

**EFFECTS OF MODELLING AND TOKEN REINFORCEMENT  
TECHNIQUES ON SHY BEHAVIOUR AMONG SECONDARY SCHOOL  
STUDENTS OF KANO STATE, NIGERIA**

**BY**

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**A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE  
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COUNSELLING**

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## **DECLARATION**

I declare that this research entitled “Effects of Modelling and Token Reinforcement Techniques on Shy Behaviour among Secondary School Students of Kano State, Nigeria” has been conducted by me under the supervision of Prof. Sani Sambo, Dr. Mustapha Ibrahim Abdullah and Dr. Dominic Arinze Oliagba. All sources of information used to enhance this research are duly acknowledged in the text and in a list of references provided. No part of this thesis was previously presented for another degree or diploma at any university.

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Date

**CERTIFICATION**

This thesis titled “EFFECTS OF MODELLING AND TOKEN REINFORCEMENT TECHNIQUES ON SHY BEHAVIOUR AMONG SECONDARY SCHOOL STUDENTS OF KANO STATE, NIGERIA” by Yusuf ISYAKU meets the regulations governing the award of the degree of Doctor of Philosophy (Guidance and Counselling) of Ahmadu Bello University, Zaria. It is considered satisfactory and therefore approved for its contribution to knowledge and literary presentation.

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## **DEDICATION**

This thesis is dedicated to my family Khadija Yusuf, Abdul-aziz Yusuf, Fatima Yusuf, Al-amin Yusuf, Bilkisu Yusuf, and Isyaku Yusuf. I would not have completed this study without their encouragement and support. Thank you all.

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## ABSTRACT

The study investigated the effect of modelling and token reinforcement techniques on shy behaviour among secondary school students in Kano metropolis, Nigeria. A Quasi-experimental design involving pretest-posttest control group was employed for the study. Purposeful sampling technique was used in selecting the sample of thirty shy students out of the population of one hundred and six identified shy students. The sampled shy students were assigned to two experimental and one control group. One of the experimental groups was treated with modelling technique while the other one was treated with token reinforcement technique. Shy behaviour observational checklist was adapted and used in the study by teachers in selecting the shy students. All the three groups were pre-tested and post-tested using shyness personality scale (SPS) designed by Akinade (2012). Five null hypotheses guided this investigation and the hypotheses were tested at 0.05 level of significance. The data collected were analyzed using paired sample t-test, t-test for independent samples and one way analysis of variance (ANOVA). The finding revealed that modelling treatment had significant effects in reducing the shy behaviour among the respondents ( $t=2.26$ ,  $p=.000$ ), token reinforcement treatment was also effective in reducing shy behaviour among the respondents ( $t=2.26$ ,  $p=.000$ ), modelling and token reinforcement have no relative effects on reducing shy behaviour among the respondents, modelling had more effects on reducing shy behaviour of the respondents than token reinforcement technique ( $t=2.10$ ,  $p=.009$ ), the finding also revealed that significant effects of the modelling and token reinforcement was found in reducing the shy behaviour between male and female ( $t=2.10$ ,  $p=.000$ ), the result also revealed that the two techniques had significant effects in reducing shy behaviour of respondents of different age levels ( $f=12.493$ ,  $p=.000$ ). Based on the findings, it was recommended among others that Counsellors, Psychologists and Teachers should be exposed to training on modelling and token reinforcement counselling techniques in addressing shy behaviour among secondary school students.

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## **ABBREVIATIONS USED**

SPS	---- Shyness Personality Scale
JSS1-3	---- Junior Secondary School Class one to Class three
SS1-3	---- Senior Secondary one to three
H0 <sub>1</sub>	---- Hypothesis one
EG1	--- Experimental Group one
EG2	--- Experimental Group Two
CG	--- Control Group
T1	--- Test one (Pre-test)
T2	--- Test Two (Post-test)
Xa	--- Treatment A
Xb	--- Treatment B
M	--- Modelling
TR	--- Token reinforcement
MOE	--- Ministry of Education
SPSS	-- Statistical Package for Social Science
SBOC	-- Shy Behaviour Observational checklist

## OPERATIONAL DEFINITION OF TERMS

- For the purpose of this study, the following terms are operationally defined:-

\* **Shy behaviour:** - It refers to a feeling of discomfort in expressing oneself among people.

\* **Modelling:** - It refers to learning something such as social interaction skills like self expression, confidence voice, good eye contact etc through observing and imitating a model.

\***Token reinforcement:** - This is a way of encouraging or rewarding somebody with items that are valuable to him or her as a result of displaying desired behaviour.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the study**

Generally, shy behaviour has been an issue of great interest in counselling psychology for the past 38 years, and researchers such as Zimbardo (1977), Leary (1986) and Akinade (2012) have contributed to the understanding of this phenomenon. In recent years, prevention of problem behaviours has become a major focus as a matter of importance to all those concerned with the education of young ones in Nigerian Secondary Schools. There is a wealth of research dealing with many effects behaviour problem has on students, among students, with teachers and the society in general. Problem behaviour among students disrupts students' learning and entire academic progress. Many teachers, counsellors, educational psychologists, resource teachers of learning and behaviour, special education workers and schools constantly seek out evidence based intervention to reduce inappropriate or problem behaviour among students. Shyness is among the problem behaviours that require intervention. It is a behaviour that affects how a person feels and behaves around others. It also means feeling uncomfortable, self-conscious, nervous, bashful, timid or insecure. People who feel shy sometimes notice physical sensations like blushing or feeling speechless, shaky or breathless. Shyness is the opposite of being at ease with oneself around others.

For more clarification on this concept of shyness, some scholars like Christopher (2008) stated that the concept of Shyness may be defined experientially as discomfort and/or inhibition in interpersonal situations that interferes with pursuing one's interpersonal or professional goals. It is a form of excessive self-focus, a preoccupation with one's thoughts, feelings and physical reactions. Miller (2007) also explained that shyness is a psychological term that describes the feeling of apprehension, lack of comfort or awkwardness experienced when a person is in

proximity to approaching, or being approached by other people especially in new situations or with unfamiliar people. For some people, the problem of shyness is having trouble thinking of things to say in social situations, while for others it involves crippling physical manifestations of uneasiness. For most, shyness involves a combination of both symptoms to a greater or lesser degree. In any case, the effect of shyness can be devastating. Students with this behaviour problem (shyness) tend to be poor in their social interactions, feel insecure to talk freely either in the classroom situation or within the midst of their peer group. These attitudes prevent them from normal participation in and contribution to classroom activities which adversely affect their academic performance. When people feel shy, they might hesitate to say or do something because they are feeling unsure of themselves and are not ready to be noticed. It is one of the behaviour problems that are brought up from unsatisfactory homes, under unsatisfactory situations or families, broken homes, crowded homes, or those that have been rejected by family, or raised up under insecurity, unloved ones, and discomfort with the regard to family. Evidence have shown that there are students with shy behaviour problem in classrooms and despite the several efforts of parents, teachers and siblings to assist such students/children in reducing their shyness by several ways of advising still the problem persist, implying that the method is not effective. This condition of students has subsequent serious bad side effects of academic backwardness, poor performance and poor social interaction with colleagues, teachers, parents and siblings.

The problem needs counselling intervention towards reducing it. This study attempted to use Modelling (M) and Token reinforcement (TR) counselling techniques which the researcher considered appropriate behavioural counselling techniques in reducing shyness among secondary schools students. Modelling and Token reinforcement have all proven to be effective tools at

reducing problem behaviours and may be used to reduce or even remove unwanted shy behaviour. These techniques were best known to the researcher not to have been used by any other person in reducing shyness or even modifying any behavioural problem at any level of students in Kano State and that was why the researcher decided to use the two counselling techniques.

Modelling is a behavioural intervention in which an observer views a model engaged in an adaptive behaviour. The aim of the intervention is for the participants to learn the adaptive behaviour and to reproduce it more frequently and appropriately. Modelling is one of such interventions which have proven to be an effective tool at reducing problem behaviour and can be used to remove unwanted shy behaviour and create a firm of only adaptive behaviour. Modelling is such an approach that involves the counsellor arranging a model for the client to observe and imitate, such as the ability to talk and associate with friends and other people without being shy. The models can be in the form of tape recordings, programmed instruction, video tapes, films and person which can induce imitative behaviour. Such models must be prestigious, competent, attractive, likable or admirable and friendly. Modelling technique and token reinforcement are forms of behaviour therapies designed to help people to effectively treat different number of problem behaviours such as anxiety disorder, post-traumatic stress disorder, specific phobia, obsessive compulsive disorder, eating disorder, attention-deficit/hyperactive disorder, conduct disorder and shy behaviour etc. It has been used successfully in helping individuals with behaviour problems. The effectiveness of modelling has led to its use in behavioural treatment of individuals with behaviour disorders who frequently lack important behavioural skills of social interaction and confidence.

In token reinforcement a counsellor uses a positive reinforcer like food, money, gifts and positive verbal praise as stimulus when a desired response from an individual is produced. Token reinforcers when presented to an individual in a given situation strengthen the desired behaviour and increase the likelihood of the occurrence of that wanted behaviour. Going by the fact that greater amount of learning takes place through social interaction shows that shy students are missing a lot, because they are unable to associate with people and that makes shyness problem behaviour. This behaviour among students disturbs learning, academic progress and lots more. The choice of these two behavioural counselling techniques on shy behaviour is to examine whether the two counselling techniques (modelling and token reinforcement) will have an effect in helping secondary school students with shy behavioural problem and also to determine the differential effects of the two counselling techniques on shy behaviour of the students. The study also aimed at determining differential effects of the two counselling techniques on shy behaviour of male and female respondents to treating gender issue. The study is also aimed at finding the effects of the two techniques on shy behaviour of the respondents of different age levels. When the techniques are used, it is hoped that the respondents will reduce shy behaviour and that will also restore into them self-image, self-esteem and self-confidence, as that will make them to overcome and enhance their ability to express themselves confidently both to their teachers, parents, friends, counsellors and even their relatives.

## **1.2 Statement of the problem**

Attempts by way of advising have been made to reduce shyness among children by parents, teachers and Schools' Managements. Despite these efforts of parents, teachers and

Schools' Managements to make students adjust in social environment to feel secure and comfortable among themselves and to prevent the behavioural problem of shyness, the problem still persists. Some of the behaviours usually exhibited by shy students include; low self esteem, embarrassment, fear, lack of self-confidence in social situation, inability to express themselves, nervousness, insecurity, avoidance, constant social fear, and timidity.

However, for few students, the shy feeling tends to be even more extreme which seems hard to conquer. This prevents students from interacting, participating in class and socializing thereby building in them a powerful fear which may lead students to avoid social situations and hold back on trying new things or making new friends. At a time, it makes them uncomfortable and it seems impossible for them to talk to their classmates or teachers, thereby affecting their feelings and how they behave around others, and preventing them from taking advantage of many positive opportunities of interactions with their mates.

Counselling has a great role to play in reducing shyness being a relationship that is purposely designed and intended to help people with such problems. Through counselling, shy students can learn to understand and clarify their views of life space and to learn to reach self determined goals or function effectively, through their models.

The counselling techniques the researcher used in reducing shyness in this study are Modelling and Token Reinforcement behavioural counselling techniques. Nwamuo (2013) explained that modelling approach has to do with the counsellor arranging for learning of skills and techniques by use of models as sources of acquiring knowledge or information in which participants are expected to observe, think, imitate or copy from the model an area in their life in which they have difficulty confronting them, and is usually done through observation and imitation by role-plays designed to help participants practise clearer and more direct forms of

communicating with others. The role-plays allow for observation and imitation of the new techniques, helping observer(s) learn imitative responses by acting on them. Feedback is provided to improve the response, and the role-play is repeated.

In token reinforcement, a counsellor uses a token reinforcer as a stimulus like food, money, gifts, positive verbal praise, marks or points when a desired response from an individual is produced. Token reinforcers when presented to an individual in a given situation strengthen the desired behaviour and increase the likelihood of the occurrence of that wanted behaviour. These counselling techniques are assumed to be an effective measure in reducing shy behaviour among secondary school students. This study examined the effects of both techniques in reducing shyness among the secondary school students in kano State.

### **1.3 Objectives of the Study**

The objectives of this research are to:-

- (1) Find out the effects of Modelling (M) counselling technique on shy behaviour of the respondents.
- (2) Find out the effects of Token reinforcement (TR) counselling technique on shy behaviour of the respondents.
- (3) Determine the effect of the two counselling techniques (Modelling and Token reinforcement) on shy behaviour of the respondents in the treatment groups.
- (4) Determine the effect of the two counselling techniques (Modelling and Token reinforcement) on shy behaviour of the male and female respondents of the treatment groups.
- (5) Find out the effect of the two techniques (modelling and token reinforcement) on shy behaviour of respondents in different age levels in the treatment groups.

### **1.4 Research Questions**

For the purpose of this work, the following questions were raised:-

- (1) What is the effect of Modelling (M) counselling techniques on shy behaviour of respondents in the treatment group?
- (2) What is the effect of Token reinforcement (TR) counselling technique on shy behaviour of respondents in the treatment group?
- (3) What is the relative effect of the two counselling techniques (Modelling and Token reinforcement) on shy behaviour of the respondents in the treatment groups?
- (4) What is the relative effect of the two counselling techniques (Modelling and Token reinforcement) on shy behaviour of the male and female respondents in the two treatment groups?
- (5) What effect would the two techniques (modelling and token reinforcement) have on shy behaviour of respondents of different age level in the treatment group?

### **1.5 Research Hypotheses**

The following research hypotheses guided the study:-

- H<sub>01</sub> (1) There is no significant effect of modelling technique on shy behaviour of respondents after post-test.
- H<sub>02</sub> (2) There is no significant effect of token reinforcement technique on shy behaviour of respondents after post-test.
- H<sub>03</sub> (3) There is no significant relative effect of modelling and token reinforcement techniques on the shy behaviour of respondents in the treatment groups.
- H<sub>04</sub> (4) There is no significant effect of modelling and token reinforcement techniques on the shy behaviour of male and female respondents in the treatment groups.

H0<sub>5</sub> (5) There is no significant effect of modelling and token reinforcement techniques on shy behaviour among respondents of different age levels.

### **1.6 Basic Assumptions**

The study was conducted based on the following basic assumptions:-

1. Modelling counselling technique could be effective in reducing the shy behaviour of the respondents.
2. Token reinforcement counselling technique could also be effective in reducing the shy behaviour of the respondents.
3. Modelling counselling technique would be more effective than token reinforcement counselling technique in reducing shy behaviour of the respondents.
4. The two counselling techniques would have significant effects on both male and female respondents.
5. The techniques (modelling and token reinforcement) would have effect on shy behaviour of respondents of different age levels.

### **1.7 Significance of the study**

Theoretically, it is hope that the findings of the study will evaluate the two techniques of the theories of social cognitive learning and positive reinforcement, add value to the theories and establish the effectiveness of modelling and token reinforcement technique in reducing shyness among students. In addition, it is hoped that the findings of this study will help in the reduction of shy behaviour among secondary school students of Kano State. It is further hoped that this study will equip guidance officers and school counsellors with techniques of behavioural counselling as well as the ability to apply the techniques to any defined sample of population.

School counsellors may also find the outcome of this study very useful and relevant in counselling their students on reducing negative behaviour and or enhancing positive behaviours. The class teacher will also find this research study as a guide through which he can use to handle shy students in the classroom by referring the clients to school counsellor. Likewise, the findings of the study will be of help to parents in handling such children and referring them to the school counsellor too, thus encouraging parents, teachers and counsellors' interaction and relationship in schools and that indicates a positive response towards their children. Also the study will guide parents on how they can handle their children at home.

It is further hope that the findings of the study will add value to the existing literature on the area and will also provide researchers with an avenue to undertake further research on shyness using other behavioural counselling techniques. It is also expected to open up other areas of research in counselling and psychology. The study will be helpful to students in understanding the behaviour and how their school counsellor can help them in terms of making proper adjustment in their social life situations and possessing the ability to adjust from intense to mild level of shyness. Likewise, this research work will hopefully be useful in clearly defining the nature of guidance to be given to secondary school students with shy behaviour in Kano State as the research findings will provide exercises and programme of activities to help the students in reducing shyness as against simple advice that are usually given by non professionals in the area. The study will stimulate effective change in reducing shyness among the secondary school students in Kano, and that will contribute to greater amount of social interaction by shy students and it will in turn enhance their academic performance.

Also the study will motivate government funding in the provision of facilities for guidance and the provision of required personnel for discharging the services in the schools. On

the side of the existing guidance officers in schools, pursuance of study/training through in-service courses, workshops, seminars and conferences to acquire more professional skills in the field will be encouraged so as to meet with the present demands. In addition, this research work will hopefully motivate educational administrators at all levels to see to the proper utilization and posting of counsellors to schools, including incorporation of guidance and counselling courses as an area of specialization in the curriculum of all conventional universities and colleges of education.

The outcome of the study may also help education policy makers to have better understanding of shy behaviour and to introduce measures to reduce the behaviour; the study could also be used in formulating policies towards enhancing the performance of shy students in schools. All relevant stakeholders in education may also uncover the relevance of counselling profession in managing behaviour problems and in the success of any educational system in general. The study may provide empirical data to counsellors and psychologists on the efficacy of the two counselling techniques in behaviour change. Result of the study may also contribute to the reduction of shy behaviour and even other behaviour problems in Nigeria.

### **1.8 Scope and Delimitation**

The main focus of the research work is to find out the effects of Modelling and Token reinforcement counselling techniques in reducing shy behaviour among secondary school students in Kano State. The scope of the study was all junior secondary school students (JSS1-3), both male and female in Kano metropolis who exhibited the symptoms of shy behaviour. Students at this level are experiencing shy behaviour problem more and they are not as mature as their senior colleagues (SS1-3) who are adolescents and have already matured. The study was limited to three junior secondary schools in Kano metropolis, two schools served as experimental

groups and one served as the control group. The study was conducted in public secondary schools, hence private secondary schools and tertiary institutions were delimited. Only junior secondary school students were used hence senior secondary students were delimited. Two counselling techniques, modelling technique and token reinforcement were used hence other counselling techniques such as cognitive restructuring, systematic desensitization, response cost counselling, brainstorming technique, punishment, negative reinforcement and similar others were delimited.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter examines the related literature regarding modelling and token reinforcement techniques on shyness among students. It is presented under the following sub-headings, the conceptual framework which includes concept of behaviour problem, concept of shyness, factors that contribute to the causes of shyness and forms of shyness, The chapter also contains concept

of modelling, types of modelling, process of modelling, token reinforcement and types or classification of positive reinforcement, theoretical framework which include theory of social cognitive learning, theory of reinforcement, review of related studies and summary of the chapter.

## **2.2 Conceptual Framework**

The focus of this section is conceptual framework; it clarifies the concepts relevant to the study and thereby putting them in the context of the study. However, a clear explanation is that like any other behavioural problem, shyness is also a behavioural problem that could be influenced (reduced) by modelling and token reinforcement counselling techniques.

## **2.3 Behaviour Problem**

Students' behaviour has been a matter of concern because of the great implication it has for welfare of the students and society. The child whose behaviour deviates markedly from the normal expectations of the school (like shyness) becomes a subject of concern. Such an individual requires special attention, the one who is most likely to be the source of difficulties in the classroom. He cannot be ignored, nor should he/she be merely tolerated. He/she should receive the necessary aid and attention to bring about better adjustment. That is why Obe (2009) stated that "All behaviour, successful, unsuccessful, wise, foolish, flexible or rigid is an attempt by the organism to meet the demands facing it or perceived as facing it. This, therefore, clearly shows that behaviour is an attempt to adjust, and if a child's behaviour is a manifestation of his attempts to make a better adjustment then any undesirable behaviour should signal the need for assistance in finding more appropriate ways of fulfilling needs. Obe (2009) further indicated that a child with behaviour problems is likely to manifest symptoms which may be placed in any one

of the several classifications. For example, a child might be regarded as overly aggressive because of his inclination to fight, bully or dominate others etc.

Sambo (2009) supported the idea that behaviour of any kind is the result of variety of influences upon a person during his years of development. His conduct is his way of reacting to these influences, and it denotes an attempt to make satisfactory adjustments. A person's behaviour is to a certain degree a reflection of his attitudes and values, and it provides mechanisms for self-fulfillment and the realization of ambitions. Some kinds of behaviours actually thwart one's progress rather than aid it and they are referred to as behaviour problems. Researchers have tried to find many appropriate methods or techniques towards reducing the problems. The most common way for children's emotional problems to surface or to manifest is through their behaviours. Students whose behaviour is inappropriate exhibit such behaviour by what they do and say. Some students are having aggressive behaviour, some are timid and some highly emotional, some bully, lie and steal, others are dishonest while some destroy property.

This situation according to Obe (2009) is clearly known that not all students will grow up and be in the school to behave in the ways that might be described as normal or well adjusted behaviour. Nearly all students have minor problems in their behaviour. For instance, they may be overly aggressive, lying, bullying, fighting and be timid, dishonest, highly emotional, talkative, and so on. Even though some students indeed outgrow in problems, but some of the problems can persist and become more serious in later life like shyness. Shy students may create problems for themselves, for their parents, teachers, colleagues and others. And shy students feel uncomfortable around others and might feel very anxious in almost any situation.

Students' behaviour problem like shyness can interfere with an individual normal life situation and can interfere with his/her ability to participate fully in social gathering as well as

classroom activities such as answering questions, asking questions, reading and reciting. Students who are shy might also sit alone throughout the class completely unable to talk or pay attention because they are so preoccupied with fear that the teacher might call on them to perform some tasks or to answer some questions.

#### **2.4 Concept of shyness**

Shyness has been conceptualized and defined in many ways, mostly being regarded as belonging to many categories. One of such category views shyness as a subjective experience which is exhibited as nervousness and apprehension in interpersonal encounters, on the other category, it has long been described as a character trait, an attitude, or state of inhibition (Miller, 2007). Researchers investigating shyness have attempted to develop objective definitions of this human experience.

Lawrence and Benett (1992) on their part defined shyness as a behaviour that affects how a person feels and behaves around others. Shyness can mean feeling uncomfortable, self-conscious, nervous, bashful, timid, or insecure. People who feel shy sometimes notice physical sensations like blushing or feeling speechless, shaky, or breathless. Christopher (2008) stated that shyness is totally a social phenomenon, and that it should be defined in terms of both social anxiety and inhibition. He thus, defined shyness as an affective behavioural syndrome characterized by social anxiety and interpersonal inhibition which results from the prospect or presence of others of interpersonal evaluation.

Miller (2007) on the other hand explained that, shyness is an interpersonal problem resulting from extreme embarrassment, low self-esteem, decreased self-concept and fear of rejection; it renders an individual ineffective in the classroom, social and work environments.

Shyness reduces the chances of success, it prevents individuals from establishing effective communication in social environment, and it leads to higher level of anxiety, unfriendliness, decreased levels of happiness, neurotic tendency, lower academic performance, increased fear reactions, social and emotional maladjustment, depression and loneliness. That is why Lyness (2004) explained shyness as that condition opposite of being at ease with oneself around others. When people feel shy, they might hesitate to say or do something because they are feeling unsure of themselves and they are not ready to be noticed. Shyness is a term used to describe someone who has a hard time in social situations. They lack confidence, feel inadequate, lack self-confidence, and they have uneasiness about themselves.

In [humans](#), shyness (also called diffidence) is a social psychological term used to describe the [feeling](#) of [apprehension](#), [lack of comfort](#), or [awkwardness](#) experienced when a person is in [proximity](#) to, approaching, or being approached by other people, especially in new situations or with unfamiliar people. Shyness in itself is not a psychological disorder, and therefore does not warrant medication, but if bashfulness prevents a person from functioning or higher level of depression or anxiety accompanies it, then medication can be helpful (Lyness 2004).

The main approach towards managing shyness is through psychological approach. Researchers like (Zimbardo, 1977; Leary, 1986 and Akinade, 2012) recommended applying cognitive and behavioural methods instead of drug use. This approach according to them aims to replace the existing thoughts and behaviours of an individual by more functional ones. It also aims to have an individual understand the thoughts leading to his/her negative feelings, so that he can change his automatic negative thoughts about his/her social environment, to reinforce his/her self-efficacy perceptions and control his/her feeling of shyness.

Miller (2007) pointed out that, shyness mostly occurs during unfamiliar situations, though in severe cases it hinders an individual in his or her most familiar situations and relationships as well. Admitting feelings may become difficult for the individual. Shy people avoid the objects of their apprehension in order to keep away from feeling uncomfortable and inept; thus, the situations remain unfamiliar and the shyness perpetuates itself. Shyness may fade with time; for instance, a **child** who is shy towards **strangers** may eventually lose this trait when he is **older** and more socially adept. This often occurs by adolescence or young adulthood (generally around the age of 13).

The condition of true shyness may simply involve the discomfort of difficulty in knowing what to say in **social** situations, or may include crippling physical manifestations of uneasiness. Shyness usually involves a combination of both symptoms, and may be quite devastating for the sufferers, in many cases leading them to feel that they are boring, or exhibit bizarre behaviour in an attempt to create interest, alienating them further. Behavioural traits in social situations such as **smiling**, easily producing suitable **conversational** topics, assuming a relaxed **posture** and making good **eye contact**, which come spontaneously for the average person may not be second nature for shy persons. Such people might only affect such traits by great difficulty, or they may even be impossible to display.

Shyness is considered to be a neutral **personality trait** by people who are not shy, but very negative traits by those who are shy themselves. In fact, those who are shy *are* actually perceived more negatively because of the way they act towards others. Shy individuals are often distant during conversations, which may cause others to create poor impressions of them, simply adding to their shyness in social situations. At times, people who are not shy may be too up-

front, aggressive, or critical towards shy people in an attempt "to get them out of their shell." This may actually make shy persons feel worse, as it can draw attention to them (making them more self-conscious and uncomfortable) or cause them to think there is something wrong with them. The result is that a shy person could become even shyer in social situations.

Existing definitions differ from expert to expert, however most definitions incorporate elements of the following. Shyness is the act of feeling uncomfortable in social situations in ways that interfere with our ability to enjoy ourselves, to perform at the level we are capable of or that cause us to avoid social situations altogether.

Therefore, shyness generally may be defined experientially as excessive self-focus characterized by negative self-evaluation that creates discomfort and/or inhibition in social situations and interferes with pursuing one's interpersonal or professional goals. The experience of shyness can occur at any or all of the following levels: cognitive (e.g., excessive negative self-evaluation), affective (e.g., heightened feelings of anxiety), physiological (e.g., racing heart), and behavioural (e.g., failure to respond appropriately) and may be triggered by a wide variety of situational cues. Among the most typical situations are interactions with authorities and strangers, one to one opposite sex interactions, and unstructured social settings. Subcategories of shyness reflect the degree (i.e., mild social awkwardness to totally inhibiting social phobia) and frequency of experienced shyness including chronic shyness (self-labeling as shy and the experience of shyness in numerous social situations), situational shyness (the experience of shyness in specific social situations), and shy extroverts (experience anxiety and negative self-evaluation but are publicly outgoing). Although similar in its overt expression, introversion is not a subcategory of shyness. Introverts, like extroverts, do not fear social situations, but simply

prefer solitary activities. Shy individuals would prefer to be with others but are restrained by the experience of shyness. That is why you see shy person with people but he cannot contribute into their social interaction as result of the fear in what he or she is going to say to be acceptable.

