

MINISTRY OF EDUCATION AND TRAINING
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NGUYEN THI THANH

**METHODS TO DEVELOP COMMUNICATION SKILLS FOR
CHILDREN WITH AUTISM 3-4 YEARS OLD**

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Supervisors: 1. A/Prof. **Nguyen Van Le, PhD**

2. A/Prof. **Le Van Tac, PhD**

Defender 1: PGS.TS. **Đang Thanh Hung,**

Workplace: Ha noi National University of education No 2

Defender 2: PGS.TS. **Vu Trong Ry**

Workplace: The Viet Nam institute of education sciences

Defender 3: PGS.TS. **Tran Thi Tuyet Oanh,**

Workplace: Ha noi National University of education

The dissertation will be defended at the Defense Committee held at The Vietnam Institute of Educational Sciences.

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The dissertation can be found at:

- The Vietnam National Library
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PUBLICATIONS RELATED TO THE DISSERTATION

1. Nguyen Thi Thanh (2008). Measures to deal with atypical behaviors for children with autism. *Magazine of Educational Sciences*. Vol. 31, p.13-16.
2. Nguyen Thi Thanh (2013). Communication characteristics of children with autism. *Magazine of Educational Equipments*. Vol. 89. p.42-46
3. Nguyen Thi Thanh (2013). Assessment for children with autism. *Magazine of Educational Equipments*. Vol.90, p.10-14
4. Nguyen Thi Thanh (3/2013). Measures to develop communication skills for children with autism. *Magazine of Educational Sciences*. Vol.90, p.53-56
5. Nguyen Thi Thanh (11/2013). The role of social worker for children. *The proceeding at the Conference at National College of Education*.
6. Nguyen Thi Thanh (12/2013). Measures to enhance the quality of practicum for the dual program of Early Childhood Education and Special Education. *The proceeding at the Conference at the National College of Education*.

INTRODUCTION

1. The research rationale

Children with autism (CwA) refers to individuals who suffer from series of neurological impairments and these deficits create difficulties in communication, social and behaviors and also create barriers to integrate in the society for children. From this point, it is realized that the impact of these deficits is significant. CwA is varied from mild to profound and the characteristics are also varied. However, it is a unique that all CwA express the same difficulty in communication and social interaction.

In daily life activities including schooling activity, CwA experience the most difficulty in communication, they do not know to verbally communicate with teachers, classmates and people around them. Children live and act in their own world, isolated and difficult to acquire content communication from communication partners and educational program... Furthermore, recent researching on education for children with CwA is a new discipline in Vietnam; therefore, preschool teachers have limited in theoretical knowledge and practical experience as well as the lack of materials guiding about communication for CwA so they have obscurity when communicate with children. In fact, preschool teachers have communicated and instructed for CwA by their own natural feeling and experience and this have direct influence on the quality of education for children. Therefore, the inquiry "Methods to develop communication skills (CS) for CwA 3-4 years old" was chosen to implement with the hope to partly contribute to improve the quality of education and care for CwA and to develop the educational sciences in Vietnam particularly.

2. Research objective

Based on theoretical and practical foundation about communication skills of CwA, the dissertation proposes and experiments methods to improve the communication skills for CwA.

3. Research subject and object

3.1. Research subject: The educational process to develop communication skills for CwA 3-4 years old.

3.2. Research object: Methods to develop communication skills for CwA 3-4 years old.

4. Research hypothese

CwA have limited in communication skills. If methods to develop communication skills are created synchronously from family to school and society, linked between intervention and education, provided various opportunities for children to integrate community, express and experience and practice communication skills in order to improve the care and education efficiency for CwA in general and develop communication skills for CwA particularly.

5. Research task

5.1. Theoretical research about communication skills of CwA.

5.2. Fact investigation of communication skills in CwA 3-4 years old;

5.3. Propose of methods to develop communication skills for CwA 3-4 years old and educational experiment in order to validate the feasibility and efficiency of proposed methods.

