professional development. Three themes emerged from these questions which are how teacher dealt with the affective and educational needs of the autistic students and teachers' challenges while implementing Montessori method which are discussed in the following. The sample of guiding questions for open discussion is provided in appendix C.

4.4.1 Teachers' Approach to Affective Needs of the Autistic Students

three questions deal with various issues associated with educational philosophy (items 2, 3 &6) dealing with disciplinary, comforting, and motivating autistic students. The results are as follows:

During the open discussion sessions, teachers explained that before the workshops, to discipline an autistic student, they first provided them with a suitable pattern for the right behavior and encouraged them to correct their behavior, and if this strategy was not successful, they resorted to punishment and, for instance, deprived them from entertainment during the break-time. Their philosophy of discipline a student with autism included a core belief that “the autistic students should understand that they can't achieve their aim by crying and misbehaving”. For instance, Teacher C stated that:

In the past, I believed that the autistic student should perceive that the teacher is the authority in the classes. They cannot achieve their goal, for instance playing instead of listening to me through misbehaving. They would gradually omit their misbehavior, if we did not reinforce them.

However, as the workshops progressed, teachers' awareness of discipline gradually improved. For example, Teacher C stated that:

I believe that students can acquire the concept of discipline without repeating the consequences of their misbehavior to them or punishing them, we can simply encourage them using a right sentence.

All teachers agreed that the way to speak with a child and using body language are important. For example, Teacher A stated:

I do not give various options to autistic students, I use imperative sentence with a smile and at the same time I have a kind and positive gesture.

Teachers also discussed how they try attract students' attention and keep them on tasks. The foremost point explained by the teachers was the importance of input and the objects surrounding the autistic students. For example, Teacher B stated:

I put some gifts above the shelf at the end of class, students should name them and ask me to give them that gift, I then gave it to them.

The teachers also believed giving some rewards such as sweets to the students facilitates their learning. For example, Teacher A stated that:

autistic students can learn the best through that provision of more patterns and encouraging them to repeat and reproduce which may be boring for some students; however, giving a reward would be motivating.

In this line, Teacher B stated that:

In fact, motivation is one of the most significant variables contributing to learning among both normal and autistic students.

Teacher C also believed that:

The educational materials developed based on the Montessori Method including movable alphabet and sand tray, can motivate students to write for themselves without any external force.

4.4.2 Teachers' Approach to Educational Needs of the Autistic Students

By discussing about 4 open-ended questions (7,8, 15 & 16), the teachers explained how they approached the educational needs of the students. Firstly, they explained that flash cards, video clips as well as body language of teachers were beneficial materials, and Montessorian materials such as sand tray, movable alphabet as well as naming game facilitate learning English language of students with autism. Then, teachers were questioned how they assessed the students with autism in order to understand they provide the right type of learning English support for the students. The teachers compared their way of assessing prior and post to the intervention. Teacher B stated that

I ask them to point to the right picture for example, I may say point to the picture of dog among other pictures of animals, or I ask them to perform what I say, for example, close the door, open the book

Other teachers also mentioned that they have the same approach. Teacher A also mentioned that

I also sometimes ask them to answer simple questions such as where are you from. This way can show me if the students internalize the meaning of what they have produced.

In this line teacher B stated that

More importantly, this way of assessment can provide feedback about the work of ourselves as teachers, for instance, if most of students have a problem in one issue, we need to repeat the lesson or even change our teaching approach.

In addition to the observation of the autistic students' performance, teachers stated that the nature of the Montessorian activity itself is a suitable assessment. Teacher A stated that

Observation of student regarding to what extent they can successfully finish an activity without any assistant, express how much they receive the right type of learning English support. For example, in case of sand tray, the students should write the letters without the teacher or other peer's help.

First of all, teachers' philosophy underpinning teaching to students with special needs was that learning takes place when three parties, i.e., EFL teacher, parents and autistic students, cooperate and have active involvement in the process of learning.

Teacher A further elaborated that:

the acceptance of an autistic student as an individual capable of learning and participating in the process of learning is crucial.

They also agreed that the key to teaching English to autistic students is building a "positive relationship" with them.

Then the teachers, more specifically, reflected on the Montessori Method training and experience. According to the teachers, making certain changes in the educational environment was the first step to implement this method. As described by the teachers, upon obtaining acceptance to conduct and initiate this research project, the head of the institute provided them with the required materials within 2-4 days. In this regard, Teacher B stated that:

I perceived that making changes in the environment is the first step. EFL teachers cannot achieve this goal, unless the whole educational system is supportive of them. Then, the teachers should try to facilitate autistic students' adoption to the new classroom environment.

The teachers also decided to use some objects to which the students were attached, for example Teacher A stated that:

I put some coins in the sand tray and in the middle of some movable alphabet, since I knew that two students were interested in money. One student started writing in the sand tray using the coins.

Teacher's B approach to change the environment was similar. She described:

I just tried to observe the students and then changed the environment and materials so as to find and include objects which suit my students' interests and needs.

Second, teachers' role from an authority in the classroom changed to that of a facilitator. As Teacher C mentioned:

we tried to move around the class and help the students to learn by themselves. We just motivated them and when they ask for help we guide them.

Teachers also were questioned how the Montessori Method of Teaching is put into practice in their class with autistic students, and they mentioned that to implement the Montessori Method they had to bear in their minds the objectives of the Montessori and the role of these materials. For instance, Teacher A stated that:

I have put a picture representing the rules of Montessori such as proximity, distraction, clear direction, patient waiting and more importantly the reflective language on my office's wall.

Teacher B also stated that:

I believed that observation of student is the most important of teachers' ability, I try to observe my students and then provide opportunities for learning English language in their classrooms.

Another aspect of environment was mentioned by Teacher C. She pointed to the position of seats in the class and stated that:

As suggested in the Montessori Method, I started to sit beside my autistic students on the ground in order to introduce the materials and work with them while in the past I used to sit at my table opposite to students who sat on desks.

4.4.3 EFL Teachers' Challenges in Implementing Montessori Method

Three items of open discussion dealt with teachers' challenges during the implementation of the Montessori Method (items 9, 10 & 11). Teachers shared their experiences and the possible solutions for these problems in the third workshop and the discussion sessions.

The first challenge was related to the adaptation of autistic students to the new environment. Teacher C mentioned:

Some of the students felt uncomfortable, threw the objects and materials, and went out of the class, especially in the first sessions. They needed time to adapt themselves with the new environment, but I do not know how I can facilitate this process.

The teachers overall believed that as a start, they should allow the students to know the new class environment, to move around, and discover the materials. They also realized that students felt anxious and needed some time to adapt to the new environment. Regarding the possible solutions, Teacher A stated that:

I tried to solve this problem by putting interesting objects such as toy cars and coin inside the materials to keep them focused. I mean they need time and it is unpreventable, but we can motivate them to involve in the activities. What they lack is the motivation, if we work on this issue, they themselves start to explore the environment and involve in their process of learning English language.

Since it was applicable for her, she suggested other teachers to motivate student with special objects interesting for autistic students. Teacher B used Teacher A's solution and in the next workshop stated that:

As it was recommended, I provided some small boxes with lids for an autistic student who was attached to doors and lids. This student was required to put toy animals and fruits in the related boxes while calling their names.

The next problem was lack of students' stability. Teacher C complained that:

it is difficult to motivate students to try on other materials, I have a student who just wants to play with a puzzle, and I am fed up with her persistence.

After discussing upon this issue which was one of the main problems all the teachers experiencing, it was decided that a break-time be added to each session of the class. It is of utmost importance that students go to the TV room during the break-time in order to watch an English educational-musical video-clip. During the break time, teachers should change the place of some materials or even remove them from the class.

Another problem frequently reported by the teachers was that the students had a tendency to take each other's toys or they wanted the same toy. As stated by Teacher A:

Sometimes I have two students who want to work with one toy, for example sand tray, I have to sit beside them to work in a group, so I cannot observe the other students.

After discussing this issue, it was decided to arrange an extracurricular activity in which the teachers tell a social story to teach how to respect people. The other solution was suggested by Teacher B:

The autistic students can choose their preferred activities at the beginning of the class, and if one student wants to work with another student' toy, they should be allowed by the student who currently has the toy.

Finally, the teachers expressed their overall perceptions about teaching English through the Montessori Method to autistic children.

Generally speaking, two teachers (A and B) were more positive and mentioned that this method was very enjoyable and thought-provoking for them. Teacher A stated:

I changed my attitude towards the teaching and behaving with children in general. More specifically, I found what I was seeking for, taking into the account autistic students.

On the other hand, Teacher C stated that

I perceived the Montessori method as an indirect method for most educational issues such as disciplining, teaching, error correcting and so on. This is an effective and provoking method, but it is not applicable to all autistic students, specially students with severe autism because when an autistic student has various options about what to do, he usually prefers not to study or work on the activities.

Teachers B and C believed it was very difficult to accept and try this new method at the beginning. On the other hand, Teacher A believed that initiating and incorporating the new method from the beginning of the class is of high significance.

As she expressed:

I found it very useful for students, because they came to the new class and started to discover the new environment before they are exposed to the same traditional environment.... this way, from the very beginning they felt being independents. However, Teachers B and C sustained their belief that autistic students cannot be independent, they need a person to push them, especially for speaking skill.

4.4.4 Contribution of the Montessori Method to Autistic Students' L2 Productive Skills

To explore the influence of training of the Montessori-oriented English language teaching on the productive skills of autistic students, the related activities and lessons were firstly discussed (question 4, 5 & 14). The teachers explained that the teaching of English language should be parallel with the governmental educational policy. As teacher A stated:

We should firstly provide the simpler educational materials including flashcards and pictures as the complementary of public education in order that the students go parallel with the normal students. We teach the vocabulary including common verbs and common words which are existed in the governmental educational materials.

The teachers also explained that in terms of grammar, they firstly teach imperative form of sentences, then the simple present tense. Regarding the extracurricular activities, Teacher A stated that:

Students' extracurricular activities included writing homework such as alphabet in the previous semesters. However, upon attending the Montessori Method training workshops, we stopped assigning such homework to the autistic students and instead started to incorporate and assign the Montessori-based extracurricular activities.

The teachers explained that extracurricular activities such as matching uppercase and lowercase letter and writing practice of student' name (Refer to Appendix T) can be beneficial to involve the students' family in the process of their learning English language. The objective of these extracurricular activities was to enhance the cooperation of families of autistic students in the process of their learning.

Regarding Questions 1 and 13 which aimed to explore the motivation of students in engaging the classes and teachers' perceptions of English language teaching based

on Montessori method, all the teachers discussed that before the workshops, the students learned only speaking and just few of them succeed to write in English.

Teacher C also pointed to the crucial role of speech therapists, as she stated:

All students seem to be happy in my class, but if in the future I have passive student, I search the problem not just in the class, but also outside. For example, I always keep contact with speech therapist, because sometimes our works interfere each other. For example, if a student does not seem to be motivated to learn grammar, the source of this problem may be that he or she is learning the grammar of Persian as his or her first language. In this case, I will not teach English grammar, so I need to change my educational plan with that specific student.

Similarly, Teacher A appeared to be quite positive about Montessori method. As she explained:

Montessori Method increased my students' motivation and their effort to learn the alphabet. It also showed students that they can collaborate and learn from each other.

Overall, all the teachers believed that through the Montessori method the students could produce language more than before when they were taught through the traditional methods. However, the teachers' concern was related to production without any awareness. As Teacher C put it:

Although I believe that production is the first step of learning for autistic students, I cannot still say that Montessori Method helped my students to develop understanding. I mean it is still unclear for me if there is any difference between the effect of a picture that I previously used to the students, and toys and boxes which I used in Montessori-oriented classes using both types of objects students can produce the names in English, but what should be emphasized is understanding, the understanding of what they produce.

Therefore, Teacher C was not sure about the effectiveness of the Montessori Method.

Motivation was one of the significant positive factor attributed to the Montessori Method by the teachers. Regarding the question 12 (How does Montessori Method

contribute to English teaching to the autistic students?), all the teachers had consensus that a few sessions after implementing the Montessori Method, the students were highly engaged in the activities of the class spontaneously and seemed more comfortable. Teacher C, in this regard, stated that after the incorporation of the Montessori-based techniques

... [students] participated in the activities without any force, I mean without the expectation of reward or fear of punishment, for example, preventing them from watching their interested programs in the TV room during the break-time. I think they are more relaxed, they do not feel anxious or get bored.

Teacher A stated that:

I think autistic students are motivated to speak English language a bit more than before, because it is now their choice to learn and speak, they are not forced to do something, and I think they are more aware of what they produce.

Teacher B believed that their increased motivation was evident even in the writing skill:

They are more interested in writing and take part in the related activities. In the past, I had to force them to write the alphabet, gave them writing assignments, and I am sure that their parents also forced them to write their homework.

Although Teacher C stated that the students felt happier in the classroom and they participate in the activities, she further explained that

Students do not know what is good for them so I cannot give them different options. The best way to control them is that I'll tell them what to do.

Above all, the teachers reported that the value of the Montessori Method was in its emphasis on the process of learning and details of the learning activities undertaken by the students with autism. In this regard, Teacher A stated:

The high quality of learning in the Montessori Method results from its rigorous environment and role of the teacher as a facilitator. I believe that we should develop ourselves based on this method, during the workshops we

could create activities based on its theory which suit the needs of students with autism, I find this method flexible, if we follow the instructions and rules suggested in this method, we will have a high chance of its complete adaption to suit the autistic students.

Overall, the teachers perceived the Montessori-oriented teaching English language as a vehicle for improvement of the autistic students' motivation and L2 productive skills of them. The role of the teachers as facilitators and their characteristics including flexible and creative were important. Henceforth, in the following chapter, the obtained results will be discussed and some conclusions will be drawn. The limitations of the study and suggestions for future research will be presented.

Chapter 5

DISCUSSION OF RESULTS AND CONCLUSION

In this chapter, the results of the current study are discussed through comparing them with the related studies in the literature and in accordance with the research questions. Then, implications, limitations and suggestions for further research are presented.

5.1 Discussion of Results

This study aimed to explore the effect of Montessori Method training on teachers' professional development as well as autistic students' productive skills. To this end, this study applied different instruments including interview, open discussion, questionnaire, observation report as well as the researcher's field notes. The results obtained from these sources were presented in chapter four and this section specifically discusses the results.

