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Development of Instructional Toolkit Using Behavior Modification Strategies for Teachers Teaching Children with Autism Spectrum Disorder

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**Development of Instructional Toolkit Using Behavior
Modification Strategies for Teachers Teaching Children with
Autism Spectrum Disorder**

A Thesis

Presented to:

The College of Graduate Studies and Teachers Education Research
Philippine Normal University
Taft Avenue, Manila

In Partial Fulfillment

Of the Requirements for the Degree Master of Arts in Education
Major in Special Education with Specialization in Special Education
(Teaching Children with Intellectual Disabilities)

Angeline Marie G. Osana

May 2018

APPROVAL SHEET

This thesis entitled “**DEVELOPMENT OF INSTRUCTIONAL TOOLKIT USING BEHAVIOR MODIFICATION STRATEGIES FOR TEACHERS TEACHING CHILDREN WITH AUTISM SPECTRUM DISORDER**” prepared and submitted by **ANGELINE MARIE G. OSANA** in partial fulfillment of the requirements for the degree of **Master of Arts in Education with Specialization in Special Education (Teaching Children with Intellectual Disabilities)**, is hereby recommended for approval and acceptance.

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Abstract

Researcher: Angeline Marie G. Osana

Title: Development of Instructional Toolkit Using
Behavior Modification Strategies for Teachers
Teaching Children with Autism Spectrum Disorder

Key Concept: toolkit, behavior modification, ABA, DTT, autism,
special education

Degree: Master of Arts in Education

Specialization: Special Education (Teaching Children with
Intellectual Disabilities)

Adviser: Prof. Shirley N. Cerbo

The main purpose of this study is to develop a technology-based behavior modification instructional toolkit that focuses in Applied Behavior Analysis (ABA) and Discrete Trial Training (DTT) strategy for teachers teaching children with Autism Spectrum Disorder. It determined how the public school special education teachers use technology integration, ABA and DTT strategy in modifying behaviors of children with Autism Spectrum Disorder; identified the problems encountered by the public school special education teachers in terms of integrating the use of technology, ABA and DTT at Antipolo City Sped Center.

Descriptive and developmental research was employed which involved 16 public school special education teachers teaching children with Autism Spectrum Disorder in Antipolo City Sped Center. The following findings were enumerated as follows: ABA and DTT strategy in average were sometimes used. The status of the use of technology was never used. Grounded on the summary of findings presented, the succeeding conclusions were drawn. Public special education teachers were not familiar with the labels and they were not fully aware that most of their routines were aligned with ABA and DTT strategies. They find ABA and DTT useful but their frequency in using it is low because they don't know how to use it. They need a toolkit to guide and help them improve their behavior modification strategies for children with ASD. As discovered in this study, the teachers were not aware of the labels as well as the steps on implementing an ABA or DTT behavior modification strategy. In using the toolkit the teachers will be guided accordingly and better conditioning and modifying of behaviors can be a possible result.

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Dedication

I dedicate my thesis to my family, friends, and children with Autism and to our Lord Jesus Christ...

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CHAPTER 1

The Problem and Literature Review

1.1 Background of the Study

Autism spectrum disorder (ASD) is an emergent public health concern. (Newschaffer et al., 2007). The past six (6) years, the Filipino children diagnosed to have ASD doubled and is still rising. 1 out of sixty-eight (68) children worldwide has autism. Cases of autism increase from 500,000 in 2008 to one million people at present. Parents who do not know their son or daughters have autism doesn't get the proper treatment and early intervention (Borromeo, 2014). Improvement from both brain and behavioral development can be attained by early intervention. (Jaymalin, 2014).

For the most part, children with ASD can act in ways their parents discover troublesome or testing to oversee. Children with ASD, for example, will probably do as such. Youngsters with ASD may decline or overlook demands, act in socially unseemly routes, for example, taking their garments off in broad daylight, be forceful or have fits of rage, participate in self-stimulatory conduct, for example, shaking or hand-flicking and hurt themselves or other kids – for instance, by head-slamming or gnawing (Richdale, 2013). They will probably act in testing ways since they experience difficulty understanding what is going on around them. For instance,

what other individuals are stating or conveying through outward appearances and non-verbal communication, prompts dissatisfaction and be exceptionally on edge because they do not have compelling methods for imparting their own particular needs (Koegel & LaZebnik, 2014).

Teacher-designed and implemented activities are techniques of behavior modification. It has an end goal of improving classroom behavior by encouraging students to remain seated, asking for permission whenever wished to talk, stay focus on given tasks, taking care of the school's property and showing others the respect and care that they deserve. Disruptive behaviors are discouraged, loud and shouting voices and going in circles inside the classroom is strictly not allowed (Standridge, 2016). It needs to be a great deal of repetition because children with ASD accomplished task thru structure, reward system, and consequences for the inappropriate or unaccepted behavior. Success comes after consistency (Secor, 2014). Hence, the Applied Behavior Analysis (ABA) and Discrete Trial Training (DTT) are applied.

ABA is an effective treatment for autism that has been well planned and implemented. According to Bailey (2013) thousands of researchers have been published about ABA. The earliest was 1972, with four (400) hundred studies in relation to ABA and showed consistent results (Hingtgen & Bryson, 1972). Another review of over two hundred (250) studies was completed in 1996 and yet again

found ABA to be effective in treating behavior of children with autism (Baglio, et. al., 1996).

One of the most imperative instructional approaches for children with autism was the Discrete Trial Training. It's a simplified and structured based method. The skill is chunked and taught step by step (Smith, 2001). It involves breaking behavior into smaller parts, training one subskill at a time, shaping required behaviors until they are securely learned and prompt fading. Repetition and clear contingencies play a vital role in the adult's directed trial instruction. Training a normal behavior is the end goal of behavior interventions. A child needs to learn how to deal with a certain problem. That is a normal behavior. Avoiding to trigger the child throw a tantrum is not a normal behavior. The learning comes in when the child learns how to act properly and react to the given situation (Grossman, 2014). Behavior interventions or modifications produce great results as long as the person developing and implementing the program is knowledgeable enough.

A growing number of studies have investigated diverse applications of technology-based interventions with children with Autism (Newman, 2004). Overall, video technology perhaps is an increasingly popular, economical, one of the most readily available and user-friendly technology that can be prove beneficial for children with Autism and educators can use it. In addition to being economically

achievable and portable, many individuals can operate video equipment with very little instruction, making it the technology of choice for many researchers. Video technology has proven useful as a tool for modeling appropriate behavior, providing feedback, and engaging discriminatory opportunities for the child's own behavior, and as a medium for presenting basic instruction that many children find engaging (Sturmey,2003).

In teaching and modifying behavior of children with ASD, Teachers are ultimate prototypes inside the classroom. They play a very important role in prompting behavior of students. Planning effectively saves a teacher from having disruptive, defiant and misbehaving students. Given this, the teacher is the first intervention that automatically improves the classroom setting and structure (Aly, 2007). Differentiated instruction is a worldwide requirement nowadays, to support the effective deployment of identified resources and the necessary teacher training/development in relation to special education, program for the gifted, etc. (Navarro, 2001).

There is a remarkable bulk of information regarding ASD and the differentiated methodology to treat them. (NRC, 2001) Despite the numerous sources of information, the identification of strategies is still difficult for teachers. It is vital that the teachers identify the exact strategy that they are going to use in a specific classroom situation. (Simpson et al., 2005) Reckon of studies states that

children with ASD can acquire and learn with the use of behavior modifications. However, here in the Philippines the regular and SPED teachers in the public school system encounters problems in applying the said behavior modifications. Thus, the conceptualization of this study is formed.

Differentiated instruction is a worldwide requirement nowadays, to support the effective deployment of identified resources and the necessary classroom development in relation to special education (Navarro, 2001). However, in the Philippines there is a need for development of material to support instruction (Department of Education [DepEd], 2016). This study will focus on ABA, DTT strategies and integration of technology in modifying behavior of children with ASD and explored the research questions.

In this study the researcher will develop an instructional toolkit that aims to answer the problems encountered by the public special education teachers in using technology integration, ABA and DTT strategy.

Review of Related Literature

Autism spectrum disorder is characterized by difficulties in social communication and collaboration with either one or more of the domains in language use. These language use may cover reciprocal interactions or a pattern of

constrained interests or stereotyped behavior. Although of smaller incidence as compared to other conditions, ASD has become more prevalent over the past few decades with an estimate of 5 in 10,000 children in the 1960s to 1 in 88 children today (Newschaffer et al. 2007).

Autism spectrum disorder are developmental disabilities significantly affecting verbal and nonverbal communication and social interaction skills which are generally evident before the age of three. This in turn, adversely affects a child's educational performance. Other characteristics often associated with autism involve engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences according to Sec. 300.8 Child with a disability, IDEA (2004).

These problems occur when the brain develops differently and has trouble with interpreting occurrences around him or her. On a daily basis, our brains perform this important task and understand the things we perceive through our senses. But when one's brain is challenged interpreting these experiences, interpreting and understanding hampers the convenience of talking, listening, understanding, playing, and learning.

There are four main sub-types of autism as quantified by the American Psychiatric Association Publishing (2017). The Autistic disorder, which is also known as autism, childhood autism, early infantile autism, Kanner's syndrome or

infantile psychosis; Asperger Syndrome, also known as Asperger's disorder or simply Asperger's; Childhood Disintegrative Disorder, also known as CDD, dementia infantalis, disintegrative psychosis or Heller's syndrome; and Pervasive Developmental Disorder (Not Otherwise Specified), also known as PDD (NOS) or atypical autism. Although individuals with Rett Syndrome may display autistic-like symptoms, this syndrome, on the other hand, is no longer considered to be a sub-type of autism.

Diagnostic and Statistical Manual of Mental Disorders [DSM-5] (2013) in its most recent edition, eliminated these four sub-types and merging them into one which is the Autism Spectrum Disorder. This episode, in effect, denotes an effort to more accurately diagnose individuals displaying signs of autism. At present, the term autism is occasionally used interchangeably with the term autism spectrum disorders to mean any or all of the different forms of ASD or simply autistic disorder (APA, 2017)

Psychologists and psychiatrists use measures when evaluating individuals for these aforementioned developmental disorders. Persistent deficits in socio-emotional interchange in different contexts or failure to begin or retort in social interactions. Another criterion is the deficit in nonverbal conversation conducts used in interactions such as eye contact and body language or failure to understand and

use gestures and facial expressions. Finally, inadequacy in building up, preserving, and interpreting relationships such as making friends or joining in imaginative play.

Severity is based on the social communication impairments and restricted, repetitive patterns of behavior. Table 1 presents the severity level and of the ASD and the social communication skills showcased by the patients and their restricted or repetitive behaviors (Research Autism, 2018).

Table 1
Severity Levels for Autism Spectrum Disorder

Severity level	Social communication	Restricted, repetitive behaviors
Level 3 "Requiring very substantial support"	Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning. There is very limited initiation of social interactions, and minimal response to social overtures from others.	Inflexibility of behavior, extreme difficulty coping with change, or other restricted/ repetitive behaviors markedly interfere with functioning in all spheres. Great distress/ difficulty changing focus or action.
Level 2 "Requiring substantial support"	Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others.	Inflexibility of behavior, difficulty coping with change, or other restricted/repetitive behaviors appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts.
Level 1 "Requiring support"	Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions.	Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning

There are restricted, repetitive patterns of behavior, interests, or activities, manifested. Some have stereotyped or repetitive motor movements, use of objects, or speech, such as simple motor stereotypies, lining up toys or flipping objects, echolalia, and idiosyncratic phrases. Others dwell on the insistence on sameness, inflexible adherence to routines, or ritualized pattern of verbal and nonverbal behavior. Some are highly restricted, fixated interests that are abnormal in intensity or focus, characterized by a strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interest, and hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment. They have an apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, and visual fascination with lights or movement.

Children with ASD regularly like predictable situations and can get extremely annoyed if their natural schedules are broken. A child has tangible sensitivities. He may like the feeling of touching specific surfaces or protests. He may get irritated on the off chance that he isn't permitted to. He may get agitated if a lot of is occurring around him, or on the off chance that he finds a specific clamor overpowering, or it's too splendid for him. Like all children, one with ASD can get baffled if he has relied upon the desire to accomplish something he does not have the right materials for. For example, getting dressed independently. Children with ASD can have rest

issues, and poor rest can cause troublesome daytime conduct. Uneasiness could incorporate things like the sentiment garments against the skin, a thorny name, wet jeans, a knock or agony (A. Richdale, 2013).

Educational Intervention

Intended to facilitate student learning in regular educational settings, alternative educational interventions, with accompanying data collection, sometimes called pre-referral, support regular education teachers. This process may examine work samples, preferred strategies, and problem-solving strategies. Sometimes teachers make simple changes in the classroom environments that avoid going through the relatively complex referral to occupational therapy, thus resulting in the same change.