## **2.5 Factors that Contribute to Shyness**

Most researchers agreed that there are two main factors that contribute to the cause of shyness: biological and environmental factors. Under biological factors they hold the view that shyness stems from temperament or innate characteristics. Research conducted by Gilbert, (2005) on identical twins to examine the genetic transition of shyness revealed that genetics could affect at a level of about .50. The researcher examined shyness levels in infants born by biological parents and adopted infants. He also observed that if biological parents had high shyness level their infants were also found to be shy. Similarly, when adopting parents had high shyness level, their infants were also shy. The infant of an adopting mother with high shyness level also displayed shyness. All these research results demonstrate that genetic and environmental factors form a combination to causes of shyness.

Gilbert, (2005) reported on environmental factors that shyness originates from parental behaviour. A child learns shy behaviour from his/her parents, parental coldness, rejection and over-control which cause neurotic and psychotic disorders. A domineering and authoritative attitude destroys the child's self-confidence; threatening and over-controlling behaviour on the part of parents give way to shyness. Continuous anger, blaming children with inadequacy and inaptitude or overprotective behaviour exhibited by parents lead to shyness in children. A person's early childhood which includes [child abuse](#), particularly [emotional abuse](#) such as ridicule and later life experiences after a person has experienced a physical [anxiety](#) reaction, in

other words the environment in which a person is raised can affect his or her shyness. If someone grew up in an abusive home or was bullied or rejected by their peers during their early childhood, that person will most likely develop shyness (Hilliard 2005).

Shyness differs from [social anxiety](#) but seems to develop first and then later causes physical symptoms of anxiety which is a broader, often [depression](#)-related psychological condition including the experience of [fear](#), apprehension or worry about being evaluated by others in social situations to the extent of inducing [panic](#). Hilliard (2005) observed that shyness is a behaviour that young children exhibit at one time or the other, which is mostly normal and temporary behaviour, especially when they are around 2 to 3 years. At these ages, shyness is considered a normal part of development. Shyness normally becomes a problem when it interferes with relationship with other people mostly 6 to 18 years in social situations, school, class, and other important areas of life. Shyness among students is a behaviour that parents, counsellors and teachers must not ignore; many shy students develop low self-esteem and lack self-confidence, thereby making it difficult for them to make friends in schools, respond to class and other academic activities, which may result in poor academic performance.

Zolten and Long (as cited in Usalem, 2011) on their part explained the reasons why students become shy such as difficulty with frequent exposure to new situations. By this, they mean that students do not have life experiences like adults do. For this reason they are frequently exposed to new situations. Some do have trouble coping with new situations, and tend to withdraw and become shy as a result of that. While shyness to some is as a result of inconsistent parenting which may be caused by parenting practises that are not consistent, for example, punishing for specific behaviour one day, and then letting it pass unpunished another day, being

over involved with a child some of the time, and being uninvolved at other times. Such inconsistencies make a person to feel insecure which can lead to shyness. Too much threatening, teasing or criticism by some children who are frequently threatened, teased, or criticized either by family members or by other people may cause negative feedback from others. These expectations will lead to avoidance of social situations and contact with other people which can lead to shyness. Lack of parental involvement is another reason, as some parents may seem disinterested in their children's lives for a number of reasons. For example, parents may mistakenly believe that they will promote independence in their children's life if they let the children fend for themselves. Others simply may not have the time or the desire to be much involved in their children's lives. Whatever the reasons, decreased parental involvement can lead children to believe that they are not worthy of attention. This will in turn affect their social relationships. Those who do not believe that other people are interested in them will probably feel very uncomfortable in social situations which can also lead to shyness.

In addition to the above, Zolten and Long (as cited in Usalem, 2011) also reported that lack of experience in social situations, students may become shy because they have not learnt how to effectively take part in social situations. Thus when exposed to social situations, they become shy and withdraw. Low self-esteem or negative opinion of oneself is another reason why those who have low opinions of themselves expect other people to feel the same way. This too can lead to shy behaviour. They also reported Modelling or imitative learned behaviour, because children learn from imitating their parents. Parents who are shy are likely to have children who are shy too. Shy adults may have few friends or social interests, thus their children have difficulty learning how to make friends too. Some children seem shy almost from birth. Sometimes these shy babies grow into being shy persons. Thus, someone with a shy nature is

more likely to be cautious, slower to get used to changes, and prefer to stick to what is familiar. He/she is more likely to hesitate when faced with new tasks. People who are shy by nature are also more likely to watch everyone else for a while before joining in on a group activity. They might be more sensitive to emotions not only their own, but the feeling of others as well.

An overprotective parent is another environmental factor which includes a family member being so overprotective that he/she forbids their children to participate in social situations. Children who are overprotected by their parents often do not have the opportunity to be independent socially. Because of this, these children often lack the confidence needed to make decisions and are often insecure, which can then lead to shyness and finally when not accepted by others, this mean when someone is not accepted by their classmates for instance during his/her elementary school days, the child often begins to develop trust issues and has a hard time trusting others because they develop the idea that no one will accept them, Zolten and Long (as cited in Usalem, 2011).

In line with the above reasons Hilliard (2005) stated that “I could recall when I was around 10 years old; a couple of white kids from my neighborhood invited me to their house to play basketball. My mom immediately told me not to go and informed them that I had homework to do. She began to say that I should not associate with people who are from a different race from us because people of different races look down on people like us who are not from a dominant race in this country. Another example of my mom forbidding me to participate in social situations was when I was a kid; I could recall that a lot of my adult family members such as my aunts, uncles, grandparents etc. would come to our house to visit my mom. Just as I was about to greet them my mom would immediately tell me to go into my room. My mom would explain to

me that in the Filipino culture it is considered rude for children to participate in adult conversations. So as a result of me having very few social interactions as a kid, i developed shyness. I was afraid of talking to people because I did not have a lot of experience in social situations because my mom was overprotective”. Similarly in Nigeria it is not allowed for a young man to interrupt into the discussion of adult people, when it happened, people normally consider such young person as not obedient and respectful by interrupting into the affairs of people that are not his or her mate, and that actually led to the young person to develop an element of shy behaviour.

This, therefore, makes a pointer to some factors that are responsible for shyness problem behaviour among students. Child rearing practises are considered sensitive as are socializing process in any social group that has tremendous influence on the individual child’s adjustment. In a social climate that is conducive, affectionate, cordial, lovely and peaceful, children from such homes develop good behaviours quickly and behave normally in the process of their development. Adults and parents in Nigerian society must be aware of the fact that where mutual interest and understanding exist, where husband and wife are positively and peacefully related and where children receive high standard of training by modelling and imitation, there is the likelihood that the children will not have fear of exposing themselves to ridicule. If the children who are “leaders of tomorrow” imbibe good behaviours right from home, counsellor are counselling such students and teachers are morally models for them to imitate and model their behaviour after them, it will be difficult to deviate from those good behaviours over-night and take to problem behaviours.

Shyness can be caused by many factors but it has been determined not to be a psychological disorder. How shy persons are really depends on the persons themselves and the underlying reason for their shyness. A shy person generally will not express his thoughts and will more often than not go unnoticed by people around him. Many times because of their standoffish ways, shy people are sometimes assumed to be snobs or even arrogant, as they appear not to be open to other people.

## **2.6 Categories of shyness**

Shyness is an act of feeling uncomfortable in social situations in ways that interfere with our ability to enjoy ourselves, to perform at the level we are capable of or leading us at times to avoid social situations altogether, due to the feeling of unease during such social situations and they cannot find anything to talk about with most people especially with unknown or unfamiliar faces, and therefore the problem manifests in different categories among individuals while in school. Akinade (2012) categorized shy behaviour into limited shyness, moderate shyness, and significant shyness. Lyness (2004) also classified shy behaviour into mild shy feeling, medium shy feeling and intense or extreme shy feeling.

Lyness (2004) reported that students with mild shy feeling or limited shyness only feel shy for some certain period of time in a particular situation. In mild shyness, students feel shy at first but later on the shy feeling melts away. After a certain little period of time, they can adjust to push through the mild shyness knowing that they will balance up to the new situations if they can just get through their initial reactions, particularly when in a new and unfamiliar situations like the first day in school, meeting someone for the first time, speaking in front of a class or group for the first time. In mild shy feeling, students are more likely to feel shy when they are

not sure of how to act, what will happen, how others will react, or when all eyes are on them. But in this situation, students are less likely to feel shy in situations where they know what to expect, feel sure of what to do or say, or are among familiar students. Students who are shy often hesitate before trying something new, they often prefer watching others before joining in on a group activity, usually they take longer time to warm up to new people and situations. In another situation, mild shyness makes students behave abnormally and makes them want to hide under the desk or table when they said something silly during lesson in the classroom. Mild feeling of shyness could be referred to as situational shyness, for the fact that it occurs based on situations like meeting new students, speaking in front of class etc. The extent of problem which this shyness creates for students varies widely, from mild to other forms of shyness stated by Lyness ( as cited in Usalem, 2011).

Lyness (as cited in Usalem, 2011) on his part explained that in medium shyness individuals in some situations do not take advantage of social situations, for instance they are less expressive verbally and show less interest in other people that are not shy. Medium shy students, particularly if they are interacting with socially confident person anxiously focus on themselves rather than on the other person or the conversation. Medium shy persons frequently and painfully report more negative thoughts about themselves and others in social interactions, seeing themselves as inhibited, awkward, unfriendly and incompetent particularly with people to whom they are sexually attracted. They also see themselves as less physically attractive, talk less, initiate fewer topics for conversation, avert their gazes more often, touch themselves nervously and show fewer facial expressions. They agree more often than not, however, with non-shy about what constitutes appropriate social behaviour. Their lowered likelihood of

enacting behaviours appears to be related to their lowered confidence in their ability to carry out the required behaviours and to their lack of self efficacy belief.

Lyness (2004) further reported that students with extreme shyness demonstrate difficulties with meeting people, initiating and maintaining conversations, deepening intimacy, interacting in small groups and with self assertion. Other frequent co-morbid diagnoses are dysthymia, alcohol or substance abuse, generalized anxiety disorder, and schizoid personality disorder. Obsessive compulsive personality is also seen, and extremely shy individuals frequently have obsessive and or paranoid tendencies. Extreme shyness interrupts with students ability to respond to teachers' questions in classroom. Students who are extremely shy can sit throughout a class completely unable to pay attention to the lesson because they are so preoccupied with the fear that the teacher might call on them to respond. When a person is extremely shy, he/she becomes fearful about talking to other individuals in the school, at home and in certain social functions (Lyness, 2004). It is therefore confirmed by Adeniyi (as cited in Usalem, 2011) that when students experience any difficulty in the process of teaching and learning, they are expected to as a matter of necessity ask for help either from their classmates or class teachers who would find it appropriate to ease them from such difficulties. However, students who are extremely shy find it difficult to ask for such help either from their classmates or class teachers. The extremely shy persons lack confidence in their own social encounters and also fear to expose their ignorance or their weakness to others in the classroom.

## **2.7 Concept of Modelling**

Artino (2007) explained that, Modelling is a term which is also called observational learning or imitation. It is a behaviourally based procedure that involves the use of live or

symbolic models to demonstrate a particular behaviour, thought, or attitude that a client may want to acquire or change. Modelling therapy is based on social learning theory. The theory emphasizes the importance of learning from observing and imitating role models, and it also emphasizes rewards and punishments that follow behaviour. The technique has been used to eliminate unwanted behaviours, reduce excessive fears, facilitate learning of social behaviours, and many more. Modelling may be used either to strengthen or to weaken previously learned behaviours.

Artino (2007) further reported that, in the early 1960s, Albert Bandura conducted groundbreaking modelling research known as the “bobo doll experiment”. The experiment involved preschool children witnessing adults abusing an inflatable doll, which led the children to later mimic the behaviour of the adults by attacking the doll in the same way. Bandura and his research team had discovered that children are able to learn through the observation of adults’ behaviour, but they were made to understand that success of the model being observed depended largely on the similarities between the observers and the model. That is, modelling intervention where participants took part as the models themselves resulted in participants acquiring target skills or behaviour in a shorter time compared to participants who are not the models.

Bandura subsequently proposed social cognitive theory which suggests that behaviours can be taught and developed through modelling. The theory suggests that individuals gain knowledge and skills by observing behaviours which are displayed. The advantage of this type of learning is that it provides the learner with clear information on how best to perform the skills. The theory identifies four steps in the process of learning through modelling, (1) the individual must attend to the events being modelled, (2) modelled behaviour must be retained, (3) symbolic representation of the behaviour is converted into appropriate actions similar to the originally

modelled behaviour and (4) the individual must be motivated to replicate the modelled behaviour. There are three main concepts of social cognitive theory. Firstly, from observing others, one can form a conception of how new behaviour patterns are performed and on later occasions the symbolic construction can serve as a guide for action. Secondly, one's mental state is an essential part of the process for learning which emphasizes the internal thought and cognition which help connect learning and behaviour. Thirdly, the theory recognizes that even though people can all learn something new, it does not mean that their behaviour will necessarily change (Artino 2007).

Building on Bandura's research, many researchers according to Artino (2007) have explored self-modelling, moving from an understanding of modelling to video self-modelling. The key characteristics of video self-modelling are the observer's potential and need to recognize conceptual and semantic information about the self. A video self-model is of the individual himself or herself and it aims to make the situation more personally significant to increasing the likelihood of this constructed memory being projected into future thinking. Observing the self model should provide an opportunity to register or encode such behaviour and to recognise one's potential to reach a valued goal, Artino (2007) stated that there are a number of contributing factors to include for successful learning by observation. Some contributing factors are clarification of goals and outcomes, demonstrating a positive self-image, reminders of previous competence, repeated observation of competent role-play and, anxiety-free behaviour or successful outcomes despite anxiety.

Over the last 40 years, research has indicated that there are two fundamental points essential for successful modelling; firstly, it is best to use the self, or someone with the same attributes, as a model and secondly, as Bandura found out, the higher the belief in success, the

higher the success rate. Therefore, self-modelling allows people to see themselves succeeding and increasing their self-efficacy. In addition, Bandura more recently, in 1997, noted the advantage of seeing oneself performs successfully, “provides clear information on how best to perform skills” and “strengthens belief in one’s capability” (Artino 2007). He also built on the idea of using the self as a model, where he said the individuals can learn to imitate their own modelled behaviour, as it provides them with relevant information by showing their own potential. It can also show how best to perform a skill and this strengthens their beliefs in being able to do so.

Artino (2007) reported that, Modelling has been used effectively to treat individuals with anxiety disorders, [post-traumatic stress disorder](#) , [specific phobias](#) , [obsessive-compulsive disorder](#), eating disorders, [attention-deficit/hyperactivity disorder](#) , and [conduct disorder](#) . It has also been used successfully in helping individuals acquire such social skills as public speaking or assertiveness. The effectiveness of modelling has led to its use in behavioural treatment of persons with substance abuse disorders, who frequently lack important behavioural skills. These persons may lack assertiveness, including the ability to say "no". In addition, they may have thought patterns that make them more susceptible to substance abuse.

Artino, further explained that modelling when used alone has been shown to be effective for short-term learning. It is, however, insufficient for long-lasting behaviour change if the target behaviour does not produce rewards that sustain it. Modelling works well when it is combined with role-play and [reinforcement](#). These three components are used in a sequence of modelling, role-play, and reinforcement. Role-play is defined as a practise or behavioural rehearsal of a skill to be used later in real-life situations. Reinforcement is defined as rewarding the model's

performance or the client's performance of the newly acquired skill in practise or in real-life situations.

Several factors increase the effectiveness of modelling therapy in changing behaviours.

Modelling effects have been shown to be more powerful according to Artino (2007) when:

- The model is highly skilled in enacting the behaviour; is likable or admirable; is friendly; is the same sex and age; and is rewarded immediately for the performance of the particular behaviour.
- The target behaviour is clearly demonstrated with very few unnecessary details; is presented from the least difficult level to the most difficult level of behaviour; and several different models are used to perform the same behaviour(s).

Modelling is the new term that has replaced observational learning or imitation in a later version of the theory of Albert Bandura's social cognitive learning theory. That is why Nelson (2013) explained that individuals learn much of what they do through observing and speaking with others ("models"), rather than through personal experiences. They also form a cognitive image of how to perform certain behaviours through imitation. Nelson further explained that, the basic processes of modelling include attention processes which have to do with attending to an accurately perceived model's behaviour, then retention processes which are concerned with remembering the model's behaviour, motor reproduction processes which translate symbolically coded memories of the model's behaviour and lastly motivational processes that have to do with, when positive reinforcement is potentially available, enacting the modelled behaviour.

Therefore, the above shows that modelling or imitative learning or observational learning may be used for helping to inhibit anxiety as well as for learning new responses, such as social skills on relating to people in expression of thoughts, feelings, emotions and physical reactions as well as creating good rapport. Indeed, when a counsellor uses modelling to teach a client how to relax, modelling is serving both anxiety-inhibiting and skills-acquisition functions. Modelling forms a part of techniques of behaviour rehearsal training.

Modelling is also considered a variant of systematic desensitization, in which the emphasis is on in vivo performance of feared tasks, with successful performance being viewed as the primary vehicle of psychological change. Nelson, (2013) explained that modelling involves a number of stages. First, the feared activities are repeatedly modelled or imitated both to show clients how they can be successfully performed and to show them that the feared consequences do not occur. For instance, the counsellor might repeatedly model or imitate handling a feared situation like in case of shyness, such as talking within people in expression of thoughts, feelings, emotions and physical reactions in social relationship etc. Second, joint performance with the counsellor may enable the clients to start engaging in activities which would be too frightening for them to engage in on their own. In imitative learning, hierarchies of sub-tasks of increasing difficulty are used. The counsellors' function is partly that of anxiety inhibitor as well as guide. Third, response inducing aids or protective conditions may be introduced to reduce the anticipated likelihood of feared consequences and thus help clients to perform the desired tasks. For instance, when treating conversation, response inducing aids might include the model's holding a conversation topic or discussion where everyone is expected to do his/her presentation before the group of the clients. Fourth, gradual withdrawal of performance supports takes place to ensure that performance; in which clients spend time interacting with the feared situations on

their own follows. During the initial period of self-directed performance the counsellor may stay in the classroom with the clients, but later he withdraws, possibly to observe the clients behind a one-way mirror. The idea here is that perceived self-competence is best strengthened by independent achievement in which it is clear that the clients' successes are due to their own ability to master the feared situations on their own. In his comment, Nelson (2013) said that "the success of modelling which is conducted mainly under experimental conditions should encourage validation in counselling setting". Based on the above reasons and the relevance of the technique to this research, the researcher decided to use this technique for his research.

## **2.8 Types of Modelling**

Modelling can be done in different ways. These according to Nelson (2013) may include live modelling, symbolic modelling, participant modelling or covert modelling.

Live modelling refers to watching a real person, usually the therapist or counsellor, performing the desired behaviour the client has chosen to learn. For example, the therapist or counsellor might model good manner of interaction and self expression for a client who wants to be able to interact with people.

Symbolic modelling includes filmed or videotaped models demonstrating the desired behaviour. Other examples of symbolic models include photographs, picture books, and plays. Self-modelling is another form of symbolic modelling in which clients are videotaped performing the target behaviour. The video is then replayed and clients can observe their behaviours and how they appear to others. For example, public speaking is one of the most commonly feared situations in the general population. A student who is shy of associating with

his friends and teachers in the classroom might be videotaped speaking to classmates who are role-playing the students and teacher in the classroom. The student can then be videotaped and work on his or her speech problems or other aspects of performance that he or she would like to change.

In participant modelling, the counsellor models the desired behaviour for the client, and then prompts the client to engage in the behaviour. The client first watches as the counsellor approaches that desired behaviour, and then the client too approaches the behaviour in steps or stages with the counsellors' encouragement and support. For example, modelling social skills to client may be done as the counsellor follows the steps of practising the social skills while client is watching. The client also follows the steps.

In covert modelling, clients are asked to use their imagination, visualizing a particular behaviour as the counsellor describes the imaginary situation in detail. For example, a child may be asked to imagine one of his or her favourite cartoon characters interacting appropriately with other characters.

## **2.9 Mechanisms of Modelling**

There are four steps involved in the modelling process that ensure better outcomes. As earlier mentioned, not all observed behaviours are effectively learned. In order, one must first have *attention*. If the observer is interested in what is being modelled, then there will be dedication for focus and learning. Second, the observer needs to have *retention*. This is the ability to retrieve the learned information gained from viewing the modelled behaviour a number of times, before enacting it. Third, is the necessary component of *reproduction*. More practise of the learned behaviour will lead to further improvement. Fourth it is the observer's *motivation*.

This is a key component which can sustain the idea of achieving their desired goal and encourage continuation of modelling the learned behaviour (Nelson 2013).

Artino (2007) also reported that Bandura's social cognitive learning theory states that there are four basic elements involved in learning from models, that he referred to as stages or processes involved in modelling. These are attention stage of consciousness characterized by concentration, retention stage to use or practise, production stage to bring into existence and finally motivation stage to have incentive to do something. Artino (2007) further explained that modelling, theoretically, is seen as encompassing four classes or sub processes. The first of these are attention processes, which are concerned with questions about what and to what degree various cues from the model register upon the observer. That a person who has a history of rewards for imitation is more likely to imitate may be partly a function of learning to discriminate the cues in a model, which if followed will result in reward. Other variables relating to attention are the physical properties of model stimuli, intensity, size, vividness and novelty. For example, the characteristics of model that elicit attention, such as social status; the characteristics of the observer such as low self-esteem, which suggest he will pay greater attention; the incentives for attending; and the discriminability of the modelling stimuli, are affected both by stimuli and observer variables. The second processes affecting modelled behaviour are the processes dealing with retention of cues. Rehearsal, especially covert rehearsal, falls into this class, as do symbolic coding operations that allows for more efficient memory. A third class is labelled motoric reproduction processes and it is concerned with the translation of the retained cue into overt behaviour. A person may attend and retain the cues depicting the proper sequence of behaviour, but he may be unable to perform the behaviours because he cannot accomplish them at his level of ability. Most people know how to “dunk” a basketball,

having seen it done, but few people are able to do it. Golf is another illustration, long hours on the practise range may be necessary before people can translate the cues from the instructor-model into anything resembling appropriate behaviour. The fourth and final class of modelling processes is *incentive and motivational processes*. In simple terms, people may attend, retain and be capable but yet not perform if the perceived incentives are not great enough.

## **2.10 Concept of Token reinforcement**

Token reinforcement according to Sigler and Aamidor, (2005) is an evidence-based practise used to increase appropriate behaviour and teach new skills (e.g., replacement behaviour in place of an interfering behaviour). That is why *Token reinforcement* is the contingent presentation of a stimulus (i.e., reinforcer) immediately following a learner's use of a target skill/behaviour. This relationship between the use of a target skill/behaviour and receiving token reinforcement according to Sigler and Aamidor,( 2005) increases the future rate and/or probability that the learner will use the skill again. This therefore indicates that within an educational setting, a token reinforcement is a system for providing [positive reinforcement](#) to a child or children by giving those tokens for completing tasks or behaving in desired ways. Token reinforcement are used as a method of strengthening a behaviour, or increasing its frequency, because the tokens are a way of “paying” children for completing tasks and the children can then use these tokens to buy desired items.

In assessing the role of token reinforcement in behaviour change, Sigler and Aamidor (2005) pointed out that there are certainly been an increased emphasis on token reinforcement to address antisocial behaviour in the school setting over the last few decades and its effectiveness has been well established among pupils. They explained further that reinforcement is a stimulus

which follows up contingent upon behaviour and increases the probability of a behaviour being repeated. Token reinforcement can increase the probability of desirable and undesirable behaviours.

Sigler and Aamidor, (2005) further reported that one of the most commonly used behaviour management interventions, especially in school settings for students who have learning or behavioural challenges, is the use of token reinforcement system. A token reinforcement involves awarding ("reinforcing" a student with) tokens, chips, stickers, check marks, points, stars, or other items/markings to students who demonstrate desired behaviours identified by the teacher. Students may periodically exchange the tokens for rewards, which are items or activities desirable to them. They further explained that token reinforcements are often quite effective for students who are resistant to other types of motivational or behaviour management techniques. Other benefits of this system are ease of administration. The use of immediate or frequent reinforcement (tokens) while teaching delayed gratification (holding tokens until trade-in time), lack of boredom or satiation for the student due to the availability of a variety of back-up reinforcers, and lack of unhealthy competition between students as they compete only against themselves. Token economies have great flexibility and utility; they have been shown in research studies to be effective with students with various kinds and severities of disabling conditions. Perhaps the reason for the effectiveness is that a token or check mark is visible evidence of success and progress. It also reminds the student to display proper behaviour, and assures that the teacher will notice appropriate behaviour and interact with the student in a positive manner.

Zirpoli and Melloy (2006) also stressed the importance of planned token reinforcement in relation to behaviour change indicating that it is very effective in promoting desirable change in students' behaviour. Some teachers question whether reinforcing or rewarding students for improving their behaviour is really just bribing them to do what is desired. This is not the case. A bribe is something which is unacceptable or inappropriate (and illegal). Token reinforcement is given to bring about desirable change and to teach students to take responsibility for behaviour. In order to make positive reinforcement, an effective intervention uses the following guidelines according to Zirpoli and Melloy (2006). Token reinforcement must be consistently delivered according to a planned reinforcement schedule. If it is not, no connection will develop between appropriate behaviour and the reinforcement and the behaviour will not change. Token reinforcement must be delivered immediately and students should know when they can expect reinforcement. If you wait until the end of the day to reinforce a student, the effect of the reinforcement may be reduced if not lost. If it is impossible to deliver reinforcement immediately, verbal reinforcement should be given and the student should be told when he or she can expect to receive other reinforcement. In this way, a contingency between behaviour and reinforcement will be strengthened or maintained.

They further, explained that improvement should be reinforced to recognize the effort made, and should not wait until the student's behaviour is perfect to deliver reinforcement. Do not give token reinforcement because you feel sorry for a student. If a student does not achieve the required criterion, delivering reinforcement will only teach the student that rewards are readily available regardless of behaviour and may even lead to an escalation of the behaviour. Rather, recognize that you know the students are disappointed but that they will have the opportunity to try again. Reinforcement must be contingent on behaviour. Also whenever

possible, pair any reinforcement with social reinforcement. If your reinforcement plan is letting students participate in preferred activities, make sure you provide some sort of social reinforcement, such as telling the student, "You really did an excellent job today. You should be really proud of yourself" or let the student choose another student for the activity. The social reinforcers should not also be ambiguous. They should be sincere, clear, and identify the specific behaviour for which they are being delivered. Also, token reinforcement should be age-appropriate, for instance we cannot expect a high school student to change his behaviour by rewarding him with stickers. This is likely to be ineffective and insulting to the student.