5.1.1 Research Question 1: What Are the EFL Teachers' Perceptions of the Influence of the Training of Montessori-Oriented English Language Teaching on their Professional Development?

To answer this research question, four sources (observation report, approaches to teaching inventory, teachers' interview and open discussion) were used. The obtained results are discussed as follows.

First of all, although the teachers reported in the questionnaire that their current English teaching approach suits the autistic students, during the interviews, they pointed out to the fact that their knowledge about more recent methods and

approaches to teaching English to students with special needs such as autism is outdated. This shows that the teachers themselves needed some professional development programs which informed them and provided them with new knowledge and advances in teaching to students with mental disabilities, and different English teaching methods and techniques. Lack of professional development for teachers in special education area has also been identified in some studies. As a case in point, Wolfe (2012) found that special education teachers experienced lack of pre-service preparation for teaching students with autism, mentoring support during their initial phase as novice teachers; and reciprocating community throughout their careers. Similar to the current study, the teacher participants in Reppond's (2015) study also reported some gaps in their knowledge of how to teach students with mental disabilities, and complained about lack of training, appropriate materials and curriculum, and open-minded educators. These findings overall highlight the necessity of setting up professional development programs in different contexts to promote the quality of teaching to students with special needs. In fact, the Montessori Method training as proposed in this study, can be an effective program to be integrated into EFL classes for autistic students. Therefore, as a result of the Montessori-method training, in the post interview, the teachers broadened their horizons about characteristics of good English language teacher as characterized by their flexibility and creativity, their role as a facilitator who guides the students in the decision-making process, and as an accurate observer who can identify the students' needs and assess their performance, and as a provider of learning opportunities. The positive effect of teachers' professional development programs has been confirmed by Clement et al. (2012). These researchers stated that persistent professional development programs of high quality and intensive

workshops with the purpose of updating teachers' knowledge and increasing their skill repertoire which consequently lead to improved student outcomes, were reported as necessary by the teachers who intend to provide their students with the best practices. In another study by Murphy (2016), a professional development program for special education teachers of students with autism which general knowledge of autism and the related teaching strategies showed significant changes in teachers' perceptions of students with autism, their increased knowledge of autism, and employment of strategies which satisfied the needs of these students.

The results of the questionnaire revealed that Montessori intervention led teachers to adopt a more student-focused approach. It can be concluded that the Montessori intervention may have the potential to affect the teachers' approach of teaching English to autistic students. This positive progress towards more student-oriented approaches shows the contribution of the Montessori Method to professional development of the teachers. The change in their approach also observed by the researcher including taking the role of a facilitator, using more encouragement, more observation, incorporation of more group work and pair work, self-correction which are the characteristics of student-centered approach according to Chattin-McNichols (1998). More specifically, in the context of this study, the teachers started exerting less control over students' functioning; in other words, by giving the students more freedom, they became more active, are not supposed to take product-focused exams in compare with traditional one. Before receiving the Montessori Method training, the teachers had a less tendency to select the items dealing with formal assessment and centralization of teachers in the class, some examples of items are as what follows:

- autistic students should focus their study on what I provide them.

- It is important that teaching English language to autistic students be completely described in terms of specific objectives that relates to formal assessment of specific items.

- My English teaching approach to autistic students focuses on delivering what I know to them.

However, after participating in the Montessori Method workshops, the teachers became more familiar with independency and centralization of students as one of the most significant characteristics of Montessori classrooms (Havis, 2006a). Achieving independency is of high significance because “Difficulties in independent functioning also create challenges for young people with autism in school” (Hume et al., 2009, p. 1330). On the other hand, interventions such as giving more responsibility to these children and self-monitoring can make them more independent learners.

Since teachers are supposed to observe and direct the learning process of students in a Montessori-oriented classroom (Havis, 2009), and the students actively explore the environment to find their own learning resources, the teachers of this study, post to the intervention, were more likely to select the items that are focused on the interaction of the teacher and the students, the independency of the students and restructuring the existing knowledge of the students. For example:

- Teaching English to autistic students should include helping them find their own learning resources.

- I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.

Similar to the findings obtained from Approaches to Teaching Inventory, the results of the interviews highlighted more awareness of teaching to autistic students. As teacher A explained:

I think I could teach them not only English, but also the way of life such as decision-making, independency as well as how to respect others....

The above quotation is in line with Dewey's (1897) statement that the Montessori Method contains practical life materials that take into account care for oneself, the environment, as well as social graces.

During the observation sessions, it was found that all the three teachers were approximately responsive to individual needs of their autistic students. This indicates that the teachers were familiar with what the students with autism suffer from and also with individual characteristics of each student. According to Reppond (2015), this understanding helps teachers to employ techniques which are appropriate and useful for every autistic student. The teachers who participated in this study also frequently emphasized the importance of knowing each individual student to facilitate teaching in the interviews and group discussions as well. In fact, the teachers' performances are referred to as person-centered approach in which the planning process is carried out by the teacher who decides which skills are most suitable for a particular student (Browder et al., 2014). In this line, the study of Trigwell, Prosser and Waterhouse (1999) showed that students learned better in classes where teachers changed their teaching approaches and adopted more student-focused approaches. Martel (2009) also concluded in his study that student-centered strategy is very beneficial for students with behavioral and academic difficulties, and those with mental disabilities.

Building a positive relationship is at the heart of teaching students with autism, and the results of observations in this study revealed that the teachers established a positive relationship with the students by showing love and attention to their autistic students using kind words, and encouraging them by giving them rewards in this study. Similarly, findings of Hue's (2016) study showed that receiving love, affection, and companionship in Chinese children with autism made them more positive about school and facilitated their learning. Results of the interviews are in agreement with the results of open-ended questions of Approaches to Teaching Inventory, and the topics evolved around the importance of having sufficient information about autism spectrum disorder, students' individual differences, and the ability to establish effective relationship with students with autism. In this line, Denning and Moody (2013) stated that one of the benefits of building positive relationship with students is that, it allows teachers to talk to students in order to discover their interests, and to plan how to deal with their needs in the classroom.

It is obvious that a positive relationship could facilitate the process of learning particularly in case of autistic learners who cannot listen to the teachers for a long time (Moghadam et al., 2015) numerous studies have concluded that teachers' supportive relationship with student can increase students' motivation, interest and social responsibility (e.g. Wentzel, 1998). In Robertson et al's (2003) study, the paraprofessional training helped teachers to build more positive relationship with autistic students. Therefore, more attention to students' affective needs can lead to their educational progress.

Observing teachers' behavior over a semester showed that participation in the Montessori workshops helped teachers to improve their listening skills, teacher-

student relationship. Moreover, during the classroom observations, it was found that Teachers A and B had good listening skills whereas Teacher C was seen to lack such skills identified by neglecting or interrupting the students. Teacher C also lacked suitable coping strategies and tried to solve the problems by punishment. During the intervention, she stated in the open discussion that she had difficulty with motivating the students. She also achieved the highest score in teacher-focused approach prior to the Montessori training program and this is associated with her inflexible, strict character as the sole authority in the classroom which may even resort to punishment to solve the students' misbehaviors. This inconsistency in the way different teachers treat the students (Teachers A & B as opposed to Teacher C) shows that the characteristics of teachers themselves plays a crucial role in their professional development process.

Furthermore, prior to the intervention, teacher A believed that mix-age classes could be more beneficial, since it contained peer-teaching where more-proficient students could assist the teacher by reducing the load of teaching to the less-proficient students. In this line, Martal (2009) stated that peer-tutoring as one of the strategies employed in student-centered classes, encourages positive student interaction and it fits mixed classes containing students with different skills.

Teachers also reported that issues including discipline, freedom, family participation in the process of learning are of importance when dealing with the autistic students. In this regard, Wire (2005) mentioned that autistic students can better progress in foreign language classes which are highly disciplined and structured, since students with autism are not flexible and prefer routines. The Montessori approach regards a

person as disciplined if he is master of himself, thereby can regulate his own conduct (Montessori, 1912).

Regarding family participation, Reppond (2015) in his study also concluded that all the participants of his study including the special education teachers and ESL Teachers were all in agreement that the English language learning of autistic students is not limited to the classroom, and parents must actively help the students at home. Browder and et al (2014) also stated that the communication with family provide the opportunity for parents to receive the guidance and go parallel with the English language teachers to help the autistic students with learning English language. In this line, Handayani (2014) also explained that the connection among parent, peers and environment could enhance the quality of learning and make students motivated. Likewise, teachers in the current study stated that learning takes place when three parties, i.e., EFL teacher, parents and autistic students cooperate and have active involvement in the process of learning (also see Pomerantz et al., 2007).

Following the Montessori training, the teachers started to improve their philosophy and tried to foster students' intrinsic motivation and stress students' natural desire to learn which is highly important in Montessori Method. the results of the study by Handayani (2014) also indicated that children who were learning English as a second language using the Montessori Method had intrinsic motivation and an innate desire to learn and explore.

However, during the implementation of the Montessori Method was challenging and the teachers faced with several pitfalls. The first challenge was related to the adaptation of autistic students who felt uncomfortable and anxious in the new

environment which is due to their lack of cognitive flexibility (Geurts et al., 2009) and seeks predictable routines in the classroom (Wire, 2005), so a sudden change of their English language classroom, resulted them to misbehave (throw the materials, cry and leave the classroom). These misbehaviors are exacerbated specifically when the teachers do not react to them. However, the teachers' creative solutions such as putting interesting objects like toy cars and coins inside the materials, reduced their misbehavior and made them easily adapt to the new situation. Consistent with these findings, the results of the study by Lu et al. (2010) showed that creative sand-play engaged the students with autism.

The next challenge was teachers' lack of motivation to work with different materials, and the problem was solved by addition of a break-time to the class sessions while fulfilling the Montessori Method rules (e.g., students should not be forced to watch TV, teacher should not interrupt students' concentration, etc.). It was found that the strategy of changing the environment could be successful since the teachers had already tried the same strategy for reducing the autistic students' desire for lack of change. During the break time, teachers changed the place of some materials or even removed some items from the class, so that the autistic students who were interested in them became encouraged to move around the class, explore the environment in an attempt to find them. In this regard, Spiro et al. (1991) argued that in order to increase cognitive flexibility in autistic students who are resistant to change, learning environments should also be flexible and allow the same items to be presented and learned in different ways.

Generally, the findings indicated that the Montessori Method was conducive and assisted teachers to find more practical and effective solutions to the students'

problems and the challenges they experience, and this is an important aspect of their professional development.

5.1.2 Research Question 2: What are the EFL Teachers' Perceptions of the Influence of the Training of the Montessori-Oriented English Language Teaching on L2 Productive Skills of Autistic Students?

To answer this research question, two sources (students' observation and teachers' interview) were used. The obtained results are discussed as follows.

The observation results highlighted three improvements in the students' L2 productive skills: peer collaboration as result of blended-level and mixed-age classes which led to more interaction and L2 production, production of two-word and in some cases three-word phrases which was previously limited to the production of single words and naming the objects. The importance of interaction among student for enhancing L2 language learning has been emphasized by some scholars (Allwright, 1984; Swain et al., 2002; Watanabe, 2008). Watanabe (2008) found that students' interaction in a mixed-level classes (with higher- and lower-proficiency peers) could enhance L2 language learning. Sáenz et al. (2005) concluded that Peer-Assisted Learning Strategies (PALS) and peer-tutoring strategy could develop English language learning of students with learning disabilities (see also Handayani, 2014).

Based on the observations, an improvement was also observed in the students' writing skill due to more interesting writing activities that were incorporated into their instruction. Pennington and Delano (2012) stated that acquisition of this productive skill by autistic students despite all difficulties that they experience is of high importance because writing skill can be used in a variety of contexts to express

ideas and subsequently access reinforcement. Although in the present study indirect and more creative writing practices resulted in some improvements in writing skills of the students with autism, the results of some other studies contradict the current results. For instance, in Pennington's et al. (2012) study the autistic students benefited from explicit writing instruction. However, the focus of the study was writing in L1 (also see Dockrell et al., 2014).

One important aspect of second language learning is vocabulary development which also has a significant effect on students' speaking and writing (Nation, 2001). Inclusion of more visual clues, or in other words, visual-spatial language, as characterized by print and visual supports can facilitate autistic L2 learning of autistic students (Yahya et al., 2013). Concerning the materials used, it was observed that in this study, all the teachers used a variety of educational materials including songs, videos, flashcards, and pictures which were suitable for autistic students with various learning styles. In this line, Lisle (2007) also argues that among the learning styles, individuals with autism have kinesthetic, visual, and then auditory preferences for learning. Yahya et al. (2013) found that teachers could facilitate vocabulary learning by ESL students with autism by using visuals. Another way to facilitate vocabulary learning by autistic students as suggested by Rao and Gagie (2006) is to modify abstract concepts into more concrete ones to make them more tangible and easier to learn by these students.

The result of the interviews revealed that the teachers' lesson plan contained a huge amount of input, and repetition of simple sentences. This is in line with Krashen's (1981) input hypothesis maintaining that progress arises from providing communicative as well as comprehensible input. Other researchers such as Andrews

(1999) and Field (2010) have also pointed to the importance of provision of sufficient amount of input for L2 language learning. This is specifically vital in case of students with autism since they have concentration and verbal production problems (Frith & Happe, 1994), so amount of sensory input and repetition of lessons are critical in teaching English language to them.

All the teachers, prior and post to the intervention, stated that they can give more freedom to the normal student and may take into account their opinion about the process of their learning, but in terms of the autistic students, they cannot be aware of their educational needs. In their study, Moghadam et al. (2015) also found that normal students, as compared to students with autism, were more aware of the usage of English language, and the purpose for which they wanted to learn English (e.g. to communicate with English-speaking people).

Furthermore, the participants of this study stated that what specifically made teaching English to the autistic students different from the normal students was *cognition*. Although repetition helps students with verbal production, when an autistic student repeats a word, it does not mean they have learned the word or know its meaning. Hence, the incorporation of activities which target students' cognition and check their comprehension to assure that they understand the meaning of what they have produced is of utmost significance. The same situation can be applied to their communication. As Happe (1998) argues, autistic children may show some language while being unable to communicate. Indeed, they use words or phrases in idiosyncratic way, just repeating after hearing a phrase with no perception about it.