Table 2.
Classroom Adaptations to be Considered

Referral Complaint	Possible Adaptations
Poor lunch skills/behaviors	Provide a wheeled cart to carry lunch tray Provide large handled utensils Clamp lunch tray to table to avoid slipping Serve milk in sealed cup with straw
Poor toileting skills	Provide a smaller toilet Provide looser clothing Provide a setup stool for toilet/sink
Can't stay in seat; fidgety	Allow student to lie on floor to work Allow student to stand to work Provide lateral support to hips or trunk (e.g. rolled towels) Adjust seat to correct height for work

Clumsy in classroom/halls; gets lost in building	Be sure feet are flat on floor when seated
	Provide more variety in seatwork
	Move classroom furniture to edges of room
Can't get on or off bus independently	Send student to new locations when halls are less crowded
	Provide visual cues in hall to mark locations
	Match student with partner for transitions
Can't get jacket/coat on/off	Allow student to back down stairs
	Provide additional smaller steps
	Place in front of student, in same orientation each time
Drops materials; can't manipulate books, etc.	Provide larger size for easier handling
	Place tabs on book pages for turning
	Provide small containers for items

Table 2 shows examples of difficulty a child with ASD can have and some possible adaptations that the special education teacher can do to help the child.

Educational Therapy

Educational therapy includes the utilization of numerous materials and assistive apparatuses (an innovation that enables individuals with handicaps to lead more autonomous lives) other than the kid's own course books, worksheets, and class notes. It especially centers around those that empower development, gives procedures, constructs authority and fitness, is inquiring about based, fortifies mental aptitudes, is profoundly spurring, and are multi-tangible. These incorporate 3D objects; props; motivators; cerebrum supporters; memory sponsors; pacing and behavioral instruments; familiarity following an advance following apparatuses;

realistic coordinators; assistive innovation; learning materials identified with locating, sound, hearing, and touch prompts; toys; signs; and diversions. The mediations utilized as a part of instructive treatment are intended for the exceptional needs youngster. They manage to help him enhance his basic aptitude zones: social, enthusiastic and behavioral abilities; consideration and centering abilities; official working aptitudes; intellectual abilities; engine abilities; and dialect abilities. Unless tended to, these troubles make his taking in a battle and hinder scholastic execution (Katz, 2011).

Role of Teachers to carry the intervention

Therapy provided is very much like playing tennis. Constant practice and repetition are needed. A student works with a professional for an hour each week which focuses on specific skills. The hour of instruction may vary depending on the needs of the students or clients. Practice between lessons is a collaboration by parents, teachers, and students. As they say, tennis lessons alone will not make someone a better player; it's the rehearsal between the training that makes a dissimilarity (McWilliam & Scott, 2001)

Motivating a child with special needs is a must to be able to take a broad view of the skills he learns from an expert during a therapy period. He needs to run-through the skill so that getting hold of the skill can come more quickly. They can be

fueled by their desire to imitate peers or favorite activity in the room (McWilliam & Scott, 2001).

Teachers' Classroom Management

Teachers and students closest interaction happens in the classroom. The manner on how the teacher handles classroom matters is very important and has a deep teaching influence (Muhammad and Ismaili, 2001). Teachers teaching quality and students learning depends on the effectiveness and efficiency of the teachers' classroom management. It should have a sympathetic environment and safe classroom. The students should feel that they are recognized as different individuals that need to be cared for, respected and protected. Teachers who are effective create a learning environment that invites the students to be cooperative and responsible for others and for themselves (Riaz, 2009).

Having a student with ASD in an inclusive program significantly challenges the regular and SPED teachers (Simpson, de Boer, & Myles, 2003).

Behavior modification is a technique that uses reinforcement to reward good behaviors and discourage unwanted ones. The basic goal is to address a behavior without worrying about the underlying cause that motivates it (Eichenstein, 2015). Two widely known strategies that uses reinforcement is the Applied Behavior Analysis (ABA) and Discrete Trial Training (DTT).

Applied Behavior Analysis (ABA)

ABA is a broadly used tactic of the basic reward-consequence model. It starts with the little steps to meet bigger objectives. The ABA practice shown optimistic results when properly used in a social and communicational skill same goes with academics. Best results can be seen if the child began before five years old and enrolled in an intensive platform (Secor, 2014).

ABA as a treatment for autism became well known after the study of Ivar Lovaas that was published in 1987. Nineteen (19) children were the subject and all of them have ASD. They received an intensive ABA treatment in a week for forty (40) hours. Nine of the participants were tested and got an average and above average result and they moved to a mainstream program. Lovaas claimed that these children ruled out autism. After the study, ABA has increased in popularity worldwide. Individuals with autism are supported by a major amount of scientific evidence and suggested for use (Granpeesheh, 2009).

Psychiatrist and ABA provider have the same goal for children with autism – the current status of the child needs to be analyzed, clinical judgments will be considered and recommendations that will improve the life of the child. The two parties both aim to give socially meaningful behaviors and to collaboratively work side by side (Granpeesheh, 2009).

Discrete Trial Training (DTT)

DTT is used to get a new response to the stimulus and it's a strong method. However, lack of spontaneity and difficulty with generalization will be one of the limitations. Once a skill is mastered, a developed plan should be implemented to generalize the new skill acquired (Bogin, et. al., 2010).

DTT are well-defined and scripted to assure every trial is tracked the same way. The teacher can identify why a trial procedure might not be working and change it due to running the trial repeatedly. It is observed as an effective teaching process for children with autism due to their lack of desire to learn like the typical ones (Smith, 2001).

DTT can increase motivation and learning because it's short and allows the child to do numerous other learning opportunities once he's done. The method is a one on one teaching which allows the program to be individualized. It is procedural and gives clarity to the child, a clear beginning, and end. Prompts and antecedents were simplified and have a level of appropriateness. A task that is broken down into short, simplified trials and suitable prompts maximizes the children's success and minimizes the failure (Smith, 2001).

Any parent can enroll their child in a public school due to the zero reject policy regardless if the child has a diagnosis or not. The state is obliged to provide that

kind of service to all students and a nurturing education. They are entitled to a free basic education (Cayetano, 2012).

According to Mirla Olores (2014) regrettably, not the entire country have public schools with SPED center or at least a SPED program. But it is in their goal that every school should partake a program for SPED, for all kinds of children is found in schools.

Lack of Sped Teachers and Centers

Four hundred and sixteen (416) SPED centers nationwide are funded by the government. Four of them are still waiting for recognition. DepEd released Order No. 26 in 1997. But up to date our country just have 200 public school that offers and caters to students with a special need but they do not have a SPED center.

A long way to go to our special education schools today --- That is six hundred and twenty (620) out of thirty-four thousand (34,000) public elementary schools nationwide. There are 239,000 SPED pupils in public elementary schools today based on enrollment data, and only 6,000 pure SPED teacher-items (Geronimo, 2014).

According to Zenaida Concon, the Department of Education SPED Senior Education Program Specialist, the SPED teacher and the school principal is the one responsible to decide and propose if the school should open a SPED class.

Students with special needs are identified during an enrollment procedure. The principal will do coordination with DSWD to do a family mapping survey. This will help the child with special need receives the program that will cater to his or her needs.

A Need to Improve Teachers Qualification and End Professional Isolation

If it is desired for all the young people to succeed in the 21st century they should have a 21st-century teacher as well. The way and content of teaching varies and enables the child's educational development. Deep content knowledge and higher-order teaching skills are what we need.

It is believed that increasing more systematic methods to professional development will have added paybacks. We have to improve teacher skills and knowledge for the sake of our students. There's no better way to alter the old-fashioned model of school institute and the isolation of teachers. This is the reform that we needed (Hunt, 2009).

Developing a well-trained and knowledgeable special education teacher is what we need to ensure that children with special needs will receive the necessary quality education that they deserve (Chambers, 2008).

In public school system, to accommodate the increasing number of children with special needs the division officers tend to appoint a regular teacher to handle classes of children with disabilities. These educators become isolated from the teams and collaborative instructional models of education in the 21st century and in a digital age when we are all so personally and professionally connected through technology. As leaders in special education, we must find new and creative ways to connect our teachers to their resources and supports. The National Commission on Teaching and America's Future (NCTAF) is convinced that the isolation of the classroom is more than a relic of an industrial-age model: "It is a factor driving many of our best teachers out of the classroom and driving new teachers from schools that need them the most." As we look at today's digital-age generation of teachers, one that is mastering the use of multiple technologies—the Internet, cell phones, PDAs and more—we find that these educators are often working alone (Chambers, 2008).

We should stop the seclusion to end the flight. School administrators should endorse and be responsible for technical supports and contact to learning communities. In addition to online activities, offering a balance of face-to-face mentoring and networking through professional organizations and ongoing professional development can provide the web of support and the opportunity to reach beyond the isolation of the classroom. Above all, administrators must ensure that teachers have access to software applications to support instruction and

monitor progress, interventions matched to their students' needs, and adequate instruction time. (National Association of State Directors of Special Education)

A Need to Develop Material to Support Instruction

The Department of Education (DepEd) developed learning resource and teacher resources for classroom and local use training. Teacher-developed materials are encouraged may it be in a form of digital or non-digital. These materials were catalog and or redeveloped for the use in the inclusion classroom. In developing a material it needs to follow the guidelines and processes as well as the assessment and evaluation (Guidelines and Processes for LRMDs Assessment and Evaluation V1.0 29/04/2009).

The term "toolkit" is functional to many practices of evidence and content. Toolkits for making projects or planning collections are no different. Hundreds of them are in print and on the internet (Navarro, 2001).

This Instructional Tool Kit provides teachers with tools and resources for effective implementation of ABA and DTT strategies and with the use of technology. The contents include ABA and DTT modules, examples, videos, and manipulative resources that are used in behavior modification of children with Autism Spectrum Disorder. The toolkit contains a PowerPoint presentation of the modules, activities, and videos to help the teachers in a better understanding of the behavior modification strategies.

The end goal is to use instructional strategies that nurture a deep line of attack to learning. This guarantees participants relate their new knowledge to the real domain. This Instructional Tool Kit was created for Antipolo City Sped Center special education teachers to find all the instructional resources needed for their proper implementation of ABA and DTT behavior modification strategies. The toolkit has integration with technology to give the public special education teachers a material that they can use in modifying the behavior of children with ASD.

The toolkit is composed of the certain behavior of children with autism, the approach of the teacher and proper procedure in using ABA and DTT strategies. The toolkit is a user-friendly material; it has step-by-step instructions and materials, which cater to the needs of a public school Sped teacher in areas like their classroom behavior management, strategies and use of appropriate materials.

The researcher contended that having an instructional toolkit in using ABA and DTT strategies was beneficial to public school Sped teachers because of the following reasons:(a) The instructional toolkit served as their guideline in handling behavioral problems of children with Autism. Behavioral difficulties may look like as a result of inappropriate skills which students absorb, selecting an unsuitable time for learning, and the limited learning chances presented to students. (Glavin, 2002)

The teachers who have less experience and poor training find it difficult to deal with the above cases effectively. (Al-Amarat, 2011)To solve this, (b) the toolkit

was user-friendly and it includes ways to an effective implementation of ABA and DTT strategies. (c) Availability of ready-to-use instructional materials that were aligned to ABA and DTT strategy. Objects or devices that support the teacher in making meaningful learning activities is called an instructional material (Ikerionwu, 2000). Electronically intervened instruction motivates learner more and it copies the outdated face to face classroom in an alteration from teacher to student-centered classes Larson (2001).

Use of Technology

Teachers and practitioners focus on targeted skills and behaviors and how these skills/behaviors can be acquired by using an available technology tool or application. For example, a learner with ASD may struggle to remain engaged in learning spelling words through traditional formats. If we provide additional means of representation and expression by selecting a mobile device and application supporting a spelling program, it may increase student engagement and spelling performance.

Technology is well-defined as an electronic thing, apparatus, application, or virtual network that is intentionally used to escalate/sustain, and/or develop a day-to-day living, work/efficiency, and recreation/respice capabilities of children with autism spectrum disorders. Some of the forms of technology included in the definition are smartphones, tablets, laptops, and desktop computers, speech

generating devices, interactive whiteboards, software for computers, and the internet.

Many learners with ASD have a preference for using visuals²¹ and find technology highly motivating.²² Most classrooms today have some form of computer technology available, if not in the classroom, then, on carts for teachers to check out or in a computer laboratory (Hedges, S., & AFIRM Team, 2017).

Applied Behavior Analysis (ABA)

Applied Behavior Analysis (ABA) uses techniques and principles that aims to bring eloquent and positive modification in behavior. Since the 1960s, ABA was used by thousands of teachers to teach communication, play, educational, self-care, labor and community-living skills to decrease unruly behaviors of children with autism. There was an abundant deal of research that has proven that ABA is effective for cultivating children's results, particularly mental and verbal abilities. They all based their strategies on Skinner's work. It is commonly difficult to understand 'til you see it in action. It's helpful to start by unfolding all of the similar means of a diverse ABA. ABA procedures follow three-step drill to teach.

Verbal or physical stimulus like a command or request that may come from surroundings or from another person is called as the antecedent. The child's

response is the resulting behavior or lack of response; Depending on the behavior, a consequence may consist of positive reinforcement of the looked-for behavior or no feedback for incorrect responses. ABA goals the acquiring of skills and the decrease of challenging behaviors. Skills and behaviors are grounded in a reputable curriculum. Each skill is packed up into minor steps and taught using stimuli that are progressively eliminated as the stages are grasped. The child is given repetitive occasions to acquire and practice each phase in diverse settings. Each time the child succeeds the anticipated result, the child receives affirmative reinforcement, like spoken praise or other items that the child discovers to be highly appealing, like a minor piece of sweets.

An upkeep for the child in a school locale is provided with an individualized aide to target the general transmission of abilities to a usual school setting. In a natural setting, the child learns by breaking down skills into handy pieces. Accomplishment is stated by direct surveillance and data gathering and exploration – all serious mechanisms of ABA. If there's no significant progress, changes are made.

