USE OF VIDEO MODELING IN DEVELOPING SOCIAL SKILLS AMONG CHILDREN WITH AUTISM SPECTRUM DISORDER

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ABSTRACT

Children with Autism Spectrum Disorder (ASD) are poor in social interaction and following instruction. Most researchers of today focus on having the children to interact with toys to enhance their social skills, but not with other peers. This study was carried out to investigate the use of video modeling in developing social skills among children with ASD. The study uses single-subject design with multiple baseline graphs to examine the development of children's social skills. This study consists of three sequential phases: 1) Baseline, 2) Intervention, and 3) Maintenance. Results show that children with ASD have social interaction with peers after the video modelling, with 60 percent achievement among the three children upon the development of social skills with video modeling as compared to the achievement at Baseline Phase. The children were found to use more language and gestures in their social interaction with other peers. In addition, all three children also show improvement in following instruction, with an increment of 70 percent from the baseline upon going through video modeling. Most of the children can follow the instruction shown in the video and they even can help other peers to play correctly. The more the video is being played among the children with ASD, the more they can model the skills. The teachers also feed backed that video modeling was effective to teach social skills, and they wish to use video modeling to develop more skills among children with ASD. In conclusion, the use of video modeling can be helpful for children with ASD in their social interaction and following instruction. In addition, this study enables teachers to make evidence-based decision when choosing appropriate tool during classroom instruction.

PENGGUNAAN PEMODELAN VIDEO DALAM PERKEMBANGAN KEMAHIRAN SOSIAL KANAK-KANAK KECELARUAN SPEKTRUM AUTISME

ABSTRAK

Kanak-kanak Kecelaruan Spektrum Autisme (ASD) didapati lemah dalam interaksi sosial dan mengikuti arahan. Lazimnya, penyelidik masa kini memberi fokus terhadap interaksi kanak-kanak dengan alat permainan tetapi bukan dengan orang lain untuk meningkatkan kemahiran sosial mereka. Kajian ini menggunakan pemodelan video dalam mengembangkan kemahiran sosial kanak-kanak ASD. Kajian ini menggunakan reka bentuk subjek tunggal yang mempunyai pelbagai garis dasar untuk mengkaji perkembangan kemahiran sosial kanak-kanak tersebut. Kajian ini terdiri daripada tiga fasa berurutan: 1) Garis Dasar, 2) Intervensi, dan 3) Pengekalan. Hasil kajian menunjukkan bahawa kanak-kanak ASD mempunyai interaksi sosial yang baik dengan rakan sebaya selepas pemodelan video, dengan 60 peratus pencapaian dalam kemahiran sosial bagi ketiga-tiga orang kanak-kanak selepas pemodelan video berbanding dengan pencapaian di Fasa Garis Dasar. Kanak-kanak ASD juga didapati lebih mahir menggunakan bahasa dan gerak isyarat dalam interaksi sosial dengan rakan sebaya lain. Selain itu, ketiga-tiga orang kanak-kanak tersebut juga menunjukkan perkembangan dalam mengikuti arahan selepas penggunaan pemodelan video, dengan peningkatan sebanyak 70 peratus berbanding dengan pencapaian di Fasa Garis Dasar. Kebanyakan kanak-kanak boleh mengikuti arahan yang ditunjukkan dalam video, bahkan mereka dapat membantu kawan sebaya lain agar bermain dengan cara yang betul. Semakin banyak video dimainkan dalam kalangan kanak-kanak ASD, semakin banyak mereka dapat

mengembangkan kemahiran tersebut. Maklum balas daripada guru juga menunjukkan bahawa pemodelan video adalah berkesan untuk mengajar kemahiran sosial, dan mereka ingin menggunakan pemodelan video untuk membangunkan lebih banyak kemahiran di kalangan kanak-kanak dengan ASD yang menjawab soalan penyelidikan tiga.Penggunaan pemodelan video mampu membantu kanak-kanak ASD dalam interaksi sosial mereka dan mengikuti arahan yang diberikan. Selain itu, kajian ini juga membolehkan guru membuktikan bahawa pemodelan video boleh dijadikan sebagai kaedah pembelajaran.

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LIST OF ABBREVIATIONS

ASD : Autism Spectrum Disorder

VM : Video Modeling

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The Autism Society of America defines autism as a complex of development disabilities that typically emerge during the early year of life and is the result of a neurological disorder that affects the normal functioning of the brain, impacting development in the areas of social interaction and communication (American Psychological Association, 1980). Bondy and Frost (1994) estimated that as many as 80% of children with Autism Spectrum Disorder (ASD) do not speak well with others. This impairment may be also the result of difficulties in interpreting or 'reading' the verbal and non-verbal social communications of other individuals or in communicating with others in ways that accord with normative expectations (American Psychological Association, 2013). According to Cafiero and Meyer (2008), 33-55% of children with ASD failed to develop the ability to communicate with others to meet their basic needs. This is manifested in difficulties such as the use of non-verbal behaviors (eye contact, facial expression, body posture, and gestures), ability to develop and build relationship with others.

In addition, children with ASD show difficulties in mastering attending skills. They struggle with focusing and paying attention when performing a task (Holifield, Goodman, Hazelkorn & Helfin, 2010). Children with ASD frequently use visual support systems in making sense of their environment (Van Laarhowen, Kraus, Karpman, Nizzi & Valento, 2010). Fifty percent of individuals diagnosed with ASD

do not speak but they are highly visual oriented, with the presence of strong visual spatial skills. (C.Lord &S.L Bishop, 2010).

Moreover, Children with ASD often show poor self-management skills (Wilkinson, 2008), social interactions (Council for Exceptional Children, 2014) and play skills (McConnell, 2002). According to Kanner (1943), the very first description of children with Autism Spectrum Disorder (ASD) was core deficit of the disorder being social impairment and children who lack some of these socially appropriate behaviors. According to Caldarrella and Merrell (1997) these broad dimensions are:

a) Peer relational skills,

b) Self-management skills,

c) Academic skills,

d) Compliance skills and

e) Assertion skills

Researchers have noticed that video modeling might be a useful technological device that can help children with ASD to enhance social skills. The features of technology including cartoon, pictures and sound effects might be attractive for children with ASD (Blood, 2011). Video modeling and video prompting are the main visual support systems for children with Autism (Dettmer, Simpson, Smith-Myle & Gahz, 2000; Rao & Gagie, 2006).

Video modeling has been successfully used in education of children (of a variety of diagnosis) on diverse sets of skills, including language, play, classroom behavior expectation, self-care and social skills (Tereshko, MacDonald, & Ahearn, 2010, Wynkoop, 2016). A number of studies had been carried out to investigate the use of video-based intervention (including video modeling) in teaching children with

ASD daily living skills such as teeth brushing (Charlop- Christy, 2000), purchasing skills (Ayres, 2002), sending a mail (Taubman, 2002), setting a table (Cannella, 2006), washing dishes (Sigafoos, 2007) and unpacking a school bag (Rayner, 2010). A portable hand-held technology video modeling intervention has include in the special needs children education (Ayres et al, 2013, Carnaham et al 2012, Macpherson, K., Charlop, M. H., & Miltenberger, C. A. 2015).

Video modeling encourages children to acquire targeted skills through observation learning (American Psychiatric Association, 2013, Wong et al., 2015).). Video modeling intervention involves a child watching video tapes of positive examples of adults, peers or him-or herself engaging in a behavior that is being taught (Odluyurt, 2013). Children with ASD learn systematically- they will only learn in a certain sequence.

1.2 Rationale of the Study

Children with ASD are particularly affected by the impairment of difficulties in social interaction skills (American Psychiatric Association, 2013). Many researchers had done a lot of the studies regarding the ways to develop children with ASD to build up their social skills. There are a few studies which focus on the relationship between video modeling and social skills in children with ASD (Barnard-Brak, Ivey-Hatz, Ward, & Wei, 2014). However, so far these studies which use different types of method to carry out the studies have given different results.

Technological device has become an effective therapeutic tool in the occupational therapy field (Hayers, 2012). One of the technological devices was video modeling. It provides a visual model of targeted behavior or skill in a video recording and display while needed. Examples of types of video modeling are basic

video prompting video modeling, point-of-view, and video self-modeling. Video modeling takes advantages of the strengths of many individuals with autism as visual learners by recording appropriate target behaviors and showing the video to the individuals ((Besler & Kurt, 2016; Aldi et al., 2016). Most of the researchers emphasize on self-modeling and point of view modeling. In this study, we will be using video prompt which fewer researchers used in their studies.

Besides that, many researchers support that through playing, children with ASD may acquire many skills such as language skills, social competence, appropriate behaviors, fine and gross motor skills, memory skills, imagination, emotional control, and confidence (Bredekamp & Copple, 1997; Gitlin-Weiner, Sandgrund, & Schaefer, 2000; Sara-Cho & Spondek 1998; Besler & Kurt, 2016). Children with ASD should know how to interact with their peer or adult in different surrounding environments (Ginbury, 2007; Garcia-Albea, Reeve, Brothers, & Reeve, 2014).

1.3 Statement of Problem

Children with ASD have less opportunity to experience the play with their friends or siblings at home. This is because, children with ASD show limited social skills. Their play is rigid and lacks the complexity of normal developing peers (American Psychiatric Association, 2013). The ideas of play have been designed to social, language, and creativity deficits in children with ASD (Kasari, 2012). There is a lack of study which relates social skills (cooperative play) to children with ASD. Children with ASD have difficulties in playing cooperatively with their peers and in sitting in a group with others. Most of the children with ASD enhance their play skills through functional play, solitary play, imagination play, symbolic play, and pretend play

(Sancho, Sidener, Reeve, & Sidener, 2010). Most of the researchers focus on the play interaction of children with ASD with toys, but not with other children (Lifter, 2000). This means that children with ASD has limited chances for peer interaction and playing together.

Moreover, patience in their daily life routine is also one of the skills that children with ASD often fail to master children with ASD lose their patience easily. Children with ASD require more time to be trained to wait for their turn to do activities or play in a lesson. Children with ASD know how to follow instruction, but they have weak cognitive skills and emotional skills (Fragale, 2014). Children with ASD are encouraged to engage in social and play activities, and they should be guided to understand and follow the instructions before they learn to play with others. Children with ASD who lack guidance in following instructions or rules will suffer negative effects in their cognitive and social development.

Children with ASD often show poor communication skills (American Psychiatric Association, 2013), as they would prefer to have their own quiet time. They do not like to mix around with others. Children with ASD also show deficit in social interactions with others, thus they may have fewer opportunities to initiate social play (Koegel, Koegel, Frea, & Fredeen, 2001). Through developing social skills of children with ASD they can communicate and interact with others more confidently and building positive relationship within others. Most of the time, they are not taught on how to socialize with others. Most of the time, most focus was put to enhance children's speech and memory skills in their learning.

Many researchers used video modeling to enhance certain skills. To help children with ASD be attentive to the video and targeted behavior or skill, the

researcher had control the length of the video. According to Lee (2015), there are several studies did not mention the times of participant viewed the video models in a single session, so that it shown a unclear report. Hine and Wolery (2006) used videos less than 2 min in length; Tetreault and Leman (2010) included videos no more than 3 min in length; and Tershko, McDonald & Ahearn (2010) did not clearly report on the length of their video. Nevertheless, all researchers had shown repeated viewing of video models were a good ways to enhance targeted skills.

In Malaysia, there were some studies on software development and technology for children with ASD. Lahiri (2013) stated that during a testing of a technology- assisted intervention, the researcher mentioned that these may not be suitable for all children with ASD. A systematic review on the use of technology device in children with ASD has concluded that technologies devices did improved communication skills with visual aids but it did not provide evidence that children can apply the skills acquired in their daily life (Bartolome & Zapirain, 2014). So that, I believe that, through technology (video modeling) can be a new tools to carry social skills development among children with ASD.

Another study reported that the use of specially designed device games improved the social skills of children with ASD, especially after they played the games (Riaza&Sarah, 2013). However, some teachers might have a negative perception on the use of video modeling in their children in enhancing social play skills, and this is the reason we would like to find out the reflection of using video modeling in autistic child in this study. So that, we can prove that video modeling is an important tool to develop social skills among children in ASD.

ASD children learn through steps by step, some teachers apply backward

chaining in developing children's skills. This gives the child an experience of success and completion with every attempt following step by step. If through video modeling, we can works faster to than the backward chaining. Children can watch the video modeling and apply the skills. It takes shorter times to apply the skills too. That the reason that the use of video modeling is important to improve skills among children with ASD.

1.4 Purpose of the Study

To help children with Autism Spectrum Disorder (ASD), this study aims to use video modeling to enhance children's development skills. Video modeling approach have been shown to be effective in supporting children with ASD (McCoy & Hermansen, 2007, Bellini & Akullian, 2007) and adults with developmental disabilities (Goodson et al., 2007). Adult will show a video repetitively to the children with ASD until he or she successfully develop the social skills with their peers. The more a child practices through the video modeling, the more their social skills are improved.

To help those children with ASD to get to know how to follow instruction and apply in their daily life, adult should set rules and regulation in the class. It is important for children to be able to follow instructions. It helps children to obey and function effectively in all different environments like home, kindergarten, park, school, or mall. If a child struggles in following instructions this would have big issue on his/her ability to work on a task. There were a lot of report mentions that children with ASD very difficult to obey classroom rules, share equipment and cooperate with classmates (Pavri & Hegwer-DiVita, 2006). Rules should be mentioned and reminded frequently, so that children will remember their responsibility as a student to follow the instructions and rules regulation.

To help those children with ASD know how to social interact with others. Many researches had used video modeling to enhance children with ASD to develop their social communication skills (Johnson M., 2013), hand writing (Gerde, H.K., Foster, T. D., & Skibbe, L. E., 2014), social skills (Vandermeer, J., Beamish, W., Milford, T., & Lang, W., 2013), and educational environment support (Watts, L., Brennan, S., & Phelps, R., 2012). Video Modeling is one of the methods used to help children with ASD to master a skill. In view of the deficit in focusing and following instructions in learning environment among the children with ASD, video modeling method has been used in getting their attention by allowing them to imitate the model and enhancing their social skills. This will enable children with ASD to have a model to imitate while learning certain target skills. According to Ingersoll (2013), by using the video modeling (technology devices) we create a safe environment for the children.

Parents are the first person that attach with the children since they are born. And teachers are the first person to guide them and teach them. They are very important for the children with ASD. They should know get more input the help their children in developing skills. Through the video modeling, it helps parents or teachers have an idea by using video modeling to enhance children social skills.

1.5 Research Objectives

The objectives of the study are based on the rationale and the problem statement. To achieve this research's purpose, the objectives of this study are as follows:

a) To examine the effectiveness of video modeling in enhancing social interactions among children with ASD;

b) To examine the effectiveness of video modeling in enhancing the skills of

following instructions among children with ASD;

c) To gather feedbacks from the teachers of children with ASD in using video modeling in teaching social skills.

1.6 Research Questions

The corresponding research questions in this study under each of the objectives are:

a) How effective is video modeling in enhancing social interactions among children with Autism Spectrum Disorder?

b) How effective is video modeling in enhancing the skills of following instructions among children with Autism Spectrum Disorder?

c) What are the feedbacks from the teachers of children with ASD after using video modeling in teaching social skills?

1.7 Hypothesis of the Study

The hypothesis of this study is: the use of video modeling to educate children with ASD for a period of time will enhance the autistic child's social skills. Children with ASD will acquire better social skills such as to communicate with peer, to play with peers and to follow teacher's instruction. Children with ASD will have the confidence to talk with the people around him, not only family, peers and teachers. Children with ASD will be able to start a conversation with peer confidently after undergoing training from video modeling. ASD children will be able to follow steps-by-steps instruction given, in order to achieve the required learning skills.

Besides that, teachers have an idea on how to teach children with ASD. Children will enjoy learning social interaction and obeying direct instruction through the video modeling. Teachers will agree that using video modeling will enhance the social skills in children with ASD. Teachers will continue to use this tool to develop

more skills in children with ASD. Teachers may also recognize used of video modeling as a method of teaching aid in children with ASD.

Moreover, single subject design will be using to conduct in this study. Why we choose to use single subject design in this study it because that we would like to get an accurate result from the study. From the result on single subjects design, we believe that it would show the accurate results for the study.

1.8 Significance of the Study

This study enables the children with ASD to develop their social skills and follow instruction skills throughout the video modeling. Children with ASD have an ideas or method to learn new skills or develop their skills. Video modeling can show a clear instruction to lead the children with ASD develop social skills.