From the above, it is very clear that token reinforcement is a very important and effective technique of positive reinforcement in behaviour change or modification, the power of a token economy largely depends on the consistency of its application.

### **2.11 Types or classification of positive reinforcement**

To reinforce means to strengthen, and is used in psychology to refer to any stimulus which strengthens or increases the probability of a specific response. Zirpoli and Melloy (2006) explained that, there are different kinds of reinforcers which have been found to be effective in changing students' behaviour. They are:-

Natural and direct reinforcement: This type of reinforcement results directly from the appropriate behaviour for example, interacting appropriately with peers in group activities will lead to more invitations to join such activities. The natural reinforcement for appropriate behaviours leads to attention and help in participation etc. Natural reinforcement is providing the attention, help and opportunity to participate. The goal should always be to move the student to natural and intrinsic reinforcement.

Social reinforcements: These are reinforcers which are socially mediated by teachers, parents, other adults and peers which express approval and praise for appropriate behaviour. Comments ("Good job," "I can tell you, you are working really hard," "You're nice"), written approval ("Super"), and expressions of approval (nodding your head, smiling, clapping, a pat on the back) are all very effective reinforcers.

Activity reinforcers: These are very effective and positive for students. Allowing students to participate in preferred activities (such as games and computer time) is very powerful, especially if part of the reinforcement is being allowed to choose a classmate with whom to participate in the activity. This also provides social reinforcement from the partner.

Tangible reinforcers: This category includes edibles, toys, balloons, stickers, and awards. Edibles and toys should be used with caution. Parents may have reasons to object to edibles as reinforcement (for example, if a student has a weight problem) and toys can make other students envious. Awards can be in the form of certificates, displaying work, and letters to parents commending the students' progress. These are powerfully motivating reinforcers.

Token reinforcement: Token reinforcement involves awarding points or tokens for appropriate behaviour. These rewards have little value in themselves but can be exchanged for something of value.

Zirpoli and Melloy (2006) further stated that, reinforcers must be valued, preferred, and individualized, and that a token which may be extremely motivating for one student may be entirely useless for another. The following guidelines are used in choosing a reinforcer; observe the student on what kinds of activities he or she seeks out? What objects or events are presently serving to reinforce his or her behaviour? When designing a plan to modify behaviour give the student a list of choices and ask what he or she would like to try to earn. For example, if setting

up a token economy for work completed, let the student choose from a list of activities to find out which one he or she is interested in earning and monitor periodical review by observation and discussion whether the reinforcer remains preferred or whether a new reinforcer is necessary. Finally evaluate by doing a formal preference assessment.

## **2.12 Theoretical Framework**

The theoretical framework for this study was based on social cognitive learning theory by Albert Bandura and Reinforcement theory by B.F. Skinner. The social cognitive learning theory defines learning as a process of information gathering by observing and imitating a model through interaction and role-play which are two of the elements of modelling and theoretically they are very effective parameters that influence behaviour. However, for positive reinforcement theory, token reinforcement is equally another measure that influences behaviour. This therefore, indicates that the two counselling techniques of modelling and token reinforcement can all be used in reducing shyness behavioural problem as presented by this study.

## **2.13 Albert Bandura Social Cognitive Theory**

Social cognitive theory of Albert Bandura according to Artino (2007) is an improved version of social learning theory which rests on several basic assumptions such as plasticity, that humans have the flexibility to learn a variety of behaviours in diverse situations, triadic reciprocal causation model, that humans can transform temporary events into relatively consistent ways of evaluating and regulating their social and cultural environments, agentic perspective, also that humans have the capacity to exercise control over the nature and quality of their lives; people are producers as well as products of social systems; also people regulate their conduct through both external and internal factors, and finally moral agency, that people regulate

their actions through moral standard of conduct. This theory defines learning as a process of regulating learning experiences which human beings have the potential within the context of man's social and cultural environments

In line with the social learning theory, Albert Bandura (as cited in Artino, 2007) stated that human being can provide both means of acquiring noble behaviours and a more efficient means of shaping current behaviours without the use of direct reinforcement. Bandura referred to this type of learning as social skills learning which occurs through information gathering and role-play the behaviour of other people and that suggests that the modelling of new behaviours might actually be more dependent on a child's ability to observe and imitate model in expressing himself, and behaving well and confidently without violating the rights of others. Bandura referred to such indirect consequences as vicarious reinforcement. By introducing the concept of vicarious reinforcement, Bandura was stating explicitly that human learning is primarily a social experience. Thus, for Bandura, learning theory becomes social learning theory. Bandura's biggest contribution to learning theory according to (Artino, 2007), is that a new patterns of behaviour can be acquired in the absence of external reinforcement and in social learning of modelling, human beings learn skills and techniques for resisting manipulation and coping with criticism based on what others do, relating to expression of thoughts, wants, needs, feeling, emotions and physical reactions as well as establishing a good relationship with others. He also explained that in learning, we can exercise control over our behaviour through self-regulation since human beings are not slaves to environmental influences, rather than trial and error, to foresee probable consequences of our acts and behave accordingly. Self-regulation allows us to choose behaviours that help us to avoid punishments and move towards long-term goals.

A modification of Bandura's social learning theory (imitative modelling) was employed as a theoretical base for language instruction. This approach was experimentally compared to an alternative technique which required the subject to literally match each stimulus statement made by the clinician (mimicry). The results support the prediction that modelling is more effective in teaching the subjects appropriate grammatical rules, which they initially lacked. Moreover, subjects in the modelling condition exhibited speaking out what is in their mind for both greater retention of the rules and a more successful relationship. The results were explained in terms of an "interference hypothesis," which suggests that a client's overt verbalization may interfere with the cognitive processing necessary to learn an abstract language rule.

Modelling can also affect behaviour in many ways, with both positive and negative consequences. It can teach completely new behaviours, for one. It can also increase or decrease the frequency of behaviours that have previously been learnt. Modelling can even encourage behaviours that were previously forbidden (for example, the violent behaviour towards the Bobo doll that children imitated in Albert Bandura's study). Modelling can also have impact on behaviours that are similar to, but not identical to, the ones being role-played. For example, seeing a model excel at playing the piano may motivate an observer to play the saxophone. Bandura's theory is often referred to as "social cognitive learning theory" as it emphasizes the role of modelling (Artino, 2007).

Therefore, Bandura stressed the importance of social learning because it allowed children especially, to acquire new responses through role-playing others' behaviour. This form of learning does not need reinforcement to occur; instead, a role-play is required. A role-play is significantly important in modelling because it allows one to cognitively process behaviour,

encode what is processed and store it in memory for later use. Bandura claims that children continually learn desirable and undesirable behaviour through social learning. Modelling suggests that an individual's imitation and observation of his/her environment, cognition, and behaviour all integrate and ultimately determine how one functions.

Culture and environment also play a significant role in whether social learning will be the dominant learning style in a person or community. In some Nigerian cultures for example, children are expected to participate actively in their communities' work/activities and are therefore exposed to different trades and roles on a daily basis. This exposure allows children to be trained and learned the different skills and practises that are valued in their communities. In communities where children's primary mode of learning is through social skills, the children are rarely separated from adult activities. This incorporation into the adult world at an early age allows children to use social learning skills in multiple spheres of life. Culturally, they learn that their participation and contributions are valued in their communities. This teaches the children their expected roles as members of the community in order to gradually become involved and participate further in the community.

Throughout the evaluation of Bandura's theory, there has been a growing acceptance of mentalistic concepts such as the concept of self within explanations of behaviour and behavioural change. Bandura's theory adopts an explanation of psychological functioning in terms of triadic reciprocal causations. This system assumes that human action is a result of an interaction among three variables: environment, behaviour and person. By person, Bandura means largely, but not exclusively, such cognitive factors as memory, anticipation, planning and judging (Artino, 2007). The theory concept was that the child learns adults' behaviours which

imply that shyness can be learnt from parents and peer groups and the same concept theory can also be used to reduce it. In counselling we can't eradicate, but we can reduce, improve, enhance, and facilitate etc. unwanted behaviour of shyness.

#### **2.14 Reinforcement theory by B.F. Skinner**

Michael (2005) reported that, Positive Reinforcement is a theory originally identified by the psychologist, B.F. Skinner in the late 1930s and 40s. He coined the term "Operant conditioning" which states that behaviour can be changed when reinforcement is used after a desired response. As Skinner mentioned in his 1945 article in Psychological Review, the trainer must consider "the contingencies of reinforcement which account for the functional relation between a term, as a verbal response, and a given stimulus". Token reinforcement can be used by trainers to reward positive behaviours displayed by trainees. Positive reinforcement occurs when desired behaviour is strengthened by the presentation of a contingent stimulus. The attractive, behaviour-increasing, contingent stimulus used during positive reinforcement is referred to as a positive reinforcer. A positive reinforcer is defined as any environmental event that, when given in response to the behaviour, increases the strength and frequency of that behaviour. Some commonly used positive reinforcers in the classroom are praise, attention, tokens, and stickers etc. for an effective learning to take place.

According to Michael (2005) the theory of B.F. Skinner is based upon the idea that learning is a function of change in overt behaviour. This theory was developed by the behaviourist school of psychology, notably B.F. Skinner. Skinner believed that behaviour is a function of its consequences. The learner will repeat the desired behaviour if positive reinforcement (a pleasant consequence) follows the behaviour. Likewise, changes in behaviour

are as a result of an individual's response to events (stimuli) that occur in the environment. A response produces a consequence such as defining a word, hitting a ball, or solving a math problem. When a particular Stimulus-Response (S-R) pattern is reinforced (rewarded), the individual is conditioned to respond. Reinforcement is the key element in Skinner's S-R theory. A reinforcer is anything that strengthens the desired response. The distinctive characteristic of operant conditioning relative to previous forms of behaviourism (e.g., connectionism, drive reduction) is that the organism can emit responses instead of only eliciting response due to an external stimulus. This simply means that shyness as a behaviour that a person is displaying is shaped by external factors much more than genetic factors and therefore can be learnt from people.

In academic study, token reinforcement leads to compliance behaviours and decreases “escape-maintained problem behaviour” (Hanley, 2009). Token reinforcement ultimately helped the children learn which behaviours were acceptable and which behaviours were not. Token reinforcement as positive reinforcement is superior to punishment in altering behaviour. Skinner maintained that punishment was *not* simply the opposite of positive reinforcement; token reinforcement results in lasting behavioural modification, whereas punishment changes behaviour only temporarily and presents many detrimental side effects. As childhood learning differs from adult learning, there are hundreds, if not thousands of research studies that have been conducted to show the importance of positive reinforcement. Positive reinforcement can be applied to almost any situation, learner level, style, and age. Positive reinforcement can be a great tool to effectively train children, as reinforcements of learning can lead to a deeper understanding.

Sobel (2006) stated that, Token reinforcement is the process whereby desirable behaviour is encouraged by presenting a reward at the time of occurrence of such behaviour. Positive reinforcement is a tried and tested method in what is known in psychology as ‘operant’ conditioning. It is widely studied and used in behaviour analysis. He enumerated some of the advantages of using positive reinforcement as follows. It can be successfully used to increase the frequency of a wide range of behaviours (positive and negative). It can also be used to produce new behaviours and can also be effectively used in the classroom to help students identify their strengths and limitations and to put them to optimum use to accomplish tasks allotted to them.

Reinforcement theory is the process of shaping behaviour by controlling the consequences of the behaviour. In reinforcement theory a combination of rewards and/or punishments is used to reinforce desired behaviour or extinguish unwanted behaviour. Any behaviour that elicits a consequence is called *operant behaviour*, because the individual operates on his or her environment. Reinforcement theory concentrates on the relationship between the operant behaviour and the associated consequences, and is sometimes referred to as operant conditioning.

Reinforcement is an educational concept rooted in behavioural learning theory (Wilson and Boni, 1997). Behavioural learning theory does not focus on mental knowledge, such as learning information. Neither does it focus on cognitive and sociocultural concepts, such as creating meaning, understanding concepts using memory and the experience of conceptual change. Instead, behavioural learning theory focuses on behaviour. Specifically, it focuses on voluntary, intentional, and situationally appropriate behaviour. So, the learning highlighted by behavioural learning theory is learning how to adapt successfully to one's environment (e.g.,

raise one's hand before speaking, waiting for one's turn in the lunch line). Reinforcers play an important role in helping students learn how to adapt to the classroom (and school) environment by signalling which behaviours are desirable (those that are reinforced) and which ones are not (those that are not reinforced). Students learn which behaviours are desirable and adaptive by learning which behaviours are associated with reinforcers. The assumption that relates reinforcement to learning is that the presence of a reinforcer signals that a particular behaviour is desirable, and this signalling process, therefore, helps students learn how to adapt more successfully to the classroom environment.

However, the above implies that reinforcement theory is an important explanation of how people learn behaviour. It is often applied to school settings in the context of a behavioural modification programme. Although the assumptions of reinforcement theory are often criticized, its principles continue to offer important insights into individual learning and motivation. Being positively reinforced in life is essential for growth, success and the overall well-being of a person. It could also be successfully used for shyness reduction among people. Token reinforcement is one aspect of positive reinforcement. Interventions based on token reinforcement are effective and can help change an individual's behaviour or reduce problem behaviours very quickly if implemented properly.

## **2.15 Review of related Studies**

Related studies on shyness and other behavioural disorders using modelling and token reinforcement counselling techniques among secondary school students are reviewed. However,

researches like that of Chinyere (2012) investigated the effectiveness of two psychological treatments (modelling social skill training and thought restructuring techniques) in the management of shyness among adolescents in Owerri North, Imo State. Two research questions and six null hypotheses were formulated for the study, and the hypotheses were tested at 0.05 level of significance. Thirty (30) participants with shyness behaviour were selected from forty participants identified and were assigned into three experimental groups comprising modelling social skills training group, thought restructuring techniques groups and control group. Three sampling techniques were adopted in the study. They included purposive, cluster and random. A 3 X 2 factorial design consisting of pre-test, post-test and control group was adopted. Two reliable and validated instruments were used for data collection. They were Teacher Shyness Identification Questionnaire (TSIQ) and Shyness Personality Questionnaire (SPQ). Data was analyzed using mean, percentage, t-test, analysis of covariance and scheffe test. Results of the findings showed that the treatment gave rise to a slight reduction of the degree of shyness at post test but sharp reduction of the degree of shyness of the participants at one month's follow-up assessment period and the reduction was more pronounced with social skills therapy. The two techniques were effective compared to the control group both at posttest and one month follow up. They also maintained their superiority over control. This shows that the two techniques used in this study were effective on reducing shyness among adolescents.

The weakness of Chinyere's study is that she has not clearly specified the Thirty (30) participants into gender for the research. The researcher used Teacher Shyness Identification Questionnaire (TSIQ) and Shyness Personality Questionnaire (SPQ) developed by herself and she has not indicated the process followed in coming up with the validity and reliability of the instrument. However, the above study is relevant to the present study since it investigated the

effectiveness of two psychological treatments (modelling social skill training and thought restructuring techniques) in the management of shyness among adolescents in Owerri North, Imo State. Thus, some of the Chinyere's findings will be more useful in discussing the present study

Nnodum, (2010) on his study investigated the relative effects of Assertive Training (AT) and Modelling Technique (MT) and a combination of Assertive Training and Modelling Technique (AT & MT) techniques in improving the social skills of primary school shy children. The study is a quasi experimental research that adopted pre-test, post-test, treatment control group design with a 4x2 matrix. It was conducted in one of the primary schools in Urlu Local Government Area of Imo State. Four experimental groups comprising of three treatment groups of AT, MT, and AT & MT who were treated through eight therapy sessions for six weeks were used for the study. Forty-eight participants were randomly selected from the target population and were randomly assigned to the four experimental groups. Different types of researchers developed and validated the instruments, and the instruments were used after the identification of the shy students, measuring their social competence and testing the effects of the treatment programmes at the post-test and follow up assessment periods. Two null hypotheses which were tested at 0.05 level of significance were raised to guide the study. Data collected were analyzed with ANCOVA F-test and Scheffe test. The result revealed that the treatment techniques were equally effective and superior to the control condition in improving the social skills of shy students and reducing their shy behaviour. None of the treatment techniques was superior to the other.

Nnodum's study did not mention the method used to validate the instrument. T-test and ANOVA should have been better tools for the analysis of his study since the groups were not

more than three instead of ANCOVA, F-test and Scheffe test used in the analysis of the data. However, the above study has a relationship with the present study in the area of shyness and the variable of modelling counselling technique which the present study is investigating. This shows that the findings of Nnodum's study will be useful in discussing the present study.

Florence (2012) in her study investigated effects of peer modelling technique in reducing substance abuse among undergraduates in Osun State, Nigeria. The study adopted pre-test post-test control quasi-experimental research design. Random sampling technique was used to select 120 undergraduate students drawn from 100 and 400 levels respectively, 60 students from each level. The sample was divided into two (2) groups, one treatment group and the other control group. The researcher designed a questionnaire titled "Substance Abuse Questionnaire" for the study, and data was collected using the instrument. Experts in the field validated the instrument for both pre-test and post-test. A test retest was employed at interval of two weeks to test for the reliability of the instrument. In analyzing the data for this study, t-test was used to test the hypothesis. The correlated coefficient of substance abuse questionnaire = 0.84.

The summary of the research question and hypothesis answered based on the findings of this study showed that there was positive effect of peer modelling on the reduction of substance abuse among the respondents but there was no significant difference on the reduction of substance abuse of participants in the treatment group based on gender. The study of Florence is relevant to the present study. The researcher investigated effect of peer modelling technique in reducing substance abuse and modelling technique which is one of the variables of the present study was also used in Florence's study. Thus, some of her findings will be useful in discussing the present study.

Nwamuo (2013) in his study investigated the effect of cognitive modelling technique in the reduction of impulsive behaviour among primary school children in Owerri, Imo State. Under this study, the researcher investigated relative efficacy of the treatment strategy (modelling) in the reduction of impulsiveness and post assessment period, comparison of the academic performance between the treated and controlled group, and comparison of relative efficacy of the treatment strategy in the reduction of impulsiveness in one month follow-up assessment. A total of twenty (20) impulsive underachieving participants were randomly assigned to cognitive modelling and control groups of ten (10) participants each. The experimental group was exposed to six weeks of training based on cognitive modelling. The group had a total of nine sessions of approximately 50 minutes each. Impulsive-related questionnaire for teachers (IRQT) was used for teachers to identify pupils. Fifty (50) pupils who scored above 20 points were considered with this problem behaviour. Impulsive questionnaire for children (IQFC) was used by the researcher for the pre-test and post-test on the twenty (20) final sampled respondents for the study, ten (10) to each group, experimental and control groups. Those who scored ten (10) points and above on impulsive questionnaire for children (IQFC) were rated as impulsive. The experimental group was exposed to six weeks training based on cognitive modelling, while control group was not. In analyzing the data, t-test analysis method was used to test the result. The result of the study revealed that cognitive modelling was effective in reducing impulsiveness among the students, it was effective in improving academic performance of the respondents, and it was also effective in reducing impulsiveness when compared with the control group. These led to the rejection of the null hypotheses. The study of Nwamuo above is relevant to present study since the researcher investigated the effects of cognitive modelling in the reduction of impulsive behaviour among primary school children, and

modelling is among the variables of the present study. Thus, the findings of Nwamuo will also be useful in discussing the findings of the present study.

Lindsey (2012) conducted a study on a comparison of point of view video modelling and video self-modelling for children with autism spectrum disorder. The study examined the effectiveness of point of view video modelling compared to video self-modelling using a novel object retrieval task. Four children with a primary diagnosis of autism participated in the study. A multiple baseline design across participants was used in the study. Finding shows that point of view video modelling was more effective in teaching the object retrieval task in four children with autism. The result refuted the hypothesis that video self-modelling would be more effective because of its ability to also improve self-efficacy. The two children in the video self-modelling condition took considerably longer time to learn the task when compared to the two children in the point of view video modelling condition. Despite being the oldest and more cognitively advanced child in the study, one participant still had to watch his video self-model three times to correctly complete the task and one had to watch ten times. The findings showed that although both forms of video modelling were successful in teaching the task to all of the participants, point of view video modelling resulted in faster acquisition.

Christine (2008) conducted a study on the impact of video modelling and peer mentoring of social skills for middle school students with autism spectrum disorders in inclusive settings. The study explored the impact of video modelling and peer mentoring of five critical social skills for inclusion in middle school students with Autism Spectrum Disorders. A multiple baseline design across subjects was used in conducting the Study. The participants were four middle school-aged students with diagnoses of Autism Spectrum Disorders in grades six and seven. The researcher facilitated the completion of all pre-intervention measures including the Social

Responsiveness Scale, the Autism Social Skills Profile (ASSP), and the Autism Diagnostic Inventory-Revised (ADI-R) which were the instruments used for data collection. Participants were assessed both pre- and post-intervention using the Autism Social Skills Profile (ASSP) to provide more information on levels of social functioning. The results of this investigation indicated that the combination of video modelling and peer mentoring of critical social skills positively impacted on the levels of demonstration of the skills of students with Autism Spectrum Disorders. All three students with Autism Spectrum Disorders increased their levels of demonstration of the targeted critical social skills, meaning that the techniques were effective.

A study of Diana (2011) investigated the effectiveness of video modelling delivered via an *ipod* to teach students with autism to locate library books. The primary purpose of this study was to examine the effectiveness of video modelling delivered on an *ipod* to increase percentage of accuracy of task completion for children diagnosed with autism. Four participants, with chronological ages ranging from 9 to 10 years participated in the study. A combination of multiple probe design across four participants, replicated across three library topics, was used to evaluate the effects of video modelling to teach participants to use the media center computerized catalog system. For reliability of the result, Inter-observer Agreement and procedural fidelity data were collected at least once during each condition for each participant. IOA data were 100% agreement for three participants and 89% to 100% for one. One participant remained at 100% accuracy for all target behaviours on follow-up probe trials and on post-generalization probe trials. Second participant's accurate response during Pre-generalization ranged from 10% to 20%. Initial probe trial data were variable, with response ranging from 20% to 33% during the initial session and stabilizing at 67% response for all target behaviours while the other two participants ranged from 0% to 10% correct response. Initial Probe trial data for

target behaviours ranged from 0% to 100% accurate response. Since criteria were mastered during Initial Probe trials, instruction was not implemented. Post-generalization response on all topics was 100% accurate. Results for one participant demonstrated that video modelling was effective for increasing response from 67% to 100% and replicating findings for the other three participants did not require instruction and the participants were able to learn the target behaviour and generalize to other topics through repeated exposure to the task during the multiple probe opportunity trials.

Juliet and Kelly (2012) conducted a study using video self-modelling via iPod to increase academic response of an adolescent with autism spectrum disorder and intellectual disability. The purpose of this study was to examine the impact of VSM, delivered using a video iPod, on the academic response of a secondary student with autism spectrum disorder and intellectual disability during science instruction. One 16 year old, male student with ASD and moderate intellectual disability participated in the study. A single-subject, experimental research reversal design (ABAB) was used to evaluate the effectiveness of the VSM iPod intervention in this study. The results showed that the VSM intervention delivered using the iPod was effective for increasing the frequency of correct, unprompted response of an adolescent with autism spectrum disorder and intellectual disability in the context of a resource-room, science class setting. Although there was some variability during the video self modelling condition, increases in correct, spontaneous response were evident (i.e., increasing from 4 and 6% in baseline to 24 and 42% in video self modelling conditions). Austin continued to require prompting during science instruction (19–28% of questions posed) across all phases. However, his failure to respond declined (from over 50% of questions asked in baseline conditions to 32 and 28% respectively during video self modelling). The results therefore, indicated positive treatment effects, with the

participant increasing correct, unprompted academic response during the VSM intervention, decreasing such responses when VSM was withdrawn and increasing response rate when the intervention was re-introduced.

Cathy (2013) compared the effects of feedforward video self- modelling on reading fluency and comprehension. The study examined how an evidence-based behaviour intervention feedforward video self- modelling (FFVSM) improves reading fluency and comprehension. The method of video self-modelling has proven to be effective in a number of different applications for learning and changing target behaviour. The participants were 11 children (7 boys and 4 girls) aged between 7 and 10. The Participants were recruited from three primary schools in New Zealand. In the study, an observational learning technique - feedforward video self modelling (FFVSM) was used to improve children's reading fluency. The participants viewed edited video footage of themselves seemingly reading a difficult text at a fluent rate six times over a two week period. A multiple baseline across participants design was used to determine whether participants individually made an improvement in their reading fluency (rate), comprehension and accuracy. Overall change in RA was measured through the use of a pre-test and post-test after the completion of the intervention. There were three phases, baseline, intervention and follow up. The results showed that the majority of the children improved their reading fluency, comprehension and accuracy, as well as their reader self-perception (a proxy measure of self-efficacy). These positive results suggest that FFVSM could be a rapid, cost effective intervention to be used within educational settings to promote fluent reading. Eleven (11) participants who improved their fluency also improved in comprehension as measured. The majority of the students in the study increased their fluency from pre-test to post-test and throughout the intervention as measured. The result supported the hypothesis predicting that FFVSM would

improve fluency, and it also showed that many of the children experienced rapid learning of fluency skills over the two months of the intervention.

Christina, (2013) conducted a study on the use of video modelling to facilitate compliance and skills with a special education preschool group. The purpose of the study was to identify the effectiveness of video modelling, more specifically, a combination of VSM and video peer modelling. Eight students participated in the study. The students' ages ranged from four to five years. These students attended a half-day preschool special education programme in a rural county school system in the southeastern United States. The disabilities and behaviours represented within the group varied. The study was an action research study with an A-B-A design. Data were recorded to obtain the frequency of redirection needed during playing and cleaning, the duration of playing and cleaning, and the number of independent cleaners. The quantitative data were analyzed through the graphical representation of the data. Anecdotal observations were analyzed to determine the effects on the individuals in the group. Intervention effects showed that there were both positive and negative effects recorded throughout the study. According to the quantitative data taken, positive change was reflected in the students' ability to play appropriately with peers without redirection after viewing the video. Qualitative and quantitative data showed an increase in the number of students observed cleaning independently. Quantitative data also indicated negative effects in the area of cleaning; including an increase in the amount of time spent cleaning and in the amount of redirection needed during cleaning time. That is to say that the use of group VSM led to increase in some areas and decrease in other areas.