Dr. Ivar Lovaas modeled another nature of ABA intervention which is the Discrete Trial Training (DTT). DTT includes teaching discrete abilities in sequence using numerous repeated instruction trials and reinforcers that possibly will or

possibly not be essentially related to the ability that is being imparted (Autism Speaks, 2014).

Discrete Trial Training (DTT)

Based on the nature of applied behavior analysis (ABA), discrete trial training (DTT) is used to develop a new response to a stimulus. DTT is based on the principle of chunking behavior into distinct steps called a “solo teaching component” or learning trials. Trials are repeated several times with the learner receiving reinforcement for responding correctly.

Often people misuse the term DTT to refer to ABA or vice-versa. Remember, ABA denotes to the discipline of educational principles to impart behavior that helps a child’s way of life. DTT is only one method based upon ABA that uses massed trials, discrimination training, reinforcement, and didactic instruction. DTT contains the 3 core components; antecedent, behavior, and consequence.

These are referred to the ABC’s of DTT. These core components are hand-me-down to systematically demonstrate learners the connection amongst the environment and their own behavior. The table below provides a description and example for each core component.

Table 3*Core Components of DTT*

Core Component	Description	Example
ANTECEDENT (DISCRIMINATIVE STIMULUS, SD)	Instruction, cue, or stimuli signaling the learner to demonstrate a specific behavior to receive a reinforcer. The antecedent can be a verbal or nonverbal cue or visual stimuli, but must be a clear and concise instruction or cue.	“Touch your nose.” “Give me the pencil.” Pointing to the desk to signal learner to sit.
BEHAVIOR (RESPONSE)	The three possible responses or behaviors a learner can have include: 1) a correct response, 2) an incorrect response, or 3) no response at all. Establish the criteria for a correct response in advance to ensure consistency. Clear and well-defined responses will increase the likelihood of correct responding.	Learner touches nose. (correct response) Learner gives adult paper. (incorrect response) Learner remains standing. (no response)
CONSEQUENCE (REINFORCING STIMULUS, SR+)	The consequence is delivered immediately after the learner’s response and includes 1) reinforcement and 2) corrective feedback. Reinforcement is delivered following a correct response and can include verbal praise, edible food, access to preferred object/activity, tokens, etc. (based on learner’s preferences). Corrective feedback is used when the learner provides an incorrect response or no response at all. Usually, corrective feedback includes a verbal statement.	Adult delivers reinforcer of blowing bubbles for correct response of touching nose. Adult says, “No.” Adults say, “No, try again.”

When the discriminative stimulus (Sd) is paired with the supporting result, the child recognizes that a correct response was provided. When beginning a DTT lesson, the learner might need help in creating a right response. The assistance can be provided by a prompt used after the antecedent is particular to help the learner perform the correct response. Visual prompts, Gestural prompts, verbal prompts, model prompts, and physical prompts are forms of prompts. Remember to avoid prompt dependence, plan to systematically reduce or fade prompts over time to promote independent responding. (Sam, A., & AFIRM Team, 2016)

Conceptual Framework

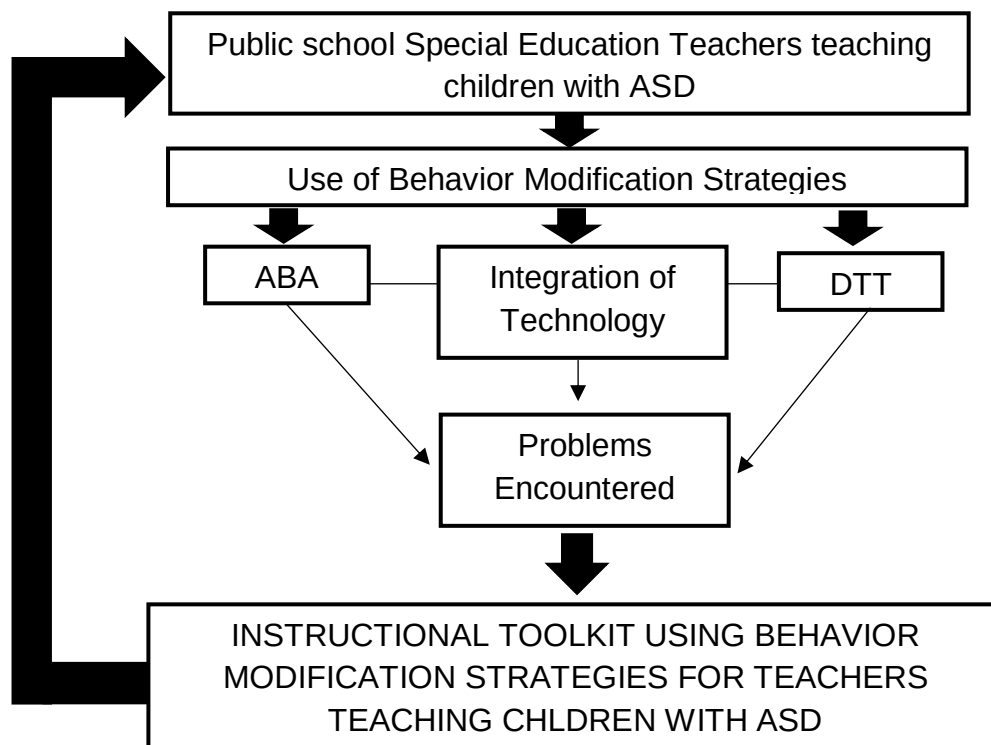


Figure 1. Conceptual Framework

As shown in Figure 1, the goal of the study focuses on the development of Instructional Toolkit Using Behavior Modification Strategies for Teachers Teaching Children with Autism Spectrum Disorder. It shows the different concepts which were integrated in conducting the study. The development of the instructional toolkit begins with the importance of having special education teachers teach children with Autism Spectrum Disorder. The features of the conceptual framework are presented in the following paragraphs.

As indicated on the start of the paradigm, the public school special education teachers illustrates the mission of the study to seek information to the public school Special education (Sped) teachers teaching children with Autism about their application, problems on integration of technology, ABA and DTT behavior modification strategies.

The behavior modification strategies presented in this study such as ABA and DTT strategy were based from B.F. Skinner's work. It removes undesirable behavior and replace it with a desirable behavior by reinforcement (Berger, 2006). There was an abundant deal of research that has proven that ABA is effective for cultivating children's results, particularly mental and verbal abilities. Based on the nature of applied behavior analysis (ABA), discrete trial training (DTT) is used to develop a new response to a stimulus (Autism Speaks, 2014).

Integration of technology played a vital role in this study because many learners with ASD have a preference for using visuals and find technology highly motivating which can avoid them from exhibiting disruptive behaviors (Hedges, S., & AFIRM Team, 2017).

Results gathered from the interview and questionnaire from the public school SpEd teachers served as the springboard for the output of the study: Development of Instructional Toolkit for Teachers Teaching Children with Autism Spectrum which aims to help the teachers to gain a better understanding in implementing their behavior modification strategies.

Statement of the Purpose

The purpose of this study is to develop an instructional toolkit using behavior modification strategies for teachers of children with Autism Spectrum Disorder.

Specifically, this study seeks to:

1. Determine how the public special education teachers use technology integration in modifying challenging behaviors of children with Autism Spectrum Disorder
2. Determine how public special education teachers use the following behavior modification strategies:

- a. Applied Behavior Analysis (ABA)
 - b. Discrete-Trial Training (DTT)
- 3. Identify the problems encountered by the public special education teachers in using ABA and DTT strategies and integrating the use of technology.
- 4. Develop a technology-based instructional toolkit that will help public special education teachers for an effective implementation of ABA and DTT strategies for children with Autism Spectrum Disorder.

1.2 Significance of the Study

This study is a significant endeavor for the following: public school special education centers and schools in terms of catering to the needs of children with Autism Spectrum Disorder. This is beneficial to the public school special education teachers handling challenging behaviors of children with Autism Spectrum Disorder in using technology as attention getter and enhancement of medium of materials, a step-by-step guide in using ABA and DTT strategies and proper time to use it, solve teachers' problems like lack of time in preparing different materials and lack of knowledge and understanding the proper use of ABA and DTT strategies. .

This instructional toolkit will enhance the special education teachers' knowledge, strategic and effective use of ABA and DTT strategies for children with

Autism Spectrum Disorder. The toolkit includes an example of challenging behaviors, manuals and manipulative materials that are used to modify a certain behavior. Modifying challenging behaviors promotes a conducive learning environment for children with Autism Spectrum Disorder. By understanding the needs of the children with Autism Spectrum Disorder as well as the proper use of the ABA and DTT strategies, these children are assured to have a proper placement and intervention program.

The teachers of children with Autism Spectrum Disorder and eventually the children with ASD will benefit from this study. The main goal of the instructional toolkit is to make it easier and more accessible for the teachers to easily manipulate the materials. The instructional toolkit is useful because it is time-saving and user-friendly where everything the user need is already inside the box. It will serve as a future reference for teachers who are having a difficulty in applying ABA and DTT strategies for children with Autism Spectrum Disorder.

1.3 Scope and Delimitation of the Study

This study was conducted to develop an instructional toolkit using ABA and DTT strategies for teachers teaching children with Autism Spectrum Disorder. The aspects looked into where the determination of problems encountered by the teachers in using the ABA and DTT strategy in modifying behaviors of children with

Autism Spectrum Disorder, integration of technology and how to be able to address the problem properly using an appropriate instructional toolkit. This study was limited to public special education teachers in Antipolo City Sped Center (ACSC) because they were employed in to the only Sped center in the Division of Antipolo.

Identified and classified behavior modifications for children with Autism Spectrum Disorder are the ones that are scientifically-based; that show potential; that have limited support; and that are recommended for use (Simpsons, 2005).

According to Simpson (2003) there were four interventions considered to be scientifically based. These are applied behavior analysis, discrete trial training, pivotal response training and Learning Experience: An Alternative Programme for Pre-Schoolers and Parents.

In line with that, the researcher focused in ABA and DTT along with the public school special education teachers' integration of technology as a tool for behavior modification.

Applied Behavior Analysis (ABA) uses techniques in range of ways. This includes classroom applications and everyday situations such as in the school and home. ABA examines behavior in relation to the antecedents and consequences or the ABC approach (Antecedent, Behavior and Consequence)

Discrete trial training is a further example of ABA. It involves breaking behavior into smaller parts, teaching one subskill at a time, shaping required behaviors until they are securely learned and prompt fading (Koegel, L.K., LaZebnik, C. S. 2014).

The researcher chose the Antipolo City Sped Center because of the following reasons: (a) work experience in ACSC, (b) all Sped teachers were handling children with Autism Spectrum Disorder, and (c) the only special education center in the division.

Antipolo City SPED Center is the only public institution in the Division of Antipolo City that provides different educational services to children with special needs. Towns such as Morong, Teresa , Taytay and other neighboring towns near Antipolo City prefer to enroll their special child in this institution because of its outstanding school performance. The main center is situated in Antipolo City a few distance from the DEPED Antipolo City.

The school currently provides services to three hundred ninety five (395) students with different types of exceptionalities. The center offers various educational programs such as Resource Room Plan, Kindergarten using the Adjusted Curriculum, Grades One to Six applying the K-12 Program, Transition Program, adopting the transition program for those ID who will not benefit in the

secondary level due to very low IQ range and Grades seven to 4th year self-contained and thru mainstreaming program (Manuel, S. Lico, N., 2015)

The administration of the survey of questionnaires and interview were conducted within the schools' premises and took place in the Sped teachers preferred time. This study was limited to public special education teachers in Antipolo City Sped Center (ACSC) because it is the only Special Education Center in Antipolo. The availability of all the Sped teachers depended on their personal schedule and if they agree to participate in the study.

Definition of Terms

For a better understanding of the study the following terms have been operationally defined.

Behavior Modification. This presents routines, rules, intuitive exploration, reports, strategies and techniques to modify, lessen or remove unwanted behavior of a child. May include temper tantrums, aggression or self-injury.

Evaluation. This is the procedure of finding and inferring information essential for involvement. This includes preparation for and recording the evaluation procedure and results.

Instructional toolkit. These are materials or objects that are planned to help as a main tool for supplementary instruction of a topic or progress. This includes paraphernalia like flashcards.

Strategy. It is a way of making decisions about an individual starting with a breakdown of important variables in the teaching condition.

Technology-based tools. This tools are materials that uses electronic devices. It allows the teacher to make students apply computer and technology skills in learning and problem-solving.

Discrete Trial Training (DTT). It is based on the principles of applied behavior analysis (ABA). It is used to develop a new response to a stimulus.

Applied Behavior Analysis (ABA). It is strategy applies laws to behavior treatments in a way that helps to increase desired behaviors.

Autism Spectrum Disorder (ASD). It is a set of neurodevelopmental disorders characterized by difficulties in social communication and collaboration with either one or more of the domains in language use.

CHAPTER 2

Research Methodology

This chapter presents the research methods utilized in the conduct of the study which include the research design, participants of the study, locale of the study, instruments used, data gathering procedure, data analysis as well as potential ethical considerations.

2.1 Research and Design

A descriptive research methodology was used in this study. The researcher developed an Instructional toolkit using Behavior Modification for children with Autism Spectrum Disorder.

Descriptive research is a study intended to portray the contributors in a precise way. It is all about unfolding people who join in the study (Kowalczyk, 2013). A process of gathering, analyzing, categorizing, and organizing data about usual circumstances, practices, principles, procedures, styles, and then making sufficient and exact clarification about such facts with or minus the aid of numerical methods (Calderon & Gonzales, 2012). This study was descriptive because the researcher undergo the process of gathering, analyzing, categorizing and organizing data about the problems encountered by public school special education teachers, behavior

modification strategies and their integration of technology in modifying behavior of children with Autism Spectrum Disorder.