Besides that, this study also enables special need teachers to make evidence based decision when choosing appropriate equipment for their student or children to enhance particular skills. Their choice of choosing the equipment appropriately should be according to the needs of the children with ASD. Some teachers might have doubt in choosing the appropriate learning materials for the children. Thus, from this study, video modeling will be proven as one of the appropriate tools in enhancing social skills among children with ASD.

Furthermore, to the researcher's knowledge, there are very few studies on video modeling used to enhance social skills conducted in Malaysia of children with ASD being. Hence, it is important to conduct video modeling to enhance social skills among children with ASD to fill in the gap of the research in this area. With the findings obtained from this study, there will be a way to help children with ASD to learn to enhance their social skills in following rules and communicate with others.

Moreover, the present study intends to bring some awareness to the parents about the importance of video modeling as a tool to enhance social skills among children with ASD. The parents can use video modeling by searching or create a video to develop the children lacking skills. A new idea for the educator and parents of the important of video modeling can develop skills among children with ASD.

Besides that, this study also giving us a new idea of using video modeling to develop social skills among children with ASD for the state holder. We know that children with ASD facing problem with social skills. They feel hard to play or communicate with others, either following instruction. From this study, it can provide the ideas to state holders who plan the children with special need children curriculum. We can help children to solve their problem, on difficulties in communicate and follow instruction. Even that, using video modeling can also develop others skills. It could be on the language development or social emotional development.

1.9 Limitation of the Study

The sample of children and teacher is relatively small and specialized. The data collected in this study is qualitative and deal mostly with teachers' and children's ability to follow instruction and enhance social interaction with peers to master the particular skills. During the observation, it does not get any feedback of the peer during the observation goes on. Peer is only the support to carry out the activity smoothly throughout the study.

In view of this is a single subject research, there is a limitation in numbers of children involved in this study. Every class have different amount of children, while we carry out of the lesson we have to fix the number of children while playing

the games. Therefore, the result of this study should not be used to generalize on other children of the class.

In this study, there is another limitation which is the children's age. The study's focus in the children's mentality age which between age group from 9-11 years old. This study does not evaluate them on the others development such as physical development or chronological age. It helps to identify that the children who are chosen have a same ability.

Next, the limitation in this study is the modification of the lesson. Individual teacher will be given the manual guideline how to carry out the lesson in the class, but there is a limitation to limit each of the teacher's teaching method. The lesson will extract and implemented in isolation and at times, in a different order than prescribed.

Moreover, the setting of the classroom also will be a limitation during the study. This will affect the result of the study. Children are easily distracted by things such as teaching material around the room, peers, facilities and others. It's hard to predict the child behavior in the classroom.

Furthermore, another limitation of the study will be the skills that teacher going to develop among the children through video modeling. In the inclusive classroom setting, there are different types of children who place together to learn. And the video modeling which prepares by the teachers would not fit all the children in the classroom. It may only help certain children in enhancing certain targeting skills. So, video modeling could not develop skills for all the children in the same class.

1.10 Operational Definitions

1.10.1 Video Modeling

Mc Coy and Hermansen (2007) had identified and described Video modeling includes certain types of modeling such as adult modeling, peer modeling, video-self modeling, and point of view modeling by using portable devices, such as smartphone, video recorder, camera and others. This video is focuses on peer modeling (Macpherson, et. al.2015).

In this study, video modeling refers to a video recorded using the technological devices (e.g. camera and video recorder), and this video is edited using iMovie Maker. The video is taken with a help of a professional videographer and being edited by the videographer. The total duration of the whole video is 2-3 minutes. The video will be recorded in parts. Each part of short video lasts less than a minute. Subtitle will be added into the video part by part and played together with the voice narrator.

The video will be acted by a group of unfamiliar children which do not have any relationship with the children with ASD and narrated by an adult. The narrator will give instructions to the children with ASD as the games commence. One of the children in the group will be an actor to show the other participant what they should do in the play through the recorded video. After watching each part of the video, participants should follow and do what is show in the video. In the play, other actors represent the friends of the participant. The video shows clearly what should they do and how the games will be carried out. The same video will be shown to all the three children with ASD in the study.

The video is divided into four parts. Each part will be shown to the

participant. The first part and last part of the video are to enhance the skills of social interaction- which develop the children's skills – to greet others in daily life and invite friends in their play and hold peer's hand in play. The second and third part of the video shows on how to play the games, and how the participants have to follow the instructions example, run in a circle, tap his/her friend's head and sit down. The video shows how the games are carried out steps by steps to the participants.

In this study, video modeling refers to a short video that showcases the play achieves for the enhancement of social skills among a group of primary school students.

1.10.2 Social Skills

Children with Autism Spectrum Disorder have problems in non-verbal communication behaviors used for social interaction such as impairment in social use of eye contract, body language, facial expressions, and gestures (American Psychiatric Association, 2013). These deficits lead to difficulties in developing and maintaining relationships in all contexts due to an inability to take another person's perspective to understand others' emotions, difficulties in adjusting behavior to social contexts, and an absence of interest in others (American Psychiatric Association, 2013).

Social interaction plays a crucial part in life. It supports participation in education, play/leisure activities, employment, and living with others. The lack of social interaction skills can have negative effects on relationships and overall quality of life. This study hopes to enhance the social of the children with ASD to invite peers to play and also to encourage them to communicate with their peer through the use of video modeling.

During this study, one of the aims of the video shown to the children with ASD is to enhance the children to follow the instruction of the games steps by steps. It is divided into two parts, in which the first part it shows the participant that they should run and chase his/her peer. While the second parts the video shows the participant who fails to chase and follow the instruction for the next step.

1.10.3 Children with Autism Spectrum Disorder (ASD)

Autism Spectrum Disorder (ASD) is a developmental disorder, in which effected individuals have impaired communication, social interaction, restricted, repetitive patterns of behaviors, interests and activities (American Psychiatric Association, 2013). For individual with autism, development of early social-communication skills is an integral step forward reaching their academic and social potential (Sigman and McGovern, 2005). This study aim to help children with ASD learn to social interacts with others. At least, children with ASD could learn words to communicate and would be able to understand simple instruction.

Children with ASD also show difficulties with attending skills, such as focusing and paying attention (Holifield, Goodman, Hazelkron & Helfin, 2010). Children with ASD will be involved in this study, and it is expected that the children can follow the instructions in the study.

In this study, ASD refer to children with mild-moderate high functioning autism, with some speech ability, and shows interest in games and have little bit interaction with peers.

1.11 Summary

Chapter 1 describes the background of the study, which identify the use of video modeling in autistic child to enhance social play skills. Besides that, this chapter also

shows the impact of video modelling in children's response on their social emotional behavior. This study also focuses on the teachers' feedback on the use of video modeling with their autistic child to develop their social play skills. Furthermore, it also mentions the problem statements, purpose of the study, objective of the study, research question, significance and also the limitations of the present study, which justify the need of the present study to be worked on.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Video modeling has been used successfully to teach children with a variety of diagnoses a diverse set of skills, languages, play, classroom behaviors, expectations, self-cares and social skills (Baker, 2009; Tereshko, MacDonald, and Ahearn, 2010). Many researchers had used iPad video modeling to enhance children with ASD in their domain development, such as cognitive (classification tasks), language development (reading), social development (interaction with peers) and functional living skills (toilet training).

2.2 Related Theories

The most related theories that be use in this study is Vygotsky's Social Development Theory and Bandura's Theory. Both theories were on the social development growth of ASD Child.

2.2.1 Vygotsky's Social Development Theory

According to Vygotsky's Social Development Theory, social interaction plays a fundamental role in the process of cognitive development. Vygotsky's Theory did not focus on an individual child. On the other hand, it focused on the child as a product of social interaction, especially interaction with adult. This theory focused on dynamic interactions rather than the child himself.

Vygotsky (1962) mentioned that children learn through their interactions and communications with peers. He examined how social environments influence the

learning process among children. He suggested that the learning process takes place through the interactions of the students with their peers, teachers, and other experts.

Another principal of Vygotsky's Theory is "Zone of Proximal Development". That means, adults can create a learning environment that provides the best conditions to help improve a learner's ability to interact with each other through discussion, collaboration, and feedback. Adult gives appropriate assistance to the learner to accomplish a task. Scaffolding requires that an adult show example how to solve problem, while controlling the learner environment so that learner can take step by step expanding their knowledge without excessive frustration.

2.2.2 Bandura's Theory

The social learning theory of Bandura (1977) utilizes some of the basic principles of behaviorism and adds an emphasis on observational learning to a better explanation on human learning. Bandura provided the classic evidence that learning can occur through observation and imitation (Bandura, Ross, & Ross, 1963). Modeling has been found to have several kinds of effects on observers.

According to social learning theory, children are more likely to learn from an observed behavior when they perceive the model as a powerful character with status and influences. Children with ASD have the opportunity to code and rehearse the behavior symbolically and act it out. People's behaviors can be major effect from the awareness and expectation on future reinforcements and punishments. The results shown children had changed their behavior through positive reinforcement.

According to Bandura, a model can be a living being or a symbolic character (an athlete, a character in a book, television, video recordings or movie).Bandura famous experiment, which observe children learning and imitation

behavior. The result of the experiment shown children imitated the exact behavior from the violet model tended.

2.3 Theoretical Framework

Figure 2.1 show the theoretical framework of Lev Vygotsky's Theory and Bandura's Theory in this Study.

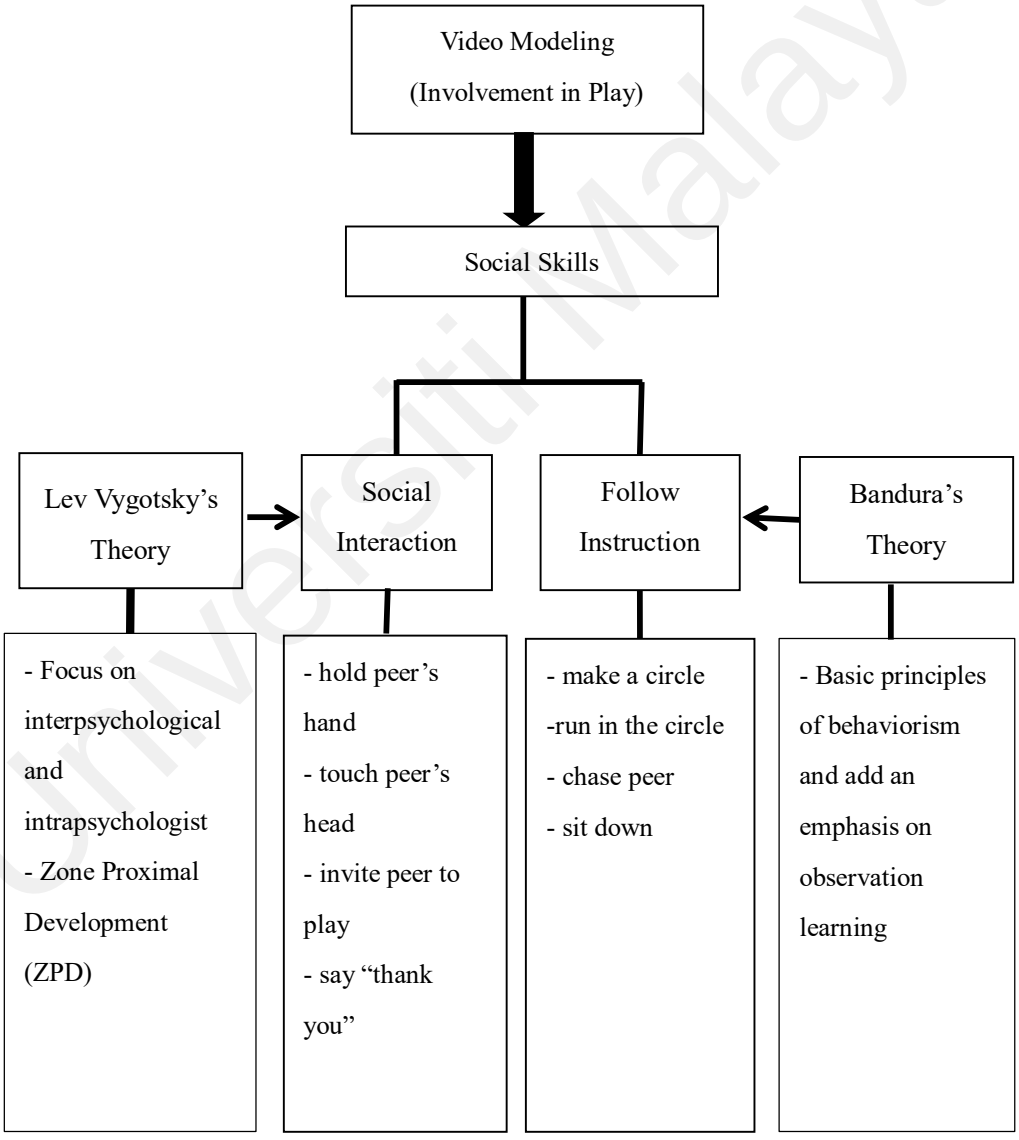

Figure 2.1. Theoretical Framework of the Study

2.4 Video-Modeling

Children are being taught to watch the video modeling to provide opportunities to engage in the modeled behavior(s). Recently developed portable hand-held technological devices are being used in video modeling procedures.

Past research has shown that video modeling have helped children with ASD to increase their thinking skills (Plavnick & Feren, 2011), conversational speech and variation in conversational speech (Charlop, 2009; Charlop & Milstein 1989; Pierce, Paredes, Kisacky, Ingersoll, & Schreibman, 2011), solitary and reciprocal pretend play actions and verbalizations (MacDonald, Clark, Garrigan & Vangala 2005; MacDonald, 2009), and social skills (Wynkoop, 2016). Video modeling also helps individuals who have deficits and /or limitations in communication, handwriting, fine and gross motor skills, visual perception, cognition, coordination, academics, and independence tasks (Amerih, 2013).

Video modeling also refers to a demonstration of an appropriate behavior such as being attentive and on-task. Coyle and Cole (2004) showed three students a video entitled “working very well”. This video showed the participating students how to work in a classroom task and how they should behave in a class. The video modeling provided the students appropriate behaviors for imitation was successful in improving social skills.

From the study where children with ASD were taught to check the spelling of word, two children with ASD who watched the point-of-view video modeling clips on an iPad showed improvement in their spell-check performance (Kagohara, D.M, Sigafoo, J., Acmadi, D., O’Reilly, M., & Lacioni, G. 2012). They can spell the words that were given to them by their teacher and parents. The children can spell

out almost 80 percent of the words throughout the whole experiment.

As suggested by Shrestha, A., Anderson, A., & Moore, D. W. (2013) for children who have problems with imitation of extended videos, as skills are requested, more segment of the behavior chain are added to the video until the full behavior sequence is presented. Consistent with Bandura's (1969) social learning theory, video modeling is an intervention that can be used to help children in observational learning and is well suited to address the educational needs of children with autism.

Video feedback is also another form of self-monitoring where a student is asked to perform an action he/she has viewed in a video (Odluyurt, 2013). Video feedback differs slightly from video modeling as it gives children with ASD feedback of his/her own behaviors and evaluating how he/she can improve (Deitchman, Reeves, Reeve, & Progar, 2010) after reviewing the video shoot. Adult will explain and correct children's misbehavior.

Moreover, earlier studies also have provided preliminary evidence that video modeling as a technology device have the potential to improve behavior and communication for student disabilities, especially autism spectrum disorder (Cihak, Fuhrenkrog, Ayres & Smith 2010; Kagohara et al, 2010).

From McCoy and Hermansen's (2007) study, whereby adult modeling were used in their research and has found that adults are effective model and adult modeling tend to respond quickly to training and direction. Bellini and Akullian (2007) conducted meta-analyses and concluded that video peer or adult modeling is as effective as video modeling in improving the academic, social and functional behaviors of individuals with ASD.

Buggey (2011) used video self-modeling on four children with ASD to facilitate their social initiations during playground time. The results were mostly positive, with two children exhibiting major treatment effects, one with questionable results, and one child being unaffected. But for some student with Autism Spectrum Disorder, using the student himself or herself or using the students peer as a model in video instruction has not been effective for improving their target behaviors (Cihak & Schrader, 2008; Marcus & Wilder, 2009).

Video modeling with others as models is one class of interventions that has frequently been explored in the literature. Video modeling was used to teach play skills across three response categories (having a tea party, shopping, and baking) to a preschool child with autism. Results shown video modeling intervention had lead the special need children to develop their verbal and motor responses during play. The video modeling teaching procedure was shown to be an efficient technique for teaching relatively long sequences of responses in the absence of chaining procedures in relatively few teaching sessions.