Susan, William, Thomas and Melissa (2000) investigated effects of self- modelling as a treatment for increasing on-task behaviour. The purpose of the study was to investigate the

effectiveness of self-modelling as a treatment to increase on-task behaviour. A multiple baseline design across three (3) students was employed to determine the treatment effects. In addition, classroom peers' on-task behaviour was employed as comparison data. Three male students, aged 9 to 11, participated in the study. Classroom observations prior to the onset of the study indicated that the three students were on-task an average of only 30% of the intervals observed. Baseline data were consistent with these preliminary observations. All the students were in a self-contained special education classroom. All the students were perceived as being off-task most of the time during their independent seat work. A multiple baseline design across subjects was used to determine the effects of the self-modelling treatment. The treatment effects for Students 1, 2, and 3 were immediate and substantial. The mean of the on-task intervals during intervention was 86%. The peer composite scores yielded a mean of 87% during the period that the experimental students were in the self-modelling treatment condition. For each of these students, there were no overlapping data points between baseline and the self-modelling treatment condition. The results indicated immediate, substantial, and durable changes in students' on-task behaviour that generalized across academic settings. The 3 students evidenced an increase of on-task behaviour from an average of 33% of the intervals observed at baseline to 86% during treatment. At 6- and 8-week follow-up, off-task behaviour was also one the behaviour problem of the children by not staying on their task. The students' percentages of on-task behaviour were essentially indistinguishable from their classroom peers. This showed that the technique was effective as a treatment for increasing on-task behaviour

Christos and Mickey (2009) conducted a study on the effects of video modelling on training generalization of social initiation and reciprocal play by children with autism. The study was conducted to assess the effectiveness of a video modelling intervention to promote social

initiation and reciprocal play as well as to increase the likelihood of generalization of the treatment gains across stimuli. Three children with autism participated in the study and experimental control was demonstrated using a multiple baseline across subjects design. Childhood Autism Rating Scale was administered for the adaptive behaviour rating of the children. Total time spent in reciprocal play for the first participant was about 292 seconds, for the second, it was 295 seconds across all sessions, while for third participant it varied from 240 and 290 seconds. The performance of these three children also generalized across settings (GS) and peers (GP) across all five toys. Similar results were obtained at the two follow-up conditions that showed the percentages of intervals engaged in reciprocal play, object engagement, and other behaviours for all three children. For one participant, 66% of intervals were occupied by object engagement and other behaviours occupied 34% of intervals. In the subsequent conditions T1 and T2, both of these behaviours dropped to zero level, while reciprocal play rose to near 100%. Nevertheless, object engagement and other behaviours increased again during the first implementation of condition T3, with a mean of 69% and 19% of intervals per session, respectively. Finally, the result obtained from the research findings showed that video modelling was an effective procedure for promoting social initiation and enhancing reciprocal toy play in all the three children when a single stimulus (i.e., one toy) was present. However, the successes reported in the study mainly relied on the ability of the participants to imitate the modelled behaviours. This can be attributable to the effects of the modelling treatment which showed that modelling technique is effective.

Stephanie, (2011) conducted a study on the effectiveness of using video modelling for teaching safety skills for children with autism and other developmental disabilities. The purpose of the study was to determine if video modelling would be an effective intervention for teaching

safety skills to young children with autism spectrum disorders or developmental disabilities. Five students, between ages 5 and 6 years, participated in the study. They watched a 2-minute video of an adult demonstrating the proper procedure for safely walking around the yellow marker. The five participants successfully generalized the new safety skill to a novel setting. The results of the individual data from the participants were summarized in response to the research questions: Is video modelling an effective method for teaching the safety skill of walking around yellow marker that indicate a wet area? Yes, all of the participants were able to learn this skill using video modelling. Video modelling may be an effective method for teaching this safety skill to these students. The second research question addressed the generalization of the safety skill across settings. All of the participants demonstrated generalization of the skill to a novel setting. The generalization scores ranged from 86%, indicating completion of all but one correct task, to 100% indicating the completion of all the correct tasks. The results indicated that the use of video modelling was effective in training young children with developmental disabilities and autism spectrum disorders to learn the safety skill.

A study by Gilchrist (2013) was successful in finding the effects of video self-modelling as an intervention for teenagers with public speaking anxiety. Ten (10) high school students, three (3) males seven (7) females aged 16-18 years participated in the study. The students were recruited from English class at South Island High School in New Zealand. Personal Report of Public Speaking Anxiety (PRPSA) questionnaire was used as the instrument of the study. The validity of (PRPSA) questionnaire had been demonstrated by correlation above .80 with Personal report of confidence as a speaker (PRCS). Two video Cameras, a Canon, legria HI20 and a GSCO ultra flip camera were also used simultaneously in the study. A within-participant, AB design was replicated across the ten participants where A was baseline and B was the video self-

modelling (VSM) intervention. Each participant acted as the control within his/her own study. Baseline data was collected and over a period of three (3) weeks, the participants were required to present speeches which were videoed.

The findings of the study shows that an overall scores of the (PRPSA) questionnaire range from 34-170 for all students in the study. Their pre-intervention scores ranged from 156-98 with a score of 128.7. The post-intervention scores, in comparison, ranged from 144-85 with a score of 118.9. Seven of the ten students' scores indicated a decrease in anxiety on this measure from pre intervention to post intervention, meaning that video self-modelling was effective in reducing anxiety level while on self-statement during public speaking (SSPS). The students' individual thoughts varied, with majority initially scoring 3.1 and 4. There were two students with extreme 4.9 and 1.9. Post intervention scores were varied again with the majority scoring between 2.9 and 4.2.

Two participating students scored at each end with 4.6 and 2. Six of the ten students indicated increased positive thinking during public speaking from pre to post intervention. This equally showed that video modelling was effective in increasing positive thinking. On the part of behavioural assessment of speech anxiety, overall scores range from 0 (the lowest score indicating no observable speech anxiety). All of the students' pre to post intervention decreased their level of observable speech anxiety. This shows that video modelling is effective in treating speech anxiety. This equally shows that video modelling is effective in bringing about positive change of reducing unwanted behaviours. The study of Gilchrist above is relevant to present study since the researcher investigated the effects of video self- modelling as an intervention for teenagers with public speaking anxiety, and modelling is among the variables of the present

study. Thus, the findings of Gilchrist will also be useful in discussing the findings of the present study.

Another study that attempted to study the effects of modelling was conducted by Sharon (2003). She assessed the effects of modelling, video modelling, prompting, and reinforcement strategies on increasing helping behaviour in children with autism. Four children with autism participated in the study. Each child attended classes at the Institute for Educational Achievement (IEA), a private school for children with autism. All children had previously received diagnoses of autism by independent agencies. Video modelling was used as teaching strategy for the participants that attended classes at IEA. A multiple-baseline across-participants experimental design was used. Baseline was introduced simultaneously for all the four children. Intervention was introduced for the four children successively across the legs of the design after the mastery criterion was met for each child and stability of performance was demonstrated.

The researcher used a related-samples t-test as the instrument of data analysis which revealed that there was no significant difference between the number of videotaped episodes scored as appropriate between these two individuals,  $t(19) = -0.56, p > 0.05$ . The mean percentage of videotaped episodes scored as containing an appropriate verbal and motor helping response for one person was 99% with a range of 90% to 100%. The mean percentage of episodes scored as containing an appropriate verbal and motor helping response for his age-matched peer was 99.5% with a range of 90% to 100%. Again, there was no significant difference between the number of episodes rated as appropriate between these two individuals,  $t(19) = 1.0, p > 0.05$ . The mean percentage of another person's videotaped episodes scored as containing an appropriate verbal and motor helping response was 89% with a range of 80% to 100%. The mean percentage of episodes scored as containing an appropriate verbal and motor

helping response for his age-matched peer was 99.5% with a range of 90% to 100%. Once again, there was no significant difference between the number of episodes rated as appropriate between these individuals,  $t(19) = 1.37, p > 0.05$ . Finally, the mean percentage of another person's videotaped episodes scored as containing an appropriate verbal and motor helping response was 97.5% with a range of 90% to 100%. The mean percentage of his age-matched peer's episodes rated as containing an appropriate verbal and motor helping response was 99.5% with a range of 90% to 100%. There was no significant difference between the number of episodes rated as appropriate between these individuals,  $t(19) = 1.71, p > 0.05$ .

The video model increased in effectiveness. Specifically, during the first treatment session, only 46% of the video models occasioned the correct combined verbal and motor response following the subsequent presentation of the discriminative stimuli. The video models were 67% effective in the first session. The models were 40% effective for one person and 67% effective for another person. By the tenth treatment session, every video model was 100% effective for all children. Therefore, children with autism could learn to engage in appropriate verbal and nonverbal helping responses taught using a video modelling, prompting, and reinforcement treatment procedure. Prior to their participation in the study, the four children with autism engaged in very few or no helping responses. Following the successive implementation of the teaching procedure, video models, verbal prompts, manual prompts, and reinforcement, all the four children successfully and rapidly learnt to emit appropriate verbal and motor helping responses in the presence of non-verbal, verbal, and affective discriminative stimuli during training trials drawn from four different helping categories. In addition, generalization of these verbal and motor helping responses was observed in the presence of non-trained discriminative stimuli during probe trials drawn from both the non-trained categories and trained-category.

Finally, the verbal and motor helping responses also increased in the presence of novel stimuli, in a novel setting, and with a novel instructor, as seen during the seven pre- and post-intervention measures. Although the children in the study exhibited little or no prosocial behaviour prior to treatment, the systematic application of video modelling, prompting and reinforcement allowed these children to learn to use both motor and verbal helping responses in the training situation and in novel situations. Furthermore, the children demonstrated a generalized repertoire of helping behaviour as demonstrated by their ability to respond with appropriate helping behaviour to novel verbal and nonverbal discriminative stimuli from novel categories of helping.

Stefanie (2009) investigated the use of video modelling to increase food acceptance. The researcher conducted his study using one participant. The person that participated in the study was a fourteen-year-old boy diagnosed with Pervasive Developmental Disorder. The design researcher used was a multiple baseline across foods. The target behaviour food acceptance was first tracked for each food under existing baseline conditions. The treatment programme was implemented with one of the foods, while the other foods continued under existing conditions. Interobserver agreement data were collected during 100% of all sessions and averaged 100%. It was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying them by 100%. An agreement was scored when both observers recorded the same information for each dependent measure. Procedural integrity was scored if the experimenter correctly implemented the procedure. Procedural integrity data were recorded for 100% of the sessions by a trained observer. Stefanie Allen's findings of the study represented the number of bites consumed by the participant each session over the 24-week treatment period and a three, four, five, and six-months' follow-up probes were presented. In the initial baseline condition for each food item, no food was consumed. The implementation of the video modelling

intervention resulted in an increase in food consumption with all of the foods offered. He accepted all five bites of the cucumber in Sessions 4-6 during the video modelling condition. The participant accepted three bites of grapes in Session 7; however, he did accept all the five bites of grapes in Sessions 8 and 9. He also accepted all the five bites of the French toast during Sessions 10-12 and all the five bites of the waffles during Sessions 13-15. Once video modelling was introduced, his rate of acceptance increased for all of the foods presented.

The finding of the study of Stefanie (2009) suggested that video modelling was effective in increasing food acceptance with Pervasive Developmental Disorder. Video modelling was utilized as an antecedent based approach and was an effective intervention for increasing food acceptance by the participant. The study of Stefanie Allen (2009) is relevant to the present study on video modelling in increasing food acceptance; some of his findings will be used in discussing the findings of the present study.

Geral, (2013) conducted a study on the effects of video-self modelling on inappropriate behaviour in elementary school students. Twenty-six elementary age students (grades K-5) in regular and special education classrooms in the Green Bay Wisconsin Area Public School District were involved in a study utilizing video self-modelling. Students involved in the study showed high frequency inappropriate behaviours according to teacher's reports. The findings of the study of both groups showed a similar amount of inappropriate behaviour before the Video Self-Modelling procedure. The Video Self-Modelling group showed a decrease in inappropriate behaviour after the treatment procedure and the Control group did not. A two-way analysis of variance of the average percentage of any inappropriate behaviour pre-post by groups yielded an F of 10.43 (df = 1,  $p < .01$ ) for pre-post, and an F of 9.02 (df =1,  $p < .01$ ) for interaction. In case of average percent of particular inappropriate behaviours in groups, there were decreases for each

of the types of inappropriate behaviour subsequent to the Video Self-Modelling procedure in the Video Self-Modelling group and no decrease for the Control group with the exception of the Noncompliance category where there was a decrease for the control group although not as large in magnitude as for the Video Self-Modelling group. Decreases were not statistically significant for the inappropriate noise or aggression categories, which were the lowest frequency behaviours observed. Two-way analyses of variance of average percentage of particular inappropriate behaviour pre to post by groups did yield an  $F$  of 5.58 ( $df = 1, p < .05$ ) for pre- post, and an  $F = 5.27$  ( $df = 1, p < .05$ ) for interaction for Inappropriate Movement; an  $F = 5.71$  ( $df = 1, p < .05$ ) for interaction for inattention; and an  $F$  of 5.70 ( $df = 1, p < .05$ ) for pre-post for Noncompliance. Effects on individual subjects showed that there was some variability in the effects of the VSM procedure versus the no treatment control condition on individual subjects. This means that the technique was effective in decreasing inappropriate behaviour among the participants in the study when compared to control group.

Marjorie, Loc, and Kurt (2000) conducted a study on a comparison of video modelling with in vivo modelling for teaching children with autism. Five children aged 7–11 years participated in the study. The targeted behaviours of the participants in the study included: independent play, expressive labelling of emotions, spontaneous greetings, oral comprehension, conversational speech, cooperative play, social play, and daily living skills. A multiple baseline design across children was used. Additionally, a multiple baseline design with children across the two modelling conditions was used. The results of the study showed that video modelling was an effective and efficient technique for teaching children with autism a number of different behaviours (e.g., expressive labeling, independent play, spontaneous greetings, oral comprehension, conversational speech, cooperative and social play, and self-help skills). For

four of the five children with autism, video modelling led to quicker acquisition of tasks than in vivo modelling. For one of the children, criterion performance was demonstrated after only two presentations of both video and in vivo modelling. All the five children acquired their specific tasks after exposure to video modelling rapidly. The above study is equally relevant to the present study and therefore its findings will be used in discussing the findings of the present study.

Stacey, Dennis, and Angelika (2010) conducted a study using video self-modelled social stories to teach social skills to a young child with Autism. The study was aimed at finding out the effectiveness of combining Social Stories and Video Self- Modelling (VSM) to teach social skills to a three-year-old child with autism. The person participated in this study. During the treatment sessions for this study, three self-modelled videos were produced, with each video specifically targeting one behaviour. A single-subject, multiple-baseline across behaviours design was employed to assess the effectiveness of the intervention. The study comprised of three phases: baseline, intervention, and follow up. The data for the target behaviours were visually inspected to determine whether a functional relationship existed between VSM training and any observed behaviour change. In addition, descriptive data analyses were presented for the associated concomitant behaviours and social validity results display the frequency of the three target behaviours, expressed as percentages of opportunities, across baseline, intervention and follow-up phases, for testing data (scripted) and generalization data, respectively. Following commencement of the intervention, increases were first noticed by the third test session, with 33% (one out of three) successful completion of the target behaviour. The introduction of verbal prompting at session 5 was associated with a marked increase of the target behaviour to 100%. Test session greetings maintained at between 60% and 100% for the remainder of this phase

(phase mean = 62%), and this target behaviour was maintained with the participant performing at 100% in follow-up. Generalization of greetings, both at home and the early intervention center was exhibited throughout intervention and follow-up phases. Generalized greeting at the home was seen from the first session in the intervention phase, despite an absence of the behaviour in training settings at this time. Home generalizations remained variable throughout the intervention phase (mean = 48.5%). Maximum generalization coincided with the introduction of prompting in testing sessions. In the early intervention center, a steady increase was apparent across the intervention (mean = 37.5%) and follow up (mean = 66%) phases in generalized greetings. On inviting to play during baseline, Jesse displayed a fluctuating level of this target behaviour with a single invitation to play (33% successful completion) on three occasions in the training setting (mean = 10%) and on four occasions in generalized settings (mean = 10%). Following commencement of the intervention, frequency of the behaviour in the test setting increased markedly (mean = 69.7%), and maintained in follow up (mean = 100%).

The findings revealed that video self-modelled Social Stories were effective at improving all the three target behaviours: greeting, inviting to play, and contingent responding. In addition, these behaviours successfully generalized across settings, toys, and communication partners. Concomitant behaviour changes, namely, increased levels of communicative behaviour and levels of social engagement were also observed. These results support the effectiveness of video self-modelled Social Stories and illustrate the potential of combined intervention techniques for remedying the social deficits faced by this population. The above study is equally relevant to the present study and therefore its findings will be used in discussing the findings of the present study.

Tom (2005) conducted a study on video self-modelling applications with students with autism spectrum disorder in a small private school setting. The present study was designed to analyze the effects that video self-modelling had on children with autism spectrum disorders across a variety of behaviours, including language, social initiations, tantrums, and aggression. Multiple baseline designs across students and behaviours were used to evaluate performance in several sub studies. Five participants who were diagnosed with autism spectrum disorder who attended a private school were the focus of this study. Ages of the participants ranged from 5 to 11 years, and the level of involvement of their autism ranged from mild to moderate autism. Two groups of students were found to have similar behaviours and were of similar ages and thus were grouped for studies using a multiple baseline design across persons. Participants were tested using the Wechsler Intelligence Scale-Revised, the Woodcock Johnson Achievement Test, and the Peabody Picture Vocabulary tests. The findings of the study revealed that both participants in this study made substantial gains in the frequency of their social initiations. A summary of these results is revealed that the participants made no social initiations during baseline. His mean during intervention rose to 4.0 and maintained at an average of 4.4 initiations a day. They had two social initiations in the 12 days of baseline observations, for a daily mean of 17. During intervention, this rate rose to 3.8 and was maintained at 4.25 initiations per day. Analysis of the results indicated that the rate and duration of tantrums for both participants decreased substantially in the ten (10) days of baseline observations. The mean duration of the behaviour was 16.25 minutes during baseline, 1.6 minutes during intervention, and 2.8 minutes during the maintenance phase. The findings further indicated that all the five participants exhibited immediate and significant gains and that those gains were maintained after cessation of treatment. The findings suggest that video self-modelling constituted a positive behaviour change

intervention worthy of consideration for persons with autism. The finding of the study therefore, is relevant to the present study.

Anika (2010) conducted a study on the effects of video self-modelling on elementary students' on-task behaviour as a response to intervention. The study examined the effects of video self-modelling (VSM) as a Tier 2 RTI for two students in general education classrooms. Both students exhibited low rates of on-task behaviour and were considered at-risk of academic failure. Instruments and materials used include Functional Behavioural Assessment (FUBA) forms, Behaviour Intervention Plan (BIP) forms and behavioural observation forms served to document data prior to intervention for each participant. At post intervention, a brief questionnaire was administered to the participants by the researcher. A video camcorder was used by the researcher to record student behaviour in classroom settings, and a Mac Book computer editing programme served to edit and prepare videos with verbal and audio enhancements. The results showed that Video Self Modelling intervention had a positive effect on the behaviour of the participant, an increase of 3 percentage points. When measured against the comparison peer in the classroom, participant's average was lower by 34 percentage points. The days of observation affecting this percentage were consecutive; however, the behaviour dropped to 25% on-task for the second observation probe, his lowest during observation, before again rising to 81%. This occurred to provide substantial evidence of the effects of VSM for the participants. Findings of the study in a nut shell indicated that this method of intervention has potential. In spite of uncontrollable confounding variables, both participants' average on-task behaviour minimally increased (by 6 and 3 percentage points respectively) over the course of intervention. Video self-modelling as a Tier 2 intervention provided substantial instruction for students with learning deficits. The finding of the study therefore, is relevant to the present study.

Wanda Gail (2012) conducted a study on the effects of video self-modelling on improving oral reading fluency to students with attention deficit hyperactivity disorder. The study was conducted in order to evaluate the effects of video self-modelling on improving oral fluency among the participants. The participants of this study include three middle-school students, two 13 years old and one 14 years old who were diagnosed with the attention Deficit/Hyperactivity Disorder, Post Traumatic Stress Disorder and reactive attachment. A multiple probe single subject experimental research design across participants with a pretest and posttest was employed to analyze the effectiveness of the Video Self-Modelling intervention. According to the findings of this study, the data indicated that the 3 participants who completed the study demonstrated improved oral-reading fluency, as evidenced by performance after a Video Self-Modelling feed forward intervention and their performance on pre-tests and post-tests of a standardized reading fluency assessment. Video Self-Modelling intervention improved from a 4.0 to a 4.7 oral reading-fluency. The data indicated that the 3 participants who completed the study improved their mean levels for oral-reading fluency during the Video Self-Modelling intervention condition. The finding of Wanda Gail Chandler's study is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Alyce (2012) conducted a study on using video modelling and role playing to teach social skills to middle school students with intellectual disabilities. The purpose of this study is to evaluate the effects of two intervention strategies (video modelling alone and video modelling paired with role playing) to increase appropriate social interactions among middle school students with moderate Intellectual Disabilities (ID). A single-subject, multiple-treatments design following an A-B-A-C-A model was used. Four students between the ages of 10-13: two boys, two girls participated in the study. They were given two types of social skills intervention

(video modelling and video modelling + role play). The selected participants were appropriate for this study because all had some deficits in communication skills and social interactions based on the nature of their disabilities. The data collection period ended, the participants' data was compiled using Microsoft Excel and a graph was created for each participant demonstrating the effects. The findings of the study showed that the effect of the two intervention packages of video modelling (VM) and video modelling combined with role playing was that all participants demonstrated increased appropriate responses. During the VM + RP phase, all participants again demonstrated increased appropriate behaviour, trending higher than both previous baseline phases and the video modelling phase. These gains then decreased to some extent under the final return to baseline phase, although rates of appropriate behaviour remained higher than during the previous baseline phases. The video modelling plus role play intervention was observed to be effective in raising the collective average rate of appropriate response across all participants. The average rate of appropriate responses across all participants during the Video Modelling intervention was approximately 42%. During the video modelling plus role play intervention, the average rate of appropriate response across all participants rose to 58%. The second intervention, video modelling plus role-play proved more successful as the intervention had higher rates of appropriate interaction compared to both the video modelling intervention and baseline. The finding of this Alyce's study is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Robert (2010) conducted a study using video self-modelling to teach new skills to children with social interaction and communication difficulties. The study was carried out in a primary school. Two 10-year-old boys with social interaction and communication difficulties participated. One of them focused on developing anger management skills, and the other on

improving communication performance. A mixed-methods approach was used with qualitative information from post-intervention of participant and a purposive sampling. The researcher suggested that the Video Self-Modelling intervention was successful, first participant viewed a video of himself demonstrating adaptive anger management skills and there was a marked decrease in problematic behavioural incidents following Video Self-Modelling intervention. As for the second participant in the study, the quantity of his communication work also increased during an intervention period when he repeatedly viewed a video of himself demonstrating planning and self-monitoring skills for communication. Ostensibly then, this study provides strong support for the effectiveness of video self-modelling interventions with children with social interaction and communication difficulties. However in reality, a more nuanced interpretation of the findings is merited. Outcome measures suggested that there had been positive changes in both participants' behaviour following intervention.

Robert's study has a number of shortcomings. Firstly, the small sample size which means that generalization of its findings is difficult. Research design, method of data collection and analysis were all not clearly stated. Video self-modelling may not necessarily be an individualized approach. If not, the participants of the study were two and of different problem areas, a more or less standardized general paradigm could be adopted. Differences in intervention focus, implementation and the influence of extraneous factors are all area of shortcomings of this study. The finding of this study of Robert Hart study is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Allison, Felix and Ilene (2005) conducted a study on effects of video modelling alone and with self-management on compliment-giving behaviours of children with high-functioning autism spectrum disorder (ASD). Two experimental studies were conducted under this topic by

the researchers, the first one included two 5-year-old boys with autism spectrum disorders (ASD) participated in Experiment 1. The participants, like many children with high-functioning autism or Asperser syndrome, exhibited language ability, intellectual functioning, and academic performance at near normal level, but their social capabilities were markedly impaired. A multiple baseline design across participants was used to assess the effectiveness of the intervention. Results from the study showed that both participants were able to make response compliments once video modelling was removed. Furthermore, the ability to respond to others with compliments was maintained throughout the two additional phases. Because the use of response compliments was consistently maintained before, during, and after the additional procedures were dropped, it appeared that the artificial reinforcers (i.e., the figurines) were not necessary for the acquisition and maintenance of this behaviour. These findings clearly showed video modelling as an effective intervention to teaching specific social skills. Three additional children participated in the second experiment of added self management. Data were collected approximately 6 months after the completion of Experiment 1. Diagnostic information concerning the new participants was obtained from educational records. A multiple baseline across participants design was used to replicate the effects of the use of video modelling on teaching compliment-giving responses and in assessing the effects of self-management training on initiating compliments. The participants showed an increase in compliment-giving responses on exposure to video modelling, meaning that video modelling was effective. The finding of these researchers' studies is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Susan, William, Thomas and Melissa (2000) investigated effect of self-modelling in increasing on-task behaviour. The study investigated the effectiveness of self-modelling as a

treatment to increase on-task behaviour to learning disabled students. Three male students, aged 9 to 11, participated in the study. Classroom observations prior to the onset of the study indicated that the three students were on-task an average of only 30% of the intervals observed. Baseline data were consistent with these preliminary observations. A multiple baseline design across subjects was used to determine the effects of the self-modelling treatment. At the end of intervention, all students answered questionnaires that indicated that they had positive reactions to the treatment. They reported that they enjoyed watching their respective videotapes, judged the intervention to be effective in increasing their on-task behaviour, and were unconcerned about being removed from their classrooms and being observed. The students' involvement in the self-modelling treatment condition resulted in a substantial increase in their on-task behaviours. The rapid and dramatic shift in the level of on-task behaviour coinciding with treatment, together with non-overlapping data ranges for the baseline and treatment conditions, supports the conclusion that the change observed was due to treatment effects. This therefore, indicated that video self-modelling is effective in increasing on-task behaviour of the students. The finding of the above researchers is relevant to the present study and therefore will be useful in discussing the findings of the present study.

James, (2013) conducted a study on improving the on-task behaviour of students with emotional and behavioural disorders using an iPod-created video self-modelling intervention. This study evaluated the effectiveness of video self-modelling intervention on improving the on-task behaviour of two school-age students with emotional and behavioural disorders (EBD). They were diagnosed with Attention-Deficit Hyperactivity Disorder; Combined Type (ADHD-CT) .They also have a history of work refusal, verbal threats and significant difficulty initiating and sustaining focus with school-related tasks. Participants were selected out of a pool of

students who were nominated by their teachers. A multiple baseline across subjects design was employed in order to evaluate the effects of the intervention. The findings of the study indicated that for one participant, data collected during four baseline sessions revealed that on-task behaviour did not increase over the course of four sessions. The mean percentage of on-task behaviour intervals was 12.5 (range = 2-20%). When the VSM intervention was delivered beginning with session five, an immediate increase in on-task behaviour was observed, which continued above baseline levels for the 10 remaining sessions. During the VSM phase, the mean percentage for on-task behaviour intervals was 84.5 (range = 49- 98%). Since a significant response to the VSM intervention was not observed after four sessions, an additional intervention phase was instituted, which consisted of VSM plus positive reinforcement. During the VSM plus positive reinforcement phase, the mean percentage of on-task behaviour was 66.75 (range = 57-78%). Four and six weeks after the conclusion of the intervention phase, a follow-up phase was attempted. However, the mean percentage of work completed during baseline session was 33.25 (range = 0-73%). When the VSM intervention was delivered beginning with session five, an immediate increase in the percentage of work completed was observed and sustained for eight of the following nine sessions. During the VSM, the mean percentage of work completion was 89.78 (range 8-100%). A score below 50% is considered ineffective. Results for one participant in the current study showed immediate and substantial increases in on-task behaviour and productivity after the VSM intervention was introduced and these increases were maintained over the course of treatment. For a second participant, VSM alone was ineffective in producing increases in on-task behaviour. When positive reinforcement was added to the intervention package, an increase in on-task behaviour was observed. Furthermore, the addition of positive reinforcement resulted in an increase in productivity, as evidenced by higher rates of task

completion. The finding of the James Hood Babcock is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Casey and Sunil (2013) conducted another study that assessed the effects of Video self-modelling (VSM) on children with autism spectrum behaviour disorder in an academic setting, with specific focus on improving on-task behaviour and appropriate transitions. The Participants were two children of 13 and 14 years who were enrolled within the functional interrelated classroom and diagnosed with autism spectrum disorder. Using an alternating treatment design over a 20 day time period, participants received 10 days of Video self-modelling (VSM) and 10 control days in a random order. The study utilized a single subject repeated measures design. An alternating-treatment design with comparison and withdrawal conditions was used to compare the effects of VSM on the performance of on-task behaviours and transitions by the two respective students. An alternating-treatment design is one in which two or more treatment options are alternated in quick succession to evaluate differential effects.