Although teachers reflected on how to teach writing to the autistic students in the open discussion, they added further points in the interview sessions specifically by explaining the reasons underlying the autistic students' writing difficulty. In fact, the writing activities included in the lesson plan were limited to practice writing the single letters of alphabet taught in the previous semesters. However, inclusion of more creative activities such as the alphabet box improved the students' writing skill which was also representative of their cognition. It was observed that some more proficient students were able to realize all the letters of word. For instance, after hearing the word 'dog', they collected D, O, and G toy letters and put them in the box. This suggests that inclusion of more creative and engaging writing tasks can enhance students' writing ability. The results of the study by Dockrell et al. (2014) also indicated that writing was so challenging for the autistic students because they were not interested in the writing activities.

The teachers also took the chance to reflect on grammar teaching in the interview sessions. Teaching grammar to the students with autism was characterized by teaching imperative before affirmative structure while normal students are taught affirmative structure firstly. This is due to the importance of gesture and body language as well as the ease of asking students to do what they were supposed to do. Also, for the autistic student with slow or poor ability to develop vocabulary and grammar, learning simple sentences such as "open book" and "close the door" which contain two elements would be easier (Reppond, 2015).

Moreover, the statements of the teachers in this study were in line with Dockroll et al, (2014) that most of their autistic students' challenges which effect their productive

skills were related to lack of motivation, poor attention, lack of communicative skills, problem with dictation and composition (Dockrell et al., 2014).

Concerning the overall effect of the Montessori Method, the teachers explained that before the workshops the students learned only speaking and just few of them succeed to write in English. However, at the end of the implementing Montessori-based English teaching method, all the teachers stated that after the incorporation of this method students produced language more and this method can facilitate the process of their learning English language mainly due to the following reasons.

- an engaging and provoking environment containing variety of the learning activities which were motivating contained using all senses, and emphasis on the process of learning
- The role of the teacher as a facilitator rather than authority in the classroom
- Incorporation of peer-tutoring to facilitate teacher teaching and students' learning
- The process-based assessment of Montessori which resulted in less anxiety on the part of the students.

Montessori Method is characterized by provision of further support for learning in a rich environment prepared specifically according to special needs of students with autism. The environment in the process of learning has already been emphasized by some scholars such as John Dewey (1897). Moreover, Montessori method gives priority to learning by means of a series of senses from visual to stereognosis (Montessori & Gutek, 2004), in which every child has the opportunity to accept the world not through the mouth, but through the senses. In a study, Ploeg et al. (2013) also found that tailoring activities to students' needs and capabilities elicit more

positive interactions and are especially suitable for people with no fluency in English. Similarly, Handayani (2014) concluded that some characteristics of the Montessori Method contribute to the development of L2 including well-equipped environment in which children feel convenient during the learning process, learning in small groups which allows children to be free and enjoy the learning activities under the surveillance of the teacher, and iteration in learning which assists children to explore the topics several times.

5.2 Conclusion

This study was conducted to explore the effect of Montessori Method training on professional development of teachers and L2 productive skills of student with autism. Classroom observations, interviews and open discussion with the teachers led to the following conclusions drawn from the study.

Firstly, the results of the study showed that participation in the Montessori workshops can help teachers to improve their various dimensions of teaching method including teacher-student relationship, discipline strategies including using distraction for misbehaviors, provide an environment for students with autism to work independently, move freely around the class, and interact more with their peers. Furthermore, the Montessori teacher training made teacher participants' more aware that autistic students as people who have the right of making decisions and participate in their learning process, and also led to a move from teacher-focused approach to more student- focused. The results also showed that the teachers faced with a range of difficulties in dealing with autistic students such as outdate knowledge and lack of teacher training which meet the needs of EFL teachers dealing with students with autism. They also reported that when dealing with the autistic students, some issues

including discipline, freedom, family participation in the process of learning are of importance. Secondly, the findings revealed that Montessori workshops for teachers resulted in the improvement of L2 productive skills of students with autism. The students of the current study communicated more and were motivated through a rich environment and Montessori activities which teachers provided them. Inclusion of more creative activities improved the students' writing and speaking skills as well as their cognition.

Finally, the teacher participants of this study complained the lack of teacher training and update knowledge on English teaching method to students with autism which shows the professional development needs to be offered to all teacher educators in order to meet the needs of students with autism.

5.3 Implications of the Study

The current study has some implications for EFL teachers who deal with autistic students, teacher educators and material developers who are involved in the process of teaching English to autistic learners or have specialty in this area of research.

Firstly, EFL teachers should be equipped with the skills that are necessary for improving autistic student achievement and accommodating their needs. Montessori method may better equip EFL teachers to serve students with autism in the classroom due to the variety of activities, enriched teaching environment which suit learners with different learning styles.

Secondly, professional development programs which offer both workshops and open discussions provide opportunity for teachers to keep themselves update, share their

experiences, obtain feedback on their teaching method. Moreover, teachers can be more aware of possible ways which meet the needs of autistic students.

Thirdly, the results of this study may increase the awareness of teacher educators to plan teacher development programs for teachers dealing with students with special needs using different alternatives for English teaching methods such as Montessori method which was developed based on the observations of children affected by a mental deficiency .

Fourthly, Montessori teacher training can provide an opportunity for EFL teachers to be more creative and make activities more interesting for students. More importantly, Montessori teacher training can raise the awareness of teachers about the educational alternatives which involve all senses of the students and thus suit the needs of different students, especially ones with special needs.

Finally, the results of this study may increase the awareness of material developers and suggested that educational materials which involve all senses of students may more satisfy the needs of students with different visual, auditory, and kinesthetic learning styles as well as students with autism.

5.4 Limitations of the Study

The current study has the following limitations:

The sample of this study constitute the students with mild to moderate autism, aged between 14-17 and the sample was limited to one center. As a result, the student sample of current study can not be the representative of the population of autistic students.

Moreover, due to the few number of teacher participants (3 participants) of this study, the results of this study can not be generalized to whole population of EFL teachers. More importantly, teacher professional development constituted some short-term workshops and the time limitation of the current study prevented a deeply study of the subject under the research from various dimensions. For instance, the reading and listening skills as well as cognition in autistic students as various dimensions of learning English language by autistic students cannot be included in the research.

5.5 Suggestions for Future Research

For future studies, it is recommended that researchers focus on more severe autism, different age group of autistic students and various educational centers for autistic children to study the influence of Montessori method on L2 learning of such students.

Furthermore, future researchers can recruit more teacher participants and use long-term interventions to more explore the influence of Montessori-oriented teacher training on professional development of the teachers who deal with students with autism.

Moreover, the researchers can investigate the influence of the training of the Montessori-oriented English language teaching on writing and listening skills of autistic students.

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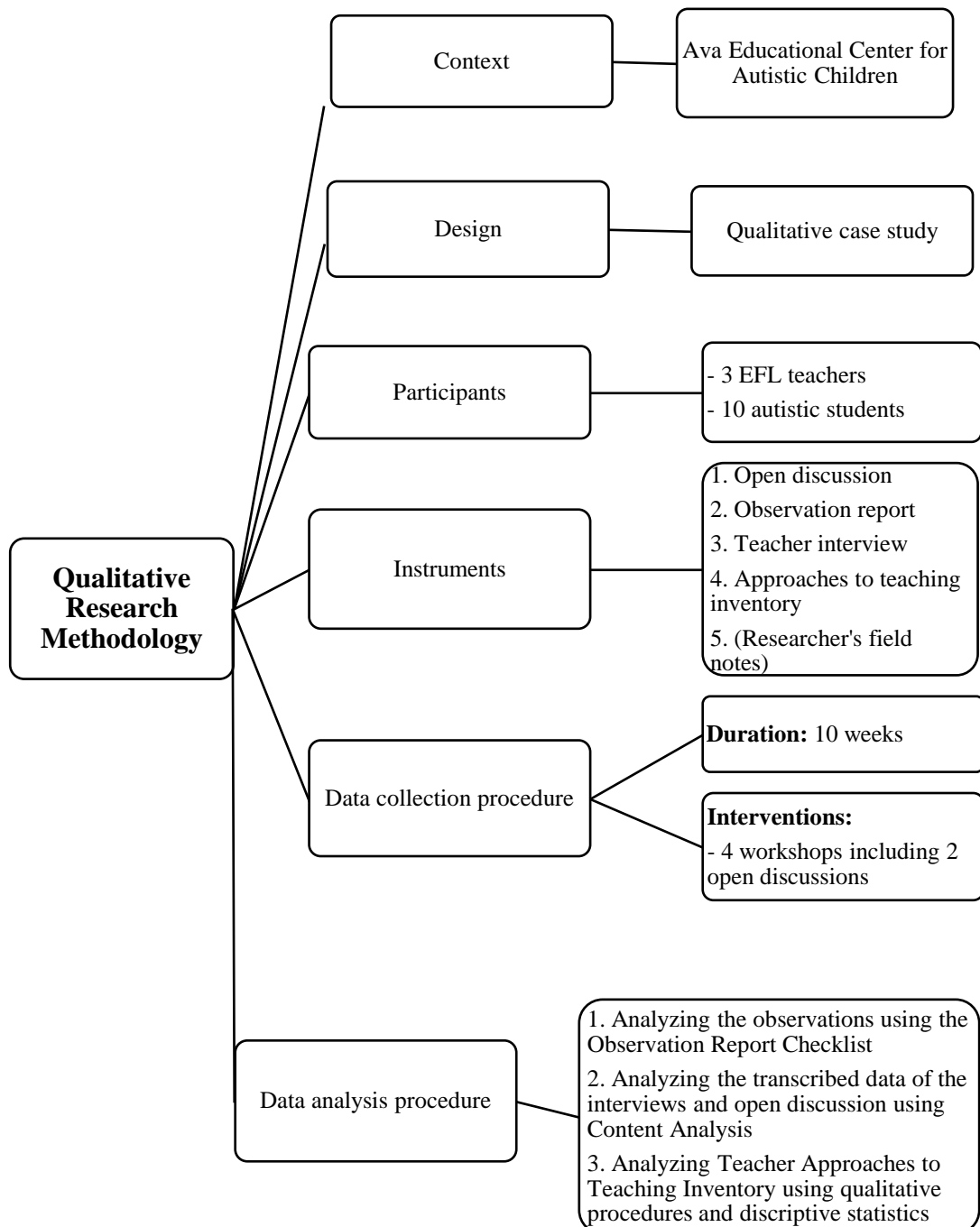
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APPENDICES

Appendix A: Graphic Overview of Methodology



Appendix B: The Researcher Certifications

ماهرخ خزاعی نژاد
مترجم رسمی زبان انگلیسی قوه قضائیه
شماره پروانه ۶۸۳ - مشهد - دارالترجمه رسمی آریا
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تلفن: ۰۵۱)۴۶۰۴۶۵۴

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Official Translation from Persian Original Page 1 of 2

EMBLEM OF ISLAMIC AZAD UNIVERSITY
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Master's Degree

Central Organization Certified No. 189111800515 Sealed photograph of the holder
Hologram of Islamic Azad University Serial No: 0211991 Central Organization Certified Date: 16/09/2013

According to the University Code approved on 03/11/1987 by the High Council of Cultural Revolution and unique article issued on 04/05/1988 by the Islamic Consultative Assembly, whereas;

Ms. Mahsa Rezvani

Daughter of Hassan, holder of the Birth Certificate No. 592, issued in Mashhad, born in 1984 has fulfilled her studies in the field of *Clinical Psychology* on 18/02/2013 in Torbat-e Jam branch and is qualified to receive Master of Art (MA) degree, this license is hereby conferred upon her.

Signed: Dean of University Branch, Mr. Alireza Rajaei
Signed: Dean of Islamic Azad University, on behalf of Dr. Farhad Daneshjoo, Dr. Irvan Masoudi Asl

ماهرخ خزاعی نژاد
مترجم رسمی زبان انگلیسی
قوه قضائیه - مشهد
شماره پروانه ۶۸۳
دارالترجمه رسمی آریا

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1st INTERNATIONAL CONFERENCE ON RESEARCH & TREATMENT IN CLINICAL PSYCHOLOGY

MAY 2012

Certificate of Attendance in Training Workshop

Hereby this is to certify that

Ms. Mahsa Rezvani

Holder of National ID No. -- participated in the training workshop titled "Montessori Theory and Practice" held for 8 hours on 30th and 31st May 2012 by Dr. Parvaneh Mohammadkbani and successfully fulfilled the course.