2.4.1 Benefits of Using Video Modeling

Thelen, Fry, Fehrenbach, and Frautsehi (1979) discussed the advantages of video modeling. First, video modeling can produce a variety of naturalistic settings that would be difficult in a classroom or clinic, using on a teaching method infrequently used in traditional settings. Second, with video modeling therapist, teachers and parents have greater control over the modeling procedure compared with in vivo modeling, because the videotape can be recreated until the desired scene is obtained. Third, there is the convenience of repeated observation of the same model, because the model does not have to be present for each presentation of the

videotape and finally, videotapes can be reused with other people, who means meaning more clients can be treated and this does not require any others additional therapy cost. With these advantages, video modeling may be a more worthwhile procedure to use than in vivo modeling.

On the others hands, according to Yasmin (2014), there are some benefit on the use of video modeling. The video recorded are reusable, it has the opportunity to be played repetitively to the children in enhancing multiple skills in one video scenario. Once it is recorded, it can be used as many times as needed. Autistic children are visual learners, naturally drawn to video and other visual inputs. Video modeling for children with autism is a natural "fit" for teaching all types of skills. Besides that, recorded video avoids teachers from making mistake during the class and confusing children while learning.

2.5 Social Skills Development

A school is social environments so in addition to academic skills, children and youth are learning how to live with others. Learning to socialize is especially important for children with ASD. Children need to know the fundamental principles of sharing, following instructions and problem solving through speaking to prevent physical conflicts. Children at risk in social skills may have more difficulty managing social interactions in schools and other environments. They may miss social cues that children with more mature skills might pick up. Social skills are important to one's personal life and career. As the difficulties and impairments in social communication and interaction are the primary characteristics for children with ASD, a lack of social skill can lead them to a social isolation or withdrawal situations.

2.5.1 Social Interactions

Children with ASD internalize information or knowledge that is socially or culturally transmitted. Children with ASD do not develop in isolation, but within a social and cultural context. Before that, teachers of children with disabilities might need to provide direct instructional strategies to help these children initiate activity, use materials appropriately, and make choices. So, social interaction intervention is one of the most critical interventions in the lives of children with ASD (Heward, 2013; Weiss & Harris, 2001)

2.5.2 Follow Instruction

Han Asperger (1991) reported that children with autism are individuals in the literature described as 'uncoordinated', 'relatively slow', and 'inaccurate'. According to Mostofsky and friends (2006), the poor performance in object manipulation, for example, requiring the manipulation of a ball, reflects that motor difficulties are not limited to imitation, but to a generalized praxis impairment to help those children with ASD.

Games with rules are the form of play associated with the concrete operational stage of Piagetian theory. This stage usually refers to children's involvement in more formal games, with rules that have been predetermined. Games with rules, according to the Piagetian description (Piaget, 1962; Rogers and Sawyers, 1988) encompass three levels. Firstly, rules were set to the related action that need to follow; secondly, that rules are set by adults and therefore no reason to change; and thirdly, that rules operate with the agreement of all participants, enabling rules to change if players agree.

The roles and rules enacted in children's play reflect and guide their

understanding of what is important in their social context. While children are very clear that they are playing, they can guide their peer and even point out to others the way of playing the games. The Vygotskian view of play suggests that children do not act entirely spontaneously within play. Rather, they are constrained by the social rules that apply to the roles adapted.

2.6 Autism Spectrum Disorder

Autism Spectrum Disorder (ASD) is one of the neuro-developmental disorders (Butchart et al., 2017). Children with ASD have problems in the social interaction, communication skills, repetitive and stereotyped patterns of behaviors, and interests of activities across multiple contexts (Besler & Kurt, 2016). ASD is a common lifelong neurological developmental condition characterized by qualitative impairments in the social interaction and communication, engagement in routines and rituals, and hyper sensory or hypo sensory sensitivities (American Psychiatric Association, 2013). Autism also can cause intellectual disability, physical health issues, and difficulties in motor coordination and attention. The term "spectrum" refers to the wide range of symptoms, levels of impairment or disability, and impairment of skills exhibited in children with ASD (National Institute of Mental Health, 2011).

Individuals with Autism Spectrum Disorder are diagnosed with a few criteria (American Psychiatric Association, 1994). Firstly, the individual is clinically significant, has persistent deficits in interaction and social communication, as in lack of nonverbal or less verbal communication in their communications and social interactions with others. The individual is lacks of social interplay. Individual can't give and take during their play either on asking question and work out in teacher's

instruction.

Secondly, the symptoms of individuals with ASD may emerge during their early childhood years in which individual fails to build and keep the relationship with their peers according to normal developmental levels (American Psychiatric Association: DSM-V Development, 2013). Children with ASD do not know how to start a conversation with peer and they choose to be quiet.

Lastly, the individual with ASD are likely to have restricted, repetitive patterns of behavior, interests and activities. The individuals may have stereotyped motor or verbal behaviors, or unusual sensory behaviors (Spain, Sin, Linder, McMahon, & Happé, 2018). They will only do what they like to do and hardly try new things or change new schedules. Its take times for them to enhance new patterns of behavior, interest and activities.

Most researchers had focused on the problem of communication, socialization and cognition in children with ASD. There are many effective instructions for children with Autism Spectrum Disorder which are usually highly structured, using a directive approach based on basic principles of behavioral psychology for analyzing tasks and building their logical foundation (Simpson, 2004). However there is a lack of intervention programs to develop social play skills among children with Autism Spectrum Disorder.

Besides the motor behaviors, other characteristics that are frequently seen among children with ASD are extreme fascination or preoccupation with objects with limited areas of interest. ASD Children may play with the same objects for hours or show extreme interest in a particular object. They may also show reluctance in having changes in their routine or surrounding environment. Autism Spectrum

Disorder children often insist on the preservation of sameness and have problem with change and transition (Adreon & Stella, 2001; Myles & Simpson, 2001).

2.6.1 Characteristics of Autism Spectrum Disorder

Autism spectrum disorder (ASD; i.e. Asperger syndrome, autistic disorder or pervasive developmental disorder–not otherwise specified) is defined as qualitative impairment of social interaction, qualitative impairments in communication and restricted and repetitive stereotyped patterns of behavior, interests and activities (American Psychiatric Association, 2000). It ranges in severity from a handicap that somewhat limits an otherwise normal life to a devastating disability that may require institutional care.

For children with Autism Spectrum Disorder, it can be described as a neurological/mental disorder that includes symptoms like lack of social skills, little to no communication skills, lack of ability to report internal physical and emotional experiences, irritability, tantrums, aggression, self-injury, rigid routines, repetitive behaviors, stereotyped/restricted patterns of interest, sleep abnormalities, sensitivity to sensory stimulation, involving auditory, visual, vestibular, tactile, and oral sensory domains (Gabriels & Hill, 2007).

Social and communication difficulties largely affect the context of learning, at least at school, but difficulties in being flexible have a profound effect on learning itself. The effects of inflexible thinking that have been noted include problems in attending to relevant aspects of a problem or changing focus to accommodate changes in a task. In the same way they can learn lists of facts but do not seem to connect them with existing knowledge patterns or even to be aware of what they know, until it is cued. They tend to learn set routines and even set responses to

questions, which they cannot modify and become upset if required to do so.

The principle is to help children with Autism Spectrum disorders to become more aware of what they know and to provide ways of accessing alternative solutions. Thus the pattern of a rigid set of solutions to problems needs to be broken and the child needs to learn several ways to tackle problems. Word processing not only enables presentable work at the end but also encourages a process of drafting which is a very good device for teaching flexibility.

2.6.2 Intervention for Autism Spectrum Disorder

Overall, the goal of intervention is to optimize the functional independence of the individual with ASD by minimizing the core ASD features. Another important goal of intervention is to facilitate development and learning, including promoting the social skills of the individual. Another goal of the intervention is to reduce restricted interests and stereotypic behavior and to eliminate maladaptive behavior.

No medical treatment, however, can eliminate ASD symptoms but medical treatment may be necessary to reduce symptoms from comorbid psychiatric disorders. In principle, the developmental level of the person with ASD should be determined to adapt the demands from the people around the person with ASD and to adjust the environment to potential sensory problems of the person with ASD.

In addition, the quality of life and well-being of the person with ASD is dependent on support from the family and for that reason, education and support of families having persons with ASD need to be prioritized in the plan for intervention. The guidelines are in general very thorough but the guidelines where evidence-based practice is systematically presented are recommendable.

The National Institute of Clinical Excellence (NICE) guidelines

recommend no specific instrument in the diagnosis of autism. It is widely believed that there is one gold standard instrument for the diagnosis of autism, and this leads to many children on the spectrum being excluded from autism and from the autistic diagnosis, with great distress to the children themselves, to their families and the schools that they attend. This then excludes them from the specific autism services, and unfortunately, this happens in many parts of the world.

2.7 Appropriate Prompting

Prompting is a term which describes the ways used to encourage children to work or complete a task. Often, a child needs guidance to complete a skill. When a ASD child does not understand the response you are looking for, it is appropriate to prompt him. There are six ways of prompt which can help ASD children to acquire target skills namely: 1)Independent, 2)verbal prompt, 3)gesture prompt, 4)modeling, 5)partial gesture prompt and 6)full physical prompt (National Professional Development Centre on ASD, 2010). Prompting can be applied effectively with ASD children, to improve his or her cognitive skills and communication skills across the age range.

1) Independent: Children with ASD able to perform task him/herself without any one from adult.

2) Verbal prompts: Teacher/Practitioner makes statements that help children with ASD to acquire target skills (e.g., what is your name?).

3) Gesture prompts: Teacher /practitioners make movements that cue children with ASD to learn a particular behavior or skill. (e.g., pointing to the top of the paper to indicate where the child with ASD needs to write his/her name).

4) Model prompts: Teacher/Practitioners perform the target skill on behavior.(eg:

showing how to perform a task.)

5) Partial Physical prompts: Teacher/Practitioners guide by with moving their body parts towards the target (e.g., holding the hand to write the first word and children with ASD move forward to write the others.

6) Full Physical prompts: Teacher/ Practitioners can be verbal if they skill being taught is verbal, or they can be motor responses if the skill being taught involves moving a body part.

2.8 Past Studies in Malaysia

For the past few years, there were few studies in Malaysia which focus on enhancing social skills and following instruction among children with ASD. One of the studies was conducted among the children with ASD, with the use of a specially designed computer game called "Find Me". The study shows that playing game regularly were improve performance of children with ASD (Riaza& Sarah, 2013). One of the major reasons behind the use of technology and multimedia devices to assist interaction with children diagnosed with ASD is that they have shown fascination with "visual stimuli" such as computer applications, games, and videos.

Another study on use of social stories in encouraging social interaction among children with ASD had been carried widely and had shown positive improvement and success. (Sansosoti, PowellSmith, & Kinkaid, 2004). If the social story was come together with prompt, it would bring out more successful for the child with ASD. According to the research done by (Crozier & Tincani, 2007), when verbal prompts were added in the intervention, the subject demonstrated higher levels of the target behavior compared to baseline and the Social Story alone condition. Social story that are used together with other interventions have proven to

be more effective (More, 2010; Hutchins & Prelock , 2013; Tanriady, 2013).

Lee & Lee (2015) reported that three children with autism in a Malaysian preschool had improved their social skills by creating peer-mediated strategies and environmental arrangement during the snack time. This study will evaluate using single-subject multiple-baseline design across participants. Results had shown the important combination in social interactions and verbal interactions for the children with ASD which children sustained high level of performance. Teachers' interview data also showed positive perception of the effects in intervention package on peer-mediated strategies and environment arrangement.

2.9 Conceptual Framework of the Study

The purpose of this study is to identify the use of video modeling developing social skills among children with Autism Spectrum Disorder. In this study, Figure 2.2 is represented in the conceptual framework. The main idea to enhance the social skills of children with ASD by using video modeling, its divide into two parts of social skills, which are social interaction and follow instructions.

Social interaction enhances children's listening skills and verbal skills. Children have to listen and understand the teacher's instruction through video modeling to develop four items of skills (example, inviting peer to the games, hold peer's hand, touch peer's head, invite a peer to play, and say thank you). Children have to apply the four items after watching the video. The simple social interaction between children was welcoming in games, say "thank you", and gesture touch (tap on his's friends head). All this movement had proved that children were developing their social skills. Children even learn simple words like "play with me", and "thank you". Those are common words that use by the children on their daily life.

The second targeting in social skills among children with ASD was follow instruction. Follow instruction, which after the children watching the video and them able to follow the step on games. Throughout the games, children will enhance the skills of make a circle, run in the circle, chase peer and sit down. This is a non-verbal learning social skills. This study can help some of the ASD children to follow instruction.

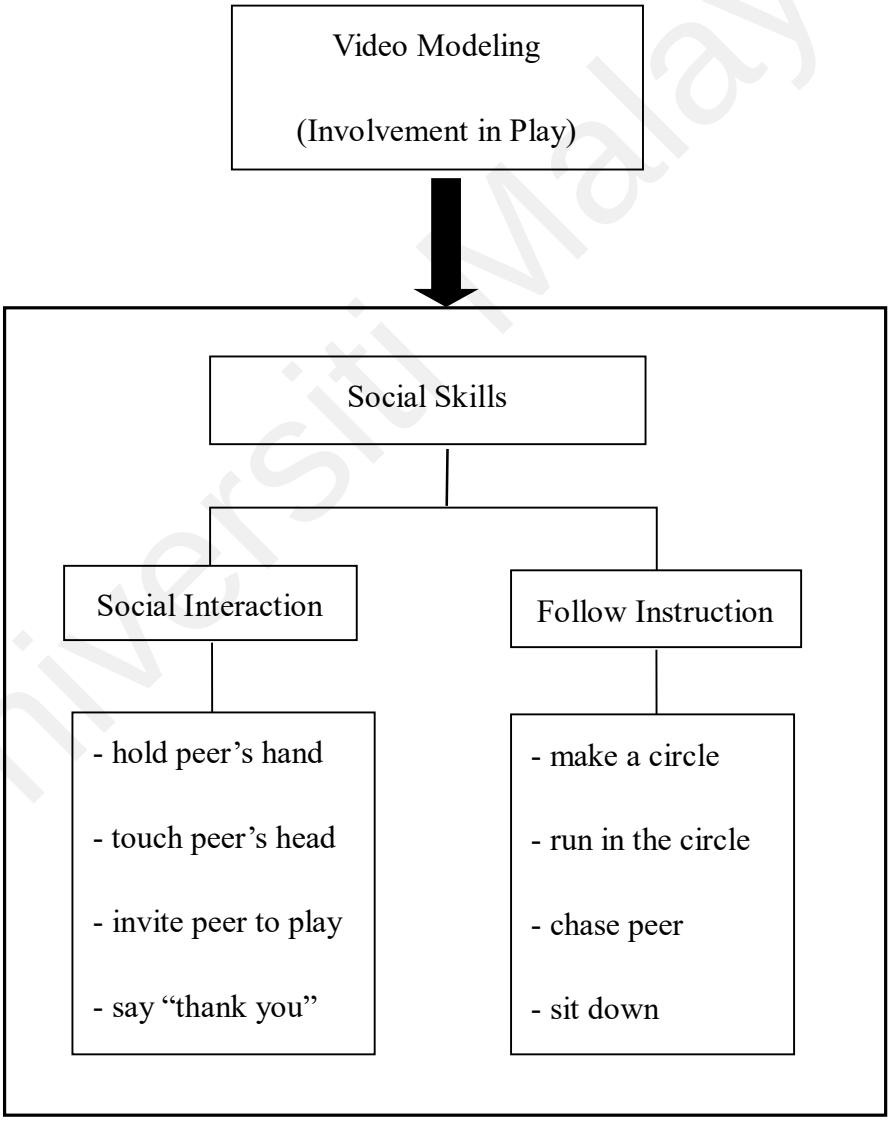

Figure 2.2. Conceptual framework of the study

2.10 Summary

Vygotsky's Social Development Theory and Bandura's Theory provide a theoretical basis for this study. The existing relevant literature is discussed under the heading based on the essential element. From the past studies and theories, we observe how important of the social skills among the children with ASD. Children with ASD only developing practical life skills, which their major problem also in social skills. Moreover, we get to know about the benefit of video modeling enhancing skills. Many researchers had use video modeling in developing skills, from past studies, it can identify that video modeling was a good tool. Throughout the studies, we decided to use video modeling method to develop social skills among children with ASD. The next chapter will address the methodology used in the research.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This study aims to investigate the use of video modeling in the development of social skills among children with Autism Spectrum Disorder. In this Chapter, the methodology to be employed to achieve this aim is highlighted. Outlines of this chapter include research design, descriptions of settings and participants, descriptions of materials and instruments, procedures of the study, as well as data collection techniques. And in the end of this chapter, data analysis and ethical limitation are discussed.