In an effort to examine the effects of video self-modelling on children with autism spectrum disorder; five hypotheses were developed for the study by the researcher. The first hypothesis developed stated that the implementation of VSM would significantly increase the percentage of on-task behaviour compared to control conditions. There was a clear demonstration that for Student 1, on-task behaviour greatly improved as a result of the VSM implementation in her reading class. Consistent with the second hypothesis developed, the implementation of VSM demonstrated maintenance over the seven weeks of implementation. The third hypothesis developed stated that the implementation of VSM would increase the percentage of appropriate transitions as compared to control conditions. Student two was approaching significance overall, but showed evidence of an anomaly within the 20 days of

implementation. With the removal of this anomaly, Student 2 showed a significant difference in overall appropriate transition behaviour. The anomaly occurred on day 11 when the student's para-educator was absent unexpectedly. It was apparent that the removal of her consistent para-educator led her to struggle during her math class and this provides a clearer picture of the actual impact of Video Self Modelling. The fourth hypothesis developed stated that the implementation of video self modelling would demonstrate maintenance. Maintenance for Student 2 was difficult to establish, and it was thought with more time dedicated to the implementation of Video Self Modelling, maintenance may be found. The fifth, and final, hypothesis developed stated that the teachers' ratings of on-task behaviours and appropriate transitions would significantly increase after the introduction of Video Self Modelling as compared to baseline ratings. Consistent with this hypothesis, teachers rated on-task behaviour and appropriate transitions low on the administered likert-scale before implementation. Upon completion of the study, another likert-scale was administered for the teachers to rate the strength of improvement in on-task behaviour and appropriate transitions. Each teacher gave high ratings for improvement and an increase in on-task behaviour and appropriate transitions. Video self modelling implementation increased desired behaviours in the specific Video Self Modelling days when compared to the control days.

A paired-samples t-test was calculated in testing hypothesis (a) with Student 1 data to determine if on-task behaviour varied between control days and video self-modelling (VSM) days. Results indicated that the average percent of on-task behaviour on the VSM days ( $M = 97.42$ ;  $SD = 5.16$ ) was significantly higher than the average percent of on-task behaviour on the control days ( $M = 93.6$ ;  $SD = 4.56$ ),  $t(9) = 2.18$ ,  $p < .05$ . A paired-sample  $t$  test was also calculated using student 1 data to determine if off-task behaviour varied between control days

and VSM days. The average percent of off-task behaviour on the control days was 6.12 ( $SD = 4.83$ ), and the average percent of off-task behaviour on the VSM days was 2.58 ( $SD = 5.16$ ). Thus, significantly higher mean scores were found for off-task behaviour on the control days than on the VSM days,  $t(9) = 1.98, p < .05$ . A Pearson correlation coefficient was calculated in testing hypothesis (b) to assess the maintenance effects of VSM on Student one over the course of implementation.

A moderate positive correlation was found ( $r(20) = .402, p < .05$ ), indicating a significant linear relationship between the day of treatment and on-task behaviour. Maintenance was achieved over the course of implementation of the research for Student one. A paired-samples  $t$ -test was calculated in testing hypothesis (c) with Student 2 data to determine if appropriate transitions varied between control days and video self-modelling (VSM) days. The average percent of appropriate transitions on the control days was 76.84 ( $SD = 18.34$ ), and the average percent of appropriate transitions on the VSM days was 84.67 ( $SD = 22.09$ ),  $t(9) = -1.41, p > .05$ . A review of the days in which the video was applied to Student 2 revealed an anomaly. This anomaly might be due to the fact that Student 2 had a different para-educator than she usually had on that specific day, resulting in a change in the student's schedule. Student 2 had a consistent para-educator to work with during math class each day, but on that day the para-educator was absent. Many students with ASD display resistance to environmental change, which might have led to the anomaly. Thus, the paired-samples  $t$  test was re-run with the exclusion of the anomaly. The average percent of appropriate transitions on the control days was 80.93 ( $SD = 13.78$ ), and the average percent of appropriate transitions on the VSM days was 91.45 ( $SD = 5.09$ ). With the removal of the anomaly, there was a significant difference between the control days and the VSM days ( $t(8) = -1.94, p < .05$ ). A paired-samples  $t$  test was

calculated with Student 2 data to determine if inappropriate transitions varied between control days and VSM days. The average percent of inappropriate transitions on the control days was 23.16 ( $SD = 18.34$ ), and the average percent of inappropriate transitions on the VSM days was 15.33 ( $SD = 22.09$ ),  $t(9) = 1.41$ ,  $p > .05$ . Again the analysis was re-run excluding the anomaly. The average percent of inappropriate transitions on the control days was 19.07 ( $SD = 13.78$ ), and the average percent of inappropriate transitions on the VSM days was 8.51 ( $SD = 5.09$ ). With the removal of the anomaly, there was a significant difference between the control days and the VSM days ( $t(8) = 1.94$ ,  $p < .05$ ). A Pearson correlation coefficient was calculated in testing hypothesis (d) to assess the maintenance effects of VSM on Student 2 over the course of implementation. A weak positive correlation was found ( $r(20) = .103$ ,  $p > .05$ ), indicating a lack of a significant linear relationship between the day of implementation and appropriate transitions.

A 5-point likert-scale was administered in testing hypothesis (e) to the two classroom teachers before implementation of VSM and upon completion of the VSM research. The likert-scale had each of the teachers rate on-task behaviour as well as off-task behaviour for Student 1 and appropriate and inappropriate transitions for Student 2. A paired-samples  $t$  test was calculated to compare the teachers' perceptions of on-task behaviour for Student 1 before implementation of VSM, to the teachers' perceptions of behaviours after implementation of VSM, with higher scores indicating greater frequency of behaviour. The average mean rating of the teachers' perceptions before VSM implementation was 2.79 ( $SD = .49$ ), and the average mean rating of the teachers' perceptions after implementation of VSM was 4.12 ( $SD = .24$ ). According to the two teachers' responses, there was a significant increase of on-task behaviour in Student 1 upon completion of the VSM research ( $t(6) = -5.20$ ,  $p < .05$ ). A paired-samples  $t$

test was also calculated to determine the teachers' perceptions before and after VSM implementation of off-task behaviour, with higher scores on the post-test indicating improvement or a decrease in behaviours. The average mean rating of the teachers' perceptions before implementation was 2.90 ( $SD = 1.93$ ), and the average mean rating of the teachers' perceptions after implementation was 4.40 ( $SD = .42$ ). Again, according to the two teachers' responses, there was a significant decrease of off-task behaviour in Student 1 upon completion of the VSM research ( $t(4) = -3.00, p < .05$ ).

A paired-samples  $t$  test was calculated to compare the teachers' perceptions before implementation of VSM, to the teachers' perceptions after implementation of VSM of appropriate transitions for Student 2, with higher scores indicating greater frequency of behaviour. The average mean rating of the teachers' perceptions before VSM implementation was 2.80 ( $SD = .67$ ), and the average mean rating of the teachers' perceptions after implementation of VSM was 4.20 ( $SD = .57$ ). According to the two teachers' responses, there was a significant increase in appropriate transitions in Student 2 upon completion of the VSM research ( $t(4) = -14.00, p < .05$ ). A paired-samples  $t$ -test was calculated to compare the teachers' perceptions before implementation of VSM, to the teachers' perceptions after implementation of VSM of inappropriate transitions for Student 2, with higher scores on the post-test indicating improvement or a decrease in behaviours. The average mean rating of the teachers' perceptions before VSM implementation was 3.20 ( $SD = 1.35$ ), and the average mean rating of the teachers' perceptions after implementation of VSM was 4.40 ( $SD = .55$ ). Thus, there was no significant difference found between before and after implementation of the VSM research with regards to inappropriate transitions ( $t(4) = -1.47, p > .05$ ).

The weakness of this study is that the researcher used two participants for the study and a single-subject design which is small sample size. In this specific study, the threat was confounded by only having two participants with ASD. In addition, the implementation of VSM was conducted in a natural environment, where there were many extraneous variables that could not be controlled, such as fire drills and school wide activities. Another possible threat to its validity was the presence of the video-camera throughout the implementation of the research. Known as the Hawthorne Effect, students may have tended to increase their on-task and appropriate behaviour having known there was a camera recording their behaviour. A final limitation of the present study is the lack of a follow-up phase. Maintenance as well as replication of skills across settings and contexts within the student's natural environment remains uncertain. This study was performed within 20 days of control and VSM implementation; the two participants may have benefited and maintained appropriate behaviours if more time were given for the study. However, this study on effects of Video self-modelling (VSM) on children with autism spectrum disorder in an academic setting, with specific focus on improving on-task behaviour and appropriate transitions, is relevant to the present study which also has modelling as one of the variables. The findings will be useful in discussing the present study.

The study of Rachel (2009) compared the effects of two types of general education classroom interventions, self-monitoring and video self-modelling (VSM), to increase on-task behaviour for children with AD/HD. The study included three participants in an ABCA, multiple baseline design. The phases included baseline, self-monitoring intervention, self-monitoring and VSM intervention, and maintenance. Participants were three boys, diagnosed with Combined Type AD/HD, aged 9-11, in fourth and fifth grade classrooms in a small public school in the Midwest. The students were observed in their classrooms and on-task percentages were recorded

using a whole-interval time sampling procedure. Following baseline observations, the students were video-taped in their classrooms during teacher instruction and independent seat work. During a training session, the students were taught how to self-monitor their behaviour using the Motive Aider Device. They viewed videos of themselves exhibiting both on and off-task behaviours in order to learn how to self-monitor their behaviour. After practising, they self-monitored their on-task behaviour during class to increase their awareness of their own behaviours. The Motive Aider device signalled random intervals with an average of 40 seconds. Then, the students noted if they were paying attention and checked a column on a worksheet.

At the same time, the principal investigator was observing their behaviours and recording the accuracy levels of their reporting. Students were rewarded for levels of accuracy above 80%. Each student was then videotaped "acting" out positive behaviours in his classroom with his teacher. Students were praised for paying attention, sitting quietly, raising their hands, not talking, and participating. These videos were edited into 2-4 minute segments to be viewed by the students twice a week for two weeks. The students viewed the positive images of themselves on video exhibiting on-task behaviours to increase their self-efficacy about their behaviours in the classroom. Percentage of non-overlapping data points was used to examine the data.

Results indicated immediate and significant improvements in on-task behaviour at the onset of Phase B. Analysis demonstrated that the intervention was labelled "very effective." Video Self-Modelling helps students with AD/HD to view a positive image of themselves completing a task with which they normally have some difficulty, which is staying on-task in the classroom. Students in the study were able to view themselves remaining on-task in small video segments, which was proposed to improve their ability to self-monitor their behaviour, thereby increasing performance. VSM has been shown to be not only effective for children with

difficulty staying on-task, but has also received high levels of social validity from teachers and students alike. Children tend to enjoy watching themselves practising positive behaviours on video. The experience increased the levels of self-efficacy and ability to complete tasks, such as remaining on-task.

Casey & Jennifer (2013) conducted a study on the effects of video self-modelling on children with autism spectrum disorder. The study was designed to analyze the effects of video self-modelling (VSM) on two children of 13 and 14 years old with autism spectrum behaviour disorder in an academic setting, with specific focus on improving on-task behaviour to one participant and appropriate transitions to the other. A paired-samples *t* test was used to calculate the data between control days and video self-modelling (VSM) days. The Findings of the study indicated that the average percent of on-task behaviour on the VSM days ( $M = 97.42$ ;  $SD = 5.16$ ) was significantly higher than the average percent of on-task behaviour on the control days ( $M = 93.6$ ;  $SD = 4.56$ ),  $t(9) = 2.18$ ,  $p < .05$ . Likewise, the average percent of off-task behaviour on the control days was 6.12 ( $SD = 4.83$ ), and the average percent of off-task behaviour on the VSM days was 2.58 ( $SD = 5.16$ ). Thus, significantly higher mean scores were found for off-task behaviour on the control days than on the VSM days,  $t(9) = 1.98$ ,  $p < .05$ .

The average percent of appropriate transitions on the control days for the other student was 76.84 ( $SD = 18.34$ ), and the average percent of appropriate transitions on the VSM days was 84.67 ( $SD = 22.09$ ),  $t(9) = -1.41$ ,  $p > .05$ . The average percent of appropriate transitions on the control days for the student was 80.93 ( $SD = 13.78$ ), and the average percent of appropriate transitions on the VSM days was 91.45 ( $SD = 5.09$ ). With the removal of the anomaly, there was a significant difference between the control days and the VSM days ( $t(8) = -1.94$ ,  $p < .05$ ). The average percent of inappropriate transitions on the control days was 23.16 ( $SD = 18.34$ ), and the

average percent of inappropriate transitions on the VSM days was 15.33 ( $SD = 22.09$ ),  $t(9) = 1.41$ ,  $p > .05$ . Again the analysis was re-run excluding the anomaly. The average percent of inappropriate transitions on the control days was 19.07 ( $SD = 13.78$ ), and the average percent of inappropriate transitions on the VSM days was 8.51 ( $SD = 5.09$ ). With the removal of the anomaly, there was a significant difference between the control days and the VSM days ( $t(8) = 1.94$ ,  $p < .05$ ). These results indicated that for the first child, on-task behaviour significantly increased on VSM days compared to control days and maintenance was established by the increase of on-task behaviour during the weeks of implementation. For the second child, appropriate transitions significantly increased on VSM days compared to control days. The above findings of the study indicated that video modelling is effective in treating children with autism spectrum behaviour disorder.

Kimberly (2002) conducted a study on the effects of token reinforcement in comparison to social praise on the manifest behaviours of elementary learning disabled students. The purpose of the study is to determine if a token reinforcement programme could decrease inappropriate behaviours of students with learning disabilities, just like shyness which prevents students from learning or make learning difficult. The study has one research question and one hypothesis. Two groups (experimental and control group) were studied, with five subjects in each group. The subjects were tested using Conners' Teacher Rating Scale-Revised to obtain the manifest behaviours of the control and experimental groups. The approximate test time is 15-20 minutes. An independent t-test was used to analyze data with the use of hand tabulation. The T-score conversions were based on the age and sex of the subjects. The mean for a T-score is 50, while the standard deviation is 10. In the Conners' Teacher Rating Scale-Revised, a T-score from 65 and above is usually considered clinically significant. The result of the study revealed that there

was no significant difference between a token reinforcement system in comparison to social praise on the manifest behaviours among the students. Both techniques were effective in decreasing inappropriate behaviours of the students.

The weakness of Kimberly's study is that the researcher did not explain the validity and reliability of his instrument, the sample size is too small, the study has only one research question and one hypothesis. However, the study is relevant to the present study since the variable of token reinforcement is also in the present study. Some of his findings will be useful in discussing the present study.

Titilayo and Aderanti (2013) conducted a study on differential effectiveness of self – management and token reinforcement in the treatment of adolescent's disorderliness in Lagos State. Seventy-two (72) inmates of remand homes in Lagos State were the subjects of this study. The age range of the inmates is between 9 – 16 years. Each of the remand homes contained two (2) experimental groups while each group consists of 18 inmates, that is 36 inmates in each of the remand homes. Demographic data was used to identify the socio-economic level of the inmates. The instruments used include Rebelliousness inventory, Personality reaction statements scale and Disorderliness inventory (DI). The instruments were validated with correlation coefficient of .80. The researcher cross-validated the instruments in a pilot study among randomly selected adolescents in the cluster of junior secondary school and tertiary institution (n=120). The results which were cross validated with rebellious inventory were significantly correlated (.585) at 0.01. The reliability of the instrument was also established with the three-week test retest reliability and obtained alpha reliability coefficient of 0.67. Pretest posttest factorial design was adopted. Four hypotheses were tested based on analysis of covariance (ANCOVA) at .05 level of significance.

The findings of the study above revealed significant effects of the treatments (self-management and token reinforcement) on orderliness. The result further revealed that self management is more effective than token reinforcement in the treatment of disorderliness, and also no significant two-way interaction effect of treatment and gender on the inmates' disorderliness. The findings of the study also showed that both treatment (self management and token reinforcement) were more effective on females' than males' disorderliness. The study of Titilayo and Aderanti above is relevant to the present study on token reinforcement and gender-wise comparison to the reduction of behaviour disorder. Token reinforcement is also one of the variables which features in the present study. Thus, some of the findings will also be useful in discussing the present study.

Jennifer (2007) conducted a study on examination of the use of token reinforcement in reducing behaviours in an adolescent with autism spectrum disorder. This quantitative study used a single-subject research design method to gather, analyze and report result of the data. An A-B-A design was implemented. Instruments used for the study included behavioural data sheets which were used to record the frequency of property destructions, physical aggression and disruptive talk displayed by the participants across all phases of the study. Token reinforcement procedural document was also used along side with the token card to record in numerals the number of tokens earned, token spent, and the tokens that were available for the participant to spend in phase 2 intervention B (7weeks). The researcher collected and analyzed the data by graphing the frequency of physical aggression, property destruction, and disruptive talk across conditions using single subject research. The study found that the token reinforcement was an effective intervention method/strategy in reducing physical aggression, property distruction and disruptive talk in the participant of the study. The weakness of Jennifer's study is in the use of

single subject participant for the study that generalization to other students cannot be made. Motivational level of the participant and other behaviours present were not indicated as targeted behaviours for the participant in this study. In addition, the study did not address antecedent behaviours that may have affected whether the participant demonstrated the targeted behaviour. However, the study is relevant to the present study since it investigated the effects of token reinforcement on behaviour disorders, and the effect of token reinforcement is one of the variables of the present study. Therefore, the findings of the study will be useful in discussing the present study.

Mahmood, Ashoori, and Narges (2010) investigated the effect of social and token reinforcement on academic achievement of students with intellectual disabilities. The population of the study included 98 mentally retarded male students in the third grade at guidance schools in Tehran province 2009-2010 school year. Students' selection was done through a multi stage cluster; a sample of 30 mentally retarded students was selected for the study. In the sampling process, three cities of Varamin, Rey and Karaj were randomly selected. Then a school was selected from each city, and 10 students within the age range of 13 to 17 years whose IQ was between 60 to 70 were randomly selected from each school. The subjects did not have any disability other than mental retardation. Then, respondent students were randomly assigned to three groups, token reinforcement, social reinforcement; and control group.

The researchers used Wechsler Intelligence Scale for children as the instrument for the study, the reliability coefficient was calculated through test retest that ranged from 0.44 to 0.94. The obtained reliability coefficient medium was 0.73. The difference between the scores of pretest and post test was calculated using one-way analysis of variance and Sheffe prosecution test for the comparison of the mean scores of achievement in science course between the three

groups of mentally retarded students (token reinforcement, social reinforcement and control group). The findings of the study indicated that there was a significant difference in academic achievement between the three groups of the token reinforcement, social reinforcement and control group ( $P = 0.001$ ). The mean scores of achievement in science course was significantly higher in the token reinforcement group than in the social reinforcement group ( $P = 0.002$ ) and control group ( $P = 0.001$ ). This means that token reinforcement was more effective than social reinforcement and control group on academic achievement of students with intellectual disabilities. Furthermore, the mean scores of achievement in the science course were significantly higher in the social reinforcement group than the control group. This shows that social reinforcement too was effective on academic achievement of the respondents, but not as effective as token reinforcement technique. The above study of Mahmood et al (2010) is relevant to the present study because the study tested the effect of token and social reinforcement on academic achievement of students with intellectual disabilities, and token reinforcement is also one of the variables of the present study. Therefore, some of their findings will be useful in discussing the present study.

Kerilynn and Michelle (2013) conducted a study on the effects of token reinforcement on the occurrence of appropriate and inappropriate behaviours by children with autism in a social skills setting. Tokens were also provided on a variable interval schedule of reinforcement. Two children participated in the study. Researchers collected data by reviewing video recorded sessions after the social skills training groups had ended. To be sure that the researchers reliably collected data, an Inter-Observer Agreement (IOA) was calculated on 38% of one person's sessions and 23% of the other. IOA is a calculation used in behavioural research to ensure integrity of data collection and agreement on what behaviours constitute each of the dependent

variables. The researchers calculated 99.6% agreement for one person's percentage of quiet hands, and 99.6% agreement for his frequency of hitting. The agreement for the other person's percentage of quiet hands was calculated at 97.8%, and the frequency of pinching at 94.3%. The findings of the study as clearly stated above indicated that one of the participants clearly showed a decrease in hitting behaviours upon implementation of the token reinforcement. Before treatment was implemented (baseline condition), the person's frequency of hitting reached 61 hits, followed by nine treatment sessions with a stable, low frequency of hits. Hitting frequency only ranged from zero to five per session and remained at zero for the last three sessions. This showed that token reinforcement was effective in decreasing hitting by the participant. Regarding the results of second person's pinching behaviours, there was a downward trend which also indicated the effects of token reinforcement on that behaviour reduction. This study is also relevant to the present study; the findings can be used in discussing the finding of the present study.

James, Randy and McLaughlin (2001) conducted a study on effects of a token reinforcement employing instructional consequences for a Third-Grade Student with Learning Disabilities. The purpose of their investigation was to determine if a token reinforcement programme could decrease three inappropriate behaviours (out of seat, talking out, and poor posture) of an elementary student with learning disabilities. The participant in this study was a 10-year-old, third-grade male. According to teacher's report, the participant exhibited high rates of multiple disruptive behaviours including out-of-seat behaviour, talking-out, and poor seat posture. The participant had normal intelligence but was below grade level in the basic skills of reading and written language. A multiple baseline design across behaviours was used by the researchers to evaluate the effects of token reinforcement. The findings of the study showed that

the mean number of inappropriate behaviours during baseline was as follows: talk outs, 6 (range 5 to 7), out-of-seat behaviour, 1.9 (range 1 to 3), and poor posture, 11 (range 8 to 14). With the implementation of the token economy, there was an immediate decrease in the targeted inappropriate behaviours. The mean number of inappropriate behaviours was reduced to 0.8 (range 0 to 2) for talk-outs, 0.2 (range 0 to 1) for out-of-seat behaviour, and 5.0 (range 4 to 6) for poor seat posture. The effectiveness of the token reinforcement was apparent. The token reinforcement therefore, is a very powerful and effective intervention and the present findings bear this out. The above study is equally relevant to the present study and therefore its findings will be used in discussing the findings of the present study.

Anna and McLaughlin (2007) investigated the effects of a token reinforcement system on improving social and academic behaviour with a rural primary aged child with disability. The purpose of the study was to evaluate the effects of an individual's token reinforcement with a young child who was a 6-year-old kindergarten student enrolled in the primary kindergarten-third grade with severe behaviour disorders. The pupil demonstrated inappropriate behaviours that included, running in the classroom, screaming, refusing to work, refusing to answer questions or participate academically, hitting, kicking and climbing under and over furniture. These data were gathered for 30 minutes each morning. The setting for the study was a special education classroom located in a rural elementary school in the Pacific Northwest. The study took place in the morning because the participant was only at school from 9 a.m. until 11:30 a.m. because of her high rates of inappropriate social behaviours. Single-subject design was used for the study. Baseline was conducted three sessions for the participant. A three-token system was implemented for six sessions, and a five-token system working toward maintenance was implemented for eight sessions.

The overall outcomes indicated a decrease in the amount of time required to complete an assignment, an increase in assignment completion, and a decline in the frequency of inappropriate classroom behaviours during three baseline sessions. The average amount of time taken to complete an assignment was 10 minutes per assignment with a range of from 9 to 12 minutes. For the first token economy (3 Token System), the mean amount of time taken to complete an assignment was to be 4 minutes per assignment (range 3 to 5 minutes during the five-token system resulted in a small increase in the average amount of time taken to complete an assignments ( $M = 4.571$  minutes; range 3 to 6 minutes).

During three baseline sessions, the average amount of assignments completed was 2.0 with a range of 2 to 3 per 30-minute period. When the first token programme was implemented (3 Token System), the number of assignments completed increased to 7.67 (range 6 to 9) per 30-minute period. For the five-token system, a slight decline in assignment completion was seen 6.75 (range 6 to 10). During baseline, an average of 3.33 behaviours per 30 minute session found (range 3 to 5). For the second token system (3 Token System), no inappropriate behaviours were scored. Only one inappropriate behaviour was scored for the third token programme (5 Token System). The findings therefore, showed the overall results of this study demonstrated that a token reinforcement increased the rate at which box work was completed by the participant. In addition, the token programme increased the amount of assignment completion and reduced the frequency of inappropriate classroom behaviours. The overall outcomes indicated that the two different token systems were effective in improving the participant's academic and social behaviour. The finding of the study is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Damayanti and Sunil (2011) investigated the effect of token reinforcement behaviour technique for controlling drooling in children with cerebral palsy associated with mild intellectual disability. A total number of 25 children with cerebral palsy associated with mild intellectual disability attending the occupational therapy department of Swami Vivekanand National Institute of Rehabilitation Training and Research (SVNIRTAR), Orissa, India, participated in a single blind randomized pre-and post-test control group training study. Subjects were randomly allocated to group A (experimental n=12) and group B (control n=13). Baseline frequency of drooling was observed by two independent raters for 20 minutes for both the groups. After the baseline data collection, subjects in group A received conventional therapy along with behaviour therapy (token reinforcement) and group B received conventional therapy alone. The findings of the study showed that there was a significant decrease in frequency of drooling after application of token reinforcement as a behaviour modification technique in the experimental group ( $p=0.001$ ) as compared to the control group ( $p=0.070$ ). This means that the result of their study demonstrated that the token economy programme was effective in controlling drooling in children with cerebral palsy associated with mild intellectual disability. The study of Damayanti and Sunil is relevant to the present study because the study tested the effect of token reinforcement behaviour technique on controlling drooling in children with cerebral palsy associated with mild intellectual disability. Token reinforcement is also one of the variables of the present study. Therefore, some of their findings will be useful in discussing the present study.