In this study the researcher did a survey form of descriptive research. The researcher conducted a survey for public school sped teachers. It was also a developmental research. Developmental research is a traditional stage of preparation, conducting, and relaying a research project--problem explanation, text reviews, and research actions (Richey and Klein, 2005). This study was developmental because the researcher developed an Instructional toolkit with technology integration in using ABA and DTT as behavior modification strategies for children with Autism Spectrum Disorder.

2.2 Locale of the Study

Antipolo City Sped Center was the locale of the study. Antipolo City SPED Center is the only public institution in the Division of Antipolo City that provides different educational services to children with special needs. Towns such as Morong, Teresa , Taytay and other neighboring towns near Antipolo City prefer to enroll their special child in this institution because of its outstanding school performance. The main center is situated in Antipolo City a few distance from the DEPED Antipolo City.

The researcher chose the Antipolo City Sped Center because of the following reasons: (a) work experience in ACSC, (b) all Sped teachers were handling children with Autism Spectrum Disorder, and (c) the only special education center in the division.

The school currently provides services to three hundred ninety five (395) students with different types of exceptionalities. The center offers various educational programs such as Resource Room Plan, Kindergarten using the Adjusted Curriculum, Grades One to Six applying the K-12 Program, Transition Program, adopting the transition program for those ID who will not benefit in the secondary level due to very low IQ range and Grades seven to 4th year self-contained and thru mainstreaming program (Manuel, S. Lico, N., 2015)

The researcher wrote a letter to the Division Office of Antipolo to seek a permit to conduct study in the given research locale. The participation of respondents in this study was voluntary, with informed consent and was done in their most convenient time. Safety and protection of the participants was given priority. Privacy and anonymity of the respondents were a paramount importance. There were no violent, biased or other intolerable language in the execution of the surveys and interviews.

2.3 Sampling and Participants

The researcher conducted survey and interviews with the public special education teachers in Antipolo City Sped Center (ACSC) because they were teaching in the only Sped Center in the Division of Antipolo. Each respondents signed a consent form (See Appendix A). It was critical that the researcher learn from ACSC's SpEd teachers' their approach to behavior modification. All information were kept strictly confidential and the respondents' views on the said matter will solely be used in research. The respondents' expert experiences and sentiments were critical in helping the researcher comprehend behavior modification from the teacher's viewpoint.

Table 2.2.1
Profile of SpEd Teacher Respondents

ACSC's SpEd Teachers	Highest Educational Attainment	No. of years Teaching Children with Autism Spectrum Disorder
1	MA - SPED	10
2	MAED - SPED	2
3	MA - SPED	6
4	MA - SPED	1
5	MAED - SPED	2
6	MA - TEG	3
7	MAED - SPED	4
8	MAED - SPED	2
9	MA - SPED	8
10	MA - SPED	2
11	MA - TEG	3
12	BEED - SPED	8
13	BEED - SPED	2
14	MA - ECE	1.5
15	MAED - SPED	1
16	BEED - SPED	2

Table 2.2.1 on the preceding page shows the profile of sixteen (16) SpEd teachers who did the interview and survey questionnaire entitled “Use of Behavior modification Strategies Questionnaire for Special Education Teachers.”

Survey questionnaires and interviews was conducted within the schools’ premises and took place in the Sped teachers’ preferred time. The availability of all the Sped teachers depended on their personal schedule and if they agreed to participate in the study.

2.4 Instrument Development

Two instruments or tools were used in this study: (1) Interview Questions (see Appendix B) and (2) Survey Questionnaire: *Use of Behavior Modification Strategies Questionnaire for Special Education Teachers* (See Appendix C). The instruments were validated by SpEd teachers who’s been teaching special children for 15 to 32 years. (See Appendix D for their profile).

1. Interview Questions

The Interview Questions had two parts. The first part is about the teachers’ profile such as name, age, highest educational attainment and number of years in teaching children with Autism Spectrum Disorder. Public school Sped teachers in ACSC was interviewed to further know their current technology integration,

knowledge and problems in using ABA and DTT strategies in teaching children with Autism Spectrum Disorder.

Interviews were mainly beneficial for receiving the story behind a participant's involvements. The interviewer can track comprehensive data about the matter. Interviews may be valuable as continuation to certain respondents to further inspect their answers (McNamara,1999).

2. Behavior Modification Strategies Questionnaire

The researcher adapted a behavior modification questionnaire to acquire more about the behavior modification strategies used in the classroom. It has 3 sections, the ABA, DTT and Use of technology sections.

The questionnaire was used to develop an instructional toolkit for teachers in using behavior modification strategies like ABA and DTT with integration of technology. This will help the public school Sped teachers in strategic and effective implementation of ABA and DTT in their class. The goal of this questionnaire was to revision classroom procedures through an active relationship with public school Sped teachers.

2.5 Data Gathering Procedure

The researcher sent a letter of request/permit to do survey to the division office of Antipolo City. There was a total of twenty-four (24) Sped public school teachers as respondents. However, only sixteen (16) Sped public school teachers were able to contribute in the study. Each teacher was given a voluntary consent form. The division office approved the letter then proceeded in meeting the ACSC school principal and Sped teachers. The researcher discussed the objectives of the questionnaire and proceeded with the necessary interview. All the data was confidential and used only for the benefit of the study.

The sixteen (16) public school Sped teachers was divided into 4 groups. The researcher conducted the survey and interview in 6 days. The respondents was given a consent form including their preferred time and place to be interviewed. In each day the researcher had a 20 minutes of interview per public school Sped teacher.

The mechanism for sharing the results of the study to the participants and to the community will be done by setting and inviting all the participants in the presentation of the instructional toolkit developed. The participants involves all the Sped teachers, school heads and division head of Antipolo. It will be conducted after the researcher analyzed all the data and developed an instructional toolkit that will cater the needs of the Sped teachers in Antipolo City Sped Center.

The impact of the study will be shared to the community by providing the Division of Antipolo a copy of the research study. The researcher will provide ACSC their own copy of the instructional toolkit so that the Sped teachers can borrow materials from the toolkit as they implement the ABA and DTT strategies.

2.6 Research Process

In this study, the researcher was guided by a research process following four phases as shown on Figure 2.1 below.

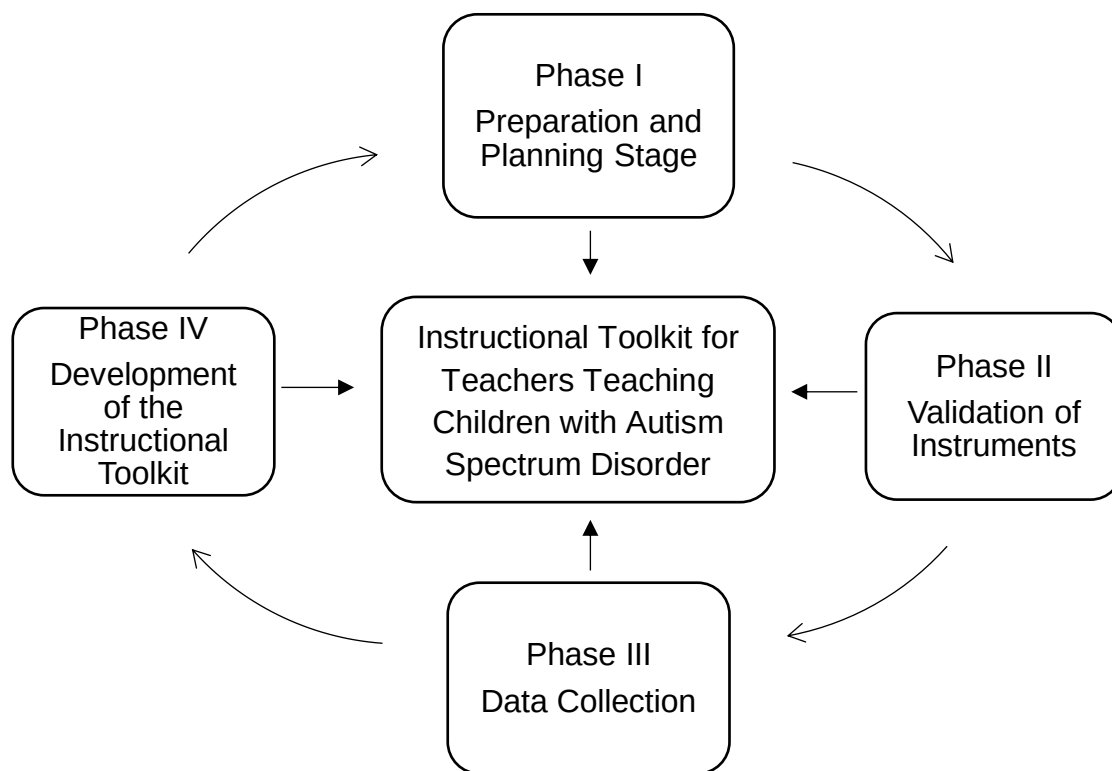


Figure 2.1

Research Process

Concisely, data gathered from the research literature were analyzed and an adapted survey questionnaire in behavior modification strategies was used in the study.

A more detailed discussion of the research process follows through the succeeding paragraphs. Phase 1 to Phase 4 reflect different steps undertaken in the process of developing an Instructional Toolkit Using Behavior Modification Strategies for Teachers Teaching Children with Autism Spectrum Disorder.

Phase 1: Preparation and Planning Stage

The use of instructional materials and behavior modification strategies of public school teachers in Antipolo City Sped Center (ACSC) were analyzed thru the researcher's informal classroom observations. Likewise, permission was sought from the division superintendent, Dr. Rommel C. Bautista, CESO V, Mrs. Merlita O. Sayago the Education Program Supervisor and Mrs. Myla F. Tupas, teacher-in-charge of ACSC. (See Appendix D for Permit to Conduct Study Letter)

Phase 2: Validation of Instruments

The interview questions were content-validated by five (5) special education teachers with fifteen (15) to thirty-two (32) years of experience in the field of education. Revisions was done considering the suggestions given by the validators. (See Appendix E: Profile of Validators)

A survey questionnaire "Teacher Classroom Management Strategies Questionnaire" was adapted from The Incredible Years (2012). The Incredible Years offers a variety of group based programs that fall into three main categories: programs serving parents, programs serving children, and programs serving teachers. The researcher signed-up in the programs for teachers and chose to implement one of the programs such as behavior modification strategies which gave access to use the "Behavior Modification Strategies for Special Education Teachers" that was used in this study.

Phase 3: Data Collection

The ACSC public Sped teachers teaching children with ASD were scheduled for an interview and was given the questionnaire for them to answer. During the interview, the behaviors of children with ASD were identified and discussed. The researcher asked the public school Sped teachers in ACSC how they use behavior modification strategies such as ABA and DTT in modifying behavior of children with ASD. Problems encountered by the public school Sped teachers in terms of using technology, ABA and DTT were gathered thru the process of interview. The results were evaluated and the findings were used to develop the instructional toolkit for teachers teaching children with ASD.

The data gathered in Phase 1 were further clarified through interviews with teachers and the result of the survey questionnaire that they answered. The survey

questionnaire results were interpreted with the help of a statistician using the weighted mean.

Phase 4: Development of the Instructional Toolkit

The Instructional Toolkit was composed of the evaluated result of the interview and questionnaire about ABA, DTT strategy and integration of technology in modifying children with Autism Spectrum Disorder. The content of the behavior modification instructional toolkit depended on the teacher's take in the integration of technology, its usefulness and their frequency use. The succeeding paragraph elaborates how the results of the interview and questionnaire was used for the development of the Instructional Toolkit.

The data extracted from the teachers led the researcher to discover their evaluation about the usefulness and frequency of their use in technology, ABA and DTT. Furthermore, the focus was to develop a material that can help them to increase the frequency use of the three main areas such as ABA, DTT and technology.

Moreover, using these strategies, the behavior modification can be inserted as part of the classroom routine while at the same time making them engage and interested with the use of a new platform, which was the integration of technology. In the process of securing the content, the researcher followed an online toolkit format which enable her to go through a systematic process of reviewing the

literature about ABA and DTT presenting it with the use of technology-based application such as PowerPoint presentation. The researcher chose the PowerPoint software as the major platform so that it will be accessible and user-friendly since most of the computers have that as a default software (Pitman Training Group Ltd, 2016). The PowerPoint presentation includes exercises/quizzes, videos, links and printable materials.

2.5 Statistical Treatment

Tabulation, frequency counts and percentage distribution will be used for the analyses of data.

The weighted mean will be computed by using the following formula:

$$\chi^{\omega} = \frac{\sum \omega \alpha}{\sum \omega}$$

Percentage:

$$X = \frac{\text{total number of frequency counts}}{\text{total number of events}} \times 100$$

2.6 Ethical Considerations

Consent forms were given before the conduct of study. All information from the participants is handled with utmost confidentiality and with agreement to grant anonymity. Children with ASD will be addressed properly in this study. Research is conducted by individuals with appropriate ethics, scientific education, training and qualification.

The participation of respondents in this study is voluntary and done in their most convenient time. Confidentiality and concealment of the respondents are a top importance. There will be no violent, biased or other intolerable language in the formulation of the questionnaires and interviews. Acknowledgements of works of other authors used in any part of the study with the use of APA referencing method were provided (Bryman and Bell, 2007).