3.2 Research Design

The research design for this study will be by way of experiment in single subject research. There are three steps consisting of collecting data through baseline, intervention and maintenance. Single subject design allows a researcher to study a participant's change in only one behavior sometime after a treatment. According to H. Millan and Schumacher (2010), every analysis will be carried out according to an individual's behavior change.

The data will be collected through qualitative and quantitative methods in this study. In terms of qualitative data, observation of participant will take place in data collection on social skills in Autism Spectrum Disorder during intervention phase. In addition, semi-structured interview will be carried out after the maintenance phase of the study.

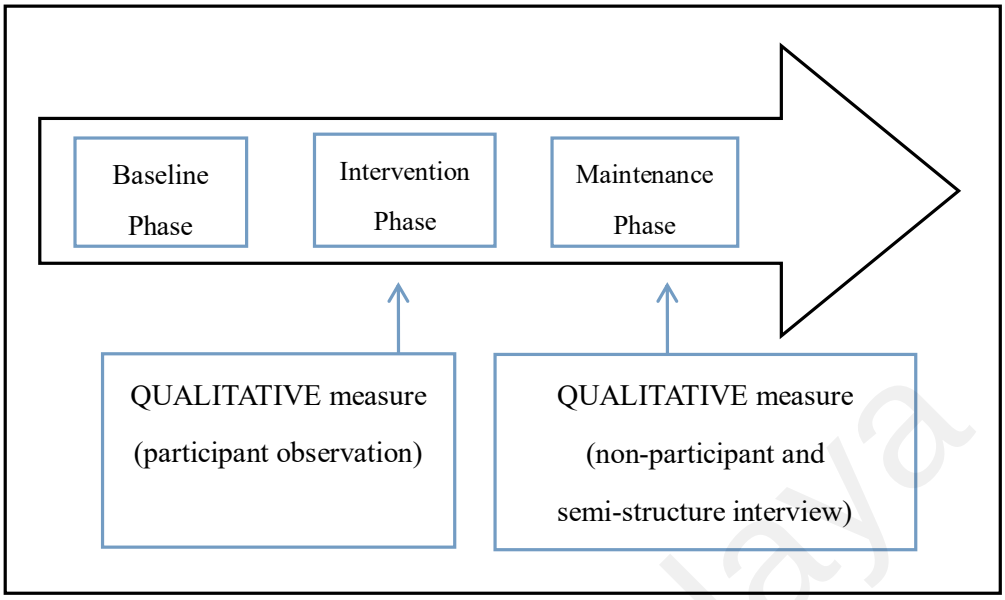

Figure 3.1. Single-subject research design with two supplementary qualitative measures.

3.2.1 Single-Subject Research Design

The single-subject design, using way, or single-case research design has been used since the 1960s (Wolery, Dumlap, & Ledford, 2011). The research design is commonly used to study change of behavior in an individual following some treatment and has been applied in many educational studies, particularly those relating to children with disabilities (Gay, Mills, & Airasian, 2006). A large majority of social skills-related interventions for children with autism has applied the single -subject research design (Avroch, 2012; Gillis & Butle, 2007; Wang, 2013).

One solution to this study is to use a multiple-baseline design. In one version of the design, a baseline is established for each of several participants, and the treatment is then introduced for each one. The key to this design is that the treatment is introduced at a different time for each participant. The idea is that if the dependent variable changes when the treatment is introduced for one participant, it

might be a coincidence. But if the dependent variable changes when the treatment is introduced for multiple participants especially when the treatment is introduced at different times for the different participants then it is extremely unlikely to be a coincidence.

Employing three baselines with three groups of participants, this study consists of three sequential phases: baseline, intervention and maintenance. The intervention phase is further divided into two stages: intervention training and intervention-fading. Quantitative data will be collected across all phases using non-participant observation. Additionally, qualitative data will be gathered through participant observation during peer social initiation training in the intervention phase. Qualitative data will be also collected through teacher interviews after the maintenance phase.

3.3 Setting of the Study

Researcher would select a setting based on the following criteria:

• An enrollment of at least three children with Autism Spectrum Disorder

• Consent to participation. (Appendix B)

This study will be carried out in a special needs center in the Klang Valley and provides integrated special education programs. There are 4 integrated classes in the school. The activity space is located on the ground floor of the premise. One teacher is managed the class. Observation will be carried out at the school's activity space. The compound will also be the activity space in which the games were conducted. The space is large enough for children to run and carry out the activity. Every day, teacher will spend 30-40 minutes to conduct the intervention class.

3.4 Participants of the Study

In single-subject studies, clear description of participant selection criteria and participant characteristics are fundamental requirements and facilitates replication of future studies. In this present study, three children with Autism Spectrum Disorder and three teachers (who are their class teachers) will be involved in this particular study. Informed consent will be obtained from the parents and school management prior the beginning of the study (refer to consent forms in Appendix B & C and letter of conducting research in Appendix L). Verbal consent will be obtained from three teachers who will be participating in this study. Codes will be used in tagging the participants as for privacy purposes.

3.4.1 Children with Autism Spectrum Disorder

The criteria of the children with Autism Spectrum Disorder in this study are:

• Children diagnosed with mild to moderate and high functioning autism

• Children with some speech ability (know some simple words such as go, come, sit down, and others, with understanding to teachers' lesson in school).

• Children with interest in games either play with computer games, technology device and physical play.

• Children with some interaction with others (e.g., able to seat with others, lining up, greet teacher or friends while attending school).

With the agreement from both the parents and teachers, the background data of the children will be collected from their Individualized Education Programme (IEP) obtained from the school, also information from the head teacher.

(a) Child A

A is 10 year-old boy, who was diagnosed with Mild Autism Spectrum Disorder by a

child psychiatrist (Appendix N). He is able to use some simple words in his conversation, such as “bye”, “hi” and “Good Morning”. He also has some speech ability. He understands simple questions and replies with short answers- single word answer - “yes” and “no”. Besides that, he also has play skills. He likes to play computer games, but most of the time he play alone at the side of the classroom. Besides playing with the computer games, he loves to draw. He will take out his art block during his free period and draw cars. He is able to follow instructions, if teacher works closely with him.

(b) Child B

B is a 12 year-old boy. He is a known case of mild Autism Spectrum Disorder diagnosed by the psychiatrist (Appendix O). He is able to answer teacher’s question and shows good support in school lesson. He has speech ability (single words in speech) and has the ability to complete his homework by himself. He loves to play with blocks. Most of the time, he plays blocks alone at the side of the corner. He can follow instructions and rules but at times he talks loudly. He never fails to greet all the teachers in the morning. He cannot sit still, love to move around of the classroom.

(c) Child C

C is a boy, who is 9 years old. He was diagnosed with mild Autism Spectrum Disorder by a psychiatrist (Appendix P). He is able to follow some simple instruction given during the study. Sometimes, he needs assistance from the teacher. He can obey simple commands (to sit down and line up) while being asked to do so. He is able to follow instructions but also need attention from teacher. He loves to play with his own toys and he like his toys to be neat and tidy. He can use simple words such

as “Good Morning”, “thank you”, and “yes” in his conversation with others.

The three children supportive documents are included in Appendix M. The table below shows the overview of three participant children’s background information and their social skills diagnosis based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V). The diagnosis result was taken by their class teacher.

Table 3.1

Overview of Children’s Background Information and Their Social Skills

Child	Gender	Age	Diagnosis	Social Interaction	Follow Instruction
A	Male	10	Mild Autism	“yes” or “no”	sit with friends, play computer games
B	Male	12	Mild Autism	reply in single word	Play block, talk to himself
C	Male	9	Mild Autism	reply in single word	love to play toys, follow instruction

3.4.2 Peers

Five typically developing classmates/ peers of the target children were identified by class teachers for participating in the study. Their ages range between 8 to 15 years old. The class teacher assisted is informing the children’s parents about the study and seeking their consent. With reference to Strain and Odom (1986), the following criteria were observed in selecting peers: (1) regular school attendance; (2) compliant behavior; and (3) no negative social history with the target child (i.e., no

previous fights or bullying episodes). Selection and grouping of peers was based on teacher's advice.

3.4.3 Teachers

Three teachers are select to participate in the study. Prior to getting their consent, the researcher met the teachers to briefly explain about the study. The teachers ranged in age from 30 to 50 years and had taught in the present school for at least 3 years prior to the study. Teachers involved in this study are required to meet some criteria:

• A minimum 3 years of teaching experience with children with Autism Spectrum Disorder and

• A minimum 2 years of teaching experience in English context.

(a) Teacher A

Teacher A is working as a teacher in a community centre. She has experience working in special education field for 7 years. She teaches children all subjects from elementary level.

(b) Teacher B

Teacher B is also a teacher from a community centre. She has worked in this field, as special education teacher for 8 years. She teaches children all subjects from elementary level.

(a) Teacher C

Teacher A is working as a teacher in a community center. She has experience working in special education field for 3 years. She teaches children all subjects from elementary level.

All three teacher's information and data will be showed in the Appendix L. The

information and data provided by the principal of the center.

3.5 Instruments for the Study

Several instruments will be used by the researcher to serve as a medium to collect qualitative and quantitative data of the study. These instruments include:

- Children's observation form (Appendix D)
- Teacher's involvement interview form (Appendix I)
- Video Equipment (Shown with pictures- Appendix Q)

3.5.1 Observation Protocol (Dependent variables)

Children's Observation Form was designed by the two parts which is going to be carried out through the study for observe the social skills in children with Autism Spectrum Disorder on the follow instruction and social interaction with others. There are 10 items in the observation form which are 5 items in social interaction and another 5 item on follow instruction. Observation Form prepared targets for answering the first and second question of the study. This observation form will be conducted in the semi-structured observation, in which observer will use observation coding form to rank the children's response and involvement.

• Social Interaction

Invitation (IV): Any verbal and /or nonverbal invitation behavior (i.e., smile, touch, body orientation, gesture) by the target child to the peer in play.

Gesture Touch (GT): Target child able to tap peer's head and say "DUCK/BLUE/ SQUARE" during the play.

Choose Peer (CP): Target child able to choose one of his/her peer and say "GOOSE/RED/CIRCLE".

Become Chaser (BC): Target child able to become the chaser, did not show any

unsatisfied faces.

Say Thank You (TY): Target child able to say thank you to all his/her peer after play.

• Follow Instruction

Sit in Circle (SC): Target child able to sit in a circle with his/her peer

Walk Around (WA): Target child able to become 'it' and walk around the circle.

Run and Sit (RS): Target child able to run and sit back to his place.

Chase Peer (CR): Target child able to chase his/her friends.

Wait for Turn (WT): Target child able to waiting for his/her turn.

3.5.2 Teacher Interview Protocol

Teacher's interview form will have at 4 questions. Data will be collected through qualitative method. Refer to Appendix I.

3.5.3 Video Analysis Protocol (Independent Variable)

The video for video modeling will be taken by a videographer with his video camera. The duration of the video is between 2-3 minutes. It records the group of children with a narrator. The group of children comes from a primary school that is 7 years old. The narrator of the video is an early childhood educator, who has just graduated from her Degree Education in Early Childhood course.

Three videos will be made with different goals. Each video will be played to the entire participant in the group to enhance children's certain social interaction skills and follow instruction skills. Subtitles will be displayed at the beginning of each video. The subtitles will be presented together with the narration.

(a) First Intervention

First video "Duck Duck, Goose" shows how the participants would invite peer to play in the games, trying to hold friends' hand to make a circle, and also what

the participant should say to do to invite their friends. It also shows how the participant to walk in the circle, touching their peer's head and say "DUCK". It enhances children social interaction by touching the friend's head -the sensory interaction and follow instruction- to walk a circle behind their peer. The participant A have to chooses one of the child, (peer B) and say "GOOSE". After being called out, B has to chase after A, while A will avoid being caught by B, and taking back to A's seat. Then, teacher will start the games with the children with some verbal and gesture prompt. If any misunderstanding, teacher may play again the video, to do more explanation.

After playing for few times, teacher will have to show the next part of the video. The next part of video will direct the participant how to solve problem. If the participant A is caught by peer (B) , then participant A should move forward (walk around the circle, touch friend's head and say "DUCK" to called someone "GOOSE". If the participant A had taking back to his seat without touching by peer (B), he or she has to sit and wait for turn to be called. The end of video shows that participant should thank his/her friends for playing games together. Teacher will be conducting the full section of the class for at least 30 minutes.

(b) Second Intervention

It the beginning of the class, teacher will tell the name of the games "Duck, Duck Goose" to the entire participant and show them again the full video without pausing for explanation. Next, teacher invites the participants to start the games. During the play, participants may forget the steps of playing the games, teacher will are verbal and gesture prompt to the participants. Besides that, teacher will also make some correction on participants during the play if needed.

(c) Third Intervention

The second video “Blue, Blue, Red” video will be show to the participants on the third intervention. Teacher will focus on the words of “Blue” and “Red”. Video shows how the participants would invite peer to play in the games, trying to hold friends’ hand to make a circle, and also what the participant should say to do to invite their friends. It also show how the participant to walk in the circle, touching their peer’s head and say “BLUE”. It enhances children social interaction by touching the friend’s head - the sensory interaction and follow instruction- to walk a circle behind their peer. The participant A have to chooses one of the child, (participant B) and say “RED”. After being called out, B has to chase after A, while A will avoid being caught by B, and taking back to A’s seat.

If the participant A be caught by peer (B) , then participant A should be doing again move forward (walk around the circle, touch friend’s head and say “BLUE” to called someone “RED”. If the participant A had taking back to his seat without touching by peer (B), he or she has to seat wait for turn to be called. At the end of video show that participant should thank his/her friends for playing games together. Participants may start the games after watching the video.

(d) Forth Intervention

At the beginning of the class, teacher will tell the name of the games “Blue, Blue, Red” to all the participants. Teacher makes sure that every participant knows the title of the games. Next, teacher shows participants the full video without pausing for explanation. Next, teacher invites the participant to start the games. During the play participants may forget the steps of playing the games; teacher will give some “clue” to the participants.

(e) Fifth Intervention

The third video "Square, Square, Circle" video will be show to the participants on the third intervention. Teacher focuses on the words of "Square" and "Circle". Video shows how the participants would invite peer to play in the games, trying to hold friends' hand to make a circle, and also what the participant should say to do to invite their friends. It also show how the participant to walk in the circle, touching their peer's head and say "Square". It enhances children social interaction by touching the friend's head - the sensory interaction and follow instruction- to walk a circle behind their peer. Participant A has to choose one of the child, (participant B) and say "Circle". After being called out, B has to chase after A, while A will avoid being caught by B, and taking back to A's seat.

If the participant A be caught by peer (B) , then participant A should move forward (walk around the circle, touch friend's head and say "Square" to called someone "Circle". If the participant A had taking back to his seat without touching by peer (B), he or she has to seat wait for turn to be called. At the end of video show that participant should thank his/her friends for playing games together. Participants may start the games after watching the video.

(f) Sixth Intervention

At the beginning of the class, teacher will tell the participant the name of the games "Square, Square, Circle". Teacher makes sure that every participant knows the title of the games. Next, teacher shows participants the full video without pausing for explanation. Next, teacher invites the participant to start the games. During the play participants may forget the steps of playing the games; teacher will give some "clue" to the participants.

(g) Seventh Intervention (Reinforcement)

Teacher will show the first video (DUCK and GOOSE), second video (BLUE and RED) and third video (SQUARE and CIRCLE). The entire participant is able to apply and play with their peers.

(h) Eighth Intervention (Reinforcement)

Teacher will be show all video at the beginning of the class. Teacher may let the participant choose between “Goose”, “ Red” or “ Circle” games they wish to start with his/her peers.

All the video will be saved in a Pendrive. The video will be played on a laptop or computer which attached to the television depending on the facilities in the center. The entire participant will be watching the video together. Watching video is often a preferred activity for children with ASD (Delano and Stone 2014).

3.6 Reliability and Validity of the Instrument

To ensure inter-observer reliability and social validity, this study employed various measures recommended for single-subject studies (Horner et al., 2005; Wolery et al., 2011).