Signed: The Workshop Instructor

Signed & Sealed: Dean of Islamic Azad University, Torbat-e Jam Branch- Dr. Alireza Rajaei



Signed: Scientific Secretary of the Conference- Dr. Mohammad Hossein Bayazi

Segal Consulting and Psychological Center-Welfare General Department of Khorasan Razavi Province- Islamic Azad University- Quchan Branch- Islamic Azad University- Kashmar Branch- Islamic Azad University- Roudehen Branch- Islamic Azad University- Torbateh-yadarie- Islamic Azad University- Birjand Branch- Psychiatry & Behavioral Sciences Research Center- Education Department of Torbatejam- Iranian Clinical Psychology Association- Iranian Psychological Association- Psychology and Counseling Organization of I.R.Iran- Ferdowsi University of Mashhad

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Appendix C: The Initial Questions for Open Discussion

Subscales		Items	Reference
Part 1: Student participation	1	Do the children seem happy and engaged? Yes/No	Daycare Checklist, 2016
	2	How do you discipline a child?	Daycare Checklist, 2016
	3	How do you comfort a child?	Daycare Checklist, 2016
	4	What will your children be doing on any given day?	Daycare Checklist, 2016
	5	What about extracurricular activities?	Daycare Checklist, 2016
	6	How do you (can you) engage an ELL student with disabilities in teaching/learning?	Reppond, 2015
	7	What materials (curriculum, techniques) have you found most effective when teaching ELL students with disabilities?	Reppond, 2015
	8	How do you ensure that each student receives the right type of support?	Reppond, 2015
Part 2: Uptake issues	9	In what general area do most of your failures come?	Ministries of Education in Africa, 2016
	10	To what do you attribute this deficiency?	Ministries of Education in Africa, 2016
	11	What ill effects do you sense can come from this deficiency?	Ministries of Education in Africa, 2016
	12	How can the deficiency be overcome?	Ministries of Education in Africa, 2016
	13	Are you enthusiastic about your program, eager to share? Yes/No	Daycare Checklist, 2016
	14	Are you able to share with me your lesson plans/curriculum? Yes/No	Daycare Checklist, 2016
	15	What is your educational philosophy?	Daycare Checklist, 2016
	16	How is the Montessori Method of Teaching put into practice at your class?	Daycare Checklist, 2016

Appendix D: Final Form of Open Discussion

Subscales		Items	Reference
Part 1: Student participation	1	Do the autistic students seem happy and engaged in a Montessori-oriented English classroom learning environment?	Daycare Checklist, 2016
	2	How do you discipline an autistic student?	Daycare Checklist, 2016
	3	How do you comfort an autistic student?	Daycare Checklist, 2016
	4	What do your autistic student normally do in each class session?	Daycare Checklist, 2016
	5	What about extracurricular activities?	Daycare Checklist, 2016
	6	How do you engage an ELL student with autism in teaching/learning English language?	Reppond, 2015
	7	What materials have you found most effective when teaching ELL students with autism?	Reppond, 2015
	8	How do you ensure that each autistic student receives the right type of learning English support?	Reppond, 2015
Part 2: Uptake issues	9	Do you experience any challenge while implementing Montessori Method in autistic students' classroom? If yes,	Ministries of Education in Africa, 2016
	10	What can be the main sources of these challenges?	Ministries of Education in Africa, 2016
	11	What ill effects do you sense can come from this deficiency?	Ministries of Education in Africa, 2016
	12	How does Montessori Method contribute to English teaching to the autistic students?	Researcher
	13	How do you feel about the English language teaching based on Montessori Method?	Daycare Checklist, 2016
	14	What is the lesson plans/curriculum of English language course for autistic students?	Daycare Checklist, 2016
	15	What is your educational philosophy for autistic students?	Daycare Checklist, 2016
	16	How is the Montessori Method of Teaching put into practice in your class with autistic students?	Daycare Checklist, 2016

Appendix E: The Original Form of Montessori Integrity

Evaluation

Montessori Integrity Evaluation

Name _____

Date _____

Style of Relating to Children and Others

- Communicates respect for the individuality of children and adults
- Gives evidence of liking children
- Demonstrates listening skills with children
- Demonstrates listening skills with adults
- Demonstrates a good rapport with children
- Demonstrates a good rapport with adults
- Is observant and responsive to individual needs as they arise
- Setting Classroom Expectations
- Building/ Reinforcing Student-Adult Relationships
- Dress and appearance indicate self-regard as a professional
- Communicates ground rules effectively and successfully enforces them
- Uses positive coping strategies to solve conflicts and problems

Comments on Style of Relating to Children and Others Goal Statement:

Classroom Management Strategies

- Maintains effective overview (total environment awareness)
- Participates in maintaining order in the environment
- Has definite expectations of self and students
- Expectations are realistic and appropriate
- Demonstrates skill in solving behavioral problems
- Works effectively with individual children
- Works effectively with small selective groups of children
- Demonstrates effectiveness with the entire collective group
- Uses appropriate movement and body language
- Interacts in a positive manner with other adults in the room
- Uses a well modulated voice in the classroom
- uses proper timing to move in and out of presentations and conflict situations

Comments on Classroom Management Strategies Goal Statement:

Observation Skills

- Readily detects situations in the environment which call for adult interaction
- Makes valid observations of child behavior, identifies needs
- Correctly assess individual needs for reinforcement or further challenge

Appendix F: The Final Form of Observation Report

Subscales	Items	References
Part 1: Type of relationship to autistic students	Communicates respect for individuality of autistic students	Fries, 2015
	Gives evidence of liking autistic students	Fries, 2015
	Demonstrates listening skills with autistic students	Fries, 2015
	Demonstrates a good rapport with autistic students	Fries, 2015
	Is observant and responsive to individual needs of autistic students as they arise	Fries, 2015
	Setting classroom expectations for autistic students	Fries, 2015
	Communicate ground rules effectively and successfully enforces them	Fries, 2015
	Uses positive coping strategies to solve conflicts and problems in the classroom	Fries, 2015
Part 2: Classroom management strategies	Maintains effective overview (total environment awareness)	Fries, 2015
	Participates in maintaining order in the environment	Fries, 2015
	Has definite expectations of self and autistic students	Fries, 2015
	Expectations from autistic students are realistic and appropriate	Fries, 2015
	Demonstrates skill in solving behavioral problems of autistic students	Fries, 2015
	Works effectively with individual autistic students	Fries, 2015
	Works effectively with small selective groups of autistic students	Fries, 2015
	Demonstrates effectiveness with the entire collective group of autistic students	Fries, 2015
	Uses appropriate movement and body language	Fries, 2015
Uses proper timing to move in and out of presentations and conflict situations	Fries, 2015	
Part 3: Observation skills	Makes valid observations of autistic students' behavior, identifies needs	Fries, 2015
	Correctly assesses individual needs for reinforcement or further challenge	Fries, 2015
Part 4: English language teaching techniques	Preparation and warm up for a new lesson	Researcher
	Using a variety of audio-visual teaching materials for autistic students	Researcher
	Using a variety of learning activities	Researcher
	Attention to individual differences among autistic students	Researcher
	Responding to autistic students' problems	Researcher
	Using technology to facilitate English language learning of autistic students	Researcher
	Provision of instruction in the first language (Persian)	Researcher
	Provision of appropriate amount of input in the target language (English)	Researcher
	Maintaining a structured and systematized learning environment for autistic students	Researcher
	Repeating English language lessons and checking autistic students' understanding	Researcher
	Using corrective feedback	Researcher

Appendix G: The Original Form of Teacher Interview

Subscales		Items	Type of questions	References
Part 1: Experience during the Montessori method-based professional development	1	My experience as an EFL instructor in this program has been positive so far.	Closed	Abe, 2011
	2	I have confidence in my ability to teach English class.	Closed	Abe, 2011
	3	On a scale from 1 to 4, 1 being very low and 4 very high, how would you describe your level of English proficiency in the following areas?	Closed	Gonzalez, 2016
	4	On a scale from 1 to 4, 1 being very uncomfortable to 4 being very comfortable, how comfortable are you teaching the following skills now?	Closed	Abe, 2011
Part 2: General beliefs about EFL teaching	5	How could EFL instruction for autistic pupils be developed?	Open	Gonzalez, 2016
	6	What teaching methods and materials are used and what do the teachers consider workable?	Open	Gonzalez, 2016
	7	How is EFL teaching realized in autism education?	Open	Gonzalez, 2016
	8	In your opinion, what makes an EFL instructor a “good” instructor for autistic pupils?	Open	Abe, 2011
	9	What do you think are the most strength of EFL instructors for autistic pupils?	Open	Abe, 2011
	10	What do you think are the most weaknesses of EFL instructors for autistic pupils?	Open	Abe, 2011
	11	Is there any aspect of the English language that you find particularly difficult for autistic pupils?	Open	Gonzalez, 2016
	12	Do the language difficulties you experience represent a problem for your future work as a teacher of English?	Open	Gonzalez, 2016
	13	What is the main reason why you want to become a teacher for autistic pupils?	Closed	Gonzalez, 2016
	14	What English variety would you like your students to use?	Closed	Gonzalez, 2016
	15	What would be your biggest worry as an English teacher for autistic pupils?	Closed	Gonzalez, 2016
	16	What do you think can EFL English teachers who teach in an autism center contribute to their students?	Closed	Gonzalez, 2016
	17	Is there anything you would like to add?	Open	Abe, 2011

Appendix H: The Final Form of Teacher Interview

Subscales		Items	Type of questions	References
Part 1: General beliefs about EFL teaching	1	Do you modify your English language lessons for autistic students?	Open	Gonzalez, 2016
	2	What is your lesson plan for English language course for autistic students?	Open	Researcher
	3	What teaching methods and materials do you find useful and use for instructing autistic students?	Open	Gonzalez, 2016
	4	In your opinion, what makes an EFL instructor a “good” instructor for autistic students?	Open	Abe, 2011
	5	What do you think are the most strengths of you as an EFL instructor for autistic students?	Open	Abe, 2011
	6	What do you think are the most weaknesses of you as an EFL instructors for autistic students?	Open	Abe, 2011
	7	Is there any aspect of the English language that you find particularly difficult for autistic students?	Open	Gonzalez, 2016
	8	What is the main reason why you work as an EFL teacher for autistic students?	Open	Gonzalez, 2016
Part 2: Effect of Montessori-oriented teaching experience on your professional development	9	Reflect on your Montessori-oriented teaching experience and its contribution to your professional development?	Open	Abe, 2011
	10	What is your opinion about Montessori education in general?	Open	Researcher
	11	Do you think that Montessori Method would contribute to English language learning of autistic students?	Open	Researcher
	12	Do you think that Montessori education would improve L2 productive skills of the autistic students? If so, how? If not, why not?	Open	Researcher

Appendix I: Approaches to Teaching Inventory

Approaches to Teaching Inventory

This inventory is designed to explore a dimension of the way that academics go about teaching in a specific context or subject or course. This may mean that your responses to these items in one context may be different to the responses you might make on your teaching in other contexts or subjects. For this reason we ask you to describe your context.

Please name the subject/course of your response:

For each item please circle one of the numbers (1-5). The numbers stand for the following responses:

- 1 - this item was only rarely or never true for me in this subject.
- 2 - this item was sometimes true for me in this subject.
- 3 - this item was true for me about half the time in this subject.
- 4 - this item was frequently true for me in this subject.
- 5 - this item was almost always or always true for me in this subject.

Please answer each item. Do not spend a long time on each: your first reaction is probably the best one. Complete this page first before you

	only rarely				almost always
	1	2	3	4	5
1. In this subject students should focus their study on what I provide them.	1	2	3	4	5
2. It is important that this subject should be completely described in terms of specific objectives that relate to formal assessment items.	1	2	3	4	5
3. In my interactions with students in this subject I try to develop a conversation with them about the topics we are studying.	1	2	3	4	5
4. It is important to present a lot of facts to students so that they know what they have to learn for this subject.	1	2	3	4	5
5. I set aside some teaching time so that the students can discuss, among themselves, key concepts and ideas in this subject.	1	2	3	4	5
6. In this subject I concentrate on covering the information that might be available from key texts and readings.	1	2	3	4	5
7. I encourage students to restructure their existing knowledge in terms of the new way of thinking about the subject that they will develop.	1	2	3	4	5
8. In teaching sessions for this subject, I deliberately provoke debate and discussion.	1	2	3	4	5
9. I structure my teaching in this subject to help students to pass the formal assessment items.	1	2	3	4	5
10. I think an important reason for running teaching sessions in this subject is to give students a good set of notes.	1	2	3	4	5
11. In this subject, I provide the students with the information they will need to pass the formal assessments.	1	2	3	4	5
12. I should know the answers to any questions that students may put to me during this subject.	1	2	3	4	5
13. I make available opportunities for students in this subject to discuss their changing understanding of the subject.	1	2	3	4	5
14. It is better for students in this subject to generate their own notes rather than copy mine.	1	2	3	4	5
15. A lot of teaching time in this subject should be used to question students' ideas.	1	2	3	4	5
16. In this subject my teaching focuses on the good presentation of information to students.	1	2	3	4	5
17. I see teaching as helping students develop new ways of thinking in this subject.	1	2	3	4	5
18. In teaching this subject it is important for me to monitor students' changed understanding of the subject matter.	1	2	3	4	5
19. My teaching in this subject focuses on delivering what I know to the students.	1	2	3	4	5
20. Teaching in this subject should help students question their own understanding of the subject matter.	1	2	3	4	5
21. Teaching in this subject should include helping students find their own learning resources.	1	2	3	4	5
22. I present material to enable students to build up an information base in this subject.	1	2	3	4	5

Prosser/Trigwell, 2005

Approaches to Teaching Inventory V1 15/12/10

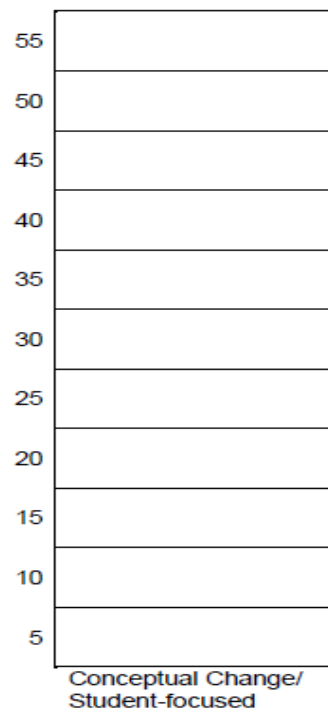
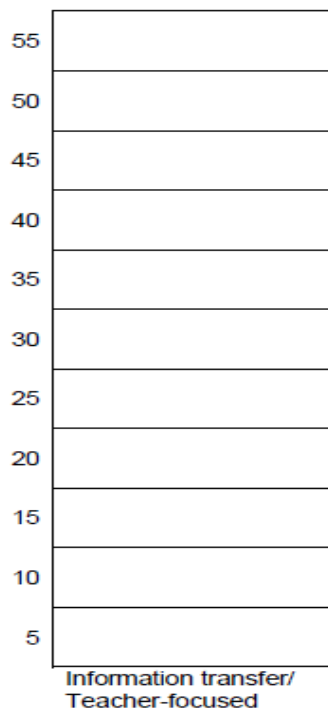
Scoring the inventory

From you scoring on the questionnaire please enter in the table each individual score

Question no	Score	Question no	Score
1		3	
2		5	
4		7	
6		8	
9		13	
10		14	
11		15	
12		17	
16		18	
19		20	
22		21	
Total		Total	
	Information transfer/ Teacher-focused	Conceptual Change/ Student-focused	

Once you have completed this transfer your scores on to the bar graph on the next page.

Shade in your scores to create two columns.



The approaches to teaching inventory can be used as a useful starting point when you are considering your own teaching. There are no published or acknowledged norms.


Please bear in mind that approaches to teaching are context specific and so your responses in one context may well be very different to another context. You may approach one area of your teaching very differently to another.