Shahnam, Bahman, Somayeh, Akram, and Ameneh (2012) conducted a study on the effectiveness of music therapy and token reinforcement on the reduction of aggressive behaviour among mentally disabled male children of Ghoochan City Rehabilitation Center. The research

design consisted of experimental pretest and posttest type with two experimental group and a control group. The study has a population of 140 children with mental disability at rehiliation center Ghochan. Following the implementation of aggressive testing, 30 patients were sampled for the study using simple random sampling technique, 10 participants to each group of two experimental groups and one control group. Aggressive questionnaire (AGQ) consisting of 30 parts, 14 parts about anger, 8 parts about invasion, 8 parts about revenge were used for the study.

The finding of the study indicated that the null hypothesis was retained because there is difference between effectiveness of music therapy and token reinforcement on the amount of decrease in aggression of mean of mentally disabled children according to F for dependent function aggressive 2.425 and the  $p = 0.121$  which is more than 5%. Also effect hamprash ( $p = 0.000$ ,  $p < 0.0001$ ,  $(df3, 26) = 27.998$  with F) the respect of statically is strongly expressive and so related to criteria ( $Eta = 0.765$ ,  $p = 0.000$ ,  $(df2, 26) = 42.111$  with F) show that there was difference between 3 groups i. e. there is expressive difference between experimental methods in decrease aggressive with control groups. Also the researchers observed that, effect hamparash ( $p = 0.000$ ,  $p < 0.0001$ ,  $(df3, 26) = 27.998$  with F), the statistic is strongly expressive and so is related with criterion. Rate of F by Karndi is expressive also by the respect for statistical ( $Eta = 0.765$ ,  $p = 0.000$ ,  $(df2, 26) = 42.111$  with F) shows that there is difference between effect of 3 groups, that is to say there is expressive difference between the two experimental groups and control group in decrease in aggressiveness. The above statistical result shows that the two methods of music therapy and token economy are effective in reducing aggression levels of mentally low ability children. Also the finding confirmed that token reinforcement was more effective than music therapy on reducing children's aggression. The study is relevant to the present study; the findings will be used in discussing the present study.

Claudine (2004) conducted a study on the effects of music therapy and token reinforcement system vs. music therapy on decreasing inappropriate behaviours with students labeled emotionally disturbed. The purpose of the study was to examine the effect of token economy with music therapy vs. music therapy to decrease the behavioural problems with students labeled emotionally disturbed. The participants of the study included 20 students' aged 13-17 years from both middle and high school classes. The mean age for the Group A was 14.5 years and for Group B was 16.5 years. Each of the treatment groups consisted of 10 students in a pre-arranged sample. The majority of the subjects were male and African American. A comparison of two groups was made: Class A received music therapy with a token reinforcement while Class B received only music therapy. This study utilized a Reversal Design (ABABAC) for each of the two groups across six sessions. Mann Whitney U test was used to compare groups. The final finding of the study showed that since the critical value of  $u$  for  $\alpha < 0.05 = 23$  and the obtained  $u = 44$  the difference between groups was not statistically significant, meaning that the two treatment (music therapy and token reinforcement) were effective techniques in treating students with emotional problem but the study showed that none of them was effective more than the other. The finding of this study of Claudine Boussicaut is relevant to the present study and therefore will be useful in discussing the findings of the present study.

Thanita (2011) conducted a study on the effects of using token reinforcement and social reinforcement to stimulate preschool students' vegetable and fruit consuming behaviour. The study has the following research objectives: 1) to study the result of using token reinforcement and social reinforcement toward behaviour of eating vegetables and fruits of experimental group of preschool children 2) to compare behaviour of eating vegetables and fruits of preschool children between before and after experimentation. Target group for this research was five pupils

at age 4-5 years, studying in kindergarten level 2 at Khon Kaen Vithes Suksa School, during the first semester of 2010 academic year. Quasi-experimental research was implemented based on ABA Reversal Design. Instruments for collecting data consisted of parent questionnaire, reinforcer survey form, evaluation form for eating vegetables and fruits, score record form for eating vegetables and fruits and record form for rewards redemption. Data was analyzed through statistics of the Wilcoxon Rank Test. It was found that the 3rd and 4th student of the experimental group could have the mean of eating vegetables and fruits at withdrawal period of token economy and social reinforcement higher than treatment period. For the 3<sup>rd</sup> student, the mean of quantity of eating vegetables and fruits at treatment period was 3.80 (  $\bar{X}$  ) and  $\bar{X}$  = 4.00 at withdrawal period. For the 4th student, the mean of quantity of eating vegetables and fruits at treatment period was 3.30 (  $\bar{X}$  ) and  $\bar{X}$  = 3.50 at withdrawal period. Result of eating vegetables and fruits of experimental group of students during 40 days could match to the theory of using token reinforcement and social reinforcement. It could increase scores of eating vegetables and fruits with statistical significance level at “.05”. It was found that students who modified their behaviour by token reinforcement and social reinforcement could reach higher scores as well. Research findings further indicated as follows: 1) Behaviour of eating vegetables and fruits of experimental group of students reinforced by token reinforcement and social reinforcement was increasingly found. 2) After experimentation, this group of students could have higher scores of eating vegetables and fruits with statistical significance level at “.05”. This shows that token reinforcement and social reinforcement techniques are very effective in behaviour change.

Brent, John, and David (2003) conducted a study on the effects of a token reinforcement system within the context of cooperative games on social behaviours of adolescents with emotional and behavioural disorders. A single subject A-B1-BC1-B2-BC2 design was used to

examine effects of cooperative games and token economy programme on pro-social (statements of encouragement, statements of praise, statements of appreciation, handshakes, or high fives) and anti-social behaviours (swearing, threatening physical harm, calling peers names, hitting or pushing) of three adolescents with emotional and behavioural disorders. Data were collected on three adolescents from Northeast Georgia (ages 12-14) identified by the school system as having emotional behavioural disorder. Also included in the study were six other youth, whose Individualized Education Programs (IEP) contained information suggesting they had characteristics consistent with emotional behavioural disorder. The six additional youth were included in the study to allow for a sufficient number of people to be involved in cooperative games. The nine youth were involved in all conditions of the study. The findings of the study revealed that with the introduction of cooperative games, behaviours remained stable and unchanged. When a token reinforcement system was introduced there was an immediate increase in the number of pro-social behaviours. Results for pro-social behaviours were replicated across conditions. Anti-social behaviours remained virtually non-existent throughout the study. This shows that token reinforcement technique is very effective in managing anti-social behaviours.

### **2.16 Summary**

In this chapter, attempts have been made to place problem of this study within a theoretical framework. We have seen that the concepts of behaviour problem, concept of shyness, factors that contribute to the causes of shyness and forms of shyness have been variously defined by different writers and theories were also provided in the study, The chapter also contains concept of modelling, types of modelling, mechanisms of modelling, concept of token reinforcement and types/classification of positive reinforcement as well as theoretical

framework which include theory of social cognitive learning, and theory of positive reinforcement for effective understanding of the subject matter.

Similarly, the review of related literature has shown that shy behaviour has effects on social well being of the shy students and modelling and token reinforcement techniques can be used to reduce the shy behaviour. It has therefore become necessary to examine the effect of the two techniques on shy behaviour of the students. The chapter reviewed related studies on modelling and token reinforcement. The studies showed that modelling and token reinforcement counselling techniques have been used and found to be effective in dealing with different behavioural problems. However, in spite of wider application of those counselling techniques in treating behaviour problem, the researcher decided to now use the two counselling techniques on shy behaviour among secondary school students, the only gap identified which will be filled by this study is that the two counselling techniques (modelling and token reinforcement) have not yet been applied in reducing shyness among secondary school students in Kano state. Therefore, the study intends to make use of the two counselling techniques on shy behaviour among students.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

The chapter presents the research methodology and design used in the study. The chapter contains population, sample of the study, control of extraneous variables, instruments for data collection, validity and reliability of the instruments, scoring of the instruments, procedure for data collection, treatment sessions and procedure for data analysis.

#### 3.2 Research Design

This study adopted quasi experimental research design in investigating the effects of modelling and token reinforcement counselling techniques on shy behaviour among secondary school students. The study used the pre-test, post-test control group design, the design being one of the true experimental research design is widely used primarily for the purpose of comparing groups and/or measuring changes resulting from experimental treatments (Nwogue, 1991). The design below represents pre-test posttest control group design:-

Experimental group	O <sub>1</sub>	X	O <sub>2</sub>
Control group	O <sub>3</sub>		O <sub>4</sub>

Respondents of the three groups were purposively selected and assigned to experimental and control groups. Two out of the three groups were made to become the experimental groups (EG) or the treatment groups, one was subjected to modelling (M) counselling technique treatment session, while the second was subjected to token reinforcement (TR) counselling technique treatment session. Lastly, the third group selected for the study was made to become

the control group (CG). The three groups consist of ten (10) participants each, five males and five females, two students were added in each of the three groups to check dropouts, but the result of the ten students to each group were considered for the analysis. Before the treatment session, the three groups, one control and two experimental groups were pre-tested. The experimental groups were exposed to treatments, shyness reduction programme using modelling counselling technique to one group and token reinforcement counselling technique to the other group as treatment sessions for the period of six weeks. The control group was also visited for group discussions on topics that are not relevant to the variables under study. There was a session every week for the three schools on Monday's, Wednesday's and Friday's respectively. After the six sessions all the three groups were post- tested (Modelling, token reinforcement and control group). The design is very powerful and valid to be used in comparing groups and/or measuring change resulting from experimental treatments (Nwogue, 1991). See table 3.1 below illustrating the design.

**Table 3.1 Non equivalent pre-test post-test control group design**

EG 1	T 1	Xa	T2
EG 11	T1	Xb	T2
CG	T1		T2

Key: - EG1:- Experimental Group1. EG11:- Experimental Group11. CG: - Control Group.  
 T1:- Text1. T2:- Test11. Xa: - Treatment a. Xb: - Treatment b.  
 Sources: Kolo and Adamu (2001)

### 3.3 Population of the Study

The population of this study is the entire JSS1-3 public secondary school students in Kano state. The number of junior secondary school students as at 2013/2014 session was 48,996 boys, and 29,039 girls (Research and Statistics Department MOE, Kano, 2014 session). The

grand total is 78,035 students. They were within the age range of 11-18 years. Three public coexist junior secondary schools were randomly selected for this study within the coexist schools because of their nature of having both male and female students in the schools and homogeneity in administration, medium of instruction and teaching process. The accessible population of the three schools is one thousand one hundred and eighty (1180) students, five hundred and eighty five (585) are males while five hundred and ninety five (595) are females, out of which one hundred and six (106) are identified students with shy behaviour using observational tools. Out of the one hundred and six (106) students, forty two (42) are boys while the remaining sixty four (64) are girls and they comprised of students in JSS1-3 as identified by their classroom teachers who knew them well, the shy behaviour observational checklist was provided to the teachers by the researcher.

### **3.4 Sample and Sampling technique**

The total sample of the study was made up of 30 students with higher level of shy behaviour identified by their pre-test scores on the shyness personality scale (SPS), their SPS pre-test scores range from 158 to 195 which indicated higher level of shy behaviour, and this sample was selected from the total number of 106 shy students. Thirty students were used for this study; this is in accordance with scholars who suggested a minimum and maximum number of clients that are appropriate for group counselling. Denga (1986) suggested a minimum of 2 to 4 clients appropriate for group counselling, while Akinade and Awolabi (2010), Kolo (1992) are of the view that members for group counselling session could be from 2 to 12 persons per session. The thirty (30) sampled shy students were divided into three groups of ten (10) shy students each from one of the three schools, five boys and five girls, two groups served as experimental groups and one as control group. Two–two students male and female were added

against mortality rate, but were not considered in the analysis. Below is table 3.2 illustrating the sampled shy students according to their schools, gender and grouping.

**Table 3.2 Distribution of shy students according to schools, gender and grouping**

Schools	JSS 1-3 students		Groups	Total Number of Students
	Male	Female		
GJSS DANWAIRE	5	5	Exp Group (M)	10
GJSS ZAWA'I	5	5	Exp Group (TR)	10
GJSS NORMANSLAND	5	5	Control Group	10
Total	15	15	3 Groups	30

Purposive sampling technique was used in selecting the samples for this study. Sampling technique according to Olayiwola (2010) is a plan specifying how elements will be drawn from the population. The elements must satisfy some pre-determined criteria which are usually a matter of the researcher's judgment in relation to what the researcher thinks will constitute a representative sample with respect to the research purpose. Olayiwola further stated that, researchers using this purposive sampling technique select sample using extra care, their experience and knowledge of the group to be sampled. In this study using purposive sampling, the researcher handpicked 30 respondents plus 6 additional respondents for mortality rate case on the basis of typically having high level of shy behaviour after responding to shyness personality scale (SPS) at the pre-test level.

### **3.5 Instruments for Data collection**

Checklist was used by teachers to identify shy students; it was an adapted work from Cheek and Buss (2014) containing specific attitudes and actions that are expected from a shy person at home or in the school.

The study also employed Shyness Personality Scale (SPS) developed and validated in Nigeria by Akinade (2012). The instrument is divided into parts initial part comprises of demographic information such as name of the respondent, class, address/school, date, age and sex of the respondents (i.e. male or female); directions on how to fill the instrument. While the other part which is section A covered items of the instrument consisting of 50 items with 4 – point Likert type of rating scale for each item to assess shyness level of students; Section B that requested the respondents to describe or list five situations in which they feel shy, and lastly to indicate whether or not they like to be counselled on the behaviour.

The instrument was used before and after the treatment sessions of modelling and token reinforcement counselling techniques to all the three groups by the researcher with an interval of six weeks between pre-test and post-test of the sampled groups in order to find out whether or not there exist an effect of independent variables upon dependent variables.

### **3.5.1 Validity of the Shy Behaviour Observational Checklist (SBOC)**

The checklist was used by teachers to identify shy students; it was an adapted work from Cheek and Buss (2014) containing specific attitudes and actions that are expected from a shy person at home or in the school. The checklist was modified to reach fifteen items. The validity indicators were adequate with KMO .744 Bartlett's test of sphericity .00 communality range between .346 to .78. However, variance explains counted for 61.94. The rotated component matrices range from .630 to .809. Similarly, anti image matrices are all greater than .5. This

therefore, shows that the shy behaviour observational checklist was found to be valid for the study.

### **3.5.2 Validity of the Shyness Personality Scale (SPS)**

Shyness personality scale (SPS) is the main instrument used in pre-test and post-test. Akinade (2012) stated that the shyness personality scale (SPS) has been found by some psychometricians, counselling psychologists and psychologists to possess both face validity and construct validity. It has the ability to distinguish those who show tendency towards shyness and those who do not show tendency towards shyness or those who tend to be assertive. It also has discriminant validity.

### **3.5.3 Reliability of the Shy Behaviour Observational Checklist (SBOC)**

The shy behaviour observational checklist (SBOC) has the reliability coefficient of .842 having used 15 items observational checklist, this was considered higher enough for the study. The shy behaviour observational checklist is said to be reliable even with the reliability index or coefficient is .7 and above.

### **3.5.4 Reliability of the Shyness Personality Scale (SPS)**

The reliability of Shyness personality scale (SPS) was tested by Akinade (2012) who is the owner of the instrument by administering it to young people (sampled 30 students, 18 male and 12 female). SPS shows a test-retest reliability value of  $r = 0.79$  after two weeks interval for young people. When compared with Sections D, E and H of Student Problem Inventory (SPI) it revealed  $r = 0.77$ . Having this fact in place, the SPS was therefore found to be reliable for this study. The researcher adopted shyness personality scale (SPS) for this study.

### **3.5.5 Scoring of the Shyness personality Scale (SPS)**

Shyness Personality Scale (SPS) can be scored manually. The minimum scores is  $1 \times 50 = 50$  and maximum score is  $4 \times 50 = 200$ . There are two ways of analyzing the scores, fast method and detailed method. In fast method, count the number of ticks made on the 3s and 4s. If they are over 30, the testees may be regarded as showing tendency towards shyness. and when you count the ticks on the 1s and 2s. If they are more than 30, the testees may be regarded as not probably shy. They may even be regarded as being progressively assertive, if the scores reduce towards 50. The detailed method on the other hand involves tallying the ticks on each of the columns 1, 2, 3 and 4. Count the ticks under each column and write the score below. Next, add up the scores and put the final score under total. For instance, if RESPONDENT A makes 9 ticks under 1, write 09 below the column of 1; 6 ticks under 2 write 12; 19 ticks under 3 write 57; or 16 ticks under 4 write 64. Under total write 142. Total score is obtained when the sub-total scores under 1, 2, 3 and 4 are added together.

### **3.5.6 Scoring of the Shy Behaviour Observational Checklist (SBOC)**

The checklist can also be scored manually. The minimum score is  $1 \times 15 = 15$  and maximum score is  $5 \times 15 = 75$ . When students scored 75 points, he/she was having high level of shy behaviour, 36 points average level of shy behaviour and 24 points low level of shy behavioural characteristics and they were all part of the study population. Students with 15 points were not shy students.

**Table 3.3 below is interpretation of SPS**

CATHEGORIES	SCORES	INTERPRETATION: Tendency towards
1.	50-60	Assertiveness/ Not being shy
2.	61-90	Limited Shyness
3.	91-119	Moderate Shyness
4.	120-139	Shyness
5.	140-200	Significant Shyness

Sources: Akinade (2012)

### **3.6 Procedure for Data Collection**

The researcher collected an introduction letter from the Department of Educational Psychology and Counselling which was forwarded to Senior Secondary Schools Management Board incharge of Educational zones under State Ministry of Education. A letter of introduction was then given to the researcher by the above mentioned Board which was also forwarded to Nassarawa zonal office in Kano Metropolis for permission to use their schools. A letter was then finally given by zonal education officer to be forwarded to principals of the schools sampled. The data collection was done in three stages by the researcher; checklist was first used to guide teachers in selecting their shy students. The shy behaviour checklist (Appendix 1) was not used to determine the level of shyness of the students for selecting sample of the study but helped in guiding the teachers in identifying shy students for the selection purposes only. The checklist is an adopted work from Cheek and Melichor (1986) containing twelve (12) specific attitudes and actions that are expected from a shy person at home or in the school. Students with 48 points' high level of shy behaviour, 36 points average and 24 points low level of shy behavioural characteristics were all part of the study population. Students with 12 points are not shy students. Research supervisors and Lecturers of the department of Educational Psychology and Counselling gave the checklist face validity. They have read through and validated the checklist.

After the selection of shy students with the checklist, all those selected by the checklist were found to be shy students with the administration of the shyness personality scale (SPS). The administration of SPS served as pretest for the entire shy students selected by the teachers using checklist; those with high level of shy behaviour from the pretest result were determined and sampled, the thirty respondents were further randomly sampled as the main sample for the study. The shyness personality scale (SPS) was also re-administered to both experimental and control groups after the treatment.

### **3.7 Treatment Procedure**

This has three phases as indicated below:-

First, pre-treatment phase where the researcher collected baseline data from the three groups (two experimental and one control group) by way of administering the instrument of shyness personality scale (SPS) to the groups as pre-test before treatment sessions were given after selecting the respondents by using shy behaviour checklist given to the classroom teachers to complete for their students. An interval of one week was given to complete the shy behaviour checklist before administering shyness personality scale as the main instrument of data collection for pretest. The result of the pre-test was kept for future comparison with the post-test result in order to determine the effectiveness or otherwise of the treatments.

Second, was the treatment phase where two experimental groups were exposed to treatments, one group with modelling counselling technique and the other with token reinforcement counselling technique. But the control group received normal classroom instructions that were not relevant to variables under investigation or any treatment of the two groups. The sessions were conducted for a period of six weeks consecutively, six sessions in each school which lasted for about 30 - 35 minutes on Monday's, Wednesday's and Friday's.

Third, we had post-treatment phase in which post-test data were collected by way of re-administering the instrument of shyness personality scale (SPS) after the six weeks' treatment sessions to the experimental and control groups as post-test. The detailed procedures for treatment sessions in both modelling and token reinforcement techniques are hereby presented below:

### **Treatment Sessions (Modelling Technique)**

#### **Session one**

- i. All the selected subjects were taken to a special class which was provided to the researcher by the head teacher and school authority. The researcher welcomed the subjects warmly and introduced himself to them in a polite and simple manner.
- ii. The researcher explained fully to the subjects that the reason for selecting them (shy students) was because they had traits of shyness in them and the purpose of the research work with them was to help them recognize their strength and weaknesses (understand themselves), set reasonable goals, accept criticism thoughtfully, avoid shame and describing themselves as stupid, ugly, worthless or failure, as well as encourage them to realize their full potential in order to reduce or minimize their shy behaviour and to prevent shyness from blocking their chances for a rich life through their models in the programme.
- iii. The researcher asked the subjects to identify some of their colleagues in their school they admired and considered to be so important as their models in the programme. The subjects were able to come up with two students, one male and the other female.

- iv. The researcher also requested for adequate support and cooperation from the models and the subjects and informed them that their video tape covering the activities was only meant to copy and shows the modelled behaviour to them for proper understanding in every session. In order to encourage them concentrate much, they were informed that concentrating on their models and practicing well what their models did would be considered as an act of good performance that could reduce or minimize the shy behaviour.
- v. The researcher asked the models to introduce themselves to the group and the subjects too were also asked to introduce themselves one after the other, the purpose was to know themselves and start to practise self introduction as done by the models.
- vi. The researcher continued to solicit the interest of the models and the subjects through good rapport and friendly approach. He assured them of confidentiality of whatever was discussed during and after the programme.
- vii. The selected models were informed that they were chosen by the subjects as their models worthy of emulation, the subjects too were reminded that they were expected to be serious and concentrate to learn from their models. They were informed to be prepared next session for self expression in which their models would practice for them to model the behaviour. Every session held for 30 – 35 minutes during break time. At the end of the session both the models and the subjects were released and informed of the time, date and venue for the next session.

## **Session two**

- i. The researcher welcomed both the models and the subjects cheerfully and expressed his appreciation for their participation and turn up last session.
- ii. The researcher started the second session by reviewing last session with showing five minutes videotaping of the modelled behaviour (good self-introduction) from their models and the subjects themselves. The researcher directed the subjects to observe their strength and weakness and told them to avoid feeling shy while talking in front of people.
- iii. The researcher started the second session by reviewing the previous session and showing five (5) minutes videotaping of the modelled behaviour and asked the subjects to report to the group on their assignment of introducing themselves casually.
- iv. The models were provided with pencils and cards by the researcher and asked them to write their names at the middle of the card. Then:
  - In the top left corner, what they did during the weekend that they really enjoyed.
  - In the top right, their favourite meal.
  - In the bottom right, their favourite season.
  - In the bottom left corner, their favourite things to do in their free time.
- v. The researcher first directed the models to explain their cards to subjects for modelling and later each member did the same in front of group. This encouraged self expression to the whole group.

- vi. Before presentation, the researcher informed the participants to pay attention to all the activities, retain what they learnt in the process of the self expression and also be able to express themselves as expected, the way their models did. This was to show the significance as well as increase the participants' level of understanding of modelling learning process.
- vii. After the exercise, researcher motivated the subjects to always practise the act of not being shy and explain what is in their mind.
- viii. The researcher ended the session by summarizing learning experience derived from the exercise, researcher also explained to the participants that during the next session, they were to come up at the beginning formally introducing themselves to the researcher assigned to be the admission interviewer (i.e. Role-Play) . The session lasted for 30 minutes.

### **Session three**

- i. The researcher warmly welcomed the models, the subjects and was friendly with all of them. That made them feel free and they cooperated as expected.
- ii. The researcher lead the group to recall what happened during the last session, especially on acquainting oneself with another individual, and then practising addressing a group. Participants recalled and expressed their appreciation and happiness on the exercise.
- iii. The day was for Role-play exercise. The researcher first fared the models through the role to be played while the subjects observe and imitate them by the role. Each person was then instructed to stand up in front of the group as if he/she were coming for

admission interview into senior secondary school. Subjects were attended to individually within the group with the researcher as the interviewer. As a person entered the venue he/she imitated his/her model by saying something like: *“Hello, good morning sir, I’m here for admission interview.”* Shake hands, and the interviewer says: *“Hello, thanks and you are welcome. Have a seat.”* The interviewer started with telling the subject his name, then followed by asking the subject the following questions one after the other as was practised with the models with the subjects as observers and imitators.

- What is your name?
- How old are you?
- What is the name of your present school?
- Why do you want admission into senior secondary school?
- What do you want to become after your studies and why? etc

iv. The researcher informed the subjects after practising the above exercise that the following areas are very important points for consideration while speaking with a person or people in a social interaction or during an interview.

- Eye contact for instance looking person to person while talking or interviewer is talking
- Confident Voice
- Listening

- Asking questions about what you do not understand.
- v. The researcher also informed individual subjects that when specifically asked to respond, they should try to confidently address their answers mainly to the questions.
  - vi. The participants acted and the researcher ended the session by summarizing learning experience derived from the exercise observed in the session after the videotaping.
  - vii. An assignment was given to participants to practise speaking in a small group while at home or in the school among peers putting into practise the above important points. This session lasted for 30 minutes.

#### **Session four**

- i. The researcher warmly welcomed the subjects to the fourth session; and allowed them to be seated for the fourth session to begin.
- ii. The researcher showed the subjects the videotaping to reflect on what they had learnt or were expected to learn on target behaviour from session three.
- iii. In this session, the researcher provided each participant with a file card with a topic written on it. Each person was directed to stand before the group members and talk about the topic. Prior to this the models were given one topic each to speak about and further inputs were made by the researcher on the subjects' presentation to provide them (shy students) with more guide on how to present a talk before a group of audience taking into consideration the way their models presented. The sample of the topics include:

- ◆ Favourite leisure activity and why

- ◆ Favourite jobs and why
- ◆ Least favourite jobs and why
- ◆ Where you live in city or village and how you get to school
- ◆ Favourite food and why, etc.

iv. Each subject responded not to the researcher but to the entire group while speaking in response to what is on his file card, which encouraged the participants to keep trying modelling learning process.

v. The researcher summarized the main points of this exercise and indicated what each person individually needed to focus on in order to improve their skills for small group discussion. After the session, the researcher asked participants what they had learnt from the session and participants responded that they had learnt how to talk, listen and above all express themselves confidently without fear.

vi. The subjects were assisted by the researcher on how to plan or design alternative ways of solving their problems i.e how to overcome or avoid those obstacles in self expression or factors preventing them from being friendly and participating in classroom/school activities. He also encouraged the subjects on how to test the alternatives. For example, making new friends and always associate with them, participating in social interaction, class or school activities with colleagues etc. and trying to play role in the interaction.

vii. Home work was given to the subjects to identify and mention some of their negative self-thoughts on shy behaviour (ie thoughts that are controlled) in order for the subjects to

be aware of them so that they can use “stop therapy” against them by changing the negative thoughts and attitude to positive one (eg. Feeling Shame, describing or looking at self as stupid, ugly, worthless, failure or incapable etc. while interacting with people such as friends, teachers, relatives etc). The time taken by this session was 30 minutes.