(a) Inter-observer agreement procedures

The second observer was trained to score at least 25 % of the video clips recorded for all three target child. The clips were selected randomly from each of the three experimental phases. A form (refer Appendix H) was used to calculate inter-observer agreement. Appendix G shows the total days and percentage of observation where inter-observer procedures were implemented. The formula for calculating inter-observer agreement is given below.

$$\text{Inter-observer Agreement} = \frac{\text{Total number of agreements}}{\text{Total number of agreement + disagreements}} \times 100$$

(b) Social validity

According to Horner (2005), the success of social validity measures as one of the quality terms of single-subject research. Social validity is further established if typical intervention agents acknowledged the intervention procedures to be acceptable, feasible and effective, and reported willingness to continue using the procedures after completion of the intervention study.

In this study, teachers were co-implementer of the intervention procedures. The researcher conducted random fidelity checks to assess teachers' ability in carrying out intervention procedures reliably. Besides to complete the experimental study, teachers were interviewed about their idea on the effect of use of video modeling in the teaching. The researcher also asked teachers the likelihood of using the intervention strategies in future.

3.6.1 Data Collection Techniques

Three methods were used to gather quantitative and qualitative data (refer Figure 3.2). First, non-participant observation will be collecting quantitative data on children's social interaction and follow instruction during the baseline, intervention and maintenance phases of the single-subject study. Secondly, participant observation using field notes for gathering qualitative data during apply video modeling in the intervention phase. Lastly, semi-structured interview will be conducted at the end of the maintenance phase as a source of qualitative data to gather feedback of the teacher's perspective of video modeling.

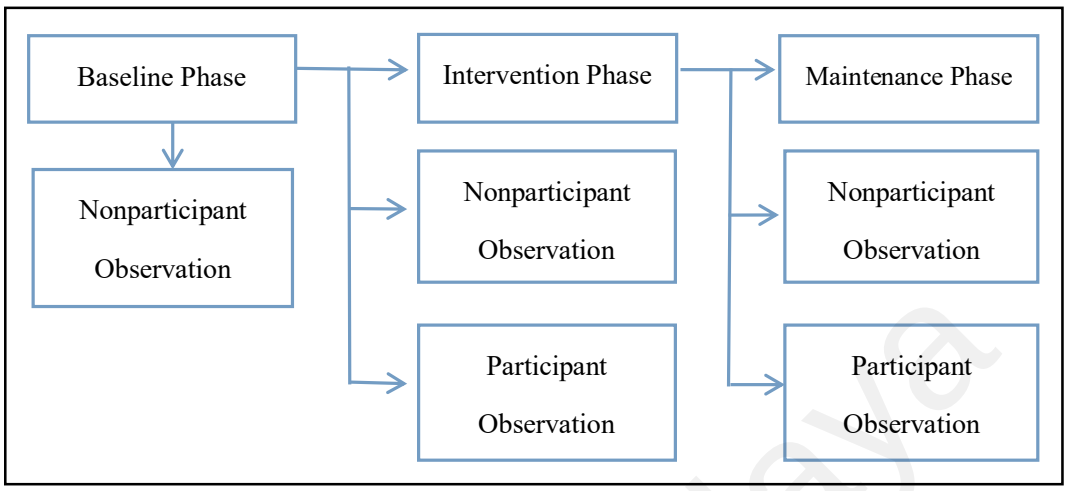

Figure 3.2 Overview of data collection methods

3.6.2 Semi-structured Interview

Semi-structured interviews were conducted with the three participating teachers after completion of the maintenance phase of the study to answer the third research question regarding of teacher's perception on video modeling. The purpose of conducting teacher interview was to get to know the perspective of a teacher regarding the effect of the video modeling to enhance social skills. Second, the interview with teachers provided qualitative data to explain and triangulate results from the nonparticipant observation.

Hence, the semi-structure interview enables the researcher to ask predetermined question and yet allowed teachers to share substantially within the scope of the chosen topic. An interview protocol (refer Appendix I) was designed for the purpose of standardizing interview procedures and questions, and ensuring proper noted taking.

The interview took place in the school after the school during teacher's convenience. Each teacher is interviewed for about 30 minutes. To ensure validity of

interview data, member checking was performed by asking teachers to check and verify their interview transcripts (refer Appendix J).

a) Observation

Non-participant observation will be used in this study the use of video modeling in develop social skills among children with ASD. Notably, the researcher in this study will serve as an observer only.

b) Video Recording

Non-participant observation will be used in this study the use of video modeling in develop social skills among children with ASD. Notably, the researcher in this study will serve as an observer only.

3.7 Procedure of the Study

The data of experimental part of the study will be collected from baseline, intervention and maintenance phases. Generally, the whole study lasts a total of four week. Experimental phases for Child A, child B and child C will be carry out in separately in different classroom and in different time.

3.7.1 Baseline

In the baseline phase, data of the usual play time in participant children will be collected during play session of respective class. All participants will be start from baseline phase between the first weeks. There are no interventions during this phase. During the baseline phase, participant child will sit together with their peers and play together under teacher's conduction. Class teacher will provide the maximum coaching to those children in the class as normal.

Baseline phase sessions will be conducted before the intervention phase session. Participants are asked to display skills listed below and to record plus for

their independent correct responses within 4 -seconds. Baseline phase session is complete when the participants display an incorrect response or no response within 4-seconds response. In the meantime, teachers will observe children's certain behavior according to the table below which consists of two parts of the observation. The two parts of observation are the finding of the study in question one and two.

Table 3.2
Observation List in Baseline Phases

Social Interaction	Follow Instruction
Play with Peer	Sit in the Circle
Say "Hi"	Walk in a Circle
Hold Peer's Hand	Run and Sit
Touch Peer's Head	Chase Someone
Say "Thank You"	Wait for Turn

In this study, Child A who needs the least coaching in play will receive the intervention first, after the four days of observation. This will be followed by child B who will start the intervention after six days of observation. Subsequently, child C who needs more concentration and assistance in social skills among all others participant will start eight days after observation. In this manner, the experimental schedule will be showed the schedule of baseline phase to intervention phase. The planned of experimental schedule in Appendix A

3.7.2 Intervention

Before the intervention being carried out to the participants, teachers will undergo training on usage of video modeling in participants' social skills. During the

intervention phase, observation of all the participants will be conducted one by one in different group with different time. Moreover all the participants will be placed in different class to prevent bias in response.

In the beginning of the intervention phases, teachers will show the participant the video clip which includes all the steps and rules of the games. The video is specially prepared to participant for enhancing the specific games involving all the target of the study. The participants have to work out after watching the video. Participants will know how the games go on and follow all the steps. The teacher will scaffold the participants in the beginning of the intervention. Intervention phases will be carried out as long as eight days.

First of all, the teacher will show the full video to the participant for three times. After the video being played, teacher will ask the participant start the games and invite participant invite friends to play. Teacher will approach the participant and say the sentences of "play with me". Then, teacher will guide them on how to play the games. Lastly, children are asked to play themselves without teacher's guidance.

Every intervention lesson will be carried out with these methods, which play

i) play the video for three times;

ii) Teacher explains and guides them, prompt is given if needed;

iii) Lastly, children play themselves and observe by teacher.

3.7.3 Maintenance

Maintenance phases will begin after the intervention phase. This main aim of this phase is to observe the intervention effect upon finishing of intervention. In this phase, there will be no intervention. Teacher still conduct the games with the participant and peers, but in a different way by changing the words to what they had

learned in the classroom.

Following the planned schedule of observation from baseline to intervention, Child A will enter the maintenance phase; follow by Child B and Child C. In this study, each participant will undergo 3 days of maintenance phase. Data collection from baseline, intervention and maintenance will be used to answer the second question of the study on to explore children's response in using video modeling in social play skills. An explanation of overall experimental conditions and procedures is shown in table below.

Table3.3.

Overall Experimental on Conditions and Procedures

Phase	Procedures
Baseline	(No intervention in this phase) Every participant plays under teacher's conduction in a group as teacher conducts the class. Teacher will observe participant's social skills during play.
Intervention	Teacher will show three videos according to the time frame. After showing for the first video, teacher will apply the activity with the children continuously until the third video end. This action will be going repeated from the first until sixth session of intervention. On the seventh and eighth intervention, teacher will play all three videos with a minor prompting. Children have to apply by themselves. .

Maintenance	Teacher will continue playing the same games and but in different way by changing the "Duck" and "Goose" to others words that teacher's taught in school.

The data will be collected using instrument. Data that comes from the instrument will be answering the entire research question. Instrument used to carry out through the study are questionnaires, checklist and interview form.

3.7.4 Baseline Intervention

This phase involves preparation procedures before commencement of formal data collection. In this phase, no formal data was collected. Three events take place during this stage: pilot study, training, and induction session for teachers.

- **Consent**

  There are few consent forms ready for the participant. There are

  A) Research Information & Parental Consent Form

  B) Research Information & Teacher Consent Form

  C) Research Information & Preschool Consent Form

  D) Teacher Transcript- Verification and Consent Letter

- **Training Session for Participant's Teacher**

Training session will be held before the experimental carried out. The researchers will teach the teachers on how to conduct the lesson. Lesson plan will be planned to the participant teachers. Teachers should follow the instruction of the lesson plan and conduct in the classroom. Teachers will be trained how to play the video and how to lead the children in play. Besides that, the training will focus on the use of video modeling. The lesson of the conducting the lesson can refer to Appendix K.

3.8 Duration of Data Collection

Table 3.4

Below are the table that showing the Duration of Data Collection.

Duration of Data Collection																			
No.		Weeks																	
1	Collect Approval letter from Education Faculty, Universiti Malaya																		
2	Collect Approval letter from the Research and Planning Education Department																		
3	Collect Approval letter from the State Education Department																		
4	Collect Approval letter from District Education Office																		
5	Collect Approval letter from the parents and school																		
6	Meeting Teachers																		
7	Distributes questionnaires to the teachers																		
8	Planning for the training																		
10	Baseline Observation																		
11	Start the intervention																		

12	Observation the change of the intervention																	
13	Interview the teachers																	
14	Data Analysis																	
15	Summary final dissertation																	

3.9 Control Threats to Internal Validity

The researchers use field notes during the experimental study. The field notes will contain the descriptive and reflective information. For this study, the researcher recorded both descriptive information (the teachers during different segments of training) and reflective information (researcher's personal thoughts and feeling). Notes taking were guided by an observation protocol.

To reduce the observational biases and ensure validity of the field notes, the researcher asked teachers for their overall observations on the target child's presentation. The transcribed observations were verified by teachers.

3.10 Expert Validation of the Instruments

Experts Validation of the Instruments According to the research design, research questions, and conceptual framework of the study, three instruments had been designed and developed by the researcher, namely (a) observation protocol, (b) Teacher's interview protocol, and (c) video analysis protocol.

Three panels have been appointed to validate the instruments of this study. One of the panels is an associate professor who is the professional in research methodology in education. She has been a head of supervisor in special education at secondary school. Another panel is also a master professional in research methodology in special education. Currently, she is a teacher in secondary school and

a part time lecturer in one of the university. Lastly, the third panel is an occupational therapist who works for more than 10 years in a NGO's association. The panels read through all the instruments and gave comments on it. The researcher reviewed and modified these instruments according to the feedback from the panels.

Table 3.5

Overview of Expertise's background Information

Panel	A	B	C
Age	45	42	36
Gender	Female	Female	Female
Working Experience	-Working in SMK Batu Unjur, Klang - Currently Lecturer in Sultan Idris Education University.	- Working at SMK Batu Unjur,Klang as PPKI teachers - Currently working at SMK Kg. Jawa, Klang as PPKI teacher	- working in NGO's association before - 5 years' experience working in Desa City Hospital as Occupational Therapist -Currently freelance occupational Therapist
Highest Qualification	Doctor in Special Need Education	Master in Special Need Education	Bachelor in Occupational Therapy
Occupation	Senior Lecturer	Senior Teacher in a secondary School	Occupational Therapist

3.11 Pilot Study

A pilot test was conducted on a child with his peers to determine if there are any flaws, limitation or other weaknesses within the data collection and protocol allows necessary revision before actual implementation of the research (Kvale, 2007). Consent is obtained from the principal of the center and parents of the children.

During the pilot study, a teacher of the center is helping out to conduct the lesson. Teacher used circle time period to conduct the study. First, it starts with teacher watching the video clip and teacher discussing with the children how does the games on. The discussion got a little bit noisy due to the big amount of student in the class. So, it should have a smaller group of children in the observation to reduce distraction among the peers. Another source of distraction is the environment during the observation. The space is too big and full of sport equipment. As such, during the actual data collection, instead of using the classroom setting, it should be an empty setting without any much equipment to avoid the distraction of children during the observation.

The recording (video and audio) from the pilot study is sufficiently clear. Children's facial expressions and conversations are easily seen and heard during playback on the footage. The initial technical difficulties, especially working out with the video files, have been resolved during the pilot study and numerous support teams from the expertise.

3.12 Data Analysis

3.12.1 Analysis of Quantitative Data

For quantitative data from nonparticipant observation, intervention effects were evaluated mainly by visual inspection of graphed data, a method applied

frequently in single- subject studies (Franklin, Gorman, Beasley, & Allison, 1996).

For this study, nonparticipant observation data are presented in simple line graphs created with Microsoft Excel 2007. Simple line graphs display percentages of interval with dependent variables on the ordinate (y-axis) and the number of session across different conditions on the abscissa (x-axis). The percentage of interval with dependent variable will be calculated based on the formula below:

$$\frac{\text{Total number of intervals with occurrence of social interaction}}{\text{Total number of intervals}} \times 100$$

$$\frac{\text{Total number of intervals with occurrence of follow instruction}}{\text{Total number of intervals}} \times 100$$

3.12.2 Analysis of Qualitative Data

For analysis of qualitative data they are collected from a classify thematic analysis as a pattern-based method that identifies, analyses and reports patterns within data. There are many different terms used by qualitative researchers. The most common to apply qualitative data basic steps is reading, coding (open coding), theme building (pattern coding or axial coding), data display, making conclusions and writing up the analysis.

In this study, data from field notes and interviews will be presented in extensive transcripts. Descriptive codes also known as semantic codes which summarize the explicit content data and also require little interpretation. Data

extracts from the teacher's interview were collated two social interaction and following rules. For instance in the later part of the analysis on intervention effects, the code used of video modeling improve social skills and used of video modeling develop social skills. Separating the code significant as "used of video modeling developing social skills" is the main aim of the intervention, whereby "used of video modeling improve social skills" in the secondary outcome.

Lastly, in the process of identifying, thematic maps are created (refer Figure 5). This data display aims to help understanding of the relationship between codes and between themes and to ensure the finding are representative of the content.