Appendix J: The Modified Version of ATI

Subscales	Number of item	Items	References
Part 1: A conceptual change/student-focused approach	1	In English language class, autistic students should focus their study on what I provide them.	Trigwell et al., 2005
	2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	Trigwell et al., 2005
	3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	Trigwell et al., 2005
	4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	Trigwell et al., 2005
	5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	Trigwell et al., 2005
	6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	Trigwell et al., 2005
	7	I structure my English teaching to help autistic students to pass the formal assessment items.	Trigwell et al., 2005
	8	I provide the autistic students with the information they will need to pass the formal English assessments.	Trigwell et al., 2005
Part 2: An information transfer/teacher-focused approach	9	I should know the answers to any questions that autistic students may put to me during teaching English language.	Trigwell et al., 2005
	10	I make available opportunities for autistic students to discuss their changing understanding of English language.	Trigwell et al., 2005
	11	A lot of English teaching time should be used to question autistic students' ideas.	Trigwell et al., 2005
	12	My English language teaching focuses on the good presentation of information to autistic students.	Trigwell et al., 2005
	13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	Trigwell et al., 2005
	14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	Trigwell et al., 2005

	15	My teaching English to autistic students focuses on delivering what I know to them.	Trigwell et al., 2005
	16	Teaching English to autistic students should help them question their own understanding of the subject matter.	Trigwell et al., 2005
	17	Teaching English to autistic students should include helping them find their own learning resources.	Trigwell et al., 2005
	18	I present material to enable autistic students to build up an information base in English language.	Trigwell et al., 2005
Part 3: Open-ended questions	19	Which of the five approaches best describes your teaching to the autistic students?	Trigwell et al., 2005
	20	Given the context of autistic students and your teaching of English language, is this the best approach?	Trigwell et al., 2005
	21	If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).	Trigwell et al., 2005
	22	If you teach normal group of students, do you select a different approach to teaching English language? Why?	Trigwell et al., 2005
	23	What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?	Researcher
	24	Further information you would like to add regarding teaching English language to autistic students	Researcher

Appendix K: Ethical Committee of the Institute of Graduate Studies and Research Approval

 **Doğu Akdeniz Üniversitesi**
"Uluslararası Kariyer İçin"

Eastern Mediterranean University
"For Your International Career"

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Famagusta, North Cyprus,
via Mersin-10 TURKEY
Tel: (+90) 392 630 1995
Faks/fax: (+90) 392 630 2919
bayek@emu.edu.tr

ETİK Kurulu / Ethics Committee


Reference No: ETK00-2017-0045 **24.03.2017**

RE: Mahsa Rezvani (15500188)
Department of English Language Teaching

To Whom It May Concern,

As part of the 2016-2017 Spring Semester, pertaining to Master Thesis questionnaires EMU's Scientific Research and Publication Ethics Committee has granted Ms. Mahsa Rezvani (15500188), from the Department of English Language Teaching Master Graduate Program, to pursue with her survey entitled ***An Investigation Into the Effect of Montessori-Oriented EFL Teachers' Professional Development on Autistic Students' Productive Skills***. This decision has been taken by the majority of votes. (Meeting number 2017/39-34)

Regards,


Assoc. Prof. Dr. Şükrü Tüzmen
Director of Ethics Committee

ŞT/sky.

Appendix L: Permission Letter

To: Assoc. Prof. Dr. Javanshir Shibliyev

Chair of the Department of Foreign Language Education

From: Mahsa Rezvani

Date: 13/02/2017

Permission Request

I am a master student and I am doing a research study entitled “*An investigation into the effect of Montessori method on professional development of EFL teachers and productive skills of students with autism*”. I would like to conduct my research in my country, Iran, Mashhad; I will collect my data through teachers’ questionnaire, audio-recorded interview and group discussion as well as classroom observation. The participants of my study will be ELT teachers who deal with autistic students in educational centers for autistic children.

Therefore, I need your approval on my request so I can do my research study in Iran, Mashhad.

Sincerely yours,

Mahsa Rezvani

Master Student

Rezvani.mahsa1363@gmail.com

Attachments:

- Observation checklist
- Teachers’ questionnaire
- Teachers’ interview
- Guiding questions for group discussion

Appendix M: Permission Letter from Ava Rehabilitation and Training Center

To: Dr. Akram Najafian, head of Ava Rehabilitation and Training Center

I am writing to request permission to conduct a research study at Ava Rehabilitation and Training Center for autistic children. I am currently the ELT Master student at Eastern Mediterranean University of Cyprus. For my master's thesis research project, I am going to investigate *the effect of Montessori method on professional development of EFL teachers and productive skills of students with autism*. To this end, I hope that the head of center will allow me to recruit at least three EFL teachers working with about 15 autistic students. Due to the nature of this study, prior to the study, a workshop will be held for EFL teachers to be instructed on how to implement the Montessori techniques in their teaching English language. Then, three workshops including open discussion will be conducted following and the end of the research. As part of the data collection procedure, the participating teachers will be observed to capture the degree to which they are able to implement the techniques correctly. They also will be interviewed individually and answered a questionnaire at the beginning and end of the research.

The process will take three months approximately. The group discussion, observation and interview results will be used for the thesis project and individual results of this study will remain absolutely confidential and anonymous. Also, consent letters will be obtained from the EFL teacher participants and autistic students' parents. Your approval to conduct this study will be greatly appreciated. Feel free to ask any questions or concerns that you may have at that time. You may contact me at my email address: rezvani.mahsa1363@gmail.com

If you agree, kindly sign below and return the signed form in the enclosed self-addressed envelope.

Sincerely,

Mahsa Rezvani

ELT Master Student at Eastern Mediterranean University

Approved by:

Akram Najafian

11February 2017



Appendix N: Teacher’s Consent Form

Teacher professional development program consent form

Dear teachers,

I am a Master student and I am conducting my thesis on the topic of “*An investigation into the effect of Montessori method on professional development of EFL teachers and productive skills of students with autism*”. This teacher professional program aims to introduce the concept, principles, and key strategies of Montessori teaching techniques besides methods to implement it into your English language classroom for autistic students, and to find out your perception on the degree to which the autistic students’ L2 proficiency will increase following this teacher professional development program by sharing your experiences on implementing Montessori method in autistic students’ classroom through open discussion.

Please read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study.

Your Participation:

- You are invited to participate in a three-month interventional study of teacher-change in autistic students’ productive skills focused on the professional development of EFL teachers in an educational center for autistic students.
- You will be asked to participate in four 2-hour workshops and audio-recorded open discussions, and to share with me documentation, which shows your implementation of the Montessori method in your English language classroom for autistic students.
- your English teaching to autistic students will be observed by the researcher, prior, during and after the teacher professional development program.
- you will be individually interviewed prior and after the teacher professional development program. The interviews will be audio-recorded and it takes about 90 minutes.
- you will be asked to answer 32-item questionnaire prior and after the teacher professional development program.

- You are free to ask questions at any time before, during or after your participation in this research.
- You may choose to end your participation at any time with no repercussions.

Data storage to protect confidentiality:

For your privacy, I will use a pseudonym to refer to you in any documents such as interview transcripts, observations, and documents collected.

Thank you for participation and cooperation.

Mahsa Rezvani

MA student

Department of Foreign Language Education
Education

Faculty of Education

E-mail: rezvani.mahsa1363@gmail.com

naciye.kunt@emu.edu.tr

Assoc. Prof. Dr. Naciye Kunt

MA Thesis supervisor

Department of Foreign Language
Education

Faculty of Education

E-mail:

✂-----

Consent form

Participant's rights:

- I have read and discussed the Research Description with the researcher. I have had the opportunity to ask questions about the purposes and procedures regarding this study.
- My participation in research is voluntary. I may refuse to participate or withdraw from participation at any time.
- Any information derived from the research project that personally identifies me will not be voluntarily released or disclosed without my separate consent, except as specifically required by law.
- If at any time I have any questions regarding the research or my participation, I can contact the

researcher, Mahsa Rezvani, who will answer my questions. The researcher's phone number is (0098)9153219345. I may also contact the researcher's supervisor, Assoc. Prof. Dr. Naciye Kunt via her email: naciye.kunt@emu.edu.tr.

- If audio recording is part of this research, I consent to be audio-recorded. The written or audio-recorded materials will be viewed only by the researcher, her supervisor and members of the research team.

I have read and understood the main purpose of this study, and I agree to participate in it.

Name- Surname: -----

Date: -----

Signature: -----

Teacher Interview Consent Form

Dear teacher,

I am a Master's student and I am conducting my thesis project entitled "*An investigation into the effect of Montessori method on professional development of EFL teachers and productive skills of students with autism*". The aim of this interview is to elicit information regarding your general beliefs about EFL teaching and your experience during the Montessori-oriented teaching and its contribution to your professional development. The interview will be audio-recorded and your identity and individual responses will be kept confidential and used only for research purposes.

Further information can be obtained directly from me or my thesis supervisor. You are free to withdraw from the study at any time.

Thank you for your participation and cooperation.

Mahsa Rezvani

MA student

Department of Foreign Language Education

Faculty of Education

E-mail : rezvani.mahsa1363@gmail.com

Assoc. Prof. Dr. Naciye Kunt

MA Thesis supervisor

Department of Foreign Language Education

Faculty of Education

E-mail : naciye.kunt@emu.edu.tr

✂-----

Consent form

I have read and understood the main purpose of this study, and I agree to participate in it.

Name- Surname: -----

Date: -----

Signature: -----

Teacher Questionnaire Consent Form

Dear teachers,

I am a Master student and I am conducting my thesis on the topic of “*An investigation into the effect of Montessori method on professional development of EFL teachers and productive skills of students with autism*”. This questionnaire aims to identify your approach to English language teaching to autistic students. It is very important that you answer all the questions sincerely. Your personal information and individual responses will be kept confidential and used only for research purposes. Further information can be obtained directly from me or my thesis supervisor.

Thank you for participation and cooperation.

Mahsa Rezvani

MA student

Department of Foreign Language Education

Faculty of Education

E-mail : rezvani.mahsa1363@gmail.com

Assoc. Prof. Dr. Naciye Kunt

MA Thesis supervisor

Department of Foreign Language Education

Faculty of Education

E-mail : naciye.kunt@emu.edu.tr

✂-----

Consent form

I have read and understood the main purpose of this study, and I agree to participate in it.

Name- Surname: -----

Date: -----

Signature: -----

Appendix O: Parent's Consent Form

Parents' consent form

Dear parents,

I am a Master student and I am conducting my thesis entitled “*An investigation into the effect of Montessori method on professional development of EFL teachers and productive skills of students with autism*”. This study aims to implement Montessori teaching techniques into the English language classroom for autistic students, and to find out teachers' perception of the degree to which the autistic students' productive skills (writing and speaking) will increase following a Montessori-oriented teacher professional development program.

To see the effect of this method, teachers' teaching practices and teacher-student relationship will be observed by the researcher. As for autistic students, their personal information, language acquisition history, and their proficiency level in Persian and English languages will be reviewed.

Ethically-wise, your child will be identified in the research records by a code name or number; and the researcher retains the right to use and publish non-identifiable data. When the results of this research are published or discussed in conferences, no information will be included that would reveal your child's identity.

Further information can be obtained directly from me or my thesis supervisor. You are free to withdraw your child from the study at any time.

Thank you for your participation and cooperation.

Mahsa Rezvani
MA student

Assoc. Prof. Dr. Naciye Kunt
MA Thesis supervisor

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E-mail: rezvani.mahsa1363@gmail.com

naciye.kunt@emu.edu.tr

Department of Foreign Language

Faculty of Education

E-mail:

✂-----

Consent form

I have read this parental permission form and understood the main purpose of this study. I give my permission for my child to participate in this study.

Name- Surname: -----

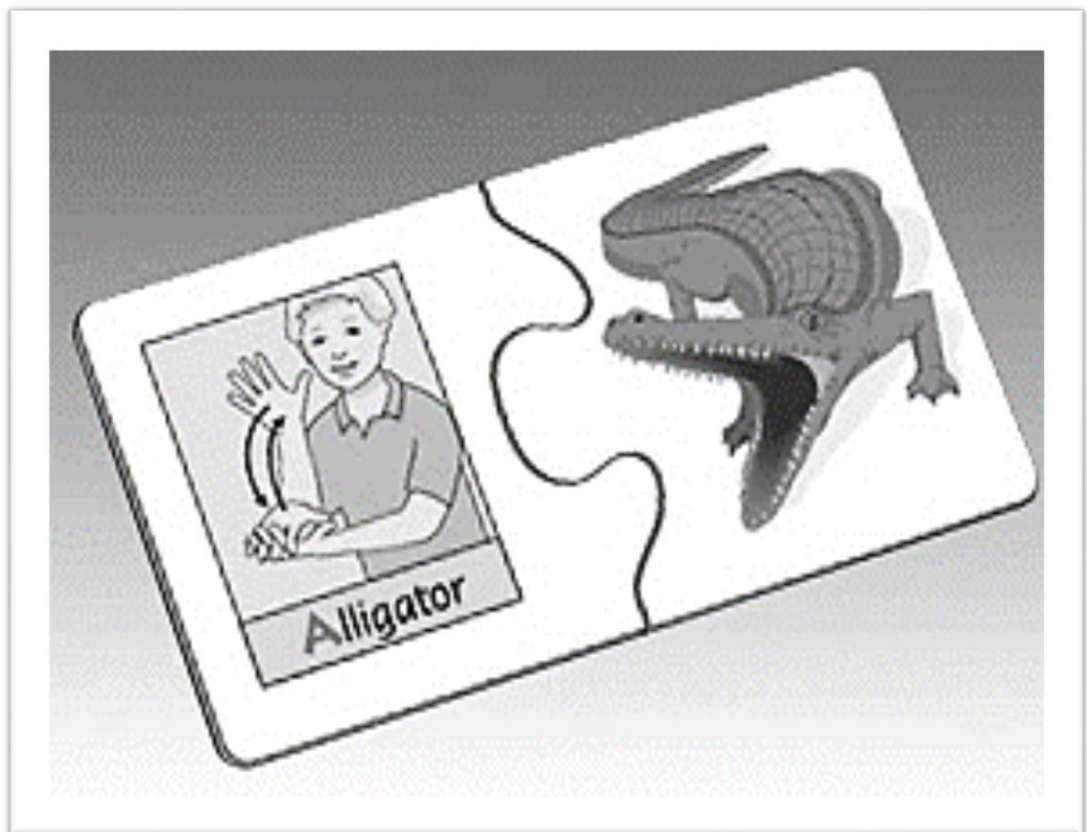
Date: -----

Signature: -----

Appendix P: Samples of Montessori Activities for Aoreign Language Acquisition

(available at <http://www.montessori-n-such.com>)

[Animal Signing Alphabet Match-Ups](#): two-piece puzzle sets which is consisted of colorful realistic illustrations and photos printed on thick laminated cardboard to provide children with a hands-on means to learn sign language.