6. Research scope

Research and propose methods to develop communication skills for CwA 3-4 years old who are in inclusive classes at kindergarten schools, exclude children with Asperger Syndrome, delay disorders, pervasive developmental disorders, Rett Syndrome. The research project was implemented in Hanoi.

7. Research methodology

7.1. Theoretical research methods: Use methods to analyze, summary, category and systemize theories.

7.2 Data collection and experiment methods: Use observation, questionnaire,

educational products, educational experiment and case study.

7.3. Analyzing methods: Software SPSS 16.0 is used to analyze data in order to measure the qualitative and quantitative results from the research.

8. Research significance

8.1. Theoretical contribution

- To clarify the definition and characteristics of the process of developing communication skills of CwA, methods to develop communication skills for CwA in order to enrich the theoretical foundation about education for CwA.
- To determine the teacher's impact of the environment of inclusive education on development of communication skills, to review literature on inclusive education (IE) for CwA.
- To compose methods developing communication skills for CwA in the inclusive class in preschools and this is a foundation for developing guiding manual for parents and teachers.

8.2. Clinical contribution

The dissertation evaluated the status of communication skills of CwA and methods used to develop communication skills for CwA in inclusive classes in preschools currently. Methods for developing communication skills for CwA 3-4 years old that were proposed and proven through educational experiment are valuable in education for CwA and are reference materials for management, research, pre-service and in-service training preschool teachers and information for parents in inclusive education preschool-age CwA.

9. Dissertation structure

Dissertation includes introduction, conclusion, references, appendices and 3 chapters:

Chapter 1: Theoretical and situational foundation of developing communication skills for CwA 3-4 years old

Chapter 2: Propose methods to develop communication skills for CwA 3-4 years old

Chapter 3: Experiment proposed methods developing communication skills for CwA 3-4 years old.

CHAPTER 1

THEORETICAL FOUNDATION ABOUT METHODS DEVELOPING COMMUNICATION SKILLS FOR CHILDREN WITH AUTISM

1.1. Literature review

Research on CwA, characteristics on CwA and developing communication skills for CwA had been done by many researchers in and outside Vietnam. The authors had focused on directions as follows:

Firstly, research to clarify identifying period of CwA. This direction was carried out in the research of Leo Kanner and Han Asperger.

Secondly, research on characteristics of CwA had been done by many well-known research who spent many years on different research, for example, Eric Schopler, Lorna Wing, Bryna Seigel, Richard G.J... These researchers had helped the community to more understand of characteristics as well as to give answers for myths about this syndrome.

Thirdly, research on diagnostic and assessment tools for CwA had done by Baron- Cohen, Allen and Gilber, American Psychiatric Association... Diagnostic and assessment tools for CwA such as: MCHAT, CARS, DSM-IV.

Fourthly, research on characteristics of communication of CwA had done by Ivar Lovaas; Quách Thúy Minh, Nguyễn Văn Thành, Nguyễn Tinh Vân.

Fifthly, research on methods supporting CwA in inclusive preschools had done by Cole.E.B., Ling D, Nguyễn Thị Diệu Anh, Nguyễn Tinh Vân. This dissertation followed the approach of integration between the second and the fifth directions in order to research on methods to develop communication skills for CwA in inclusive classes in preschools.

Currently, there is no research result published in Vietnam comprehensively focusing on developing communication skills for CwA in inclusive classes in preschool. The investigation and introducing research results from researchers outside Vietnam has also limited.

1.2. Basic definitions

1.2.1. Skill: Skill is a complex issue and its definition is varied. In this inquiry, we define skill as human ability that is done maturely based on experience through the process of practice in order to obtain targeted results.

1.2.2. Communication skill

1.2.2.1. Communication: In this dissertation, we choose the definition “Communication is expressing, exchange information through understanding and expressing language in speech, facial expression, gestures. Through communication, personality is established and developed”.

1.2.2.2. Communication skill

We use the definition communication skill is an ability to use appropriately both language and non-verbal language, to know how to organize, to adapt communication process in order to target communication goals. For CwA, we focus on developing skills such as attention, imitation, take turn, understanding and using language in order to build up foundation for enhance communication skills for CwA.