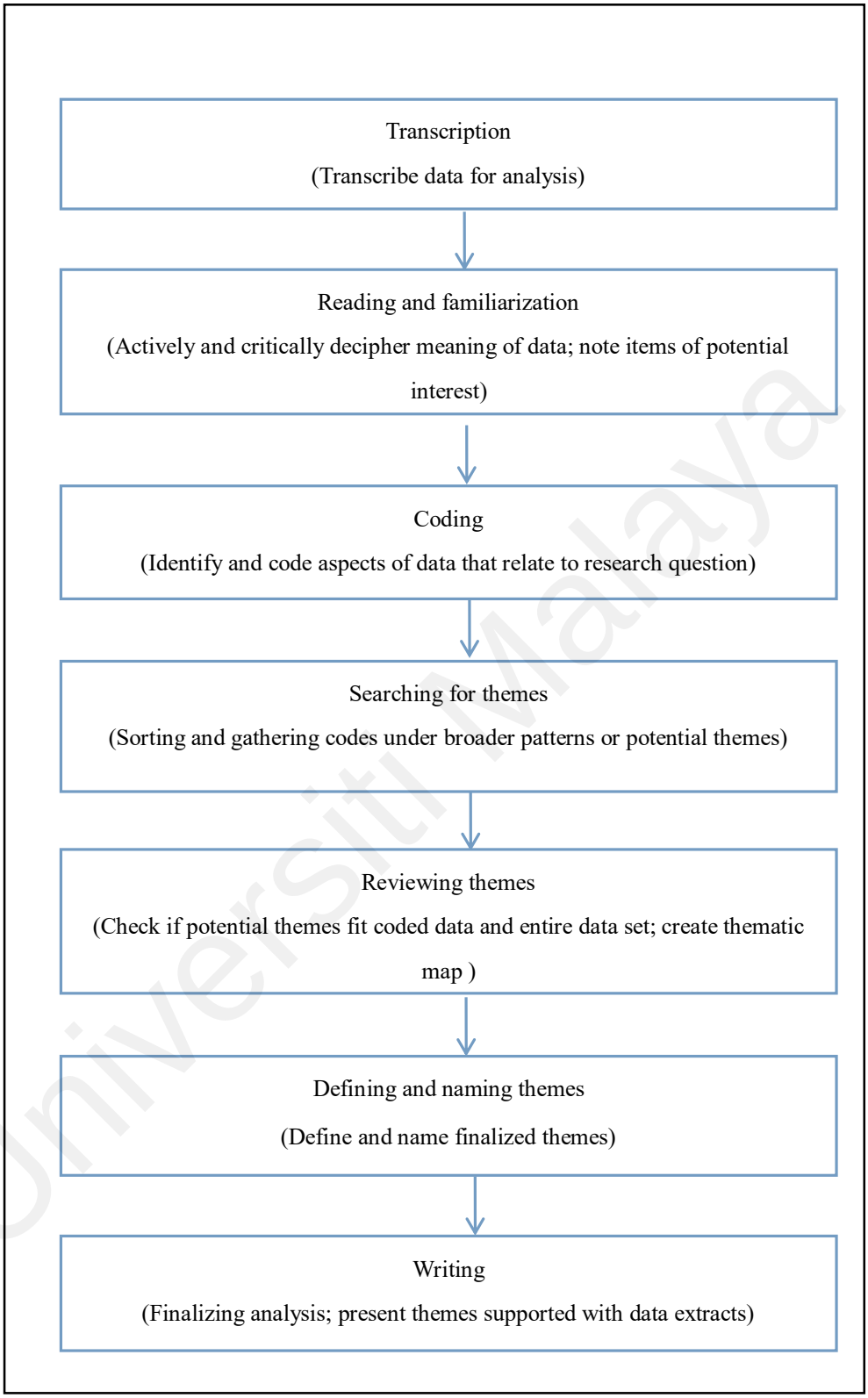

Figure 3.3 Stages of thematic analysis

3.13 Summary

This chapter outlines the research methodology that will be used to investigate the use of video modeling in social skills among children with Autism Spectrum Disorder. The details of how to conduct the study and methods of analysis both qualitative and quantitative data were discussed. Next, analysis of results will be discussed in the following chapter.

CHAPTER 4

FINDINGS

4.1 Introduction

The purpose of this research is to demonstrate the effectiveness of video modeling in developing social skills among children with Autism Spectrum Disorder. The three research questions are as follows:

1) How effective is video modeling in enhancing social interactions among children with ASD?
2) How effective is video modeling in enhancing the skills of following instructions among children with ASD?
3) What are the feedbacks received from the teachers who use video modeling to teach social skills to children with ASD?

The findings relevant to the three research questions are presented in this chapter. The progress of three participants who used video modeling in enhancing the social interaction and skills of following instructions will be demonstrated by graphs in the following page. Also, results from the teacher interview were presented to answer research question three, as well as to form a triangulation in data analysis.

Figure 4.1 shows the result between the number of intervals with the occurrence of social interaction and follow instructions were presented to answer research questions one and two related to the social interaction among children with ASD. The y-axis shows the number of occurrences in social interaction and the following instruction while the x-axis shows the video sessions.

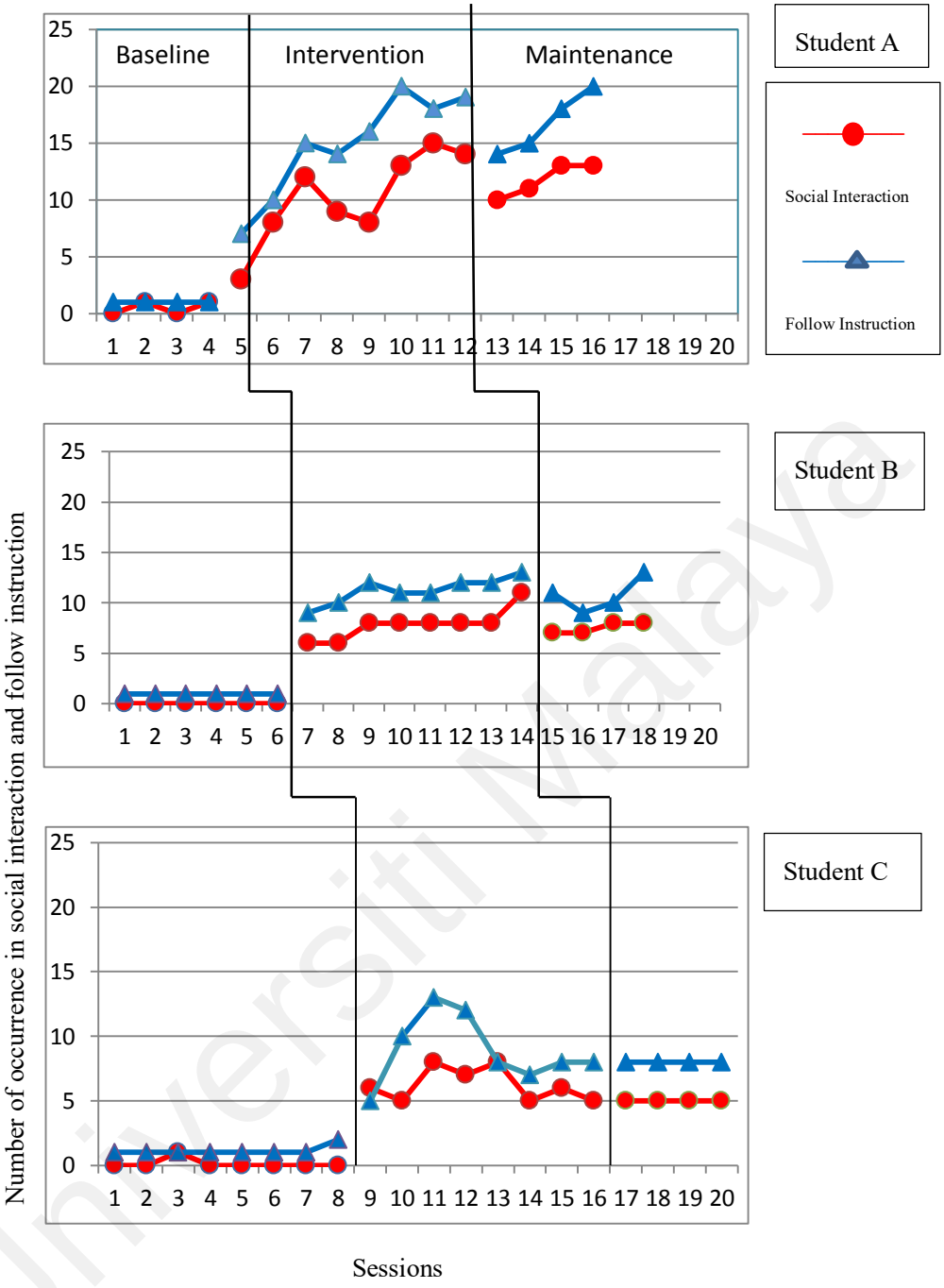

Figure 4.1 Occurrence of skills on social interaction and follow instruction

The blue line in the graph represents the student's ability to follow instructions (i.e. sitting in a circle, walking around, running and sitting, chasing peer, waiting for their turn), meanwhile the red line represents social interaction (i.e. invitation, gesture touch (head), choosing peer, becoming chaser, saying thank you).

From the graphs above, we also observed that all of the three participants have an increase in the number of occurrences in social interaction and following the instruction when video modeling is being implemented. Generally, the Student A has the highest number occurrences in social interaction and following the instruction. In the other hand, Student C has shown the lowest number of occurrences in social interaction and follows instruction. The reason that Student A graph shown the highest number it because the apply number of Student A is more compare with another two students.

4.2 Effects of Video Modeling in Enhancing the Skill of Social Interactions among Children with ASD

4.2.1 Student A

According to Student A, the number of occurrences in social interaction increases highly during the intervention period shown in Figure 4.2. It shows that Student A can invite peer for games, gesture touching with peers, choosing peer, became chaser after being chosen, and saying thank you during games. The number of occurrences in social interaction slightly decreases of 28.6 percent during the maintenance period (session 13). This is due to the teacher did not give any verbal or gesture prompting. However, it rises up again slowly towards the end of the maintenance period. During the last session of observation, the number of occurrences for social interaction is 20 times compared to the first session of observation.

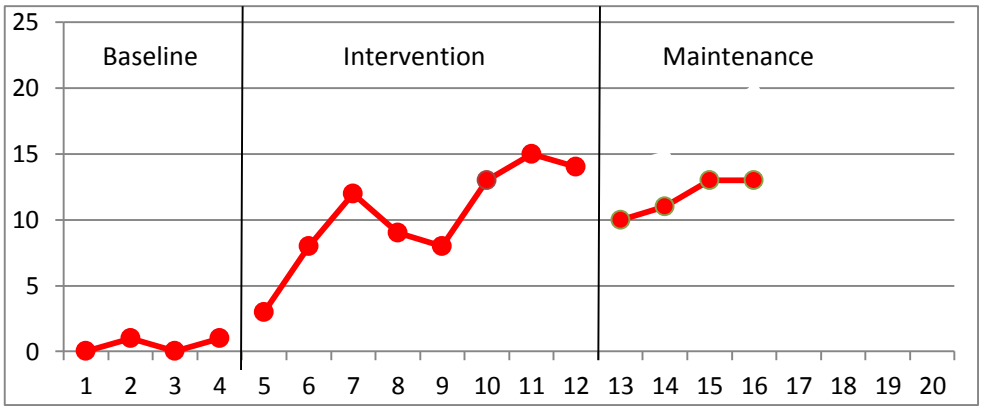

Figure 4.2. Occurrence of skills on social interaction (Student A)

According to table 4.1shown for Student A social interaction, both observers have 80 percent agreement on the children's target in developing skills. Only 1 item differs in the 3rd interval of the social interaction table. The 1st observer agrees that student A did touch the peer's head and chose peers in the play three times during the games. However, the 2nd observer agrees that Student A only completed 2 times on the task of touching the peer's head and choosing peers to play. Due to that, the number of the 3rd interval between the two observers has a different agreement.

Table 4.1

Inter-observer Agreement on Social Interaction for Student A

Interval	Observer 1	Observer 2	
1	3	3	1
2	12	12	1
3	10	8	0
4	13	13	1
5	11	11	1
(4/5) x 100 = 80%			

At the beginning of the observation, Student A does not need any verbal or gesture prompt from the teacher. He can play very well after watching the video (Figure 4.3.). Student A felt constrained when his peer does not understand how to play the game. Sometimes, he taught the peers on the next steps on the games. He was able to invite his/her friends in play, tap his peer head and choose one of his peers to run.

He felt constrained when his peer does not understand how to play the game. Sometimes, he taught the peers on the next steps on the games.

(Teacher A, extracts from the fields noted day 5, 25/1/2019)

Figure 4.3. Play well.

Sometimes, his friends refuse to hold his hand (Figure 4.4.). He even knows

how to say “thank you” to his peer after the games. But he needs to build a relationship with other friends. During the games, he will only call one of his close friends in the games

He initiative to hold his friend’s hand, guide them how to play the play.

(Teacher A, extracts from informal interview on the 30/1/2019)

He tries to invite his peer in the play, but his peer refuse to hold his hand. After that, the hold others peer’s hand.

(Student A, extracts from fields noted day 9, on 11/2/2019)

Figure 4.4. Refuse to play

4.2.2 Student B

Figure 4.5 shown social interactions in Student B have a slight increase from baseline to intervention (session 6 to session 7). However, the number of

occurrence remains the same throughout session 9 to 13 of the intervention period. It increases slightly 27 percent from session 13 to 14, where the number of occurrence increases from 8 times to 11 times. The video will not be shown to the student after the intervention period. Thus, the student has to decide which games he would like to play i.e. “duck, duck, goose”, “red, red, blue”, or “square, square, circle”. The red line in the graph decrease back to the 7 and 8 times during the maintenance (session 15-18).

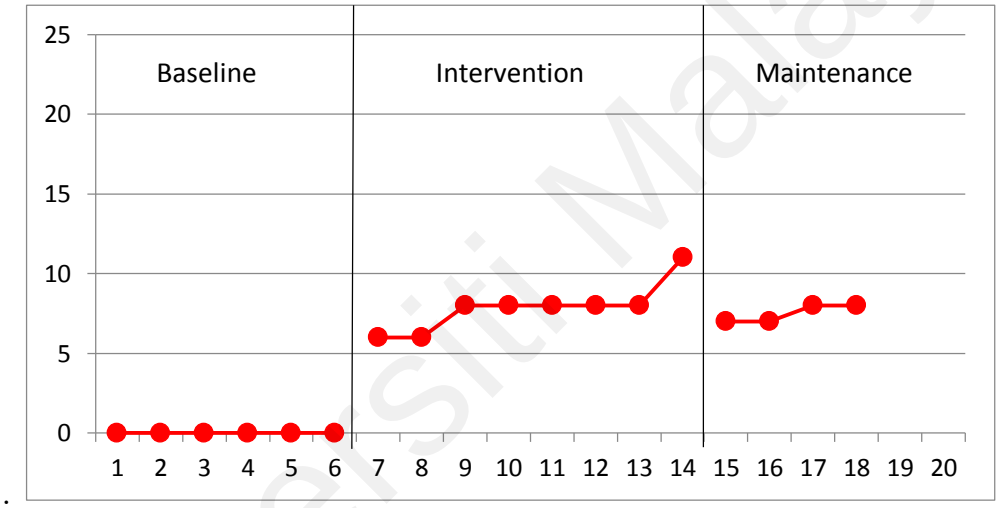

Figure 4.5. Occurrence of skills on social interaction (Student B)

Table 4.2 below are the percentage results of the inter-observe agreement by the two observers for student B. From the social interaction table, the result shows 100 percent of inter-observe agreement. It represented that both observe agree with the video that they observe.

Table 4.2

Inter-observer Agreement on Social Interaction for Student B

Interval	Observer 1	Observer 2	
1	6	6	1
2	8	8	1
3	8	8	1
4	11	11	1
5	7	7	1
(5/5) x100 = 100%			

During the intervention period, student B gave a slow response during the play. Most of the time, one of his peer will remind Student B on the teacher's instruction during the beginning of the intervention by using verbal and gesture prompt. His peer frequently uses verbal prompting to guide him in the games by repeating his teacher's action earlier. His peer also called him to stand up and chase the other peer. Sometimes, student B was too excited running while his peer was chasing him. He was reluctant to sit down until his peer has to pull his leg and ask student B to sit down (4.6.). At the maintenance period, the teacher tried to stop the peer from informing student B on his actions. From the result, we observed that student B really can adhere to instruction but requires longer processing time.

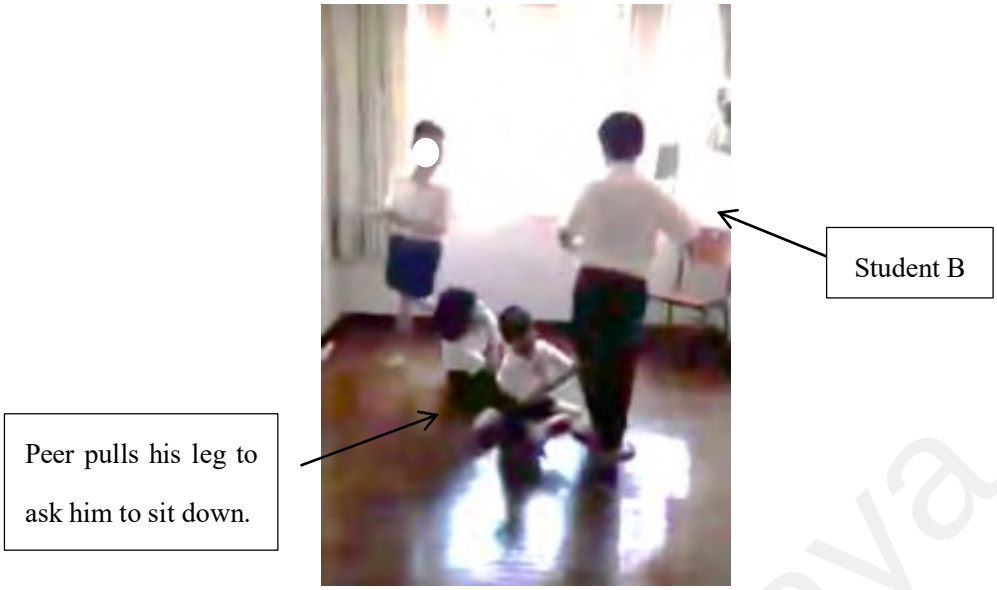

Figure 4.6. Gesture Prompting

His peer reminds him to stand up and choose a peer to run as how teacher taught them early. But teacher also stop them to use verbal prompting help him in the play.