CHAPTER 3

Results and Discussion

3. 1 How do public education teachers use technology integration in modifying challenging behaviors of children with ASD?

Table 3.1.1

Use of Technology in Modifying Challenging Behaviors

Teachers using technology as:	Frequency
Motivation (pictures)	5
Modeling (videos, ppts, etc)	7
Motivation and Modelling	2
Teachers who do not use technology	2

To address the first objective of the study an interview was conducted to determine how public education teachers used technology integration in modifying challenging behaviors of children with ASD. Table 3.1.1 shows that most respondents said that the use of technology modify or challenge the behavior of learners. Scholars have examined the connection between the classroom setting, student conduct, and educational engagement (Hood-Smith & Leffingwell, 1983; Visser, 2001). A well-ordered classroom authorizes more positive relations between teachers and children, decreasing possibility that thought-provoking behaviors will happen (Martella, Nelson, & Merchand-Martella, 2003). Modifying the classroom setting may serve as a direct involvement for children who reveal continuing disruptive behavior (Conroy, Davis, Fox & Brown, 2002).

It can be seen from Table 3.1.1 that two of the sixteen teachers said that they do not use the technology in their teaching. Whether they know technology or not, it is imperative that teachers undergo training with regard to the use of different tools in presenting lessons such as power point, excel, videos, etc.

According to LRPT 2006, "Today's students have grown up using technology, and teachers must integrate technology to meet the needs of 21st century students." With the start of all the progressions in technology, no teacher should be left behind.

Table 3.1.1 also shows that among the fourteen (14) teachers who were using technology said that through their laptops they show (1) informative and value oriented video clips, (2) pictures, (3) PowerPoint presentations and (5) interactive multi-media activities or games.

Behavior modification methods include a sequences of teacher-applied activities and movements aimed at refining classroom behavior. Technology is used as a method to change the manners of children with ASD. Incorporating technology and the necessity to successfully train teachers on using technology as an instructional tool through specialized development have an important influence on students' behavior modification (Davidson, Richardson and Jones, 2014).

3.2 How do the public special education teachers use technology in terms of frequency and usefulness?

The results of the behavior modification questionnaire indicate how the public school Sped teachers in Antipolo identified the frequency and usefulness in handling their class with the use of technology in behavior modification. See Table 3.2.1 for Public school Sped teachers' use of technology results.

Table 3.2.1
Public school Sped teachers in using technology

USE OF TECHNOLOGY	FREQUENCY									
	(1) Never		(2) Rarely		(3) Sometimes		(4) Often		(5) Always	
	TALLY	%	TALLY	%	TALLY	%	TALLY	%	TALLY	%
1. Use of audio	1	6.25			7	43.7	3	18.7	5	31.2
2. Use of visual print					1	6.25	3	18.7	12	75
3. Use of applications	3	18.7	3	18.7	4	25	3	18.7	3	18.75
4. Use of video clips	1	6.25			5	31.2	6	37.5	4	25
5. Use of interactive materials	6	37.5	4	25	1	6.25	4	25	1	6.25
6. Use of technology-enabled games	7	43.7	1	6.25	4	25	3	18.7	1	6.25
7. Use of tablet computers	9	56.2			2	12.5	1	6.25	4	25
8. Use of game consoles	11	68.7			2	12.5	2	12.5	1	6.25
USE OF TECHNOLOGY	USEFULNESS									
	(1) Never		(2) Rarely		(3) Sometimes		(4) Often		(5) Always	
	TALLY	%	TALLY	%	TALLY	%	TALLY	%	TALLY	%
1. Use of audio	1	6.25			5	31.2	3	18.7	7	43.7
2. Use of visual print							3	18.7	13	81.2

Cont. Table 3.2.1

3. Use of applications	3	18.7	2	12.	2	12.5	6	37.5	3	18.7
4. Use of video clips	1	6.25			4	25	5	31.2	6	37.5
5. Use of interactive materials	4	25	2	12.			8	50	2	12.5
6. use of technology-enabled games	6	37.5	2	12.	2	12.5	5	31.2	1	6.25
7. use of tablet computers	7	43.7	2	12.5	1	6.25	2	12.5	4	25
8. Use of game consoles	9	56.2			3	18.7	3	18.7	1	6.25

Four (4) out of 8 usage of technology resulted to a percentage level below 50%. The public school Sped teachers in ACSC gave it a percentage of 25% to 43.7%. The percentage means that majority of the Sped teachers in ACSC use technology frequently and thinks it is effective. These strategies include numbers 1, 2, 3 and 4.

One (1) out of 8 usage of technology resulted to a percentage below 50%. The public school Sped teachers in ACSC gave it a percentage 37.5%. The percentage means that they never use technology but they believe it was useful with a percentage of 50%. This strategy is number 5.

Three (3) out of 8 usage of technology resulted to a rate of never to frequency and never to usefulness. The public school Sped teachers in ACSC gave it a percentage of 37.7% to 68.7%. The percentage means that they never use technology and they think it was not useful. The strategy includes number 6, 7 and

8. The teachers explained that they answered never because they haven't had the chance to try these kinds of technology and that they don't have any idea if this will be useful in modifying behavior of children with ASD.

Table 3.2.2

Frequency of Technology

Frequency	Weighted mean
Never	29.68%
Rarely	16.66%
Sometimes	20.31%
Often	19.53%
Always	24.21%

In Table 3.2.2, ACSC special education teachers' highest weighted mean in terms of frequency in using technology result was "never". This means that they were not using technology frequently due to their school's lack of equipment such as LCD projector, lack of resources like internet connection to access and download educational videos and the like, accessibility of material and lack of preparation time.

Table 3.2.3

Usefulness of Technology

Frequency	Weighted mean
Never	27.67%
Rarely	16.66%
Sometimes	17.70%
Often	27.34%
Always	28.90%

In Table 3.2.3, ACSC special education teachers' highest weighted mean in terms of usefulness was "always". This means that the teachers believed that use of technology was always useful. This group of learners differs in a lot of ways, their

access to technology is the most remarkable one than earlier generations Eugene, H., Rod, P., & Patrick, S. (2004). Research has found that to a certain extent a few grade one aged learners use a computer on a weekly basis during the summer holidays. Statistically, even lower income students that might not have contact to technology at home discovers a way to make use of it, by either visiting a library, their school, or to an acquaintance's house (Eugene et al 2004). It obviously shows that technology plays a vital role in learners' lives. It also supports to explain why educators be certain of that a change is compulsory in the method of teaching and education occurs.

In general, in terms of **frequency and usefulness**, out of 8 items only 1 item scored higher than 50% which was item number 2 (use of visual print). The rest of the items were given a frequency of "sometimes" and usefulness of "never" used. These were the areas that the toolkit will help the public special education teachers.

The public school special education teachers said that whenever they were at seminars, benchmarking and school visits, they were able to observe different technology aided materials and witness its usefulness. However, in their school they don't have these type of technology aided materials. Most of the teacher respondents stated that since they are handling multiple classes, they don't have preparation time for material development and they don't have the necessary

supporting equipment like the projector to properly maximize the use of the technology-aided material.

Research results specify that as the growth of new communication technology advancements at a cumulative degree each year, children's capability and consciousness of such technology also unavoidably. Learner's growing use of technology has association for both communicational and educational practices, because it is now a predominant setting factor in their lives (Watt, 2010). Learner's today are frequently referred to as "natural speakers" of technology. This is frequently true for our students with ASD. Individuals on the spectrum are more relaxed interrelating with non-living objects such as iPad or a computer. They are also visual learners and have resilient technological skills. Some children with ASD require the iPad for a message tool and they used the technology to escalate another talent (Kristie Brown Lofland, 2017).

Despite the fact that they agree that using technology was always useful, the public special education teachers were not using it frequently due to the reasons stated after Table 3.2.2.

The lowest average weighted mean in frequency and usefulness was both 16.66% which denotes rarely. This means that the public special education teachers least knew that rarely using technology gave them an impression that technology was rarely useful. Some teachers are at ease with old approaches that was used to

them when they were still students. A blog or social media seems to be different if teachers have by no means to try these applications and schools ought to use these in specialized improvement, the tools will continuously seem odd (John Spencer, 2012).

The world we live in has become a technical world. Nearly all aspects of society have been influenced by technology. The reality that the society is changing dramatically cannot be hidden. Information technologies will continue to redo the world and this shouldn't be ignored. Institutions must share the changes and research should continue with the theory that technology is and will last to be a rising section within the educational world (Fouts, 2000).

3.3.1 How do the public special education teachers use ABA in terms of frequency and usefulness?

The result of the behavior modification questionnaire indicates how do public school Sped teachers in Antipolo identified the frequency and usefulness in handling their class with the use of the ABA strategies in behavior modification. See Table 3.3.1.1 for ABA results.

Table 3.3.1.1
ACSC teachers in using ABA

ABA	FREQUENCY									
	(1) Never		(2) Rarely		(3) Sometimes		(4) Often		(5) Always	
	TALLY	%	TALLY	%	TALLY	%	TALLY	%	TALLY	%
1. Coach positive social behaviors					1	6.25	4	25	11	68.7
2. Describe or comment on bad behavior					4	25	8	50	4	25
3. Reward targeted positive behaviors with incentives					4	25	2	12.5	10	62.5
4. Praise positive behavior							2	12.5	14	87.5
5. Use Time Out for aggressive behavior	1	6.2			1	6.25	6	37.5	8	50
6. Single out a child or a group of children for misbehavior	1	6.2	2	12.5	5	31.2	4	25	4	25
7. Use physical restraint	1	6.2	4	25	3	18.7	6	37.5	2	12.5
8. Reprimand in a loud voice					6	37.5	7	43.7	3	18.7
9. Use anger management strategy for self			1	6.25	2	12.5	10	62.5	3	18.7
10. Use special privileges	1	6.2			9	56.2	2	12.5	4	25
11. Send child home for aggressive or destructive misbehavior	5	31.2	2	12.5	5	31.2	1	6.25	3	18.7
12. Warn of consequences for misbehavior					3	18.7	7	43.7	6	37.5
13. Ignore misbehavior that is non-disruptive to class	1	6.2	3	18.7	4	25	3	18.7	5	31.25
14. Use verbal redirection for child who is disengaged					8	50	5	31.25	3	18.75
15. Use problem-solving strategy	2	12.5	2	12.5	8	50	2	12.5	2	12.5

Cont. Table 3.3.1.1

ABA	USEFULNESS									
	(1) Never		(2) Rarely		(3) Sometimes		(4) Often		(5) Always	
	TALLY	%	TALLY	%	TALLY	%	TALLY	%	TALLY	%
1. Coach positive social behaviors							3	18.75	13	81.25
2. Describe or comment on bad behavior					7	43.75	4	25	5	31.25
3. Reward targeted positive behaviors with incentives					1	6.25	2	12.5	13	81.25
4. Praise positive behavior							3	18.75	13	81.25
5. Use Time Out for aggressive behavior	1	6.25			3	18.75	5	31.25	7	43.75
6. Single out a child or a group of children for misbehavior	1	6.25	2	12.5	6	37.5	2	12.5	5	31.25
7. Use physical restraint	1	6.25	4	25	6	37.5	3	18.75	2	12.5
8. Reprimand in a loud voice					4	25	4	25	8	50
9. Use anger management strategy for self			1	6.25	4	25	9	56.25	2	12.5
10. Use special privileges	1	6.25		0	7	43.75	2	12.5	6	37.5
11. Send child home for aggressive or destructive misbehavior	6	37.5	3	18.75	4	25	1	6.25	2	12.5
12. Warn of consequences for misbehavior					3	18.75	10	62.5	3	18.75
13. Ignore misbehavior that is non-disruptive to class	1	6.25	2	12.5	4	25	2	12.5	7	43.75
14. Use verbal redirection for child who is disengaged			1	6.25	5	31.25	7	43.75	3	18.75
15. Use problem-solving strategy	2	12.5	2	12.5	6	37.5	3	18.75	3	18.75

Four (4) out of the 15 ABA strategies resulted to a percentage level below 50%. The public school Sped teachers in ACSC gave it a percentage of 31.3% to 43.75%. The percentage means that they were not using the strategies frequently and they don't think it is effective. These strategies include numbers 6, 7, 11 and 13. The teachers said that they were not using the strategies because they lack man power and they just ignore some of the misbehaviors of children with ASD due to time constraint.

Two (2) out of 15 ABA strategies resulted to a percentage below 50%. The public school Sped teachers in ACSC gave it a percentage of 43.8%. The percentage means that they were not using the strategy frequently but they believe it was useful with a percentage range of 50% to 62.5%. These strategies include numbers 8 and 12.

Five (5) out of 15 ABA strategies resulted to a percentage below 50%. The public school Sped teachers in ACSC gave it a percentage of 37.5% to 43.8%. The percentage means that they are not using the strategy because they think it was not useful. The teachers said that they don't really focus on these matters due to lack of time, lack of parents' support and lack of resources. These strategies were numbers 2, 5, 10, 14 and 15.

Table 3.3.1.2*Frequency of Using ABA*

Frequency	Weighted mean
Never	10.78%
Rarely	14.88%
Sometimes	28.12%
Often	28.76%
Always	32.93%

ACSC special education teachers' highest weighted mean in terms of frequency in using ABA result was "always". Upon answering the questionnaire, they realized that they were doing the enumerated ABA strategies. The indicator that got the highest percentage was praising positive behavior. This means that they were using ABA strategies without even noticing it. From the lowest frequency of "never" it states that there were not a chance that the teacher's didn't use ABA. They were just not aware that they were using ABA already in their routines and modifications.