1.2.3. Methods to develop communication skill

Methods to develop communication skills for CwA is ways to implement educational impact to support CwA having skills used in communication process such as attention, imitation, receptive and expressive language in order to express for others to understand communication content.

1.2.4. Inclusive education: Inclusive education is educational approach in which CwA learn with normal children in mainstream schools.

1.3. Basic issue about children with autism

1.3.1. Children with autism

CwA are children who show the lack of emotional interact with others; repeat ritual habits; delay in spoken language or spoken language is atypical; have typically stereo behaviors; limit in abstract thinking.

1.3.2. Causes of autism

Since 1943, science has not determined exactly about the causes of autism. An overview of causes of autism showed that there are many causes. There is a cause related to environment factors, for example, watching television too much, hinder children in communication and integration with others surrounding. This is a clue for this dissertation to develop methods to deal with difficulties of CwA.

1.3.3. Tools for diagnosis and assessment children with autism

We used DSM-IV and CARS in order to determine autism, autism degree and checklists of development skills in Book number 8 in the Small Step Program in order to assess developmental domains as foundation for this research.

1.3.4. Characteristics Communication of children with autism

- characteristics

* **Limitation in relation:** Children show the significant limitation in interaction between people, almost CwA express the isolation, self-playing preference, avoid communicating with friends. This limitation on social relation is the most popular in CwA. This limitation directly impacts on cognition development and social relation skills particularly of CwA.

* **Limitation in comprehensive understanding speech:** In daily regular communication, CwA do not pay attention on speech of communication partners. Those do not response when being called their names, do not pay attention to others surroundings, do not follow instruction given by others while they have listening skills as normal children.

* **Limitation in expressive speech:** The impairment in expression, use speech in communication in CwA is popular and varied in different modes. Almost milestones of spoken language development in CwA is slower than the typical development children.

CwA have typical characteristics in communication, attention, intelligence, language, behaviors, sensory, social interaction, etc., Based on these characteristics, we propose methods to minimize deficits for CwA.

1.4. Developing communication skills for children with autism

1.4.1. The role of developing communication skills for children with autism

Through communication, teacher can identify psychological characteristics, the need, expectation as well as the limitation the children and their families may have. From those, teachers can discuss with and collaborate to family, children, other teachers in order to build up the content, educational methods and suitable and effective intervention for children.

1.4.2. Objectives of developing communication skills for children with autism

The objectives of developing communication skills for CwA is support children used communication skills such as: attention, imitation, take turn, listening and performing verbal instruction, use gesture/speech/action to communicate with other people surrounding. Those build up foundation for establishment and development personality, social skills and social integration.

1.4.3. The content of developing communication skills for children with autism

The content of developing communication skills for CwA are developing basic skills such as: Attention skills, imitation and take turn skills, understanding and using language.

1.4.4. Development ways for children with autism

In order to develop communication skills for CwA, it needs some basic ways, such as: Integration between organizing early intervention activities with inclusive education; Opportunity for CwA joining in community activities such as shopping, visiting parks, supermarket, sight seeing; Organizing activities at home in order to develop communication relation between family members such as grandparents, parents, siblings, relatives,... and children with home objects; Organizing social activities that collaborated with different stakeholders to focus on developing communication skills for CwA.

1.4.5. Influential factors on communication skills for children with autism

Children ability; Teacher competency; Home environment; Friendship; Classroom environment; Social environment.

Summary chapter 1

1. CwA are children who have poor communication and interaction, delayed in spoken language and stereotyped behaviors. The most difficulty for CwA in daily life is communication.
2. The goals of developing communication skills of CwA depend on factors such as attention, autism degree, related syndromes with autism, particularly the factor of early intervention cooperating with intervention activities implementing in the environment of inclusive education.
3. Organizing activities to develop communication skills for CwA need to intensively research to match with reality and typical characteristics of CwA.
4. In order to develop communication skills for CwA in inclusive classes in preschool, it needs to investigate for proposing concrete methods for teachers to apply easily in their work to develop communication skills for CwA.