3-Part Wood Tiles with Objects: This material contains four pieces for every word (picture-only, word label, mini object and control card). The picture-only tiles can be used for vocabulary building, matching the wood tile to the corresponding object as well as for sorting activities. Beginning readers can use all 3-parts: read a word label, match it to the picture-only tile or to the mini object, then use the control card to check their work.



Appendix Q: Samples of Observation Report

Observation Report

Teacher	A	Class	
Observer	the researcher	Date	first observation
Topic	names of animals		

A: Type of relationship to autistic students

- Communicates respect for individuality of autistic students
- Gives evidence of liking autistic students
- Demonstrates listening skills with autistic students
- Demonstrates a good rapport with autistic students
- Is observant and responsive to individual needs of autistic students as they arise
- Setting classroom expectations for autistic students
- Communicate ground rules effectively and successfully enforces them
- Uses positive coping strategies to solve conflicts and problems in the classroom

Further observations/comments on type of relationship with autistic children:

Give the objects which her students are highly attached to, after they answer properly

B: Classroom management strategies

- Maintains effective overview (total environment awareness)
- Participates in maintaining order in the environment
- Has definite expectations of self and autistic students
- Expectations from autistic students are realistic and appropriate
- Demonstrates skill in solving behavioral problems of autistic students
- Works effectively with individual autistic students
- Works effectively with small selective groups of autistic students
- Demonstrates effectiveness with the entire collective group of autistic students
- Uses appropriate movement and body language

- Uses proper timing to move in and out of presentations and conflict situations

Further observations/comments on classroom management strategies:

Pay attention to the students when working with one student, for example, providing activity for students in order to prevent their misbehaviors.

C: Observation skills

- Makes valid observations of autistic students' behavior, identifies needs
- Correctly assesses individual needs for reinforcement or further challenge

Further observations /comments on observation skills:

a student could completely learn the lesson, teacher did not teach him a new word. She dedicated more time to individually work with others instead to learn the lesson.

D: English language teaching techniques

- Preparation and warm up for a new lesson
- Using a variety of audio-visual teaching materials for autistic students
- Using a variety of learning activities
- Attention to individual differences among autistic students
- Responding to autistic students' problems
- Using technology to facilitate English language learning of autistic students
- Provision of instruction in the first language (Persian)
- Provision of appropriate amount of input in the target language (English)
- Maintaining a structured and systematized learning environment for autistic students
- Repeating English language lessons and checking autistic students' understanding
- Using corrective feedback

Further observations/comments on English language teaching techniques:

Provide explicit error correction, showed the written form of animals

She could not work with a student this time, since a group work on the round table took a long time

C: Observation skills

- Makes valid observations of autistic students' behavior, identifies needs
- Correctly assesses individual needs for reinforcement or further challenge

Further observations /comments on observation skills:

D: English language teaching techniques

- Preparation and warm up for a new lesson
- Using a variety of audio-visual teaching materials for autistic students
- Using a variety of learning activities
- Attention to individual differences among autistic students
- Responding to autistic students' problems
- Using technology to facilitate English language learning of autistic students
- Provision of instruction in the first language (Persian)
- Provision of appropriate amount of input in the target language (English)
- Maintaining a structured and systematized learning environment for autistic students
- Repeating English language lessons and checking autistic students' understanding
- Using corrective feedback

Further observations/comments on English language teaching techniques:

One student could not complete the activity, she asked another student to help him instead of herself to repeat the activity

Observation Report

Teacher	B	Class	
Observer	the researcher	Date	first observation
Topic	names of animals		

A: Type of relationship to autistic students

- Communicates respect for individuality of autistic students
- Gives evidence of liking autistic students
- Demonstrates listening skills with autistic students
- Demonstrates a good rapport with autistic students
- Is observant and responsive to individual needs of autistic students as they arise
- Setting classroom expectations for autistic students
- Communicate ground rules effectively and successfully enforces them
- Uses positive coping strategies to solve conflicts and problems in the classroom

Further observations/comments on type of relationship with autistic children:

Hug students and give them sweet as a reward

B: Classroom management strategies

- Maintains effective overview (total environment awareness)
- Participates in maintaining order in the environment
- Has definite expectations of self and autistic students
- Expectations from autistic students are realistic and appropriate
- Demonstrates skill in solving behavioral problems of autistic students
- Works effectively with individual autistic students
- Works effectively with small selective groups of autistic students
- Demonstrates effectiveness with the entire collective group of autistic students
- Uses appropriate movement and body language
- Uses proper timing to move in and out of presentations and conflict situations

Further observations/comments on classroom management strategies:

She does not have any individual work with students this session

C: Observation skills

- Makes valid observations of autistic students' behavior, identifies needs
- Correctly assesses individual needs for reinforcement or further challenge

Further observations /comments on observation skills:

D: English language teaching techniques

- Preparation and warm up for a new lesson
- Using a variety of audio-visual teaching materials for autistic students
- Using a variety of learning activities
- Attention to individual differences among autistic students
- Responding to autistic students' problems
- Using technology to facilitate English language learning of autistic students
- Provision of instruction in the first language (Persian)
- Provision of appropriate amount of input in the target language (English)
- Maintaining a structured and systematized learning environment for autistic students
- Repeating English language lessons and checking autistic students' understanding
- Using corrective feedback

Further observations/comments on English language teaching techniques:

She used explicit error correction, although she repeated the lesson but she did not check students' understanding individually.

Observation Report

Teacher	B	Class	
Observer	the researcher	Date	sixth observation
Topic			

A: Type of relationship to autistic students

- Communicates respect for individuality of autistic students
 - Gives evidence of liking autistic students
 - Demonstrates listening skills with autistic students
 - Demonstrates a good rapport with autistic students
 - Is observant and responsive to individual needs of autistic students as they arise
 - Setting classroom expectations for autistic students
 - Communicate ground rules effectively and successfully enforces them
 - Uses positive coping strategies to solve conflicts and problems in the classroom
- Further observations/comments on type of relationship with autistic children:**

B: Classroom management strategies

- Maintains effective overview (total environment awareness)
- Participates in maintaining order in the environment
- Has definite expectations of self and autistic students
- Expectations from autistic students are realistic and appropriate
- Demonstrates skill in solving behavioral problems of autistic students
- Works effectively with individual autistic students
- Works effectively with small selective groups of autistic students
- Demonstrates effectiveness with the entire collective group of autistic students
- Uses appropriate movement and body language
- Uses proper timing to move in and out of presentations and conflict situations

Further observations/comments on classroom management strategies:

This session she encouraged all students to sit at the round table by using keys and toy cars, the students were motivated to participate in group works.

C: Observation skills

- Makes valid observations of autistic students' behavior, identifies needs
- Correctly assesses individual needs for reinforcement or further challenge

Further observations /comments on observation skills:

She mostly stood behind the students and observed the student while they were completing the activities.

D: English language teaching techniques

- Preparation and warm up for a new lesson
- Using a variety of audio-visual teaching materials for autistic students
- Using a variety of learning activities
- Attention to individual differences among autistic students
- Responding to autistic students' problems
- Using technology to facilitate English language learning of autistic students
- Provision of instruction in the first language (Persian)
- Provision of appropriate amount of input in the target language (English)
- Maintaining a structured and systematized learning environment for autistic students
- Repeating English language lessons and checking autistic students' understanding
- Using corrective feedback

Further observations/comments on English language teaching techniques:

Observation Report

Teacher	C	Class	
Observer	the researcher	Date	first observation
Topic	names of animals		

A: Type of relationship to autistic students

- Communicates respect for individuality of autistic students
- Gives evidence of liking autistic students
- Demonstrates listening skills with autistic students
- Demonstrates a good rapport with autistic students
- Is observant and responsive to individual needs of autistic students as they arise
- Setting classroom expectations for autistic students
- Communicate ground rules effectively and successfully enforces them
- Uses positive coping strategies to solve conflicts and problems in the classroom

Further observations/comments on type of relationship with autistic children:

She shouted at students when they became noisy, she ignored a student's question and used punishment (the student should stand behind the door of class)

B: Classroom management strategies

- Maintains effective overview (total environment awareness)
- Participates in maintaining order in the environment
- Has definite expectations of self and autistic students
- Expectations from autistic students are realistic and appropriate
- Demonstrates skill in solving behavioral problems of autistic students
- Works effectively with individual autistic students
- Works effectively with small selective groups of autistic students
- Demonstrates effectiveness with the entire collective group of autistic students
- Uses appropriate movement and body language
- Uses proper timing to move in and out of presentations and conflict situations

Further observations/comments on classroom management strategies:

She solved the behavioral problems of students with shouting at them and punishment,

When she worked individually, she did not pay attention to other students who were bored

C: Observation skills

- Makes valid observations of autistic students' behavior, identifies needs
- Correctly assesses individual needs for reinforcement or further challenge

Further observations /comments on observation skills:

She identified the students' needs late, in fact, when they started misbehaving in the class, she was responsive to their needs such as providing an object or activity.

D: English language teaching techniques

- Preparation and warm up for a new lesson
- Using a variety of audio-visual teaching materials for autistic students
- Using a variety of learning activities
- Attention to individual differences among autistic students
- Responding to autistic students' problems
- Using technology to facilitate English language learning of autistic students
- Provision of instruction in the first language (Persian)
- Provision of appropriate amount of input in the target language (English)
- Maintaining a structured and systematized learning environment for autistic students
- Repeating English language lessons and checking autistic students' understanding
- Using corrective feedback

Further observations/comments on English language teaching techniques:

In this session, she worked with every student in a certain period of time (i.e. working 10 minutes with everyone), while some of them needed more time to memorize the vocabulary and learn the lesson.

Observation Report

Teacher C **Class**
Observer the researcher **Date** sixth observation
Topic

A: Type of relationship to autistic students

- Communicates respect for individuality of autistic students
- Gives evidence of liking autistic students
- Demonstrates listening skills with autistic students
- Demonstrates a good rapport with autistic students
- Is observant and responsive to individual needs of autistic students as they arise
- Setting classroom expectations for autistic students
- Communicate ground rules effectively and successfully enforces them
- Uses positive coping strategies to solve conflicts and problems in the classroom

Further observations/comments on type of relationship with autistic children:

she seemed more patient since she omitted the punishment, bend to reach the child highest, when talking with them

B: Classroom management strategies

- Maintains effective overview (total environment awareness)
- Participates in maintaining order in the environment
- Has definite expectations of self and autistic students
- Expectations from autistic students are realistic and appropriate
- Demonstrates skill in solving behavioral problems of autistic students
- Works effectively with individual autistic students
- Works effectively with small selective groups of autistic students
- Demonstrates effectiveness with the entire collective group of autistic students
- Uses appropriate movement and body language
- Uses proper timing to move in and out of presentations and conflict situations

Further observations/comments on classroom management strategies:

This session she could work with all students in a group, while she was not successful to encourage them in the previous sessions

C: Observation skills

- Makes valid observations of autistic students' behavior, identifies needs
- Correctly assesses individual needs for reinforcement or further challenge

Further observations /comments on observation skills:**D: English language teaching techniques**

- Preparation and warm up for a new lesson
- Using a variety of audio-visual teaching materials for autistic students
- Using a variety of learning activities
- Attention to individual differences among autistic students
- Responding to autistic students' problems
- Using technology to facilitate English language learning of autistic students
- Provision of instruction in the first language (Persian)
- Provision of appropriate amount of input in the target language (English)
- Maintaining a structured and systematized learning environment for autistic students
- Repeating English language lessons and checking autistic students' understanding
- Using corrective feedback

Further observations/comments on English language teaching techniques:

Appendix R: Completed Forms of Approaches to Teaching

Inventory

Prior to the intervention

Teacher Demographic Information

Name: teacher A

Gender: Male Female

Age: 29

Highest Earned Degree:

- a. Bachelor's
- b. Master's
- c. Doctorate
- d. Others _____

Total number of years of teaching English: 3

Total number of years of teaching English to autistic students: 1

Total number of years of teaching autistic students in this educational center for autistic children: 1

How much are you familiar with Montessori education system? I just know about the theory of Montessori which is based on the freedom

Have you ever participated in a teacher professional development? Yes No

If yes, what type of teacher professional development did you participate and what was your attitude toward it?

Approaches to Teaching inventory

This inventory is designed to explore your approach to teaching in a specific context, subject or course. Please rate each item according to your approach towards teaching English language to autistic students in Ava rehabilitation and training center using the following scale:

	1- Never	2 - Sometimes	3- Half of the time	4- Frequently	5- Always
1	In English language class, autistic students should focus their study on what I provide them.				5
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.				5
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.				5

4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	1	2	3	4	5
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	1	2	3	4	5
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	1	2	3	4	5
7	I structure my English teaching to help autistic students to pass the formal assessment items.	1	2	3	4	5
8	I provide the autistic students with the information they will need to pass the formal English assessments.	1	2	3	4	5
9	I should know the answers to any questions that autistic students may put to me during teaching English language.	1	2	3	4	5
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	1	2	3	4	5
11	A lot of English teaching time should be used to question autistic students' ideas.	1	2	3	4	5
12	My English language teaching focuses on the good presentation of information to autistic students.	1	2	3	4	5
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	1	2	3	4	5
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	1	2	3	4	5
15	My teaching English to autistic students focuses on delivering what I know to them.	1	2	3	4	5
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	1	2	3	4	5
17	Teaching English to autistic students should include helping them find their own learning resources.	1	2	3	4	5
18	I present material to enable autistic students to build up an information base in English language.	1	2	3	4	5

Reflecting on your approach to teaching

Please read following approaches (adopted from Trigwell & Prosser, 1998) and answer the following questions according to the approach which best describes your English language teaching.

- *Approach A*: Teacher-focused strategy with the intention of transmitting information to students.
- *Approach B*: Teacher-focused strategy with the intention that students acquire the concepts of the discipline
- *Approach C*: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline
- *Approach D*: A student-focused strategy aimed at students developing their conceptions
- *Approach E*: A student-focused strategy aimed at students changing their conceptions

19. Which of the five approaches best describes your teaching to the autistic students?

I think approach B. not only autistic students should acquire the concept of discipline, but also, they need to have a class based on discipline, because discipline help them to know the class's rules and what is expected from them.