Table 3.3.1.3*Usefulness of Using ABA*

Frequency	Weighted mean
Never	11.78%
Rarely	13.4%
Sometimes	28.86%
Often	20.83%
Always	42.5%

ACSC special education teachers' highest weighted mean in terms of usefulness of ABA was "always". This means that the teachers believed that use of ABA strategy was always useful. It has been well recognized through 50 years of

research that ABA is effective by using solo-subject practice and in well-ordered studies (Matson, 2009).

The results show that the Sped teachers knew how to manage behavioral problems but are not aware of the technique or approach (like, in this case, ABA) that they were implementing. Applied Behavior Analysis (ABA) as a field is exploding. This young science has been widely endorsed and accepted as treatment for children with autism by many well-respected organizations like US Surgeon General. Despite popularity, ABA seems to be largely misunderstood by many families of children with autism (CWA) and other professionals. There are thousands of professionals helping children with special needs in the Philippines and unfortunately there are only 3 Board Certified Behavior Analysts' (BCBA) among them. Ms. Kathryn Mendoza is the only and first native BCBA residing in the Philippines. (Autism Society Philippines, 2017) Given this data, the trainings and seminars here in the Philippines were not good enough to train or equip all the special education teachers.

3.3.2 How do the public special education teachers use DTT in terms of frequency and usefulness?

The result of the behavior modification questionnaire indicated how do public school Sped teachers in Antipolo identified the frequency and usefulness in handling

their class with the use of the DTT strategies in behavior modification. See Table 3.3.1.1 for DTT results.

Table 3.3.2.1
ACSC teachers in using DTT

DTT	FREQUENCY									
	(1) Never		(2) Rarely		(3) Sometimes		(4) Often		(5) Always	
	TALLY	%	TALLY	%	TALLY	%	TALLY	%	TALLY	%
1.Use of flashcards					1	6.25	4	25	11	68.7
2.Use of drills					3	18.7	4	25	9	56.2
3.Use practice method					3	18.7	4	25	9	56.2
4. Teach children to point correct answer							10	62.5	6	37.5
5. Teach children to identify answer by pointing					3	18.7	4	25	9	56.2
6.Prompting the children when needed			1	6.25			4	25	11	68.7
7.Gives physical prompt	1	6.25					5	31.25	10	62.5
8.Gives verbal prompt	1	6.25					2	12.5	13	81.2
9.Develop child's patience					1	6.25	6	37.5	9	56.2
10. Teach children to give correct respond					2	12.5	5	31.25	9	56.2
11. Teach numerous learning opportunities in a short period of time			3	18.75	2	12.5	7	43.75	4	25
12. Teach clarity of lesson to the child					5	31.2	4	25	7	43.7
13. Allows the child to master the concept					4	25	5	31.25	7	43.7
14.Use of tally			3	18.75	7	43.7	4	25	2	12.5
15. Allows the child to get used to the drill			1	6.25	3	18.7	8	50	4	25

Cont. Table 3.3.2.1

DTT	USEFULNESS									
	(1) Never		(2) Rarely		(3) Sometimes		(4) Often		(5) Always	
	TALLY	%	TALLY	%	TALLY	%	TALLY	%	TALLY	%
1.Use of flashcards					1	6.25	2	12.5	13	81.2
2.Use of drills					1	6.25	3	18.7	12	75
3.Use practice method					2	12.5	5	31.2	9	56.2
4.Teach children to point correct answer					2	12.5	6	37.5	8	50
5.Teach children to identify answer by pointing					3	18.7	4	25	9	56.2
6.Prompting the children when needed							4	25	12	75
7.Gives physical prompt							5	31.2	11	68.7
8.Gives verbal prompt							4	25	12	75
9.Develop child's patience					1	6.25	5	31.2	10	62.5
10. Teach children to give correct respond					2	12.5	6	37.5	8	50
11.Teach numerous learning opportunities in a short period of time			3	18.7	1	6.25	7	43.7	5	31.2
12.Teach clarity of lesson to the child				7	4	25	5	31.2	7	43.7
13.Allows the child to master the concept					2	12.5	8	50	6	37.5
14. Use of tally			2	12.5	7	43.7	4	25	3	18.7
15. Allows the child to get used to the drill			2	12.5	2	12.5	5	31.2	7	43.7
				5				5		5

Three (3) out of the 15 DTT strategies resulted to a percentage level below 50%. The public school Sped teachers in ACSC gave it a percentage of 43.7%. The percentage means that they are not using the strategies frequently and they don't

think it is effective. They said that they need to follow a certain time-frame and they need to follow a curriculum. These strategies include #11, #12, and #14.

One (1) out of 15 DTT strategies resulted to a percentage below 50%. The public school Sped teachers in ACSC gave it a percentage of 43.7%. The percentage means that they are not using the strategy frequently but they believe it was useful with a percentage of 50%. The teachers said that they have different levels of child with ASD and can't really give enough time for each one to have the mastery of a concept or skill. The strategy includes #13.

One (1) out of 15 DTT strategies resulted to a percentage below 50%. The public school Sped teachers in ACSC gave it a percentage of 43.7%. The percentage means that they are always using the strategy with a percentage of 50% but they think it was not useful. They said they can't give enough time for each student to master the drill. The strategy includes #15.

Table 3.3.2.2.
Frequency of Using DTT

Frequency	Weighted Mean
Never	6.3%
Rarely	12.52%
Sometimes	20%
Often	25.65%
Always	46.25%

In Table 3.3.2.2, special education teachers' highest weighted mean in terms of frequency in using DTT was "always". Upon answering the questionnaire, they

realized that they were doing the enumerated DTT strategies. This means that they were using DTT strategies without full understanding of its concept. For DTT, the indicator that got the highest percentage was the use of flashcards with 68.75%. The public special education teachers have been using flashcards but they didn't know that it was part of implementing DTT strategy.

Table 3.3.2.3
Usefulness of Using DTT

Frequency	Weighted mean
Never	0%
Rarely	14.58%
Sometimes	14.58%
Often	22.5%
Always	55%

In Table 3.3.2.3, ACSC special education teachers' highest weighted mean in terms of usefulness of DTT was "always". This means that the teachers believed that use of DTT strategy was always useful.

The results show that the Sped teachers know how to manage behavioral problems but are not aware of the technique or approach (like, in this case, DTT) that they are implementing. General programs of DTT contain numerous hours of direct one on one instruction daily in span of months otherwise years. To successfully convey DTT, parents, administrators and teachers must put in the effort, time and energy to comprehend every features of discrete trial training programs. This consist partaking the ability to assess the usefulness and suitability

for each child (Steve Buckmann, 2017). The development of the toolkit can assist this effort.

Table 3.4

Interview Result about ACSC Teachers' Familiarity in ABA and DTT

	Familiar and implemented	Familiar not implemented	Not familiar
Number of teachers	5	9	2

Teachers said that they are familiar yet do not implement. Others said that they were familiar and they implemented but two respondents said that they were not familiar at all. Heads should pay attention to this area. ABA and DDT should be understood by all and should be implemented. Among the sixteen (16) teachers, most of them are familiar with ABA and DTT but they are not implementing it. They didn't implement it because they don't have the full understanding about its concept and how to use the said strategy. They were familiar in the aspect that they knew it was used for behavior modification. Five of them are familiar and implementing ABA and DTT. These teachers were able to attend seminar and trainings about ABA and DTT. Two of these teachers are not familiar with the said strategies. They claimed that it's their first time they heard about it.

3.5.1 What problems have the public special education teachers encounter in the use of ABA and DTT as behavior modification strategies

Table 3.4.1

*Behavior problems the teachers encountered in handling children with ASD**

Behavior	Number of teachers who encountered
Hitting classmates	2
Biting	2
Pulling of teachers' hair	1
Refuse/ignore request	2
Behave inappropriately	1
Aggressive	4
Self-stimulatory behavior	3
Hurt themselves	5
Tantrums	4
Routines	2
Attention seeker	2

**Multiple Responses*

Behavior problems are to be expected with these kinds of students. What is important is for teachers to know how to remedy situations such as those mentioned in the table, so that they may be avoided or lessened.

There are many behavior problems that the teachers encountered. Most of them encountered students who are hurting themselves. There are five teachers who experienced that instance. The most challenging behavior that five of the teachers encountered is that of the children hurting themselves. This is related to the two other challenging behaviors that were mentioned four times each. These

are showing aggressive behavior as hurting others, and having tantrums. Three of the teachers said that they encountered children indulging in self-stimulatory behaviors like rocking a chair, hand flapping and tapping a pen on a desk. Two of the teachers experience students who hit and bite their classmates or themselves, who refuse or ignore requests, who manifest repetitive behaviors and who seek attention. Only one Sped teacher encountered students who are pulling teacher's hair and who are behaving inappropriately.

According to Richdale (2013), parents find it hard to handle and manage their child's way of behaving. They may act well in publicly and inappropriate ways like removing their clothes off, be violent or have outbursts, engage in self-stimulatory behavior like for example, by biting or head-banging.

They are more likely to act in perplexing ways because they have difficulty in comprehending what's going on around (Koegel & LaZebnik, 2014).

Problems encountered by public school Sped teachers in using ABA, DTT and integration of the use of technology

Table 3.5.2

Problems encountered and details in using ABA, DTT and Use of Technology

1. Lack of knowledge in ABA and DTT

13 out of 16 teachers have an undergraduate course in Sped but they are not pursuing their graduate studies.

They were aware with the terminology ABA but doesn't know how to use it.

They didn't have a thorough discussion about the ABA strategy when they were studying.

They didn't know what DTT means and how to use it.

3 out of 16 teachers have undergraduate course in Elementary Education (1) and Psychology (2). They are pursuing their graduate studies in Special Education.

They tackled about ABA and DTT but they are not practicing it.

No trainings or seminar attended

2. Lack of educational materials and electronic devices in their classroom

LCD projectors (mostly used by the principal during meetings)

Outdated computer in the computer laboratory

Thirteen (13) out of 16 Sped teachers in ACSC had an undergraduate course in Special Education and the other 3 teachers had their master's degree in Special Education. During the interview, the teachers have been honest that they are not using ABA or DTT in modifying the behavior of their students with Autism Spectrum

Disorder because they don't have enough knowledge to apply it and they don't have the necessary materials. Some teachers didn't know that some of the strategies that they are using in their classes were actually in the form of ABA and DTT. They were not aware that the strategies that they were using had a specific origin.

In using the technology, the major problem that they had encountered was the lack of electronic devices in their classroom. The school has few LCD projectors and the teachers needed to request it before they can borrow it and their request will only be granted if it will be used for a program or special activity. They are not allowed to use it in their daily lessons. They haven't explored using different applications to enhance their lesson presentations. They were only using technology whenever they were playing educational videos and music. This only shows that technology is not utilized in the delivery of the lessons and there's lack of facilities and provisions for the like

Of the fourteen (14) Sped teachers who have experienced challenging behavior problems inside their classroom, twelve said that they are using strategies and rewards to address the challenging behaviors, while the rest are using firmness and consistency in managing those behavior problems.

According to Melinda Secor (2014), teaching appropriate behavior should be in a very purposeful manner and ASD's have a great deal in terms of repetition. A structured system should be accomplished to see a desired behavior and

consequences for inappropriate ones. Consistency is the key. Do not let inappropriate behavior slip or forgetting to praise or acknowledge the appropriate ones. This will cause confusion to them. These responses were used to determine the present level of teachers' experience in handling behavior problems inside their classroom to further help them develop and improve their ways in handling behavior problems.

3.6 Development of Instructional Toolkit

Table 3.6.1 shows the instructional strategy used in developing the Instructional Toolkit. Using this, the teacher can implement the ABA and DTT behavior modification strategy efficiently. The teacher will be guided with the principles of each behavior modification strategies and with the help of technology-based materials, children with ASD will be more engaged. Individuals with ASD often need external stimulus prompts to initiate, maintain, or terminate a behavior. Commonly used prompts include vocal, gestural, physical, written/pictorial, and signed prompts, each modality has been demonstrated effective for multiple purposes (MacDuff, Krantz, & McClannahan, 2001).

Table 3.6.1*Content of the Instructional Toolkit*

Problems that needs to be addressed	Solution/ Suggested Activity from the technology-based Instructional Toolkit	Screenshot Of Toolkit
Increase frequency in using ABA strategies	Provide information about effective implementation of ABA	See Appendix F p. 108 p. 108
	Provide sample lessons and materials	p. 109
	Provide videos/quiz/games in using ABA	p. 110
	Sample of behavior and how to use ABA in modifying the behavior	
Increase frequency in using DTT strategies	Provide information about effective implementation of DTT	See Appendix F p. 110 p. 111
	Provide sample lessons and materials	p. 111
	Provide videos/quiz/games in using ABA	
	Sample of behavior and how to use ABA in modifying the behavior	p. 112
Increase frequency in using technology in behavior modification	Provide ready-made technology-based materials	See Appendix F

3.7 Description of the Toolkit

The technology-based Instructional Toolkit provides user-friendly ABA and DTT strategy guide, which includes definition, function and step-by-step process for the use of the Sped teacher. Integration of technology was also present in the toolkit which includes PowerPoint presentations, audiovisual materials, and videos. Sample lessons and technology based materials were also included.