### **Session five**

- i. The researcher welcomed the models and the subjects for the fifth meeting and encouraged them to continue with their active participation in the programme.
- ii. The models of the participants were asked to briefly tell the participants the meaningful experiences that are good, bad or challenging they had in life at primary school or home. This led into a discussion on the importance of eye contact, posture and listening skills etc. By this, each subject was encouraged to develop his/her own particular style and manner of interaction that is to be shy free in a given situation.
- iii. The Participants were also asked (one after the other) to face the group and tell their partners their experiences that are good, bad or challenging they had in life at primary school or home. The same way their models did. This was videotaped and shown to participants for discussions on the importance of what has been discussed by their models on eye contact, confident voice, posture and listening skills.
- iv. At the conclusion of this session the researcher lead the subjects to identify those non shy behaviours displayed by the two models and they, themselves that were actually positive ones and are expected to be among each and every one of the participants at all time.

- v. When the modelled behaviour was performed in vivo mostly by the participants or a model of same age group under the researcher's guidance, the activities were videotaped. All the participants watched the videotape showing the models and themselves engaged in the modelled behaviour. The video show took only five to six minutes in a session.

### **Session Six**

- i. The models and subjects were cheerfully welcomed and praised by the researcher for being active and social in expressing themselves up to this stage.
- ii. Researcher further commended the efforts of the models and the participants for choosing to be active and social in expressing themselves up to this stage. Both the models and the participants were happy with the programme
- iii. The researcher summarized the whole programme (all the sessions) right from session one. This last session particularly what was presented to them, and the several acts of their active participations.
- iv. Participants were asked to reflect on what they had learnt about themselves from the sessions. All members reported that they were very happy with the programme because of the benefits they derived and what they understand about themselves and their shy behaviour problem. They were also happy with videotaping of their activities where they saw themselves and others acting on videotape.
- v. The subjects were encouraged by the researcher to strictly adhere to their behavioural change plans (as discussed and acquired in treatment sessions). They were urged to always remember the six weeks programme we had. The researcher also reminded the subjects on the importance of participating in classroom activities as well as other

school activities. Finally, they were informed that the programme terminated but the door was open for questions and observations. The researcher thanked all the subjects for participating

### **Treatment Sessions (Token Reinforcement Technique)**

#### **Session one**

- i. All the selected subjects were taken to a special class which was provided to the researcher by the head teacher and school authority.
- ii. The researcher welcomed the students warmly and introduced himself in a polite and simple manner including smiling thereby showing them his delightfulness through good facial expression and head nodding e.t.c.
- iii. The researcher explained fully the reason for selecting the subjects and his reason (of assisting them) for gathering them in one class, i.e. to help them understand the negative effects of shyness in life and how to reduce or even stop it. Researcher also called upon them to give him adequate support and cooperation and also informed them that participation and contributions would be taken into consideration as commendable efforts that deserved to be rewarded with token during every session would be rewarded.
- iv. The researcher continued to get the interests of the subjects through good rapport. He also assured them of confidentiality or secrecy of whatever was discussed during whole programme and after it. The researcher informed the subjects about how the programme was going to be run and what it entailed briefly.

- v. The researcher organized the subjects to come before the group and introduce themselves individually one after the other stating their full names, school, class and probably where they came from etc.
- vi. Card board paper that contained the names of all the participants with column against each name was provided and fixed on the wall. Any participant that was engaged in target behaviour of self expression and confident voice was given two ticks against his/her name, one tick to each behaviour engaged in. The two ticks were represented by one big exercise book, while earning only one tick qualified one for a biro only.
- vii. The session took 30 minutes every Wednesday during school break. At the end of the session, the students were released and informed of the date, time and venue for the next meeting. Before their departure, the subjects who earned the token were given those items representing what they earned. The researcher finally urged the subjects to come back next time adhering strictly to the schedule.

## **Session two**

- i. Here in session two, the subjects were warmly welcomed by the researcher by smiling showing them his delightfulness through good facial expression and head nodding for the second meeting.
- ii. The researcher led the group to recall what happened during the last session and its teachings; i.e the last session was briefly reviewed.

- iii. Each group member was asked to think about the first time he/she could remember feeling shy and recount the incident. They were asked the following questions to respond to:
- a) What was the situation?
  - b) Who was present?
  - c) What did others say at the time?
  - d) What decision did you make?
  - e) Did anyone try to make you feel better? If yes, how?
  - f) Did any distortion, misinterpretation or missed signals occur at the time?
- iv. Participants who confidently responded to all the items earned seven points; each target behaviour attracted one point. Participants were encouraged to express themselves, not to be shy and confidentiality of issues discussed by the subjects was also reassured by the researcher.
- v. Lessons learnt in this session were highlighted to participants. Points earned by subjects as tokens were replaced by reinforcers such as books, pens, pencils, colour pencils and other school working materials of students' needs.
- vi. Self expression/conversation was the next topic for discussion; the researcher therefore, gave assignment on the self expression/conversation with people for the participants to practise both in the school and at home before the following meeting.

### **Session three**

- i. The researcher welcomed the subjects cheerfully and appreciated their participation and turn up.

- ii. The researcher briefly asked the participants what they learnt from the last session and they responded positively.
- iii. After the brief explanation of what to do then, the researcher organized the subjects and told them to prepare for a two minutes oral expression using different topics provided by the researcher. The topics include: the school I like and why, the school I don't like and why, the class I like and why, the class I don't like and why, the house I like and why, the house I don't like and why, the bicycle I like and why and the bicycle I don't like and why, etc.
- iv. Three marks were awarded to participants who successfully engaged in the target behaviour, the distribution of the three marks covered one mark for self expression, one for confident voice and the last one for eye contacts. Whoever earned the three marks altogether won one big exercise book and a biro (two marks for book one mark for biro).
- v. After earning the marks, the researcher later distributed the items to participants according to the marks earned and encouraged them to always express their minds. The session also lasted 30 minutes.

#### **Session four**

- i. The subjects were warmly welcomed to the session by the researcher. He allowed them to be seated for the session's discussion to begin.
- ii. The subjects were motivated to think very well and discussed for some few minutes on shy behaviour. They were informed about the importance of participating in classroom, other school activities, discussions among peers and in social occasions. The researcher

shared views with the group thereby facilitating understanding of the issues related to the problem.

iii. The subjects were assisted by the researcher in understanding some of the payoffs for overcoming shy behaviour which include:

- Meeting new friends, enjoying new relationship and experiences.
- Being able to express opinions, values, rights and needs
- Receiving positive and negative feedback and learning from it.
- Thinking more clearly and communicating more effectively
- Feeling less anxious, depressed and lonely
- Being more effective in shaping your world and in controlling the events of your life etc.

iv. More rapport was increased at this point between the researcher and the subjects and among the subjects themselves. They were also encouraged to keep secrets of one another. The time taken by this session was 30 minutes.

### **Session five**

- i. The subjects were warmly welcomed just like the beginning of other session and thereafter they were allowed to sit down.
- ii. The researcher generated a discussion on the types of shyness. Some of the payoffs for overcoming shyness were also explained such as meeting new friends, enjoying new relationship and experience, being able to express opinion; value; rights and needs;

receiving positive and negative feedback and learning from it; thinking more clearly and communicating more effectively; feeling less anxious; depressed and lonely; being more effective in shaping your world and controlling the events of your life, having an increased capacity for love and energy for living and being able to choose to be quiet or to talk or to choose to be alone or socialize.

iii. After the explanation of the above, two participants were asked to select their topics and to start conversations with their partners before the group on which one is more important than the other for approximately two minutes. The topics included debating on:

- a) Teacher or Doctor.
- b) Food or Money.
- c) Knowledge or Money.
- d) Farmer or Teacher.
- e) Water or Light etc.

iv. The researcher pointed out to the subjects to focus on starting conversation, keeping conversation flowing, active listening and ending conversation. Researcher observed the participants engaged in the conversation. Four points were awarded to a person who met all the requirements of engaging in target behaviours stated above.

v. Four token points were awarded to the subject that engaged in four target behaviour stated above, subject that engaged in one aspect of the behaviour earned one point, while the subject who engaged in two earned two points and every point has a corresponding item valued for that point as stated above. The time taken by the session was thirty (30) minutes.

- vi. After the discussion and sharing of the token items as reinforcement, the researcher once again praised very well those that actively participated and encouraged those that did not do very well by words of encouragement.

### **Session Six**

- i. Subjects were cheerfully welcomed and praised; for being active and social in expressing themselves.
- ii. Researcher's careful observation was taken into consideration on those that were active and social in expressing themselves up to this stage in the class as usual to see those who were active and those who were not.
- iii. The researcher organized the participants for self expression by directing each participant to write a topic of his/her choice under the guidance of the researcher for two minutes discussion before the group. Earning points in this exercise depends on engaging in the target behaviours. Each behaviour was reinforced by one point eg ability to express self, confident voice, eye contact etc.
- iv. Participants acted and tokens were provided for participants depending on individual performance. Thereafter, the researcher summarized the whole programme (all the sessions) and asked some questions for the subjects to provide their answers relating to what had been done in the treatment sessions.
- v. The subjects were encouraged by the researcher to strictly adhere to their behaviour change plans (as discussed and acquired in treatment sessions). The researcher also reminded the subjects of the importance of participating in classroom, peer group as well as other school activities. Finally, they were informed that the programme had terminated

but door was open for questions and observations. The researcher praised and thanked all the subjects for participating.

### **3.8 Procedure for Data Analysis**

The data collected were entered into the software (SPSS 10 version) for statistical analyses. Descriptive statistics (mean scores and standard deviation) were used in analyzing the data to answer the research questions. Paired sample t-test was used for testing hypotheses 1 and 2, while t-test independent sample was used in testing hypotheses 3 and 4. Analysis of Variance (ANOVA) was used for testing hypothesis 5. Post hoc test was also used to show where difference existed; the level of significance adopted for the analysis was at an alpha value  $P < 0.05$ . This formed the basis for retention or rejection of the hypotheses. The paired sample t-test was chosen because it is appropriate for paired sample and t-test independent sample for determining significant difference between means of two groups, while ANOVA was chosen and used for testing hypothesis that has between three groups and above (Nwogue, 1991).

### **3.9 Control of Extraneous Variables**

The researcher adopted control measures in this study to make sure that the extraneous variables did not affect the findings of the study. The following measures were taken in controlling each of the extraneous variables in the study:-

**1. Instrument:** The researcher made sure that the instrument used for this study was valid and reliable and the items were well understood, very clear and devoid of ambiguity. While administering the instrument, the researcher used a well ventilated and conducive environment and made sure that all instruments were dully filled as expected and retrieved.

**2. Interaction:** The subjects were shared into 10 for each group selected from each school, in order to have a reasonable number ideal for a group session. Two additional students were added

in order to avoid dropout. Experimental group one had 6 males and 6 females from one school and was exposed to modelling counselling technique. Experimental group two also had the same grouping system with experimental group one and was exposed to token reinforcement counselling technique. The last group was the control group and was visited for group discussions on issues that were not relevant to the study. The groups generally were not privileged to know either the significance of the test or what the other various groups were doing.

**3. Effect of testing:** The researcher educated the respondents on the importance of and the need to feel free and maintain confidentiality in all activities throughout the duration of the sessions. The purpose of both the pre-test and pos-test were not divulged by the researcher to the respondents so that they would not know the uses or purposes of the tests.

**4. Effect of interest:** Shy students do not normally have the interest to interact and talk to people and subjecting them to talking and sharing views might be seen as a difficult task for them. The researcher made sure that good rapport was established alongside creating an interesting session in which activities were anchored on practical discussion based on what was in the programme of the treatment session.

**5. Conducive atmosphere:** The researcher made sure that conducive atmosphere for the study was in place by having a separate empty hall or class with good ventilation, free period during break was used for the activities when the students did not have any class work to do, so that concentration and interest would be sustained.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSIONS**

#### **4.1 Introduction**

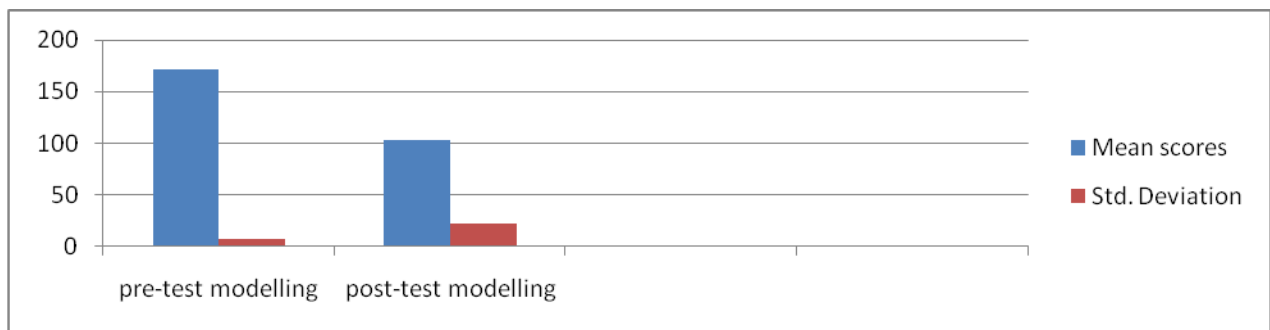
This chapter presents the analysis of the data collected for the study on the effects of modelling and token reinforcement counselling techniques on shy behaviour among secondary school students in Kano metropolis. The results are presented in figures and tables using descriptive statistics (means scores and standard deviation) to answer the research questions. Hypotheses testing and discussions of result were made in the chapter. The research questions raised and hypotheses formulated in chapter one of the work were answered and tested accordingly using appropriate statistical method.

#### **4.2 Answers to research Questions**

The five research questions raised were aimed at finding out the effects of modelling and token reinforcement counselling techniques on shy behaviour among secondary school students in Kano metropolis.

**Question One:** What is the effect of modelling counselling technique on shy behaviour of the respondents in the treatment group?

**Figure 4.2.1:** Pre-test and post-test shy behaviour mean scores of respondents in the modelling treatment group



The above figure 4.2.1 showed that the pre-test has the mean scores of 171.800 with the standard deviation 7.899 while post-test has the mean scores of 102.700 with standard deviation 22.930. These pre-test and post-test means and standard deviation scores differed; this indicated that the modelling counselling technique had effect on reducing shy behaviour among secondary school students, which means the students benefitted from the treatment.

**Question Two:** What is the effect of token reinforcement counselling technique on shy behaviour of the respondents in the treatment group?

**Figure 4.2.2** Pre-test and post-test shy behaviour mean scores of respondents in the token reinforcement treatment group.

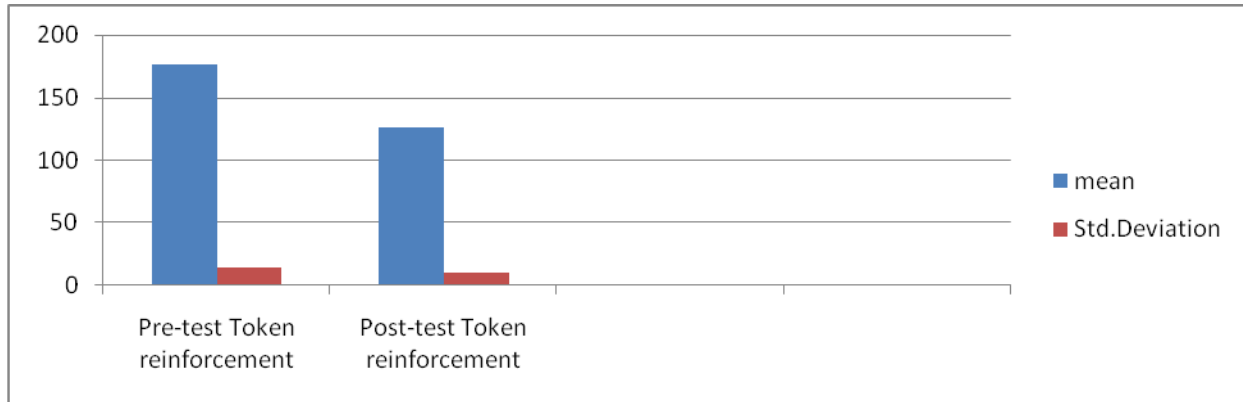


Figure 4.2.2 above indicated that the token reinforcement counselling technique was also effective in reducing shy behaviour of the respondents by considering the pre-test mean scores of 176.00 and standard deviation 14.772 which differed from the post-test mean scores 125.70 and standard deviation 9.775. This showed that the technique had effect on reducing shyness.

**Question Three:** What is the effect of the two counselling techniques (modelling and token reinforcement) on shy behaviour of the respondents in the treatment groups?

**Figure 4.2.3:** post-test mean scores of the treatment groups (modelling and token reinforcement) on shy behaviour of respondents.

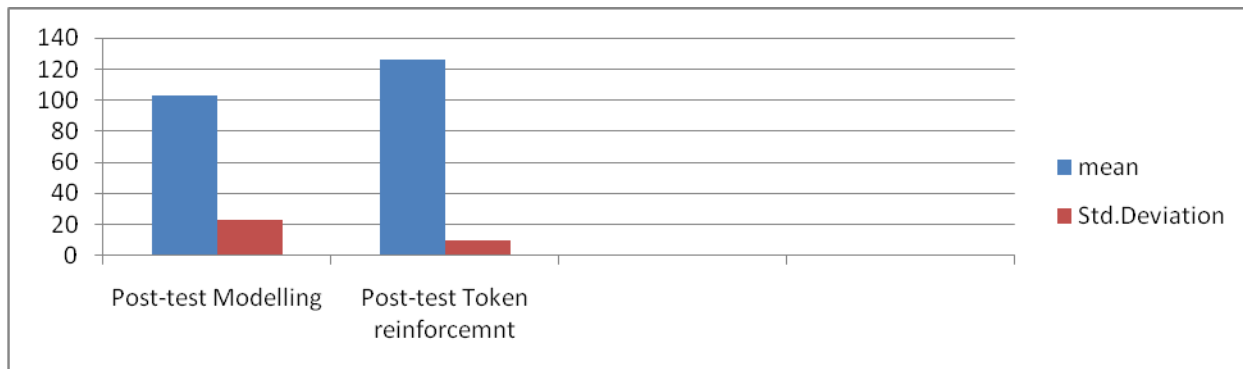


Figure 4.2.3 above indicated the difference on the post-test mean score of respondents between modelling counselling technique and token reinforcement counselling technique. This can be seen in modelling post-test mean scores (102.700) and standard deviation (22.9301) compared to the post-test token reinforcement mean scores (125.700) and standard deviation (9.7758). This showed that among the two counselling techniques, modelling was more effective

than token reinforcement in reducing shy behaviour among secondary schools students in Kano metropolis.

**Question Four:** What is the effect of the two counselling techniques (modelling and token reinforcement) on shy behaviour of the male and female respondents in the treatment groups?

**Figure 4.2.4** post-test mean scores of the male and female in the treatment groups (modelling and token reinforcement).

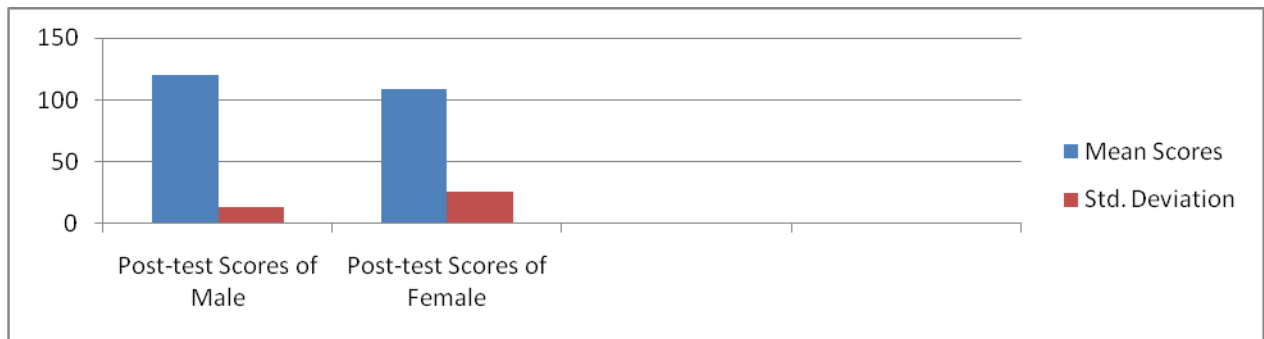


Figure 4.2.4 above showed the result of male and female post-test scores mean and standard deviation. The male had mean of (120.200) with standard deviation (12.9340) which differed from female mean (108.200) and standard deviation (25.8448). This indicated that the treatment of the two counselling techniques had more effect on females than males, meaning that modelling and token reinforcement techniques were more effective on female than male.

**Question Five:** What effect would the two techniques (modelling and token reinforcement) have on shy behaviour of respondents of different age level in the treatment group?

**Figure 4.2.5:** post-test scores of age groups on the level of shy behaviour of respondents in the treatment groups.

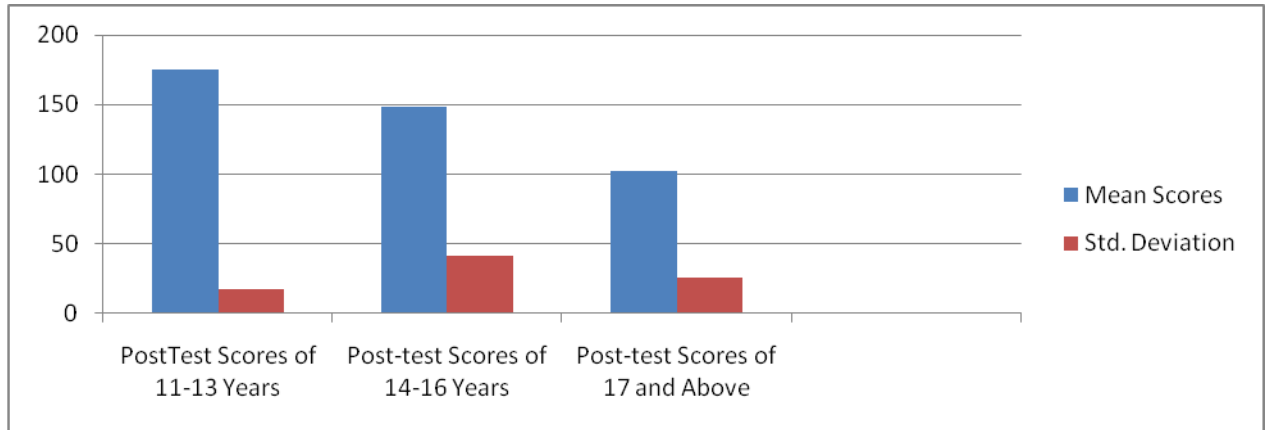


Figure 4.2.5 above showed post-test mean and standard deviation of the three age groups, 11-13 years with mean (174.714) and standard deviation (17.8859), 14-16 years with mean (148.600) and standard deviation (41.6689), and the last group 17years & above with mean (102.6250) and standard deviation (25.9777). After the treatment, those respondents aged 17 years and above responded in the reduction of shyness more than 14-16 years then followed by the last group 11- 13 age group.

### 4.3 Hypotheses Testing

The five hypotheses raised in the study were formulated in line with the objectives of the study and research questions aimed at finding out the effects of modelling and token reinforcement counselling techniques on shy behaviour of the respondents.

#### Hypothesis 1

H0<sub>1</sub>: There is no significant effect of modelling technique on shy behaviour of respondents after post-test.

**Table 4.3.1:** t-test for paired sample between pre-test and post-test of respondents exposed to modelling counselling technique

Sources	Number	Mean	S.D.	d.f	t-Cal	t-Crit	P
Pre-test modelling	10	171.8000	7.8994	9	8.346	2.26	.000
Post-test modelling		102.7000	22.9301				

From the table 4.3.1 above, the result of the t-test paired sample of treatment group revealed that the t-calculated value (8.346) is greater than the t-critical value (2.26) at 9 degree of freedom and at 0.05 level of significance. The observed probability level of significance P (.000 is less than 0.05). This showed that the treatment group of modelling benefited from the treatment when compared with the pre-test and post-test mean scores of the group. This means that there is a significant effect of modelling on shy behaviour between pre-test and post-test of the respondents exposed to modelling counselling technique. The difference was in favour of the post-test scores of the treatment group, meaning that modelling counselling technique had effect on reducing the shy behaviour among secondary school students. Therefore, the null hypothesis which says there is no significant effect of modelling technique on shy behaviour of respondents after post-test is rejected.

### Hypothesis 11

H<sub>02</sub>: There is no significant effect of token reinforcement technique on shy behaviour of respondents after post-test.

**Table 4.3.2:** t-test for paired sample between pre-test and post-test scores of respondents exposed to token reinforcement counselling technique.

Sources	Number	Mean	S.D.	d.f	t-Cal	t-Crit	P
Pre-test token	10	176.000	14.7723	9	7.502	2.26	.000

reinforcement		
Post-test	125.7000	9.7758
reinforcement		

From the table 4.3.2 above, the result of the t-test paired sample of token reinforcement treatment group revealed that the t-calculated value (7.502) is greater than the t-critical value (2.26) at 9 degree of freedom and at 0.05 level of significance. The observed probability level of significance P (.000 is less than 0.05). This showed that the treatment group of token reinforcement benefited from the treatment when compared with pre-test and post-test mean scores. This mean that there is a significant effects of token reinforcement on shy behaviour between pre-test and post-test of the respondents exposed to token reinforcement counselling technique. The difference was in favour of the post-test scores of the token reinforcement treatment group, meaning that token reinforcement counselling technique had effect on reducing the shy behaviour among secondary school students. Therefore, the null hypothesis which says there is no significant effect of token reinforcement technique on shy behaviour of respondents after post-test is rejected.

### Hypothesis I11

H0<sub>3</sub>: There is no significant relative effect of modelling and token reinforcement techniques on shy behaviour of respondents in the treatment groups.

**Table 4.3.3:** t-test for independent sample between post-test scores of respondents exposed to modelling counselling technique and token reinforcement counselling technique.

Sources	Number	Mean	S.D.	d.f	t-Cal	t-Crit	P
Post-test Modelling	10	102.7000	22.9301	18	2.918	2.10	.009
Post-test token	10	125.7000	9.7758				

From the table 4.3.3 above, the result of the t-test revealed that the t-calculated value (2.918) is greater than the t-critical value (2.10) at 18 degree of freedom and at 0.05 level of significance. The observed probability level of significance P (.009) is greater than 0.05. This indicated that there is a significant relative effect on shy behaviour between respondents exposed to modelling counselling technique and those in the token reinforcement counselling technique group. This showed that modelling technique had more effects on shy behaviour than token reinforcement technique, meaning that among the two techniques (modelling and token reinforcement counselling techniques) modelling was more effective than token reinforcement technique in reducing shy behaviour of the respondents. The finding of the research showed that there is a significant effect between modelling and token reinforcement in reducing shy behaviour among secondary school students in Kano metropolis. Consequently, the null hypothesis which says there is no significant relative effects of modelling and token reinforcement on shy behaviour of respondents in the treatment groups is accepted.