(Teacher B, extract from fields noted day 4, 21/2/2019)

He can become the chaser, but hard to sit down because he love to run.

(Teacher B, extract from fields noted day 8, 27/2/2019)

4.2.3 Student C

The number of interval occurrences of social interaction did not show much difference in figure 4.7. From the graph, the number of interval occurrence increase from slightly between the range of 5-8 times. On the 9th session, the 11th session, and 13th session showing the line is higher than the previous session is due to that teacher provide a little verbal prompting well showing the video. But at the last two sessions of intervention, the teacher did not give any verbal prompting so that the

number of interval occurrence of social interaction drop. The number of 5 times remains at the maintenance period.

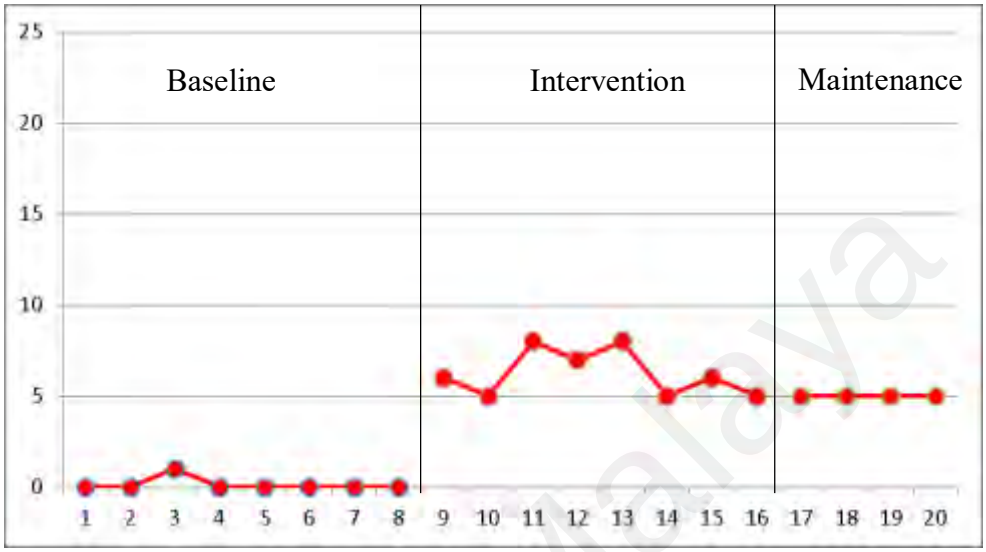

Figure 4.7. Occurrence of skills on social interaction (Student C)

Table 4.3 shows the results on the inter-observes agreement for student C. The result of student C is quite similar to student A. It shows 80 percent of inter-observe agreement in social interaction. Only a little bit different on the 2nd interval. The first observer disagrees with the last video on enhancing the skills of shaking the hand and say “thank you”. His peer shakes his hand first only he reply with thank you. For the observer 1 preview, it should student C to shake his peer hands and say “thank you”. On the other hand, observer 2 can accept student C's attitude on shaking hands and say “thank you”. So the numbers on 2nd interval between two observers are different on one.

Table 4.3

Inter-Observer agreement on social interaction for Student C

Interval	Observer 1	Observer 2	
1	6	6	1
2	7	8	0
3	8	8	1
4	5	5	1
5	5	5	1
(4/5) x 100 = 80%			

Student C able to follow the social interaction skills that request by the teachers except for one in which students have to invite his /her friends in play. The teacher had invited all the children to sit in the circle. So from the video, the observer did not saw student C invite peers to the games. At the beginning of the games, student C uses a soft gesture touch of his/her friend's head. But slowly, at the last few intervention session, he starts to use rough gesture touch on his peer's head. Some friends even complain to the teacher of his misbehavior. In the last video, while the teacher ends the games by called student C to say "thank you" to all the peers. But student C refuses to do that, he hit his friends with his punch.

He touches his peer's head to hard, until his peer complain to me.

(Teacher C, extract from informal interview day 6, 12/3/2019)

He does not know how to social with others. He punched his peer friends before shake hand and say "thank You".

(Student C, extract from fields noted day 8, 14/3/2019)

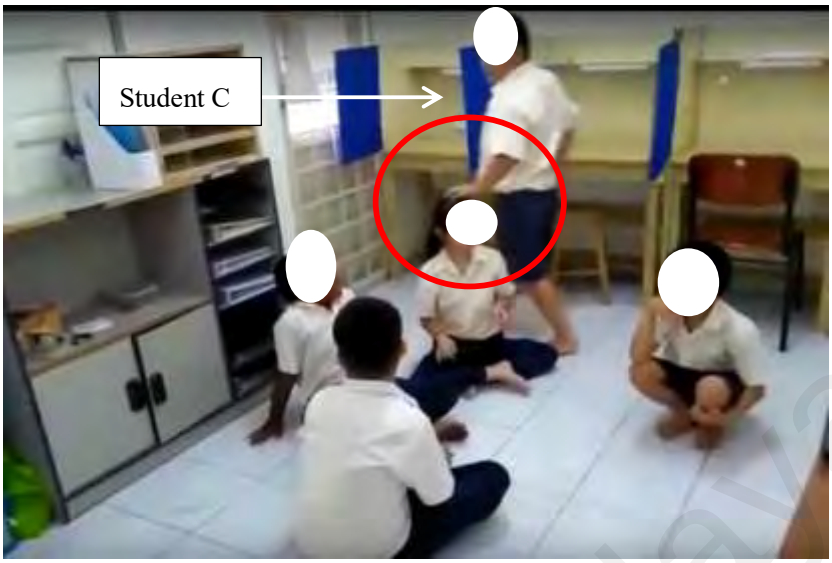

Figure 4.8. Gentle touch

Overall, the three participants have a problem with social interaction with peers. They always will play by themselves, according to their teachers, even sometimes they choose not to involve in the play. The result has shown that the three participants have an improvement in social interaction after using video modeling to develop social skills. Teachers use verbal prompting if needed during the lesson to help participants more understand the games. Besides that, not only teachers give guidance for the participants, the participants' peer also will guide them will playing the games.

4.3 Effects of Video Modeling in Enhancing the Skills of Following Instructions among Children with ASD

4.3.1 Student A

The number of occurrences in following instruction for student A also increases during intervention sessions. During the intervention session, the teacher showed the students' video and gave some verbal prompting. This enables the

students to learn from video and teacher's prompting. After the intervention period, there is a slight drop in the number of occurrences on the following instruction for Student A when verbal and gesture prompting are not provided by teachers. During the maintenance session, Student A performed greatly in following instructions. The number of occurrences from 1 time (baseline) increases up to 13 times at the end of the maintenance session. The results come from figure 4.9 as shown below.

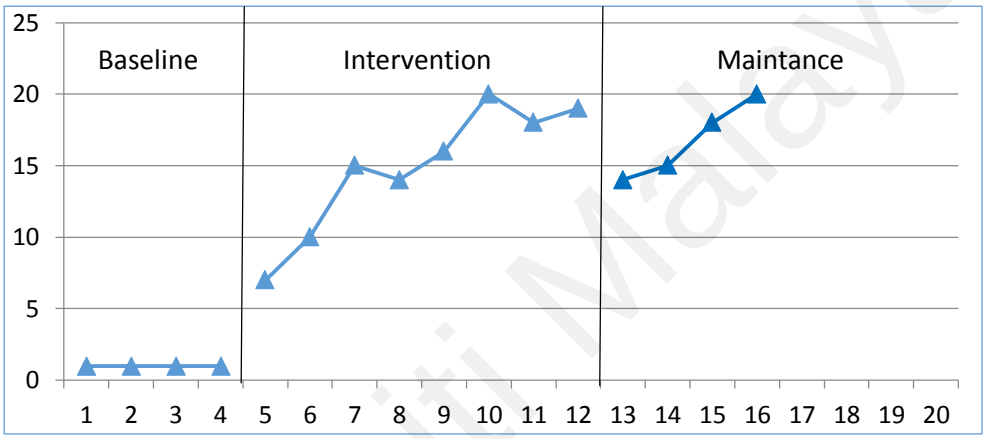

Figure 4.9. Occurrence of skills on follow instruction (Student A)

Above is the number of occurrences in the following instruction for Student A. The table 4.4 that portrays the agreement of observer in the following instruction is displayed on the next page. Both observers' agreement only shows 60 percent for the following instruction throughout the whole 5 sessions of interval. The reason for the low percentage was due to one of the observers thinks that student A did not adhere to the instruction by himself but he has been supported by his peers and teachers. So, the observer did not agree with the success of the target items. The difference between the two observers on interval 3 and interval 5 for student A is only 1 to 2 times.

Table 4.4

Inter-observer agreement on follow instruction for student A

Interval	Observer 1	Observer 2	
1	7	7	1
2	15	15	1
3	18	16	0
4	20	20	1
5	15	16	0
	(3/5) x 100 = 60%		

Student A can follow all the instructions in the video. After he felt excited, he will try to disturb his peers while they are playing. He put out his hand and leg tried to stop his peers (figure 4.10.).

He started to feel excited and try to disturb his peers while they were playing. He put out his hand and tried to stop his peers from running around.

(Teacher A, extracts from the field noted day 5, 25 January2019)

He will blocks his friends with hand, try to stop them from running due to his friends did wrongly during play. Teacher reminds him not to repeat the misbehavior again.

(Student A, extracts from fields noted day 7, 29/1/2019)

Figure 4.10. Touch to stop

4.3.2 Student B

Figure 4.11 shows the occurrence of skills on follow instruction of Student B. The graph for the ability to follow instruction increases slowly during the intervention session. The different of increment is 1 to 2 times. This shows that student B is learning step by step. However, it fluctuates during the maintenance period. The number of occurrence in the following instruction for student B drops from 13 to 11 (times) and continue to drop until 9 times (session 16). Later on, it starts to rise slowly during session 17 and 18. Student B has been supported by the peer during the play, which explained the increase in occurrence during the maintenance period.

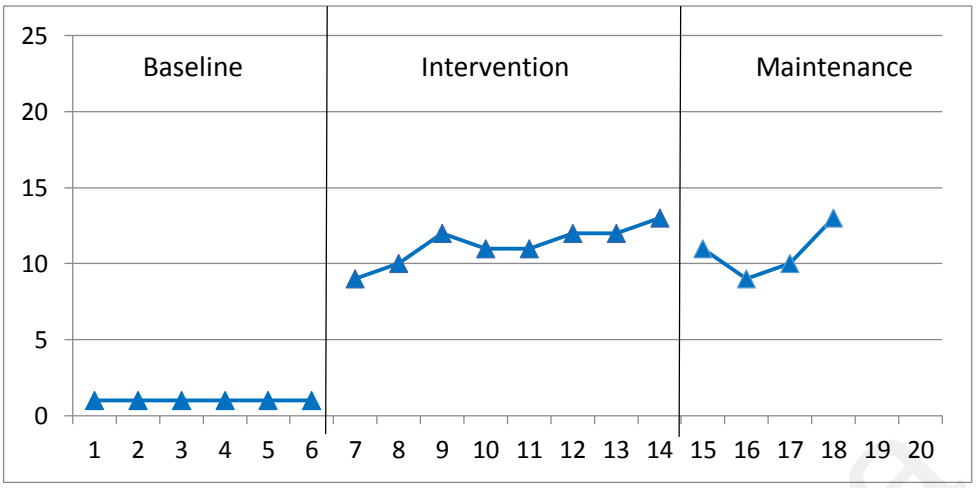

Figure 4.11. Occurrence of skills on follow instruction (Student B)

On the other hand, table 4.5 for follow instruction is 20 percent lower than social interaction. The difference occurs on the second interval where observer identifies 10 times while observer 2 identifies 12 times. The difference was due to the children did not run and chase the peers, instead he walks and touch his peers.

Table 4.5

Inter-observer Agreement on Follow Instruction for Student B

Interval	Observer 1	Observer 2	
1	9	9	1
2	10	12	0
3	11	11	1
4	13	13	1
5	11	11	1
(4/5) x 100 = 80%			

At the beginning of the intervention, student B doesn't know how to play

the games. Most of the times, he been prompted by the teacher or peer during play. At the 3rd intervention, student B started to follow the video's instruction play the games. He stood and caught his peer while his peer chosen him as the "goose" (figure 4.12). He even can choose a peer to become chaser on the 6th intervention without prompting or assisting by teacher.

He can follow the video, stand up and chase his peer while had been chosen by peer.

(Teacher B, extract from fields noted day 9, 20/2/2019)

He can choose a peer to become a chaser after 3 times of playing on the 5th intervention.

(Teacher B, extract from fields noted day 11, 22/2/2019)

I feel happy that he learned how to play with peer. Since the beginning he chooses to sit a side, but now I see him can run and catch his peer. It's a big different.

(Teacher B, extract from informal interview day 14, 27/2/2019)

Figure 4.12 Chasing

4.3.3 Student C

Student C took a longer time in the baseline observation. This is because the intervention only started during the 9th session (figure 4.13.). After the video was shown by the teacher and intervention was applied for the eighth times, student C has a high number of occurrence in following instruction during session 11 i.e. 13 times. The rise in occurrence could be due to the chance given to student C to play more often compared to his peers. The blue line (follow instruction) in the figure 4.13 shows a slight drop to 8 times in session 15 and it remained there until the end of the maintenance.

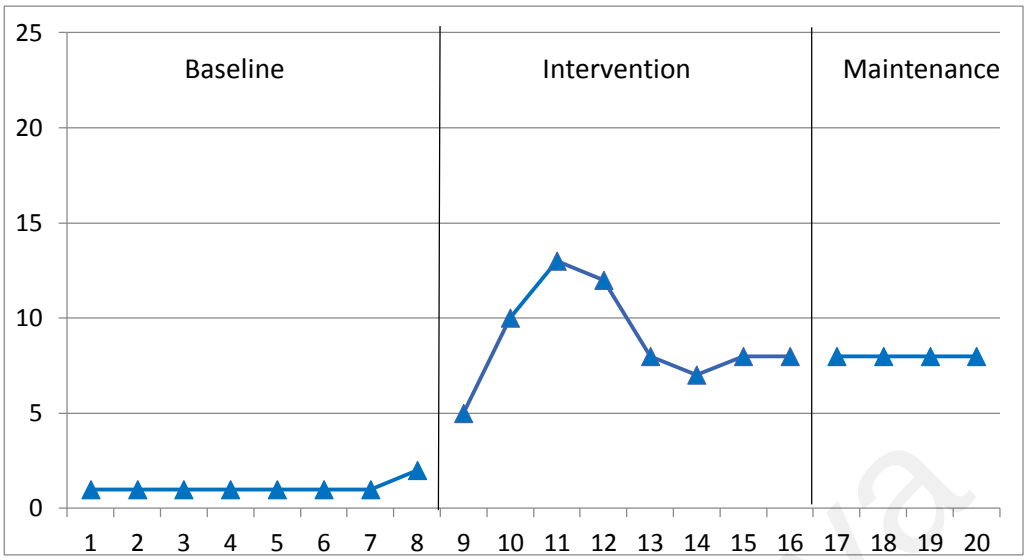

Figure 4.13. Occurrence of skills on follow instruction (Student C)

The percentage of inter-observe agreement in follow instruction was 80 percent shown in table 4.6. It's same with the percentage shown in social interaction. The table shows high percentage of inter-observe agreement. There is a difference of agreement on the 2nd of interval on social interaction tables. Student C was successful in carrying out the activities but he was over the time limits. Thus, the observer did not take that into account. However, another observer accepted the student's assessment. That resulted in the difference between the number of inter-observe agreement.

Table 4.6.

Inter-observer Agreement on Follow Instruction for Student C

Interval	Observer 1	Observer 2	
1	5	5	1
2	12	13	0
3	8	8	1
4	9	9	1
5	8	8	1
(3/5) x 100 = 80%			

Student C was very focused during the play. He could play without the teacher's guidance (Figure 4.14.). He understood the games after watching the video clip.

Figure 4.14. Without teacher's guidance

However, on the fourth intervention, student C did not follow the instructions. He started to disturb others by hugging his peer's leg, sitting with his legs apart and

pulling his peer's hand (Figure 4.15.).