3.7.1 What are the features of an instructional toolkit aimed at helping the public special education teachers to effectively implement behavior modification strategies for children with ASD?

With these results, the researcher believes that a toolkit which will cater to the needs of the ACSC public school Sped teachers will be helpful to address their needs on using ABA and DTT. The toolkit will be helpful to the public school special education teachers handling challenging behaviors of children with Autism Spectrum Disorder in using technology as attention getter and enhancement of medium of materials, a step-by-step guide in using ABA and DTT behavior modification strategies and proper time to use it, solved teachers' problems like lack of time in preparing different materials, lack of knowledge and understanding in the proper use of ABA and DTT strategy.

The toolkit has the following materials/components:

1. Informational guide to ABA and DTT

Includes model guides to facilitate learning basic knowledge about ABA and DTT. Application of ABA and DTT in activity based scenarios that promote real-world application.

2. Manipulatives and instruction how to use it using the ABA and DTT strategy

Consists of printable pictures and words

3. Media/Digital version of the module and manipulatives

Includes PowerPoint format of the toolkit, audio, downloaded videos and printable materials

Chapter 4

Summary, Conclusion and Recommendations

Summary of the Study

The purpose of the study was to develop an instructional toolkit using ABA and DTT strategies in modifying behavior of children with Autism Spectrum Disorder in ACSC, a public Sped school in Antipolo. This study was limited to public special education teachers in Antipolo City Sped Center (ACSC) because it is the only Special Education center in Antipolo. The availability of all the Sped teachers depends on their personal schedule and if they agree to participate in the study.

ACSC have 25 Sped teachers. One of them only focuses in teaching children with Hearing Impairment. Three teachers were working on their transfer of work location and one filed her resignation during the conduct of the study. Sixteen (16) Sped teachers participated in this study out of 20. The four teachers were not available. One teacher was in Palarong Pambansa and the other three were on their leave.

To accomplish the study, it was necessary to determine the current status of the Sped teachers' knowledge and implementation of the ABA and DTT behavior modification strategies and the problems they encounter on their use of technology in modifying behavior of children with Autism Spectrum Disorder. To get the responses of the identified SPED teachers on these concerns, they were asked to answer the questionnaire and were likewise interviewed by the researcher.

The *Use of Behavior Modification Strategies Questionnaire for Special Education Teachers* was used to identify the current status of the frequency and usefulness of ABA and DTT to ACSC Sped teachers. All respondents were asked to rate the frequency and usefulness of ABA, DTT and Use of technology in modifying the behavior of their students with ASD. Finally, they were interviewed to identify the problems they encounter with the use of technology and how they use the ABA and DTT strategies. Through the use of the instrument adapted for this study, data were collected which addressed the statement of the problems posed in the first chapter of this study.

Summary of Findings

Based on the data gathered by the researcher, the following findings were enumerated as follows:

1. The status of the use of ABA strategy in terms of frequency and usefulness, in average were perceived by the ACSC Sped teachers as sometimes used and always useful. With this the toolkit will be beneficial for the teachers to increase their frequency in using ABA strategies in modifying behavior of children with ASD.
2. The status of the use of DTT strategy in terms of frequency and usefulness, in average were perceived by the ACSC Sped teachers as sometimes used and always useful. The toolkit will be beneficial for the teachers to increase their frequency in using DTT strategies in modifying behavior of children with ASD and appropriate forms will be available so the teachers can be more accurate in implementing the DTT strategy.
3. The status of the use of technology in terms of frequency and usefulness, in average were perceived by the ACSC Sped teachers as never used but as always useful. There will be an increase in frequent use of visual print, use of audio and video, and applications because of the materials provided by the toolkit.

Conclusions

Grounded on the summary of findings presented, the succeeding conclusions were drawn.

1. The public school Sped teachers need a toolkit to guide and help them improve their behavior modification strategies for children with ASD. As discovered in this study, the teachers were not aware of the labels as well as the steps on implementing an ABA or DTT behavior modification strategy. In using the toolkit the teachers will be guided accordingly and better conditioning and modifying of behaviors can be a possible result.

2. The technology-based instructional toolkit was developed successfully and it caters to the needs of public Sped teachers in integrating technology, using ABA and DTT behavior modification strategy.

Recommendations

The researcher would like to present the following recommendations:

The toolkit is recommended for use of special education teachers.

1. Substantial financial and administrative support should be extended by the school to improve the current status of the electronic equipment to enable teachers use technology in teaching.
2. A similar study may be conducted using different behavior modification strategies.

3. In response to the thrust of DepEd which is the development of instructional materials in Special Education, the developed toolkit could be recommended to be used by other teachers of children with ASD in different SPED Centers in Metro Manila.
4. Further studies should be conducted regarding the use of ABA and DTT behavior modification strategies of children with other special needs.

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APPENDIX A: Voluntary Informed Consent Form



Philippine Normal University

Country's National Center for Teacher Education by Virtue of R.A. 9647
College of Graduate Studies and Teacher Education Research
Taft Avenue corner Ayala Blvd, Manila

Dear Sped Teacher,

I am a graduate school student who specializes in Special Education. I am currently working with my research paper entitled "Development of Instructional Toolkit Using Behavior Modification Strategies for Teachers teaching Children with Autism Spectrum Disorder" to see how you implement the different behavior modification strategies, to know and solve the problems that you encounter and to develop an instructional toolkit that can be a help to you. I need your help in this new study to improve the use of behavior modification strategies and provide a user-friendly toolkit which includes ways to an effective implementation of behavior modification strategies and an availability of ready-to-use instructional materials that are aligned to each behavior modification strategy. The results of this study will be a significant endeavor to public school special education centers and schools in terms of catering to the needs of children with Autism Spectrum Disorder. This will be beneficial to the public school special education teachers handling challenging behaviors of children with Autism Spectrum Disorder in using technology as attention getter and enhancement of medium of materials, a step-by-step guide in using behavior modification strategies and proper time to use it, solve teachers'

problems like lack of time in preparing different materials and lack of knowledge and understanding in the proper use of behavior modification strategies.

In this study, we will be able to help the Sped teachers to easily comprehend the strategies through a step-by-step process and procedure in the manipulation of materials will also be given, suggestions on what technique to use in a certain challenging behavior and the Sped teacher will be able to utilize the instructional toolkit effectively and efficiently. The information will be analyzed in relation to the study and will be treated with outmost confidentiality. Teachers participating in this study can expect to spend twenty to forty minutes for answering the questionnaire and interview. Respondents will be asked to fill-in their personal information and answer seven questions. The questions will be given ahead of time so the teacher will have enough time to think about their answers. There is no foreseeable risk or discomfort. Respondents' identity will and personal information will remain confidential. After the study, all respondents will be invited to a presentation of the instructional toolkit.

Your participation in this study is strictly voluntary. For answers to questions pertaining to the research and research participants' rights, you may contact me directly at 09178094450.

Sincerely yours,

Angeline Marie G. Osana
Graduate School Student and Researcher

Please indicate your consent to participate by signing one copy of this letter and returning it to me. The other copy is for you to keep.

☐

I have read this letter and consent to participate.

☐

I have read this letter and consent not to participate.

Name and Signature: _____ Date: _____

Preferred time and place to be interviewed: _____

APPENDIX B: Interview Questions For Public School SpEd Teachers

Teacher's Name: _____

Age: _____ Gender: _____ Nationality: _____

No. of Years in Handling Children with Autism: _____

Position in School: _____

Educational Background:

Post Graduate School and Course: _____

Undergraduate School and Course: _____

Other Skills: _____

Certifications: _____

Questions in managing classroom behavior:

1. Can you describe your behavior modification strategies?
2. What kind of behavior problems do you encounter in your classroom? Are you confident in managing current behavior problems in your classroom? Why?
3. How confident are you in your ability to manage future behavior problems in your classroom?
4. How do you promote your students emotional, social and problem solving skills?
5. How do you make use of the technology in modifying challenging behaviors of your students?
6. Are you familiar about ABA and DTT? Have you used them before? Do you find them useful?
7. What are the problems you encounter in handling challenging behaviors of children with ASD?

APPENDIX C: QUESTIONNAIRE FOR THE PARTICIPANTS

Use of Behavior Modification Strategies Questionnaire for Special Education

Teachers

This questionnaire will be used to develop an instructional toolkit for teachers in using behavior modifications for children with Autism Spectrum Disorder. This will help the public school Sped teachers in strategic and effective implementation of behavior modification in their class. The goal of this questionnaire is to study classroom processes through an active association with public school Sped teachers.

In that regard, I adapted a questionnaire to learn more about the behavior modification strategies used in the classroom. To gain an accurate understanding of these processes, it is critical that I learn from you about your approach to behavior modification. Rest assured that all information will be kept strictly confidential your views on the said matter will solely be used in research. Your professional experiences and opinions are crucial in helping me understand teaching from the educator's point of view. I would greatly appreciate you taking the time to complete my questionnaire.

Thank you for your participation.

Angeline Marie G. Osana
Graduate School Student and Researcher
Philippine Normal University

Noted by:



Shirley N. Cerbo
Adviser

Use of Behavior Modification Strategies Questionnaire for Special Education Teachers

Teacher's Name: _____

No. of Years in Handling Children with Autism: _____

Position in School: _____

Highest Educational Attainment: _____

A. Applied Behavior Analysis

In this section I'd like to get your idea of how often you use the ABA strategy, and how useful you find each one for managing your students' behavior

Frequency

Never	Rarely	Sometimes	Often	Always
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Usefulness

Never	Rarely	Sometimes	Often	Always
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1. Coach positive social behaviors (helping, sharing, waiting)	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Describe or comment on bad behavior	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Reward targeted positive behaviors with incentives (e.g., stickers)	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Praise positive behavior	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. Use Time Out (Time Away to calm down) for aggressive behavior	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. Single out a child or a group of children for misbehavior	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. Use physical restraint	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. Reprimand in a loud voice	☐	☐	☐	☐	☐	☐	☐	☐	☐
Use anger management strategy for self (e.g. deep breaths, positive self-talk.	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. positive self-talk.	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. Use special privileges (e.g. special helper, extra computer time)	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. Send child home for aggressive or destructive misbehavior	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. Warn of consequences for misbehavior (e.g. loss of privileges)	☐	☐	☐	☐	☐	☐	☐	☐	☐
13. Ignore misbehavior that is non-disruptive to class	☐	☐	☐	☐	☐	☐	☐	☐	☐
14. Use verbal redirection for child who is disengaged	☐	☐	☐	☐	☐	☐	☐	☐	☐
15. Use problem-solving strategy (e.g., define problem, brainstorm solutions)	☐	☐	☐	☐	☐	☐	☐	☐	☐

C. Discrete Trial Training

In this section I'd like to get your idea of how often you use the DTT strategy, and how useful you find each one for managing your students' behavior

1. Use of flashcards
2. Use of drills
3. Use practice method
4. Teach children to point correct answer
5. Teach children to identify answer by pointing
6. Prompting the children when needed
7. Gives physical prompt
8. Gives verbal prompt
9. Develop child's patience
10. Teach children to give correct respond
11. Teach numerous learning opportunities in a short period of time
12. Teach clarity of lesson to the child
13. Allows the child to master the concept
14. Use of tally
15. Allows the child to get used to the drill

Never	Rarely	Sometimes	Often	Always
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☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
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Never	Rarely	Sometimes	Often	Always
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☐	☐	☐	☐	☐
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D. Use of Technology

In this section I'd like to get your idea of how often you use the technology, and how useful it is in managing your students' behavior
In this section I'd like to get your idea of how often you use each of the following approaches.

1. Use of audio
2. Use of visual print
3. Use of applications (e.g. powerpoint)
4. Use of video clips
5. Use of interactive materials (e.g. smart board)
6. Use of technology-enabled games
7. Use of tablet computers
8. Use of game consoles (e.g. XBOX, Wii)

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------

☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
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☐	☐	☐	☐	☐
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐

Never	Rarely	Sometimes	Often	Always
-------	--------	-----------	-------	--------

☐	☐	☐	☐	☐
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☐	☐	☐	☐	☐

APPENDIX D: Permit to Conduct Study



Philippine Normal University

Country's National Center for Teacher Education by Virtue of R.A. 9647
College of Graduate Studies and Teacher Education Research
Taft Avenue corner Ayala Blvd, Manila

February 6, 2017

Dr. Rommel C. Bautista, CESO V

School Division Superintendent
Region IV-A CALABARZON
Division of Antipolo City

Mrs. Merlita O. Sayago

Education Program Supervisor

Mrs. Myla F. Tupas

Teacher-in-charge
Antipolo City Sped Center
Sir/Ma'am:

I am a graduate student of the Philippine Normal University pursuing the degree of Master of Arts in Education in Special Education Teaching Children with Intellectual Disabilities. In partial fulfilment of the requisites of the course, I am conducting a research entitled "Development of Instructional Toolkit Using Behavior Modification Strategies for Teachers Teaching Children with Autism Spectrum Disorder".

In this regard may I request permission from your Office to allow me to conduct the study in Antipolo City Sped Center the only center of Special Education in the Division of Antipolo.

Hoping for your kind consideration and approval.

Respectfully yours,

ANGELINE MARIE G. OSANA

Researcher

Noted by:

A handwritten signature in black ink, appearing to read "Shirley N. Cerbo".