20. Given the context of autistic students and your teaching of English language, is this the best approach?

No, I believed that the best approach would be teacher-student interaction. But I think the aim of EFL teachers should be developing the autistic students' concepts, if we want to broaden our horizons toward teaching English to autistic students, discipline will not be enough.

21. If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).

If I could change anything, I would have a blended class in which more-proficient students could assist the teacher in conveying the concepts of some English vocabulary and disciplines to the less-proficient students. The classes with all less-proficient learners are very burdensome... of course, I would like to allow [autistic] students to act more freely, because through action I can them new English

vocabularies and phrases, such as close the door, throw the ball, and the like. I think these activities are more authentic, what my current approach to teaching English to autistic students lacks.

22. If you teach normal group of students, do you select a different approach to teaching English language? Why?

In fact yes, because I think that they are capable of making better decision and can participate in the process of their learning. Thus, I give them more freedom and ask them what they want to learn. But I quit working with normal students, since I work as English language teacher in this institute.

23. What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

I answer it in the previous question. My restriction is just my outdate knowledge

24. Further information you would like to add regarding teaching English language to autistic students:

Communication with the family of an autistic child is of great importance because we can share with families what students are learning in the class and explain them how they can cooperate with us in teaching English to their children, furthermore, it also could an opportunity for families to discuss on learning difficulties of their children.

Teacher Demographic Information

Name: teacher B

Gender: Male Female

Age: 31

Highest Earned Degree:

- a. Bachelor's
- b. Master's
- c. Doctorate
- d. Others _____

Total number of years of teaching English: 5

Total number of years of teaching English to autistic students: 3

Total number of years of teaching autistic students in this educational center for autistic children: 3

How much are you familiar with Montessori education system? nothing

Have you ever participated in a teacher professional development? Yes No

If yes, what type of teacher professional development did you participate and what was your attitude toward it?

Approaches to Teaching inventory

This inventory is designed to explore your approach to teaching in a specific context, subject or course. Please rate each item according to your approach towards teaching English language to autistic students in Ava rehabilitation and training center using the following scale:

	1- Never	2 - Sometimes	3- Half of the time	4- Frequently		
	5- Always					
1	In English language class, autistic students should focus their study on what I provide them.	1	2	3	4	5
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	1	2	3	4	5
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	1	2	3	4	5
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	1	2	3	4	5
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	1	2	3	4	5
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	1	2	3	4	5
7	I structure my English teaching to help autistic students to pass the formal assessment items.	1	2	3	4	5
8	I provide the autistic students with the information they will need to pass the formal English assessments.	1	2	3	4	5

9	I should know the answers to any questions that autistic students may put to me during teaching English language.	1	2	3	4	5
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	1	2	3	4	5
11	A lot of English teaching time should be used to question autistic students' ideas.	1	2	3	4	5
12	My English language teaching focuses on the good presentation of information to autistic students.	1	2	3	4	5
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	1	2	3	4	5
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	1	2	3	4	5
15	My teaching English to autistic students focuses on delivering what I know to them.	1	2	3	4	5
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	1	2	3	4	5
17	Teaching English to autistic students should include helping them find their own learning resources.	1	2	3	4	5
18	I present material to enable autistic students to build up an information base in English language.	1	2	3	4	5

Reflecting on your approach to teaching

Please read following approaches (adopted from Trigwell & Prosser, 1998) and answer the following questions according to the approach which best describes your English language teaching.

- *Approach A*: Teacher-focused strategy with the intention of transmitting information to students.
- *Approach B*: Teacher-focused strategy with the intention that students acquire the concepts of the discipline
- *Approach C*: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline
- *Approach D*: A student-focused strategy aimed at students developing their conceptions
- *Approach E*: A student-focused strategy aimed at students changing their conceptions

19. Which of the five approaches best describes your teaching to the autistic students?

Approach C and I believed that the most important issue is discipline in dealing with autistic students. not only autistic students but also teachers should have discipline.

20. Given the context of autistic students and your teaching of English language, is this the best approach?

Actually, this is the best choice

21. If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).

I am not sure because this is the first time I think about it. But generally Autistic students are not able to decide what would be useful and beneficial for them, they are not even aware why they need to learn second language. Teachers can only take into the account their opinion upon the possible reward to encourage them.

22. If you teach normal group of students, do you select a different approach to teaching English language? Why?

Yes, because I can take into account the normal students' opinion since they are more aware of their needs. I give them freedom and let them to negotiate with me about their syllabus.

23. What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

This is difficult question, because I cannot change not because of the educational system, because of the nature of student with autism, they hardly accept changes and are familiar and convenient with the existing method.

24. Further information you would like to add regarding teaching English language to autistic students:

Having a good relationship with these children is crucial. If you cannot make a good relationship at the beginning, the autistic student will not obey and listen to you in the following sessions. But making a positive relationship should go in parallel with authority.

Teacher Demographic Information

Name: teacher C

Gender: Male Female

Age: 26

Highest Earned Degree:

a. Bachelor's

b. Master's

c. Doctorate

d. Others _____

Total number of years of teaching English: 4.5

Total number of years of teaching English to autistic students: 2

Total number of years of teaching autistic students in this educational center for autistic children: 2

How much are you familiar with Montessori education system? I just heard the name

Have you ever participated in a teacher professional development? Yes No

If yes, what type of teacher professional development did you participate and what was your attitude toward it?

Approaches to Teaching inventory

This inventory is designed to explore your approach to teaching in a specific context, subject or course. Please rate each item according to your approach towards teaching English language to autistic students in Ava rehabilitation and training center using the following scale:

	1- Never	2 - Sometimes	3- Half of the time	4- Frequently	5- Always	
1	In English language class, autistic students should focus their study on what I provide them.	1	2	3	4	5
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	1	2	3	4	5
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	1	2	3	4	5
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	1	2	3	4	5
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	1	2	3	4	5
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	1	2	3	4	5

7	I structure my English teaching to help autistic students to pass the formal assessment items.	1	2	3	4	5
8	I provide the autistic students with the information they will need to pass the formal English assessments.	1	2	3	4	5
9	I should know the answers to any questions that autistic students may put to me during teaching English language.	1	2	3	4	5
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	1	2	3	4	5
11	A lot of English teaching time should be used to question autistic students' ideas.	1	2	3	4	5
12	My English language teaching focuses on the good presentation of information to autistic students.	1	2	3	4	5
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	1	2	3	4	5
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	1	2	3	4	5
15	My teaching English to autistic students focuses on delivering what I know to them.	1	2	3	4	5
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	1	2	3	4	5
17	Teaching English to autistic students should include helping them find their own learning resources.	1	2	3	4	5
18	I present material to enable autistic students to build up an information base in English language.	1	2	3	4	5

Reflecting on your approach to teaching

Please read following approaches (adopted from Trigwell & Prosser, 1998) and answer the following questions according to the approach which best describes your English language teaching.

- *Approach A*: Teacher-focused strategy with the intention of transmitting information to students.
- *Approach B*: Teacher-focused strategy with the intention that students acquire the concepts of the discipline
- *Approach C*: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline
- *Approach D*: A student-focused strategy aimed at students developing their conceptions
- *Approach E*: A student-focused strategy aimed at students changing their conceptions

19. Which of the five approaches best describes your teaching to the autistic students?

Approach C because discipline is important

20. Given the context of autistic students and your teaching of English language, is this the best approach?

Most probably yes. because upon giving more freedom to the students, they would be out of control and would not pay attention to the lessons anymore.

21. If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).

To be honest, I have not thought about it. The head of Ava center provided us the materials and the necessary information that we should bear in our mind and I found it suitable.

22. If you teach normal group of students, do you select a different approach to teaching English language? Why?

Yes, I can offer them more freedom, they are not needed to be pushed in order to learn English. Sometimes, my normal students ask me not to work on book, then we decide to play an English game.

23. What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

I do not feel restricted in this institute, in fact, I believe that the syllabuses made by the policy makers is the best option for them.

24. Further information you would like to add regarding teaching English language to autistic students:

Knowing their diseases and know their personality are so crucial.

Post to the intervention

Teacher Demographic Information

Name: teacher A

Gender: Male Female

Age: 29

Highest Earned Degree:

a. Bachelor's

b. Master's

c. Doctorate

d. Others _____

Total number of years of teaching English: 3

Total number of years of teaching English to autistic students: 1

Total number of years of teaching autistic students in this educational center for autistic children: 1

How much are you familiar with Montessori education system? I know about the theory of Montessori and how to implement it in the classroom

Have you ever participated in a teacher professional development? Yes No

If yes, what type of teacher professional development did you participate and what was your attitude toward it? It was the first one

Approaches to Teaching inventory

This inventory is designed to explore your approach to teaching in a specific context, subject or course. Please rate each item according to your approach towards teaching English language to autistic students in Ava rehabilitation and training center using the following scale:

	<i>1- Never</i>	<i>2 - Sometimes</i>	<i>3- Half of the time</i>	<i>4- Frequently</i>						
	<i>5- Always</i>									
1	In English language class, autistic students should focus their study on what I provide them.					1	2	3	4	5
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.					1	2	3	4	5
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.					1	2	3	4	5
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.					1	2	3	4	5
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.					1	2	3	4	5
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.					1	2	3	4	5

7	I structure my English teaching to help autistic students to pass the formal assessment items.	1	2	3	4	5
8	I provide the autistic students with the information they will need to pass the formal English assessments.	1	2	3	4	5
9	I should know the answers to any questions that autistic students may put to me during teaching English language.	1	2	3	4	5
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11	A lot of English teaching time should be used to question autistic students' ideas.	1	2	3	4	5
12	My English language teaching focuses on the good presentation of information to autistic students.	1	2	3	4	5
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	1	2	3	4	5
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	1	2	3	4	5
15	My teaching English to autistic students focuses on delivering what I know to them.	1	2	3	4	5
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	1	2	3	4	5
17	Teaching English to autistic students should include helping them find their own learning resources.	1	2	3	4	5
18	<i>I present material to enable autistic students to build up an information base in English language.</i>	1	2	3	4	5

Reflecting on your approach to teaching

Please read following approaches (adopted from Trigwell & Prosser, 1998) and answer the following questions according to the approach which best describes your English language teaching.

- *Approach A*: Teacher-focused strategy with the intention of transmitting information to students.
- *Approach B*: Teacher-focused strategy with the intention that students acquire the concepts of the discipline
- *Approach C*: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline
- *Approach D*: A student-focused strategy aimed at students developing their conceptions
- *Approach E*: A student-focused strategy aimed at students changing their conceptions

19. Which of the five approaches best describes your teaching to the autistic students?

Through participating in these workshops, I changed my approach to E I think.

20. Given the context of autistic students and your teaching of English language, is this the best approach?

Yes, the students with autism deserve it

21. If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).

If I could, I would change the whole educational system of this institute. Autistic students should be aware of their own capabilities... they should understand that they can be independent in learning, especially in learning a new language.

22. If you teach normal group of students, do you select a different approach to teaching English language? Why?

Two of the major differences in the two contexts is that normal students can be given more freedom and independence and, their opinions can be taken into consideration and affect the classroom practices, however, it cannot be the case of normal students

23. What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

I would not anything, because Montessori method is fine with me, but I would change the whole educational system of this institute, if I had any power.

24. Further information you would like to add regarding teaching English language to autistic students:

I think that we as English teachers should establish a good relationship with them. The relationship with their family is also highly important, because they can tell us what would be applicable in controlling and encouraging the students and we tell them what to do in order to help their children with learning English.

Teacher Demographic Information

Name: teacher B

Gender: Male Female

Age: 31

Highest Earned Degree:

- a. Bachelor's
- b. Master's
- c. Doctorate
- d. Others _____

Total number of years of teaching English: 5

Total number of years of teaching English to autistic students: 3

Total number of years of teaching autistic students in this educational center for autistic children: 3

How much are you familiar with Montessori education system? I just got familiar in these workshops

Have you ever participated in a teacher professional development? Yes No

If yes, what type of teacher professional development did you participate and what was your attitude toward it?

Approaches to Teaching inventory

This inventory is designed to explore your approach to teaching in a specific context, subject or course. Please rate each item according to your approach towards teaching English language to autistic students in Ava rehabilitation and training center using the following scale:

	<i>1- Never</i>	<i>2 - Sometimes</i>	<i>3- Half of the time</i>	<i>4- Frequently</i>					
	<i>5- Always</i>								
1	In English language class, autistic students should focus their study on what I provide them.				1	2	3	4	5

2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	1	2	3	4	5
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	1	2	3	4	5
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	1	2	3	4	5
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	1	2	3	4	5
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	1	2	3	4	5
7	I structure my English teaching to help autistic students to pass the formal assessment items.	1	2	3	4	5
8	I provide the autistic students with the information they will need to pass the formal English assessments.	1	2	3	4	5
9	I should know the answers to any questions that autistic students may put to me during teaching English language.	1	2	3	4	5
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	1	2	3	4	5
11	A lot of English teaching time should be used to question autistic students' ideas.	1	2	3	4	5
12	My English language teaching focuses on the good presentation of information to autistic students.	1	2	3	4	5
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	1	2	3	4	5
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	1	2	3	4	5
15	My teaching English to autistic students focuses on delivering what I know to them.	1	2	3	4	5
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	1	2	3	4	5
17	Teaching English to autistic students should include helping them find their own learning resources.	1	2	3	4	5
18	<i>I present material to enable autistic students to build up an information base in English language.</i>	1	2	3	4	5

Reflecting on your approach to teaching

Please read following approaches (adopted from Trigwell & Prosser, 1998) and answer the following questions according to the approach which best describes your English language teaching.

- *Approach A:* Teacher-focused strategy with the intention of transmitting information to students.
- *Approach B:* Teacher-focused strategy with the intention that students acquire the concepts of the discipline
- *Approach C:* A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline
- *Approach D:* A student-focused strategy aimed at students developing their conceptions

- *Approach E*: A student-focused strategy aimed at students changing their conceptions

19. Which of the five approaches best describes your teaching to the autistic students?

Approach D

20. Given the context of autistic students and your teaching of English language, is this the best approach?

This approach proved me can be useful, but some more changes are needed and I myself should learn more about it to be more creative and convenient in this approach, but I still believed that we cannot give them freedom as Montessori provides.