CHAPTER 2: PRACTICAL FOUNDATION AND METHODS DEVELOPING COMMUNICATION SKILLS FOR CHILDREN WITH AUTISM

2.1. Practical foundation of methods developing communication skills for CwA

2.1.1. Development of inclusive education for CwA in Vietnam

Currently in Vietnam, CwA have opportunity to access inclusive education at preschool. Leading by Ministry of Education and Training, management system of education for children with disabilities has built up nationwide and acted effectively (including Steering Committee of Education for children with disability from national to local levels). Care and education for CwA at preschools have greatly improved. In order to support CwA develop well in all aspects and develop communication skills, it needs to investigate to sort out methods that suitable with children and the environment

of inclusive education.

2.1.2. Brief introduction about development communication skill in Vietnamese current preschool curriculum

Preschool curriculum enacted in 2009 is compiled towards national framework and integration. The program content is structured in 05 areas: Physical, Cognition, Language, Social-Emotional, and Aesthetic Development and those are integrated by themes and it enables CwA to increase vocabulary and opportunities to develop communication skills. The content of developing communication skills for CwA is integrated in different activities.

2.1.3. Investigation of education of communication skills for CwA 3-4 years old

2.1.3.1. Introduction of investigation

* *Objective:* Evaluate the teachers' awareness of the importance of development communication skills for CwA; teachers used methods to organize activities for development communication skills for CwA; the current communication skills that CwA have. Those investigation results are foundation to propose methods for development communication skills for CwA.

* *Content:* In order to gain above research objective, we clarify the content for investigation as follows:

- Teachers' awareness of development communication skills for CwA
- Methods that teachers have currently used for development communication skills for CwA
- Advantages and disadvantages teachers experience while organizing activities to develop communication skills for CwA.
- Level of communication skills development of CwA 3-4 years old in inclusive preschool in terms of attention, imitation, take turn, comprehensive listening and language use.

* *Investigation sample and location*

- Investigate teachers through questionnaire, observation and interview: 60 teachers who work in inclusive classes having CwA in districts such as Cau

Giay, Dong Da, Ba Dinh in Hanoi; teachers almost are qualified as preschool teacher with 58,4% graduated college, 31,6% graduated university, 10% graduated vocational schools, no one has master degree.

- Investigate CwA by observation and playing games: 30 CwA 3-4 years old in Cau Giay, Dong Da, Ba Dinh districts in Hanoi. We also used CARS for diagnosis with 23,4% CwA at mild degree, 60% CwA with severe degree and 16,6% CwA with profound degree who are all learning in inclusive preschool classes.

- Investigation location: in Cau Giay, Dong Da, Ba Dinh districts in Hanoi.

* *Investigation methods and tools*

Methods

- *Questionnaire:* Questionnaire for teachers working with CwA in inclusive preschool classes includes questions about their knowledge about communication skills development for CwA.

- *Observation:* Observe 20 activities (learning sessions, playing, lunch time, napping time, greeting and going home activities) in preschools in normal condition with prior informing. Then we analyze statistics to generate results (Appendix 6).

- *Product evidence:* evaluate 15 programs designed by teachers about educational activities in order to investigate educational objectives whether or not are adapted for CwA? The ways teachers implement are suitable with CwA ability and do they work effectively for CwA?. We mark those program/Plan in 10 criteria equivalence to 10 points.

- *Deep interview:* Interview 15 parents having CwA in order to validate information collecting for data investigation (Appendix 7).

Tools

- *Questionnaire:* For teachers working in inclusive preschool classes having CwA, it includes questions about development CS for CwA. We deliver questionnaire for teachers for their filling information in then we collect fulfill paper, all questionnaire is anonymous (Appendix 5).

- Skill assessment checklist: in order to assess CS of CwA 3-4 years old in inclusive preschool classes in 5 criteria (Appendix 2).