Prof. Shirley N. Cerbo

Adviser

APPENDIX E: Validation Letter and Profile of Validator

VALIDATION OF THE RESEARCH INSTRUMENT

February 6, 2017

Dear Sir/Madam,

As an esteemed practitioner in the academe, I would like to seek your expertise in the validation of my questionnaire. I am conducting a research entitled “Development of Instructional Toolkit Using Behavior Modification Strategies for Teachers Teaching Children with Autism Spectrum Disorder” as a course requirement in the degree of Master of Arts in Education in Special Education.

It would also be a better help if you could please write your comments; suggestions and recommendation that will help improve the attached questionnaire. I believe that your valuable observation and experiences will help along the way in the improvement of knowledge in the academe.

Thank you very much for your kind consideration and valuable contribution in this respect.

Sincerely yours,

Angeline Marie G. Osana
Researcher

Noted by:



Shirley N. Cerbo
Adviser

PROFILE OF VALIDATOR

Full Name: _____

Age: _____ Gender: _____

E-mail address: _____

Contact No.: _____

Job Title: _____

Current School/Institution Affiliation: _____

Professional Experience: _____ years

Work history: _____

Educational background:

Post/Undergraduate Studies School and Degree Title:

Certifications/Trainings:

Professional Associations/Organizations:

VALIDATOR'S PROFILE

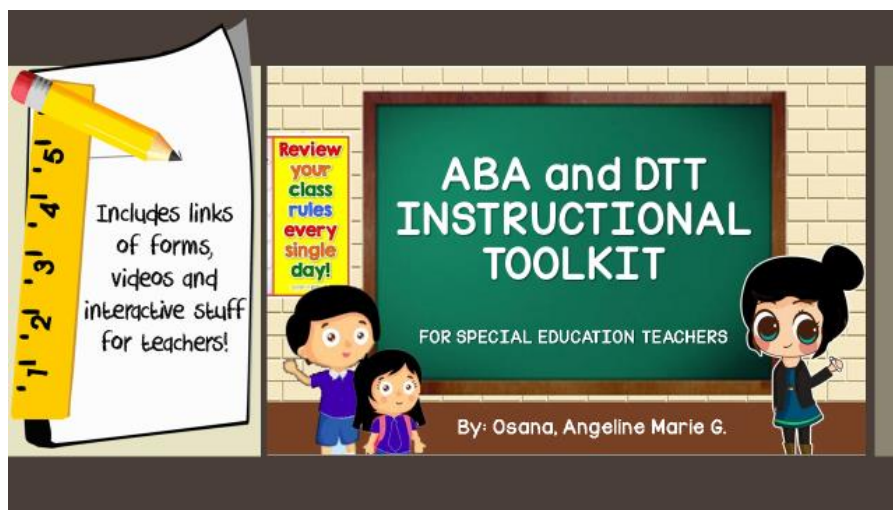
Name	Teaching Experience	School Affiliated	Position	Highest Educational Attainment
Marilyn B. Palce	20	Fort Bonifacio High school	SPED Teacher	MAED SPED
Ma. Julia E. Calibo	15	Fort Bonifacio High school	SPED Teacher	MAED SPED
Armin Tolentino Cruz	19	Fort Bonifacio High school	SPED Teacher	MAED SPED
Cristina Amon	28	Philippine School for the Deaf	SPED Teacher	MAED SPED
Editha O. Marcelo	32	University of Makati	Professor	PhD SPED

APPENDIX F: Screenshot of Technology-based Instructional Toolkit Using Behavior Modification Strategies for Teachers Teaching Children with Autism

(Note: Copy of the whole output will be made available upon request)

Slide 1

Cover of the Toolkit



Slide 2

Introduction

Introduction This Instructional Toolkit provides user-friendly ABA and DTT strategy guide, which includes definition, function and step-by-step process for the use of the Sped teacher. Integration of technology is also present in this toolkit which includes PowerPoint presentations, audiovisual materials, and videos. Sample lessons and technology based materials are also included.	It is designed to provide better understanding of Applied Behavior Analysis (ABA) and Discrete Trial Training (DTT)
---	--

Slide 3
Rationale

Rationale

The Instructional Toolkit is developed to help special education teachers implement ABA and DTT strategy properly. It will give them a clear understanding of the behavior modification strategies, how it should be done, and when they can use it.

Slide 4.1
About the Toolkit

About the Toolkit

The Instructional Toolkit is composed of information about ABA and DTT, its definition, purpose and process of implementation.

This toolkit is created to help the Special education teachers in Antipolo City Sped Center (ASCS) in their encountered problems regarding behavior modification.

Slide 4.2
About the Toolkit

About the Toolkit

It is a technology-based toolkit that uses PowerPoint software and hyperlinks of videos, printable forms and printable ABA and DTT tools.

Slide 5
Objectives

Objectives

This is set to help the Sped teachers to:

1. Easily comprehend the ABA and DTT strategies through a step-by-step process and procedure
2. Manipulate the materials following the ABA and DTT strategy
3. Utilize the lessons effectively and efficiently using this toolkit

Slide 6.1
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Table of Contents The Instructional Toolkit <i>Part I. Behavior Modification Technique</i> I.1 Understanding Applied Behavior Analysis	
a. What is ABA? p. 18	
b. Benefits of ABA to Children with ASD p.21	
c. Learning ABA p.24	
d. ABA Videos p.74	

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Table of Contents I.2 ABA as a Systematic Intervention	
a. Behaviorism	
- Classical Conditioning p.28	
- Operant Conditioning p. 30	
b. Principles of Operant Conditioning	

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- c. Positive and Negative Reinforcements
 - [Behavior Chart](#) p.33
 - [The 4 Quadrants of Operant Conditioning](#) p. 37
- d. [Prompting and Fading](#) p. 38
- e. [Shaping](#) p. 46
- f. [Why Use Positive Reinforcement?](#) P.51

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Part II. Behavioral Teaching Strategies

2.I Methods of Teaching Children with Autism Spectrum Disorder

- a. Teaching Procedures
 - [Imitation Training](#) p.55
 - [Shaping](#) p.57
 - [Prompts](#) p. 62
 - [Task Analysis](#) p. 66

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<i>Part III. Behavior Modification Technique</i>	
3.1 Understanding Discrete Trial Training	
A Case of DTT	
a. What is DTT? p. 82	
b. DTT Goals p. 91	
c. How can DTT Help Learners? p.92	
d. How is DTT Being Used? p. 93	

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<i>Part III. Behavior Modification Technique</i>	
3.2 Plan for DTT	
a. Refine target Objective p. 119	
b. Complete a Task Analysis p.121	
c. Design Data Collection System p. 124	
d. Select Reinforcers p. 127	
e. Prepare for DTT Lesson p. 128	

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***Part III. Behavior Modification
Technique***

3.3 Use DTT / Deliver DTT Trials

- a. [Transition Learner to Teaching Location](#) p.137
- b. [Getting Learner's Attention and Select Reinforcer](#) p. 137
- c. [Giving Instruction](#) p. 140
- d. [Giving Feedback](#) p. 141

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Part IV. RESOURCES

- a. ABA RESOURCES AND TOOLS p.
- b. [DTT RESOURCES AND TOOLS](#) p.
- c. PRINTABLE TOOLS

Slide 7
Effective Implementation of ABA

What is Applied Behavior Analysis (ABA)? ABA strategy applies laws to behavior treatments in a way that helps to increase desired behaviors. It also help reduce behaviors that may interfere with learning or behaviors that may be harmful. It's also used to improve focus, social skills, attention, memory, and academics.	ABA can be used to help decrease problem behaviors.
	
18	

Slide 8
Sample lesson and Material for ABA

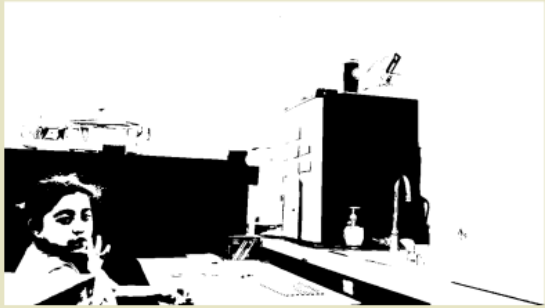
Teacher: Hi Alex! Are you excited about Christmas? Alex gives me no response Teacher: Are you excited about Christmas? Alex: Yeah I want to open my yeah I want to open my presents The teacher would then smile Teacher: Me too. What presents did you ask for? Alex: her presents what presents did you ask for Teacher will say "For Christmas I asked for.." Alex: I asked for a bike	This is a sample conversation that you would do prompting for a child with Autism
INSTRUCTIONAL TOOLKIT FOR TEACHERS	
42	

Slide 8.2
Sample lesson and Material for ABA

Teacher then responds cool multiples towards Alex Teacher: Are you excited about Christmas? Alex: Yeah, I want to bike teacher Teacher gives a bigger tickle and a bike Teacher: That's great! I've got my treat all decorated with Ornaments. I put ornaments on my tree (Teacher would point to a tree) Teacher: I put heart ornaments on my tree Alex: That's so great (Teacher would give a big temple she cut out)	 Click the icon for the materials 
--	--

INSTRUCTIONAL TOOLKIT FOR TEACHERS 43

Slide 9
Sample ABA Video

ABA VIDEOS 	
--	--

INSTRUCTIONAL TOOLKIT FOR TEACHERS 72

Slide 10

Sample Lesson in ABA

Sample Lesson: Compliance

Scenario: Packing Away of Toys

Teacher: "Jason, pack away time."

Jason: (tries to escape by standing up)

Teacher: (blocks Jason and prompt compliance by pointing to the toys)

Jason: (tries to look for other way)

Teacher: (used physical/hand over hand gesture to prompt Jason in picking up the toys)



Slide 11

DTT Goals

DTT Goals

Goals that can be addressed by using discrete trial training include:

- Improve verbal communication skills
- Respond to questions
- Increase responses
- Increase academic skills
- Increase perspective-taking skills
- Increase emotion recognition
- Increase adaptive behavior (safety issues)



Slide 12
Sample lesson and Material for DTT

Identify the behavior

Meet Sam:

- Four-year old preschooler
- Diagnosed with ASD
- Goal - improve expressive communication skills across the school day

www.thundershare.net

Identified Behavior: Requesting a desired item

00:48.12

Slide 13
Sample DTT Video

Video Story: A Case for DTT

A Case for Discrete Trial Training?

www.thundershare.net

▶ Video Transcript

KEY POINTS

- Think about how discrete trial training could be used to increase the learner's ability to complete the assigned task?
- Focal learner with ASD: boy in blue shirt at table

80

Slide 14

Sample Lesson in DTT

Learner's Behavior	Team Member's Response	Example
Responds correctly on first trial of current teaching step.	1. Repeat the teaching step several more times and record the results. 2. If the learner reaches mastery criterion for the step (for example, 80% success for in 3 of 4 days), then the team member presents a task at the next level of difficulty.	On the first teaching trial, Ms. Oaks says, "Sam, point to nose." Sam correctly identifies his nose. Ms. Oaks then repeats the instruction (Sd), three more times by saying, "Sam, point to nose." She provides reinforcement each time Sam correctly points to his nose and records the correct responses on a data form. When Sam reaches mastery with identifying his nose, Ms. Oaks begins teaching identification of forehead.

Curriculum Vitae



OSANA, Angeline Marie Guinto

Personal Information

Address: *B8 L1 Robin St. Don Mariano Subdivision Cainta, Rizal*

Mobile Number/s: +639178094450

Landline Number: +63 2 213 73 34

E-mail: angeline.osana@ymail.com

Skype ID: angeline.osana

Date of Birth: *April 26, 1993*

Gender: Female

Education

Masters' Degree

Philippine Normal University
Master of Arts in Education Major in Special
Education
Stream 4: Teaching Children with Intellectual
Disabilities

	June 2014 - present (on going thesis writing)
College	Philippine Normal University Bachelor in Early Childhood Education With Undergraduate Certificate in Special Education 2009-2013
Highschool	Siena College of Taytay 2005-2009
Elementary	Agapeland Christian Academy 1999-2005

Certifications

Licensed Professional Teacher – September 29, 2013 = LET PASSER

Basic Sign Language – Philippine School for the Deaf

Academic IELTS Passer

Work Experience

Reedley International School

CIAP ELA Middle School Teacher and Adviser
From *June 2017 to present*

Job descriptions:

- ★ English Language and Arts (ELA) teacher
- ★ Handles pull-out classes with students with LD, DYSLEXIA, ADHD, ADD, GIFTEDNESS AND TALENT
- ★ Center for Individualized Academic Program (CIAP) teacher
- ★ Project Head of CIAP Family Day and Middle School Year book
- ★ Teaches Middle School Grades 5 and 6 (ELA subject)
- ★ Girl Scout Co-troop leader (Special Club)
- ★ Writes Individualized Educational Plan, Behavior Plan and Action Plan for

students

- ★ Researches and develops enrichment modules
- ★ Does consultation with parents and students, proctorship, supervision of students, active involvement in school and community activities, field trips, parent-teacher conferences and committee work

Siena College of Taytay

SPED Teacher and Adviser

From September 2015 – April 2017

Antipolo City SPED Center (public SPED school)

Substitute Hearing Impaired Teacher – Grade 2

From *August 2015* to *October 2015*

San Beda College-Rizal

Position: Filipino Teacher

From *June 2013* to *March 2014*

Qualifications

- Computer Literate
- Knows Basic Sign Language
- Focused, creative, passionate, flexible, multi-tasked oriented, determined and emotionally stable to adopt effectively to challenging and urgent situations
- Adoptable and willing to try new ways of teaching and working
- Excellent interpersonal skills
- Team player