He started to disturb peer by hugging their legs, sitting with his legs apart and pulling his peer's hand.

(Teacher C, extract from fields noted day 14, 12/3/2019)

He was able to perform all of the action after watching the video clip. However, teacher C needed to often provide verbal prompting to student C not to do somethings misbehavior during play like blocking his peer run, touch peer's head softly and sit nicely.

(Teacher C, extract from informal interview, 29/3/2019)

Figure 4.15. Disturbing.

Overall, the three participants can follow the instruction very well after watching video modeling. They can follow the instruction of the play. From the beginning of the intervention, all three participants do very well; they play happily with their peers. During the maintenance period, participants can apply the games and helping other peers during games. From the finding, we observed that the participants had understood the rules of the game even can show the direction. We can identify that participants had developed they follow instructions by using video modeling.

4.4 Feedback from the Teacher (Semi-Structure Interview)

Semi- structure interview was conducted by three participating teachers after they had completed the maintenance phase regarding their perception on video modeling. There are three questions in the interview session.

4.4.1 What are the advantages of using video modelling compared to currently available tools and materials for children with Autism Spectrum Disorder (ASD) in teaching social skills?

Teacher A mentioned that video modelling is an effective tool in teaching social skills to children with Autism Spectrum Disorder because she noticed that children with ASD are visual thinkers. They easily got attracted to the video. If the video is equipped with many colors and animation, it's much more effective than the others tools. Moreover, Teacher A also mentioned that the advantage of video modelling was that it can be replayed over and over again and this will enhance the children's social skills. Children with ASD need to be repeated many times in their learning process. In this case, video modeling is useful when it is needed for the

teacher to repeat the lesson during class. Thus, teacher would not feel stressful or burden to carry out the repeated task for children with ASD.

Figure 4.16 Repeat Watching Video

Based on Teacher B, the effectiveness of using video modeling depends on the severity level of the children with ASD. If the child is a high-functioning autism, the child would be able to catch up quickly after watching the video and could apply the action accordingly to the content of the video shown. Sometimes, the child can even verbally teach its peer. For children with severe autism, it may be more difficult to ask them to sit them down to watch the video. If they do not like to watch the video, they would not learn anything and will not follow the instruction during the play. Overall, Teacher B also agreed that video modelling helps children with ASD to enhance their lesson in social skills.

Based on Teacher C, video modeling is also an effective method to teach social skills in children with ASD. According to teacher C, video modeling easy to

handle (Macpherson.K et. al 2015) and can be repeated play if needed. Sometimes, teacher C needs more time to explain with children how to play with peers. By using video modeling, it had solved a lot of steps to enhance children's social skills. Not only does video modeling give clear instruction to the children, but it also shows a step by step guide in the learning progress. Besides that, use of video modeling, teacher C just need to provide a little bit verbal prompting during intervention thus children are able to master the skills quickly.

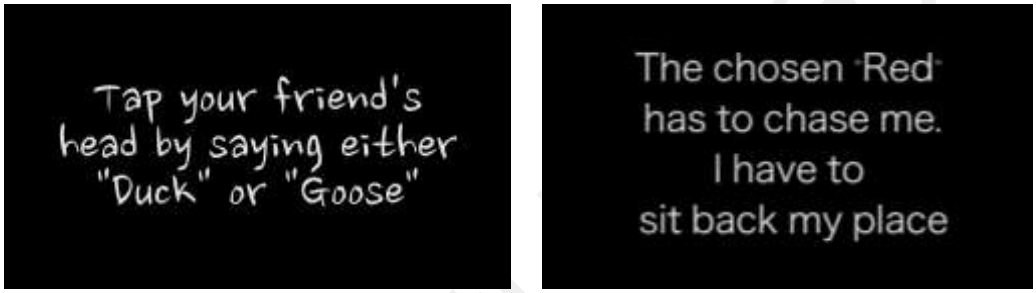

Figure 4.17. Instruction in the Video

4.4.2 In your opinion, what are the other daily routines that can be implemented by using video modelling?

Teacher A and Teacher B have the same suggestion that video modeling can be presented to enhance the daily living skills in children with ASD. For example, brushing teeth (personal hygiene), tying shoes lace, doing laundry, and others. Video modeling is really helpful in enhancing the children's life skills as simultaneous children could practice the skill while watching. The reason that Teacher A and Teacher B choose to use video modeling in teaching living skills among children with ASD because they observed that children with ASD have not fully developed their daily living skills. They do not know how to tidy up or fold their clothes. They

had spent at least 1 month to adapt to the skills and apply them without coaching. Therefore, they wished the expertise can create more video modeling to improve the living skills among children with ASD. On the other hand, Teacher C suggested using video modeling to help children with ASD in learning vocabulary and storytelling. Through video modeling, children with ASD will be able to pronounce correctly and can even tell a story. It will improve their comprehension and conversation significantly.

4.4.3 What are your suggestions to improve the use of video modeling in teaching social skills for children with Autism Spectrum Disorder?

According to the ideas of Teacher A, she suggested that the video may have to contain more imitative. The video modeling should have more facial expressions which can help children with ASD express their feeling through facial expression. Besides that, she also suggested that can use the more colorful or attractive backdrop and movement in the video such as animations as models to catch the child's attention. Furthermore, Teacher B and Teacher C suggested making the words more simple and short because it's easier to understand by the children with ASD. Try not to use too much of a sentence, and use the children's familiar words. While children watched the simple and short video they will easily be caught by the video which was shown to certain target behaviors.

4.5 Summary

In this chapter, both quantitative and qualitative data were analyzed. Quantitative results were used to answer the two questions concerning the use of video modeling developing social interaction and follow instructions among children with Autism Spectrum Disorder. Results were presented using three sequential phases (baseline,

intervention, and maintenance) with non-participant observation. On the other hand, teacher interviews were conducted to provide qualitative findings to reinforce the result gained in quantitative data. From the result based on research question one and two, it's showed that video modeling really and effective tool for developing social skills among Children with ASD. Children with ASD know how to have social interaction with peers and follow the games instruction during play time. The both graph lines (blue and red) showing all the three participants' improvement times to times during the intervention and maintenance phrase. Besides that, the feedback from the teachers also commented the video modeling was effectiveness to teach social and skills, and they wish to use video modeling to develop more skills among children with ASD.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This study aims to have a better understanding of video modeling to develop social skills in Autism Spectrum Disorder. In-depth findings of each case helped to answer the three research questions: (1) How effective is video modeling in enhancing social interactions among children with ASD? (2) How effective is video modeling in enhancing the skills of following instructions among children with ASD? (3) What are the feedbacks received from the teachers who use video modeling to teach social skills to children with ASD?

The outcomes of the study may help other teachers understand in-depth on how video modeling can develop social skills among children with ASD. In this chapter, a summary of findings, the implication of findings, suggestions from findings and conclusion for this study will be discussed.

5.2 Summary of Findings

The goal of this study was to examine the effectiveness of video modeling to develop social skills (social interaction and follow instruction) in children with Autism Spectrum Disorder. By using video modeling had proven that it appropriate tools enhance children with ASD in social skills. Children learned how to use gesture touch to communicate with peers, and step by step followed instructions from the video. All the participating children took part in three intervention phrases involving baseline, intervention, and maintenance phase to investigate the effects of video modeling develop social skills. The duration of the intervention and maintenance

were the same between the three participants.

The nonparticipant observation was applied to collect data from the intervention. The responses of the students were coded based on its occurrence. The result was then presented in graphed data and table data to evaluate the changes across intervention phrases. Eventually, participant observation and semi-structured interviews were conducted to further support the data collected from nonparticipant observation. Transcripts from participant observation and semi-structured interviews were analyzed through thematic analysis method.

The results in non-participant observation were supported by participant observation and interviews. Generally, students had greater improvement in social interaction and follow instructions after the commenced intervention phrase. Across the intervention phrase, children with ASD showing progress on gesture touch, invite peers, say thank you, wait for the turn, and sit on the fixed seat.

All the participating students were able to maintain the intervention effects and performed well across the maintenance phase. Using video modeling has generally served as a tool to develop social skills in children with ASD. Besides, teachers had pointed out some advantages of using video modeling in their teaching. The advantages include increased focus, gesture touch, and seat wait for turns. These improvements were found in each student in the study.

5.3 Discussion

In the study, the discussion of the finding are using video modeling develop social skills (social interaction and follow rules) among children with ASD. Other than that, the feedbacks of teachers using video modeling to develop social skills among children with ASD will be discussed. The finding of this study is compared and

contrasted with those in the literature.

5.3.1 Effects of Video Modeling in Enhancing the Skill of Social Interactions among Children with ASD

Three participants (Children of ASD) in the study have improved their social interaction after the user of video modeling in developing social skills. From the graph of a number of occurrences in social interaction on all three students, we can observe that all of the students have an improvement in social interaction skills (Besler, F., & Kurt, O.2016). All of the students had increased at least 5-10 numbers of occurrences in social skills. Especially the student A, who had to increase the most compare to the other two children. The finding of the study is consistent with the literature (Wynkoop, 2016), VM an attractive strategy for teaching transitions between and within activities to individuals with ASD.

The findings of this study also are consistent with the literature, (Vygotsky 1962), which mentioned that children learn through interaction and communication with the peer. Student A can teach his peer how to play the games during the playtime after the 5th intervention. Student A even communicates and welcome his friends to the games independently without guidance from the teacher, it is shown that he tried to interact and communicate with his friends.

On the other hand, Student C used gestures touch to interact with his peers during play, which held their leg to request his peer to sit down or stop running. All three participants have the less verbal ability, but mostly they use gesture touch to interact with a peer which the finding of the study consistent with the literature (American Psychiatric Association, 2013) mentioned that children with ASD have problems with non-verbal communication behaviors used for social interaction.

In addition, according to Kornacki et al. (2013), social interaction should increase vocal conversation skills too such as greetings and maintaining and ending conversations. In the finding of this study, the result shows that three participants had improved their oval conversation skills by inviting peers in the games and ending the conversation by saying "thank you". Student A and Student B do it very well, they remember to welcome and say "thank you" all the time before and after the games. Greeting, maintaining and ending a conversation were difficulties for children with ASD. But after the finding, all the students are more confident to greet and maintaining a conversation with others through games.

From the finding of the study, we can identify that video modeling is really effective in enhancing the skills of social interaction among children with ASD.

5.3.2 Effects of Video Modelling in Enhancing the Skills of Following Instructions among Children with ASD

Holifield, Goodman, Hazelkorn, & Helfin, (2010) noted that children with ASD difficulties with attending skills but after the finding of the study, we observe that children with ASD can focus and follow the instruction through the video modeling. Student A and Student B had been attracted by the video in the study. Both of them can follow the steps shown in the video. Some even Student A can guide his friends in the games.

From the finding of the study, the result has shown that all the participants have high percentages on the following instruction. All the participants get 60 percentages and above. If children with ASD able to follow the rules of the games, it means that children can involve informal games. According to Piagetian description, games with rules had guide children to understand the importance of the social

context. The finding of the study was contrary to the literature on Han Asperger (1991) which mentioned that children with ASD are individuals who relatively slow and inaccurate.

5.3.3 Feedback from the Teachers (Semi-Structured Interview)

The finding of this study video modeling is effective as a tool for the teacher in the teaching. Teachers can reuse the video and have the opportunity to be played repetitively to the children consistent with the ideas of Yasmin (2014). Teachers agreed that children had been attracted from the video modeling. They also understand the importance of using video modeling to develop other skills.

The finding of this study inconsistent with the finding in the literature by Taylor (2003) not only adults and peers can be in video modeling. It depends on the target behavior that we wish to develop. The model did not bring many changes to the children with ASD developing with skills. Children are attracted to video modeling, not the model itself. From the finding of the study, we observe that children with ASD still can follow video modeling no matter the video modeling using kids as the model.

Besides that, according to Wong.et.al. (2015), using video modeling is an education technique that is created according to observational learning theory. From the finding of the study, we can identify that through video modeling, children are paying more attention and learning faster than the teachers' teaching. All three participants are paying attention and observing what the video modeling was trying to carry out the message to them.

5.4 Implication of the Study

The findings of the study demonstrated that video modeling develops social skills

(social interaction and follow instruction) among children with ASD. The results strongly advocated the children with ASD had developing social skills by using video modeling. Children know how to interact with the peer during play. Student A will shake his entire peer and greet his peers automatically after he finished his games without teacher reminders. From don't know how to follow the instruction until now; children with ASD understand how to start games with peers and how to conclude the games by saying "thank you". It's a good start for children with ASD to learn how to start a conversation with a peer while the teacher asks to do so. They would not feel stress or do not know how to do, because it already taught in video modeling.

Besides that, the study also implements children to learn new skills (follow instructions) during play. Sometimes, while teachers wish to have games with children with ASD they feel difficult to explain games to children with ASD. But from video modeling, teachers do not need to have a long explanation to the children. Children can get it easily after watching video modeling. Children can follow the step shown in the video to play the games. It's also a way to teach children to play with others with instructions and rules.

Furthermore, from the finding of this study, we can identify that it giving ideas for the teachers, educators and community an idea on using video modeling to enhance social skills among children ASD. Teachers and educator can plan and use this method to develop children's skills in the classroom. From previous study, we observed that video modeling had been used for enhancing practical life skills. After the study, we can prove that video modeling can develop social skills too.

The finding of the study also implement video modeling is a good tool for

the teacher to develop social skills among children with ASD. The video modeling easy to handle and portable (Macpherson, K., et. al, 2015), it can show in anywhere which is convenient. Teachers can use video modeling to enhance children with other skills. According to Yasmin (2014), autistic children are visual learner, naturally, children with ASD will be drawn to video modeling that ready by the teachers. Children with ASD will learn very fast through video modeling. Teachers can use video modeling as their teaching aids in children's learning during lesson in their classroom.

5.5 Suggestions from the Study

There are some suggestions from the finding of this study. Video modeling was a good tool for teachers in the school to enhance skills among children with special needs (Aldi, C., Crigler, A., Kates-McElrath, K., Long, B., Smith, H., & Rehak, K., et al.,2016) The teacher can create some targeting skills to show children with special needs so that they can learn through imitation. According to Bandura et. al. (1963), one of the ways children learn is through observation and imitation, following adult action and behavior. So that, video modeling can be a good tool for the teacher to use as teaching aids in school.

Besides that, another suggestion from the study was educators can use video modeling to enhance social skills among children with ASD. American Psychiatric Association (2013) mentioned that children with ASD have difficulties in social skills development. According to the finding of the study, it reflected that video modeling really can enhance children's social skills. Children learned how to interact with the peer, greeting, take turn, and follow rules which were difficult to teach during the lesson. Through video, modeling was a fun way to learn the skills among

children with ASD.

Moreover, video modeling can be play repeated if needed. Children with ASD need time to enhance the skill. For teachers, is hard and emotion will be changed a long time teaching the children, but the children still cannot follow the instruction. Video modeling can be a good tool for the teachers to play with the children with ASD to develop the entire skills. It maybe takes shorten the time for children with ASD to develop certain skills.

Lastly, more attention must be paid in building substantial background knowledge in students with ASD to foster social skills on social interaction and follow instruction. More special education was focusing on practical life skills on children with ASD, but lack of social skills intervention. Special education researchers should have more research on helping children with ASD build up their social interaction and follow instructions.

5.6 Suggestions for Future Research

The use of video modeling in this study has provided observational improvement in student's social interaction and follows the instruction which subsequently led to a better life. The knowledge learned from the activity has been maintained across a period of time upon the finishing of intervention. If we would like the skills to preserve for a longer time, we should plan some other games which also build on other social skills. Different games may bring different skills to children with ASD. Future Researchers may focus on using video modeling to develop social skills with different types of games.

Besides that, the participants that I choose are mild-autism with mild to moderate and high functioning children. They must have some speech ability, interest

in games and must have some ability to interact with others. They are almost in the age range between 9-12 years old. Future researchers may choose a different diagnosis of the participants in the games. Maybe the elder children, who were parent worries about their social skills. They need the platform for them to develop their social skills with other peers.

5.7 Conclusion

The children with ASD have a problem within social interaction, verbal and nonverbal communication and disruptions in cognition (American Psychiatric Association, 2000). Many teachers struggle on how to develop children with ASD to improve their social skills. There were many ways to develop children's life practical skills, but a lack of social skills. The present study has shown that video modeling was a good tool for teachers in developing children's social skills in social interaction and follow instruction. The result shows that it's a big change in social skills among children with ASD. Thus, future research on social skills in different aspects of skills can be highlighted.

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