#### **Hypothesis IV**

H<sub>04</sub>: There is no significant effect of modelling and token reinforcement techniques on shy behaviour of male and female respondents in the treatment groups.

**Table 4.3.4:** t-test for independent sample between post-test scores of male and female respondents exposed to modelling counselling technique and those in the token reinforcement counselling technique.

Sources	Number	Mean	S.D.	d.f	t-Cal	t-Crit	P
Male	10	120.2000	12.9341	18	2.918	2.10	.000

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Female	10	108.2000	25.8448
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From the table 4.3.4 above, the result of the t-test independent sample revealed that the t-calculated value (2.918) is greater than the t-critical value (2.10) at 18 degree of freedom and at 0.05 level of significance. The observed probability level of significance P (.000) is less than 0.05. These means that there is significant effects in shy behaviour between the post-test mean scores of male and female respondents exposed to the two techniques (modelling and token reinforcement techniques). The difference was in favour of the post-test scores of female respondents. This means that the two techniques were more effective on female students than male students. Therefore, the null hypothesis that say that there is no significant effects of modelling and token reinforcement on shy behaviour of male and female respondents in the treatment groups is rejected.

### Hypothesis V

H<sub>05</sub>: There is no significant effect of modelling and token reinforcement techniques on shy behaviour among respondents of different age levels.

**Table 4.3.5:** Analysis of variance (ANOVA) for the post-test shy behaviour mean scores of respondents of different age levels in the treatment groups.

Sources	Sum of Squires	Df	Mean Squires	F	Critical Value	P
Between Groups	19972.046	2	9986.023	12.493	3.59	.000
Within Groups	13588.504	17	799.324			

From table 4.3.5 above, the result shows that the calculated f-ratio value (12.493) at 17 df 2 and at the level of 0.05. The critical value (3.59) is less than f-ratio value (12.493) and the

observed level of significance P (.000) is less than 0.05. This showed that there is a significant effect between the post-test mean scores of respondents of different age levels in the experimental group. The difference was in favour of the post-test mean scores of respondents that are within the age range of 17years and above then followed by 14years to 16 and then 11years to 13. That means the age category of 17years and above responded more to the treatments in reducing shy behaviour than those in the age category of 14years to 16 while the age category of 11years to 13 became the last group in reducing shy behaviour after responding to the treatments. Therefore, the null hypothesis which says that there is no significant effect of modelling and token reinforcement techniques on shy behaviour among respondents of different age levels is rejected.

**Table 4.3.6: Post hoc Test of Multiple Comparisons of Difference in Post-test scores of shy Behaviour of respondents of different age levels in the treatment groups**

Age group (i)	Age group (j)	Mean Difference	Std Error	P value
11-13	17 - above	26.11	16.55	0.031
11-13	14 - 16	72.09	14.63	0.001
14-16	17 and above	-45.98	16.1177	.036

\*The mean difference is significant at the .05 level

From the Table 4.3.6, it is revealed that between age group 11-13 and 17- above the mean difference is 26.11, P = 0.031. This means that there is a significant effect of the two techniques between the two age groups. The table further indicated a mean difference of -72.09, P=0.001

between age group 11-13 and 14-16. This shows no significant effect of the two techniques between the age two groups. Similarly, the result revealed mean difference of -45.98,  $p=0.36$  between the age group 14-16 and 17- above, this means that no significant effect of the two techniques in reducing shy behaviour was observed between the groups. Although, there is no significant effect of the two techniques between 11-13 & 14-16 and between 14-16 and 17- above, a close look at the means of all age groups showed a gradual reduction from their means. Mean of 11-13 is greater than that of 14-16 and both are greater than that of 17 and above: This signified that there is an effect of the techniques relative to the age of the participants.

#### **4.4 Summary of Major Findings**

The following are the major findings of the study:-

1. The modelling counselling technique had effect on reducing the shy behaviour among the treatment group ( $t= 2.26, p=.000$ ). This means that there is a significant effect of modelling on shy behaviour of the respondents after post-test. This shows that the treatment group of modelling technique benefited from the treatment.
2. The token reinforcement counselling technique had effect on reducing shy behaviour among the treatment group ( $t= 2.26, p=.000$ ). This means that there is a significant effect of token reinforcement on shy behaviour of respondents after post-test. This also shows that the treatment group of token reinforcement counselling technique benefited from the treatment.

3. The modelling technique had more effects on reducing shy behaviour than token reinforcement counselling technique ( $t= 2.10, p=.009$ ). That showed on the effects in the post-test mean scores of the respondents in the two treatment groups. This indicates that there is no significant relative effect in shy behaviour between respondents exposed to modelling counselling technique and those in the token reinforcement counselling technique group.
4. The two techniques had more effect on the post-test scores of female than male in the treatment groups ( $t= 2.10, p=.000$ ). This reveals that there is a significant effect of modelling and token reinforcement on shy behaviour of male and female respondents exposed to modelling counselling technique and the token reinforcement counselling technique groups. Therefore, females benefitted more from the treatments when compared to male respondents.
5. The two techniques had effect on the post-test scores of respondents of different age levels in the experimental groups ( $f= 12.493, p=.000$ ). This shows that there is a significant effect between the post-test mean scores of respondents of different age levels in experimental groups. That is the age group 17 and above responded more to the treatments in reducing shy behaviour than the 14 to 16 and 11 to 13.

#### **4.5 Discussion of findings**

The findings have confirmed all the assumptions made in this study. Answers to all formulated research questions and hypotheses raised have been clarified by the present study. The findings of the present study are discussed in the following manner.

From the analysis of the data it was found that, there is significant effect of shy behaviour between the pre-test and post-test scores of the respondents exposed to modelling technique. This

implies that the treatment group of modelling technique benefitted from the treatment in reducing shy behaviour of the respondents. These findings corroborate the study of Nwamuo (2013), who found modelling technique effective in reducing impulsive behaviour among students. Diana (2011), also used modelling technique to increase percentage of accuracy of task completion for children diagnosed with autism. Finding of Juliet and Kelly (2012), also showed that modelling technique was effective for increasing the frequency of correct, unprompted response of students with autism spectrum disorder, as discovered by the present study that modelling technique is effective in behaviour change. This finding of the present study is also in accordance with the study of Susan, William, Thomas and Melissa (2000) that used modelling technique and discovered immediate, substantial, and durable changes in students' on-task behaviour as discovered by the present study. Study of Florence (2012) also revealed that there was positive effect of peer modelling on the reduction of substance abuse among the respondents.

Similarly, Christos and Mickey (2009), investigated the effects of modelling and the successes reported in their study mainly relied on the ability of the participants to imitate the modelled behaviours. This is attributable to the effects of modelling treatment which present study also confirmed to be effective. In another related study, Stephanie (2011) found that the use of video modelling was effective in training young children with developmental disabilities and autism spectrum disorders to learn the safety skill. Gilchrist (2013) also discovered the effectiveness of modelling technique because students' scores indicated a decrease in anxiety from pre intervention to post intervention, meaning that video self-modelling was effective in reducing anxiety level. Sharon (2003) found modelling technique effective for all children that participated in the study. This showed that children with autism could learn to engage in

appropriate verbal and nonverbal helping responses taught using a video modelling. Similarly, finding of the study of Stefanie (2009) suggested that video modelling was effective in increasing food acceptance for people with Pervasive Developmental Disorder. This confirmed that that technique could be used to increase appropriate behaviour and decrease inappropriate behaviour as in the case of the present study. Study of Geral (2013) and the study of Stefanie (2009) that found that modelling technique had effect on inappropriate behaviour among the treatment group when compared with the control group also confirmed the present study.

Related to the present study, Tom (2005), Staley, Dennis & Angelika (2010) and Allison, Felix & Ilene (2005) conducted a study on video self-modelling applications on students with autism spectrum disorders and the findings of the study revealed that both participants in these studies made substantial gains in the frequency of their social initiations and increased compliment given behaviour. This also confirms the effectiveness of the technique. As the present study found modelling to be effective technique in behaviour change, Anika (2010) in addition, also investigated effects of video self-modelling on elementary students' on-task behaviour as a response to intervention and found that the modelling technique had positive effects on the behaviour of the participant, which means that both participants' average on-task behaviour minimally increased. In a similar study conducted by Wanda Gail (2012) on the effects of video self-modelling on improving oral reading fluency of students with attention deficit hyperactivity disorder, the findings of the study indicated that the participants who completed the study demonstrated improved oral-reading fluency, as evidenced by performance after modelling intervention. The finding of the present study, as far as modelling had positive effect on participants, agrees with those studies of Robert (2010), James (2013), Casey & Sunnil (2013), Casey (2013) and that of Susan, William, Thomas and Melissa (2000).

The only study that discovered an aspect of both positive and negative effects of modelling technique which above researchers and present study have not discovered is that of Christina (2013), who found out that modelling led to increase in some areas and decrease in other areas in facilitating compliance and skills with special education students who were attending a half-day preschool with different disabilities and behaviours represented. Intervention effects showed that there were both positive and negative effects recorded throughout this study. This might be attributable to the varied disabilities and behaviours presented by the participants which more or less act as a barrier to effective workability or implementation of the technique and secondly the participants were too young both in age and cognitive development.

Furthermore, the present study revealed that token reinforcement technique also had effect on reducing shy behaviour of respondents; therefore, this shows that the technique is effective in behaviour change. Other researchers in a similar study have also demonstrated that token reinforcement technique is effective. For instance, Jennifer (2007) in her study on examination of the use of the token reinforcement in reducing problem behaviours in an adolescent with autism spectrum disorder discovered that token reinforcement was an effective intervention in reducing physical aggression, property destruction and disruptive talk among the participants of her study. This shows that the technique was found to be effective. Likewise, Kerilyn & Michelle (2013) in their study on the effects of token reinforcement on the occurrence of appropriate and inappropriate behaviours of children with autism, discovered that token reinforcement was effective in decreasing hitting behaviour of the participants. This finding is in line with the findings of Anna & McLaughlin (2007) which discovered that token reinforcement had positive effects of reducing inappropriate behaviour and increasing appropriate ones and

improved the participants' academic and social behaviour. This clearly indicated that the technique is effective in behaviour management of appropriate and inappropriate ones.

Similarly, Damayanti & Mokashi (2011) found token reinforcement effective in their study for controlling drooling in children with cerebral palsy associated with mild intellectual disability. Their study revealed a significant decrease in frequency of drooling after application of token reinforcement. This shows that token reinforcement works in treating talking nonsense on students with brain disorder that are associated with mild intellectual disability. Another relevant study was conducted by Brent, John & David (2003) on the effects of token reinforcement system within the context of cooperative games on social behaviours of adolescents with emotional and behavioural disorders. The findings of this study revealed that with the introduction of cooperative games, behaviours remained stable and unchanged. When a token reinforcement technique was introduced there was an immediate increase in the number of pro-social behaviours. Results for pro-social behaviours were replicated across conditions. Anti-social behaviours remained virtually non-existent throughout the study. This shows that token reinforcement technique is very effective in managing anti-social behaviours.

Therefore, findings of this study are consistent with previous researches discovering one of the two techniques to be more effective than the other. Shahnam et al (2012) conducted a study and revealed a significant difference between token reinforcement and music therapy on the reduction of aggression in which token reinforcement was more effective than music therapy. Mahmood et al (2010) also found differential effect between social reinforcement and token reinforcement on academic achievement of students with intellectual disabilities. Titilayo & Aderanti (2013) discovered self-management more effective than token reinforcement in the treatment of disorderliness. This is because the study has to do with gender differences and males

are more inclined with disorder than females and the techniques were found to be more effective on females than males, as discovered by the present study. Likewise, Rachel & Oxnard (2009) discovered modelling to be more effective than self-monitoring in increasing on-task behaviour of children with attention deficit hyperactivity disorder. Chinyere (2012) found modelling social skills more effective than thought restructuring in the management of shyness. This implies that the two techniques can differ depending on behaviour under intervention and the respondents.

Those studies that are in contrast with the present study in term of no significant effect in the two techniques used is that of Nnodum (2010) who discovered no significant effect between modelling and assertive training in improving social skills of primary school shy children. Christine (2008) also found no significant effect between modelling and peer mentoring in social skills training of students with autism, the two techniques positively impacted the level of demonstration of skills of the participants. Sharon (2003), Alyce (2012), also discovered that there is no significant effect between modelling, prompting and reinforcement strategies on increasing helping behaviour in children with autism. Claudine (2004) discovered no significant effect between token reinforcement and music therapy in decreasing inappropriate behaviour of students with emotional problem. Thanita (2011) also found token reinforcement and social reinforcement to have similar effects in stimulating students' vegetable and fruit consuming behaviour.

However, an additional result yielded by the analysis of the data of the present study indicated significant effect in shy behaviour between male and female respondents in the two treatment groups. This finding is supported by the study of Titilayo & Aderanti (2013) who conducted a study on effects of self-management and token reinforcement in the treatment of disorderliness. The findings showed that both treatments (self-management and token

reinforcement) were more effective on females' than males' disorderliness. This result by implication is in line with the present study which discovered females being more sensitive to treatment than males and that was why the techniques worked more on females than males. Contrary to this finding, the study of Florence (2012) discovered no gender differences in the reduction of substance abuse among the respondents exposed to peer modelling. Cathy (2013) also discovered no gender difference on reading fluency and comprehension between respondents exposed to feedforward video-modelling. By implication, results of above researches related to gender suggested that whether a student is male or female the effects the two techniques would have on the participants remain the same which is contrary to the present study.

Furthermore, the findings of the study revealed that there exists significant effect in shy behaviour between respondents of different age levels exposed to the two treatments groups. This shows that respondents aged 17 & above and 14 – 16 years benefitted more from the treatment than those in the age group of 11 to 13 years. That means the two techniques have more effects or rather are more effective on respondents with higher age level than the lower age level. That may be interpreted to indicate that differences in age and cognitive development can affect the way an individual will respond to treatment. In this study, the respondents were of different age levels with probably differences in cognitive development. Those older ones with high cognitive development may respond to treatment more than the young ones.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the research work. Conclusions were drawn from the findings, recommendations based on the findings, and suggestions for further studies were provided and finally limitations of the study were all presented in the chapter.

#### **5.2 Summary**

Chapter one presents the introductory aspect of the study and it was presented under the following sub-headings: background to the study, statement of the problem, objectives of the study, research questions, hypotheses, basic assumptions, significance of the study, scope and delimitation of the study. Chapter two deals with review of related literature based on conceptual and theoretical frameworks of the study. The chapter also makes a review of empirical studies and summary of literature reviewed was also presented.

Chapter three focuses on describing the type of design used in the study, the population, sample of the study, the sampling technique, instruments for data collection and detailed procedures for treatment, procedure for data analysis, and ways of controlling extraneous

variables were explained. Chapter four focuses on the analysis of data obtained from the study. It involves data presentation, hypotheses testing, summary of findings and discussions of findings. All the hypotheses 1, 2, 3, 4 and 5 tested were rejected as differences were observed.

### **5.3 Conclusion**

In view of the findings of this study, it was concluded that modelling had effect in reducing shy behaviour among the respondents. This means that modelling counselling technique is effective counselling strategy for reducing shy behaviour. It was also concluded that token reinforcement had effect in reducing shy behaviour among the respondents. This means that token reinforcement technique is also effective counselling strategy for reducing shy behaviour. It was discovered that modelling was more effective than token reinforcement in reducing shy behaviour of the respondents. This concluded that modelling is more effective than token reinforcement technique in reducing shy behaviour among secondary school students in Kano State. It was further concluded that modelling and token reinforcement techniques had effects on male and female respondents in the treatment groups but this is in favour more on female respondents than male. However, it was concluded that the two techniques had effects on the respondents of different age groups. Those aged 17 years and above benefitted from the treatments in reducing shy behaviour more than 14-16 years then followed by the last group 11-13 age group.

### **5.4 Recommendations**

Consequent upon the findings of this study, the following recommendations are made.

1. Counsellors, Psychologists, and Teachers should be exposed to training on modelling counselling technique in addressing shy behaviour among secondary school students.
2. Counsellors, Psychologists, Teachers should be exposed to training on token reinforcement in order to utilize the technique in assisting students with shy behaviour among secondary school students.
3. Counsellors, Psychologists, Teachers should utilize modelling counselling technique more than token reinforcement since it is more effective than token reinforcement counselling technique in assisting students with shy behaviour among secondary school students.
4. Male and females students should be exposed to modelling and token reinforcement counselling techniques to reduce their shy behaviour in order to assist them achieve their academic and social activities irrespective of their gender differences.
5. Modelling and token reinforcement techniques should be utilized by Counsellors, Psychologists and Teachers on late adolescent so as to encourage them to participate more in academic social activities.

## **5.5 Suggestions for Further Studies**

This study was limited to the effects of modelling and token reinforcement techniques on shy behaviour among secondary school students in Kano State. Further studies possibilities for using modelling and token reinforcement for shy behaviour are multifaceted and promising as there are numerous opportunities for further studies to increase knowledge. Based on the methodology and findings of this study, the following suggestions were made for further studies:

1. The scope of this study covers only public secondary schools, it is suggested that this study be replicated to cover private schools.
2. While this investigation focused on junior secondary school students, it would be interesting to apply this intervention using one or both techniques to students who are in primary school level, this is because students at this level are experiencing shy behaviour problem more.
3. The population of this study was only junior secondary school students one to three (JSS1-3) it is suggested that this study be replicated to cover senior secondary school levels or limit the scope to cover only one level of junior or senior secondary school, where students are having the same age group and cognitive ability.
4. The present study used modelling and token reinforcement techniques, it is suggested that a similar study could be carried out using other behaviour techniques.
5. However, more research needs to be done to determine the effectiveness of each method separately and in direct comparison with one another before a definitive conclusion can be drawn.
6. The results from this study into the shy behaviour calls for other studies to investigate how modelling and token reinforcement could reduce the combination of different types of behaviour problems. For example shy behaviour with attention deficit hyperactivity disorder, shy behaviour with truancy etc.
7. It would be interesting to investigate whether modelling and token reinforcement techniques could benefit large group of students (ie whole class or classes) who are engaged in shy behaviour problem.

8. Generalization and maintenance of shy behaviour change resulting from modelling and token reinforcement is an important area for further studies.

## **5.6 Limitations of the Study**

The study has some limitations, some of which include the following: The researcher faced lack of adequate empirically based Nigerian literature on shy behaviour which is the foremost limiting factor of this study, as could be observed in the review of related studies. The schools used for this study were three public junior secondary schools under Kano State Ministry of Education, which narrow the scope of generalizations of the findings. The generalization could not be extended to private secondary schools in the State. Likewise, generalization could not be extended to senior secondary schools. Another limitation to this study was that the period of the study was relatively short, when compared to other studies that need to observe maintenance of behaviour change. More information especially in the maintenance period, could have been gained to assess whether or not new behaviour was maintained for an extended period of time, but time constraints prohibited this option. Another limitation of the study is that the participants in each condition were not appropriately matched that they cut across junior secondary school one to three (JSS1-3). Some participants were both older and significantly more cognitively advanced compared to the other participants. This makes them potentially not comparable to others in the study. To better determine differences in effectiveness, future research should also try to match participants on as many variables as possible to reduce the effect of potential compounding variables such as age and cognitive ability. More research need to be done to determine other techniques that are capable of reducing shy behaviour in conjunction with modelling and token reinforcement techniques.

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## **Appendix A**

# DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING

Faculty of Education

AHMADU BELLO UNIVERSITY, ZARIA

Email: epc@abu.edu.ng



Vice-Chancellor: Professor Abdullahi Mustapha, B.Sc (Hons) Pharm (ABU), Ph.D (London), FPSN

Asst. Head of Department: Professor Musa Balarabe, B.Sc.Ed., M.Ed (ABU), Ph.D (Edinburgh), M.B.Ps.S., MNAES

Our Ref: \_\_\_\_\_

Date: \_\_\_\_\_

THE DIRECTOR  
SECONDARY SCHOOLS  
MANAGEMENT BOARD

Dear Sir,

## STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria requires each student working for a Degree to complete a research Thesis/project. Our Students entering the final year of their studies will be collecting data during the year.

Most of them will need to be allowed access to certain relevant documents and some valuable information which you may have.

Please give assistance as much as possible.

TOPIC OF RESEARCH:

EFFECTS OF MODELLING AND TOKEN  
REINFORCEMENT ON REDUCING SHYNESS  
AMONG SECONDARY SCHOOL STUDENTS OF  
KANO STATE.

Thank You for your Continuing cooperation.

Yours Sincerely,

DEPARTMENT OF  
EDUCATIONAL PSYCHOLOGY  
AND COUNSELLING  
AHMADU BELLO UNIVERSITY  
ZARIA

Research Adviser

APPENDIX B



**KANO STATE SENIOR SECONDARY SCHOOLS MANAGEMENT BOARD  
GIDAN MALAMAI**

No. 1 Lawan Danbazau Link behind Bank of the North Headquarters, Kano.

☎ : 064-318855, 669420, 661948, 667884, 667869

Our Ref: \_\_\_\_\_ Your Ref: \_\_\_\_\_ Date 20<sup>TH</sup> FEBRUARY, 2014

**The Zonal Education Officer,<sup>S</sup>**

NASSARAWA  
KANO METROPOLIS

**LETTER OF INTRODUCTION**

The bearer of this letter is a researcher from AHMADU BELLO UNIVERSITY  
ZARIA.

He is conducting a research on EFFECTS OF MODELING AND  
TOKEN REINFORCEMENT ON REDUCING SHYNESS AMONG in  
SECONDARY SCHOOL STUDENTS IN KANO STATE. in  
your zone. You are expected to give him/her all the necessary assistance to  
facilitate his research because of the importance the Board attaches to research  
work.

The Board appreciates your usual co-operation.

Best regards.

**Shuaibu Kassim Abubakar**  
CEO – Publication/Documentation  
For Director General

## APPENDIX C



# KANO STATE SENIOR SECONDARY SCHOOLS MANAGEMENT BOARD

ZONAL EDUCATION OFFICE, NASSARAWA

P.M.B 3398, KANO

Our Ref: NZEO/ADM/5 Your Ref: \_\_\_\_\_ Date 29<sup>th</sup> April, 2014.

The Principals of

1. DANWAIRE JUNIOR SEC. SCH.
2. ZAWA'I JUNIOR SEC. SCH.
3. NOMANSCANA JUNIOR SEC. SCH.

### **INTRODUCTION LETTER**

I am directed to introduce YUSIF B. YAKU from the Department of Educ. Psychology Ahmadu Bello University Zaria/BUK. He is conducting a research titled Effects of modelling and token re-inforcement on shy behaviour among Sec. Sch. in some selected Senior Secondary Schools in Kano State.

The Board expects you to give him all the necessary assistance during the research. Your usual cooperation is highly appreciated by the Board.

Best regards.

Pomohel  
Zonal Education Officer  
Nassarawa Zonal Education Office  
Kano

BINTU A. YARO  
ZONAL EDUC. OFFICER

## APPENDIX D

### Shy Behaviour Observational Checklist (SBOC)

Name -----  
 Class-----  
 Address/School-----  
 Date----- Age----- Male----- Female-----

### DIRECTIONS

This shy behaviour checklist contains a list of 12 statements about attitudes of shy individuals. Read slowly through the items. As you do, immediately tick (√) in either STRONGLY AGREE (5), AGREE (4), NEUTRAL (3), DISAGREE (2) or STROGLY DISAGREE (1) options that you agrees with behaviour of your student. Please do not leave any space blank.

S/N	Items	S/agree	Agree	Neutral	Disagree	S/disagree
1	Feel tense when with strange person					
2	Find self in an awkward situation					
3	Find it difficult to ask other people for information					
4	Afraid of people					
5	Have trouble thinking of the right things to talk about when in a group of people					
6	Afraid of attempting to perform task					
7	Has limited number of friends					
8	Prefers to work with close ones and enjoy leading the inner life					
9	Works alone					
10	Hard to act naturally when meeting new people					
11	Don't interact with others					
12	Prefers to use body language than verbal language					
13	Feel nervous when speaking to someone in Authority					
14	Take long time to make friends in a new place					
15	Worry about saying something dumb during conversation					

## APPENDIX E

### SHYNESS PERSONALITY SCALE (SPS)

Name -----

Class-----

Address/School-----

Date----- Age----- Male----- Female-----  
(In years)

## DIRECTIONS

This instrument (SPS) contains a list of 50 statements about social behaviour of individuals (especially young people) in the society. Read slowly through the list. As you do, immediately put a tick (✓) in the space of a number provided against the statement that agrees with your thinking. Please do not leave any space blank. When you have gone through all the items, kindly answer the questions which follow on the last page i.e. page 4.

SPS is a self report scale. It has a 4 – point Likert type of rating scale for each item.

4 Stands for I Strongly Agree (SA)

3 Stands for I Agree (A)

2 Stands for I Disagree (D)

1 Stands for I Strongly Disagree (SD)

Example

Most of the time, I obey laid down rules

1 2 3 (4)

4 is encircled. This means I strongly Agree. Now please do the same with all the 50 statements which follow on section A.

### SECTION A:

#### Items

		Strongly Agree (SA)	Agree (A)	Disagree (D)	Strongly Disagree (SD)
		4	3	2	1
1	I tend to avoid unfamiliar social gatherings.				
2	I usually prefer to be left alone.				

3	I have some fear of meeting new people				
4	I do not always look at people straight in the face.				
5	I have a small circle of friends.				
6	I rarely convert acquaintances to friends.				
7	I date less often than my mates				
8	When I have to give a speech, my mouth often goes dry.				
9	When I am with an attractive person, I often feel uncomfortable				
10	I often perspire when I spend some time face-to-face with a person in authority				
11	My heart beats fast when I am in a party.				
12	Initiating contact with opposite sex often embarrasses me.				
13	A number of people think that I am shy.				
14	I am usually quiet when I am with unfamiliar people.				
15	I select my words when I speak in social gatherings.				
16	I am slow to warm up in social situations.				
17	I occasionally stammer when I speak with new people.				
18	I do not always volunteer answers to questions in school work.				
19	I do not always ask stimulating questions in school/work.				
20	I do not supply suitable conversational topics.				
21	I sometimes put a finger or pen across my face when I speak with new / influential people.				
22	When I address people, I use few body gestures.				
23	I receive few compliments from people.				
24	In class / at work, I prefer to seat on rather than move about.				
25	I do not assume a relaxed posture when I address people.				
26	Most of the time, I obey laid down rules.				
27	I find it difficult to handle personal compliments.				
28	I often suppress my strong feelings / emotions.				
29	I do not like being a leader in the school.				
30	I feel embarrassed when part of my private life is exposed especially to unfamiliar people				
31	My parents are too strict on me.				
32	My friends are too strict on me.				
33	I am not considered aggressive.				
34	I am not considered pretentious.				



**WELDONE  
THANK YOU VERY MUCH FOR YOUR COOPERATION**