2.1.3.2. Result of teachers awareness of the importance of development CS for CwA

96,6% teachers agreed that development CS is very essential, 3,4% agreed that it is not essential because of the reason that CwA in their classes are profound and have no language yet. The most importance for teachers at high priority is how teacher CwA to speak.

2.1.3.3. Result of methods teachers used to develop CS for CwA in inclusive preschool classes

Methods teachers used daily to develop CS for CwA as follows:

Name method	Level		
	fry	sometime	never
- Understand CwA by searching information about the child, assessment communication ability of each child	0%	25%	75%
- Develop Plan to develop CS for CwA	0%	20%	80%
- Organizing for CwA playing in corners	0%	23%	67%
- Encouragement CwA use spoken language	0%	15%	85%
- Create problem situation in the daily to stimulate CwA communicate	0%	26,6%	74,4%
- Establish close relationship between teachers, other children with CwA	0%	10%	90%
- Establish friend circle to encourage CwA communicate	0%	21,6%	79,4%
- Assign tasks for CwA in daily activities	0%	23,3%	76,7%
- Create opportunity for CwA to expose, interact with community to help CwA have more confident for communication	0%	31,7%	68,3%
- Practice communication for CwA by pictures	0%	18,3%	81,7%
- Practice eye contact while communicating with teachers and friends	0%	11,6%	88,4%
- Give daily homework for parents	0%	20%	80%
- Collaborate with parents to develop CS for CwA in daily activities	0%	45%	55%

In short, methods teachers used in daily activities we realize. Basically, teachers have awareness of the importance of development CS for CwA 3-4 years old. Meanwhile, teachers try to select and apply some methods to develop CS for CwA. However during process of applying, these methods are not flexible and do not understand those methods role for CwA, lack of collaboration. When using, it is isolated, lack of systematical flow. Therefore, communication ability of CwA is lack of practice opportunity, CwA is not active in all daily activities. In order to develop CS for CwA, it is essential for teachers to use synthetically methods and ways to develop, enhance vocabulary, communicate with teachers and friends, then enables to study academic knowledge to be an independent civil in the community as others.

2.1.3.4 Result of advantages and disadvantages in development CS for CwA

* Advantages

Teachers are led by school leaders to support for CwA to learn in inclusive classes. CwA learning in inclusive classes have less atypical behaviors. CwA learning in inclusive environment in which they are treated equally with no discrimination and all teachers and friends take care and support. Teachers are qualified and participated in short training courses about inclusive education for CwA therefore teachers have basic knowledge and skills for inclusive teaching for CwA.

* Disadvantages

CwA is delayed in speaking, vocabulary is less than that of normal peers. Because of limited vocabulary, CwA have difficult to initiate communication when interact with teachers, friends and other people.

2.1.3.5. Degree of development CS for CwA 3-4 years old

The dissertation investigate and evaluate CS of 30 CwA 3-4 years old who are at inclusive preschool classes in Cau Giay, Ba Dinh, Dong Da districts in Hanoi. The age of 30 CwA ranging from 36 months to 48 months with minimum age at 36 months and maximum age at 47 months, Mean age =

40,2 months, SD = 3,387. Duration of investigation is 2 months (April and May, 2010). The tool for assessment is Assessment Checklist of Communication Skills (Appendix 2).

Summary the result of assessment of 30 CwA in all criteria is measured and presented in table 2.2 below.

Table 2.2: Descriptive statistics of result assessment of communication skills of CwA

	N	Min	Max	Mean	SD	Descripti on Statistics	Standar d Error	Descripti on Statistics	Standar d Error
Age (months)	30	36.00	47.00	40.2000	3.38760	.129	.427	-1.277	.833
Attention Skills	30	.00	9.00	2.1667	2.70483	1.256	.427	.471	.833
Imitation Skills	30	.00	8.00	1.8333	2.40808	1.194	.427	.429	.833
Take turn Skills	30	.00	4.00	1.3000	1.39333	.649	.427	-.824	.833
Comprehensive Listening Skills	30	.00	7.00	1.8333	1.96668	1.269	.427	1.405	.833
Language use	30	.00	9.00	2.3667	2.57954	1.062	.427	.262	.833
Total	30	1.00	28.00	9.5000	7.34260	1.011	.427	.507	.833
Valid	30								

Recommendation

- Degree of overall development in CS of CwA 3-4 years in inclusive preschool classes is very low based on the result assessment in areas of attention, immitation, take turn, comprehensive listening language and language expression.