21. If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).

This is enough applicable and suit to my students with autism. But there are still some problems, because they are not familiar with this form of teaching. I mean you cannot incorporate this Method in one class, such as foreign language class, only because students show resistance and it makes them confused to have freedom in one class but not in the others, so it would be more beneficial if all the classes use this approach.

22. If you teach normal group of students, do you select a different approach to teaching English language? Why?

I do not teach to the normal students in this period, but if it is possible and the system allows me, I would implement to see the result.

23. What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

I would use the materials of the Montessori, but about freedom which is the base of Montessori approach, I might not.

24. Further information you would like to add regarding teaching English language to autistic students:

As I mentioned before, a positive relationship facilitate the teaching and it is not possible, unless you have enough information about autism and every student's characteristics.

Teacher Demographic Information

Name: teacher C

Gender: Male Female

Age: 26

Highest Earned Degree:

- a. Bachelor's
- b. Master's
- c. Doctorate
- d. Others _____

Total number of years of teaching English: 4.5

Total number of years of teaching English to autistic students: 2

Total number of years of teaching autistic students in this educational center for autistic children: 2

How much are you familiar with Montessori education system? I participated 4 workshops in this regard

Have you ever participated in a teacher professional development? Yes No

If yes, what type of teacher professional development did you participate and what was your attitude toward it?

Approaches to Teaching inventory

This inventory is designed to explore your approach to teaching in a specific context, subject or course. Please rate each item according to your approach towards teaching English language to autistic students in Ava rehabilitation and training center using the following scale:

	<i>1- Never</i>	<i>2 - Sometimes</i>	<i>3- Half of the time</i>	<i>4- Frequently</i>		
	<i>5- Always</i>					
1	In English language class, autistic students should focus their study on what I provide them.	1	2	3	4	5
2	It is important that teaching English language to autistic students should be completely described in terms of specific objectives that relate to formal assessment items.	1	2	3	4	5
3	In my interactions with autistic students, I try to develop a conversation with them about the English language topics we are studying.	1	2	3	4	5
4	It is important to present a lot of facts to autistic students so that they know what they have to learn in order to know English language.	1	2	3	4	5
5	I encourage autistic students to restructure their existing knowledge in terms of the new way of thinking about the new language that they will develop.	1	2	3	4	5
6	In English teaching sessions to autistic students, I deliberately provoke debate and discussion.	1	2	3	4	5
7	I structure my English teaching to help autistic students to pass the formal assessment items.	1	2	3	4	5

8	I provide the autistic students with the information they will need to pass the formal English assessments.	1	2	3	4	5
9	I should know the answers to any questions that autistic students may put to me during teaching English language.	1	2	3	4	5
10	I make available opportunities for autistic students to discuss their changing understanding of English language.	1	2	3	4	5
11	A lot of English teaching time should be used to question autistic students' ideas.	1	2	3	4	5
12	My English language teaching focuses on the good presentation of information to autistic students.	1	2	3	4	5
13	I see teaching English to autistic students as helping them develop new ways of thinking in English.	1	2	3	4	5
14	In teaching English to autistic students, it is important for me to monitor their changed understanding of the subject matter.	1	2	3	4	5
15	My teaching English to autistic students focuses on delivering what I know to them.	1	2	3	4	5
16	Teaching English to autistic students should help them question their own understanding of the subject matter.	1	2	3	4	5
17	Teaching English to autistic students should include helping them find their own learning resources.	1	2	3	4	5
18	<i>I present material to enable autistic students to build up an information base in English language.</i>	1	2	3	4	5

Reflecting on your approach to teaching

Please read following approaches (adopted from Trigwell & Prosser, 1998) and answer the following questions according to the approach which best describes your English language teaching.

- *Approach A*: Teacher-focused strategy with the intention of transmitting information to students.
- *Approach B*: Teacher-focused strategy with the intention that students acquire the concepts of the discipline
- *Approach C*: A teacher/student interaction strategy with the intention that students acquire the concepts of the discipline
- *Approach D*: A student-focused strategy aimed at students developing their conceptions
- *Approach E*: A student-focused strategy aimed at students changing their conceptions

19. Which of the five approaches best describes your teaching to the autistic students?

D

20. Given the context of autistic students and your teaching of English language, is this the best approach?

Yes, it is suitable for them, but I prefer establishing my authority in the class, then gradually allow the autistic students to interact in their learning process.

21. If you wished to change your English language teaching approach for autistic students, how may you do it? (Reflect on the potential enabling factors and barriers and how you may overcome the barriers).

The Montessori materials and games are so beneficial but it is needed to modify the approaches of providing freedom in case of autistic students.

22. If you teach normal group of students, do you select a different approach to teaching English language? Why?

The Montessori approach could be even more beneficial for normal students because it can encourage the students and involve all senses. But it is not feasible in every context.

23. What would you change in the English language classroom for autistic students, given that you had no restrictions, to be more productive with ELL students with autism?

I think what we have done was a big change without any considerable restriction

24. Further information you would like to add regarding teaching English language to autistic students:

Appendix S: Teachers' Answer to the Interviews

Prior to the intervention				
	Items	Teacher A	Teacher B	Teacher C
1	Do you modify your English language lessons for autistic students?	I do not have normal students now, but I think that the students with autism need more repetition and visual materials. For example, we should repeat a simple sentence such as I am from Iran several times for them. More importantly, we should constantly check their understanding.	Yes, I use more teaching materials and check the understanding of students with autism more than normal students, by asking questions to be sure that they understand the lesson	I think we should modify the lesson because autistic students have special needs, for example, they need more repetition. The abstract concept should be presented by visual materials that make the meaning more concrete for them and the considerable amount of class time should be dedicated to check their cognition.
2	What is your lesson plan for English language course for autistic students?	since the learning of English should be parallel with the governmental educational policy, the educational plans should be provided as the complementary components of the public education. our lesson plan also contains the items which are provided in governmental educational materials, with some modification in order to be simpler for them. For example, the grammar includes simple imperative sentences such as open the door, close the book, and simple present such as I sit, I swim	Typically, the lessons have six group of vocabulary including 5 colors, 5 animals, 5 foods, 5 common verbs, 5 common words, and three simple sentences related to the students' identity.	It contains some vocabulary such as dog, apple, etc. Five frequent verbs such as close, open, etc. and simple sentences, for example, My name is I am years old. I am from
3	What teaching methods and materials do you find useful and use for instructing autistic students?	I use video-clips, songs, flashcards as much as I can, this is very helpful with them. For example, if I want to teach the word dog to students, I will show the picture, imitate the sound of dog, ask students to show me the picture of dog among other pictures on the wall.	my methodology is that the students should listen to me and perform what I ask them, and also watch different related video clips and use flashcards. I think his way of teaching was effective for the autistic students	The students' activities included singing the songs, looking at the pictures of vocabularies and answering to me in group and individually.

4	In your opinion, what makes an EFL instructor a “good” instructor for autistic students?	A good teacher should love autistic students and be patient with them, he should not have high expectations from autistic students, because they suffer from poor concentration or attention deficit. they also have sensory problems.	A good instructor should have enough knowledge about autism, and then about every student. This is even more important than English teaching methods. Because they are base for establishing a positive relationship with them.	Although knowing about the new methods of English teaching to them is important, the first step is a good relationship and be aware of their needs and behaviors.
5	What do you think are the most strengths of you as an EFL instructor for autistic students?	My strength is my education in psychology which helps me to be aware of autistic students’ needs and feeling as well as how to make an effective relationship with them	I do not know exactly, but I love my students and I am patient with them. This could be my strength	My strength is that my communication with autistic students is not limited to the classroom environment, I also spend time with them outside the class, and also communicate with their families.
6	What do you think are the most weaknesses of you as an EFL instructors for autistic students?	my weakness is that I do not have an up-date knowledge about new teaching methods or effective English teaching approaches to autistic students	Well.. we do not have enough information about the new English teaching method to students with special needs. But this is not related to us. We are open to workshops but the institute or the whole educational system lack professional development programs for us.	I have not thought about it. I am satisfied with my job. I keep my patient with them.
7	Is there any aspect of the English language that you find particularly difficult for autistic students?	Most of autistic students are not interested in learning English, since it was demanding for them to learn a new language. One of the obstacles in acquiring a second/foreign language by these students is that they do not have imagination power and thus, cannot understand the meaning of some abstract words and concepts even in their first language.	They cannot develop a large vocabulary size, because they do not have imagination power. As a result, some words and sentences with abstract meaning is difficult for them to understand. the simpler we speak, the better the	they rarely have a complete understanding of what they have produced. This problem is related to the lack of cognition. Moreover, when I want teach them how to introduce themselves, I ask them, for example, where are you from, but they just repeat my question instead of answering it. Some

			students understand and learn.	of them do not know what interaction is
8	What is the main reason why you work as an EFL teacher for autistic students?	I came to this institute for internship in psychology. At first, I disliked working with autistic students, but soon I became interested after I could establish relationship with the autistic students. I used to teach English to normal students when I found that this offers English teaching as extracurricular program and applied for it.	I was asked by the head of this institute who knew me to work here. This is a demanding job, but the result is very interesting for me. When an autistic student can learn even one word, I feel satisfied. Now, I prefer teaching these children more than normal students.	I came to know about this institute by a relative and I decided to start working here to examine my own abilities in teaching English, but after some time, I find this job very satisfactory. Even if the autistic students cannot understand the sentences they produce, this is considered as a progress for them. I believe that they finally internalize these sentences
9	Reflect on your Montessori-oriented teaching experience and its contribution to your professional development?	_____	_____	_____
10	What is your opinion about Montessori education in general?	_____	_____	_____
11	Do you think that Montessori Method would contribute to English language learning of autistic students?	_____	_____	_____
12	Do you think that Montessori education would improve L2 productive skills of the autistic students? If so, how? If not, why not?	_____	_____	_____

Post to the intervention				
	Items	Teacher A	Teacher B	Teacher C
1	Do you modify your English language lessons for autistic students?	_____	_____	_____
2	What is your lesson plan for English language course for autistic students?	_____	_____	_____
3	What teaching methods and materials do you find useful and use for instructing autistic students?	My method is providing opportunities for students in order that they encourage to learn English through involve themselves in their processes of learning. For example, when they do not feel interested in playing with them anymore, they can continue practicing the letters with a different material such as sand tray. In fact, they can practice the same content through different materials which reinforces what students have already learned.	Well, I found sand tray very useful for them, it can solve their problem in writing to some extent, for example, it is easier for them to write with their fingers and more interesting.	I use more authentic materials though Montessori method. for instance, instead of showing picture of letters to students, they can easily touch the letters on the walls or even play with the movable alphabets.
4	In your opinion, what makes an EFL instructor a “good” instructor for autistic students?	a good EFL teacher should be flexible and creative. He should take into consideration what can be helpful for individual student with autism and constantly monitor himself.	They should provide the students with opportunity to work independently, that is, they should try to understand by themselves, self-correct, and make decision	A teacher should not push students to learn since they have the inner drive which guides them in learning, moreover, they may learn a subject at different speeds, so the instruction should go hand in hand with the students’ curiosity and their ability learning ability
5	What do you think are the most strengths of you as an EFL instructor for autistic students?	I know Montessori method which help me to be more fruitful in English teaching	I have good relationship with student, as I told you	I am patient, I have a positive relationship with students and their families.
6	What do you think are the most weaknesses of you as an EFL instructors for	I should update my knowledge in suitable English teaching method to autistic students	My weakness is my outdate knowledge, teachers should constantly	I do not have any idea in fact. I do my best with them

	autistic students?		participate in such workshops	
7	Is there any aspect of the English language that you find particularly difficult for autistic students?	Sometimes autistic students cannot read what they have written, and sometimes they read even what I write, but cannot understand the meaning. As you know, we cannot completely separate the skills, it is important for the students to read and understand what they write. Moreover, Students should not get used to rote learning. We should be make sure that autistic students know what the meaning of produced sentences are, and this can be achieved by acting out whatever they produce.	Some of the students cannot concentrate on two languages at the same time, for example, after they learn the name of a fruit in English, they may forget its equivalent in their first language.	Well I think we frequently discussed upon this issue. Generally speaking, the imperative structure is easier to learn for autistic students, since they have problem in matching subject and verb. For example, they may say she go or I goes
8	What is the main reason why you work as an EFL teacher for autistic students?	_____	_____	_____
9	Reflect on your Montessori-oriented teaching experience and its contribution to your professional development?	These workshops change my attitude toward teaching English to autistic students, I think I could teach them not only English, but also life skills such as decision-making, independency, and being respect others. For example, a student should wait patiently if he wants to work with a material which another student is working with.	I believed that workshops helped me with the recognition of autistic students' right of independence, and the ability of select and participate in their own learning process.	I learned how to observe autistic students for teaching them, for identifying their needs and for assessing their performance. I learned that observation is the most important instrument of EFL teacher for autistic students
10	What is your opinion about Montessori education in general?	Montessori Method give students the opportunity to learn with their own desire, I think students use the Montessori-based materials with the intention of playing, and simultaneously learn what they are supposed to learn.	since all senses are involved and active, I mean since students can touch, smell and even taste, and listen, it suits to students with various learning style.	In this system, students do not have to prepare themselves for any official exam, teachers assess them indirectly, I mean with the observation, so it can facilitate the learning of various skills, specially speaking. I think it this method is specifically effective for students with language anxiety.

11	Do you think that Montessori Method would contribute to English language learning of autistic students?	Yes of course, I realized that they are more active and happy in the classroom.	Yes, I am quite positive to this method. this method motivated my students and even I myself enjoy more in the classroom.	Well I am not sure, it can be a good method but the effectiveness of this method dependent on its application to students in lower age groups and even for students with more severe autism
12	Do you think that Montessori education would improves L2 productive skills of the autistic students? If so, how? If not, why not?	Yes exactly, I can realize it through the autonomy, I mean the extent to which the students can successfully finish an activity without any assistance from others, can be the representative of students' progress in productive skills. It showed me that Montessori could be beneficial method for my class. For example, in case of the sand tray, two of my students can write some letters without my help.	Yes, my students speak more than before, for example, when they are working with an activity, they frequently repeat the name of objects, it can help them with memorizing the vocabulary and understanding their meaning	Their productive skill improved since they can work and produce English language independently and without pushing them.

Appendix T: Extracurricular Activities

Matching uppercase and lowercase letter:



Name Writing Practice