- Degree of attention of CwA is poor. Therefore, it needs to practice this skill and this is prequistic skill for development CS of CwA.

- Degree of immitaton, take turn of CwA is poor therefore it is essential to design strategies to develop this skill group through concrete methods and frequent implementation in all daily activities in preschools.

- Skill of comprehensive listening language and skill of language use is poor. CwA just understand simple requests in daily life. For communication

contents that require take turn skills in communication process, most of CwA have not mastered yet.

- In order to develop CS for CwA, it is nessesary to synthetically implement all methods for CwA to inclusive with normal peers in order to assist CwA to learn ways of interaction, guesture, actions, speech of normal children about attention practice, teach for CwA the way to immitate to help CwA apply in communication process.

*** Overall evaluation about current methods of development CS for CwA**

- Positive points

Almost teachers express their enthusiatism and their love with professionals and CwA.

Teachers at inclusive preschool classes have positive awareness about the importance of development CS for CwA, started to teach CwA some skills.

Teachers initially apply some methods to develop CS for CwA such as attention, immitation skills.

- Negative points

Knowledge, skills used in organizing activities for development CS for CwA that teachers provided has been somehow not good enough, not suitable with characteristics of inclusive classes.

The teachers' understanding and applying methods of development CS for CwA has been not efficiency and this leads to unstructured applying.

- Causes

Development CS for CwA has been not focused by researchers. This results in the lack of researching systematically about methods of development CS for children with disabilities in general and CwA particularly in inclusive preschool classes.

Investigation of organizing activities for development CS for CwA and current degree of CS of CwA presented above create the need for doing a research in which propose methods in order to develop CS for CwA 3-4 years

old in inclusive preschool classes.

2.2. Proposing methods for development CS for CwA 3-4 years old

Based on theoretical review and investigation, the dissertation proposed 10 methods in order to develop CS for CwA as follows:

- Method 1: Assessment of current communication ability of children
- Method 2: Set up plan for CS development
- Method 3: Collaboration with parents
- Method 4: Applying typical communication techniques
- Method 5: Total communication
- Method 6: Individual Support
- Method 7: Friendship circle
- Method 8: Opportunity for CwA for exchange and exposure to community
- Method 9: Creating friendship environment
- Method 10: Creating problematic situations

Summary chapter 2

1. Therefore there were limited chances for CwA to practice CS this led to passive involvement of CwA in daily activities.
2. Assessment results for CS of CwA reflected that overall degree of communication development is low. These results were categorized in 25 items belonging to 5 domains such as attention, imitation, take turn, comprehensive language listening and language use.
3. Majority of teachers agreed that they had difficulties such as: limitation of reference materials; guidance manuals supporting them to applying teaching methods in real teaching; teachers did not understand effectively about organizing activities to develop CS for CwA in inclusive preschool classes. The number of students in the class was high, huge tasks, there were no individual teaching room for CwA were also considered as the causes that effected to the quality of developing CS for CwA.
4. In order to develop CS for CwA in inclusive preschool classes, it needs to

collaborate between school – family and should generate methods, concrete ways in order to enable teachers support for CwA at school and parents do at home for their children to develop CS for them.

5. Methods for organizing activities to develop CS for CwA 3-4 years were proposed including 10 methods. These methods had inter-relations in the process of organizing activities to develop CS for CwA in inclusive preschool classes. These methods proposed for teachers to apply, therefore, teachers should use those methods in flexible, creative ways as well as appropriately with the individual child.

CHAPTER 3: EXPERIMENT OF METHODS FOR DEVELOPMENT

COMMUNICATION SKILLS FOR CHILDREN WITH AUTISM 3-4 YEARS OLD

3.1 Introduction about experiment

We choose 05 CwA was selected as experiment sample, choose 03 preschools, Practical Preschool Hoa Sen (Giang Vo), Yen Hoa Preschool and Justkid Preschool (Cau Giay) to be experiment locations for this project research.

3.2. Experiment result

3.2.1. Case study 1: Nh.A (39 months)

Applying proposed experiment for Nh.A and the result showed the progress of Nh.A. The concrete progress of CS of Nh.A details in 5 areas: attention, imitation, take turn, comprehensive language listening and language use in the communication process.

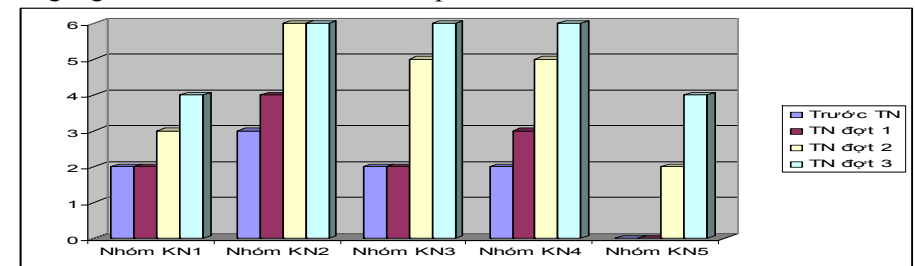


Figure 3.3 Nh.A's Experiment results through measurements

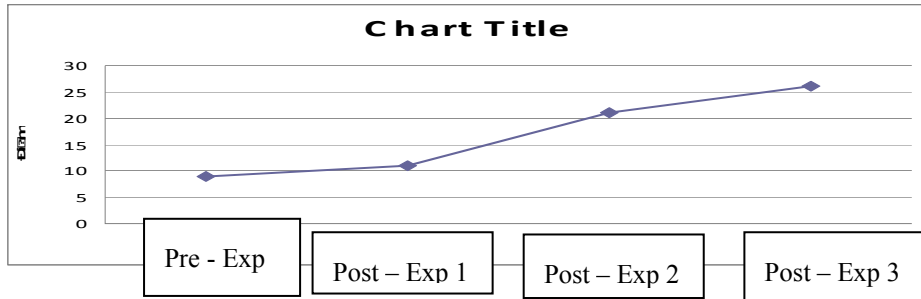


Figure 3.4: Mean 5 areas of CS of Case Study 1 (Nh.A) after experiment times

In addition to assessment of CS, we also measured other developmental domains of Nh.A by Small Step with the result as: Chronological Age: 48 months, Intelligent age: 35 months (pre-experiment her chronological age was 39 months and intelligent age was 24,2 months). According to DSM-IV: Nh.A. has had 17/39 symptoms (compared to pre-experiment was 38/39 symptoms). Result assessed by CARS was 36 points, equivalent to mild degree (compared to the result before experiment: severe degree). The result of behavior assessment was shown that diving behavior, running around and tiptoed walking behaviors had disappeared.

Such progress might reflect that we applied 10 methods to develop CS during intervention experiment for Nh.A. Especially, the method 4 (Applying techniques to develop CS for CwA), method 6 (Individual Support), and method 8 were considered as the key methods that are the most effective for Nh.A.

3.2.2. Case study 2: D.A. (39 months)

Applying experiment methods for D.A. had shown clearly about his progress. This means that his CS are better than before in terms of attention, imitation, take turn, comprehensive language listening and language use, in which the most progress was attention skills.

We measured development areas of D.A by Small Step, this test result: Chronological age was 48 months, intelligent age was 36 months (compared to chronological age was 39 months, intelligent age was 24 months before experiment). According to DSM-IV: D.A. has had 18/49 symptoms

(compared to pre-experiment was 36/49 symptoms). Result assessed by CARS was 35 points, equivalent to mild degree (compared to the result before experiment at 40 points equivalent to severe degree). The result of behavior assessment was shown that behaviors of alone playing, running around and non-sense word talking had minimized.

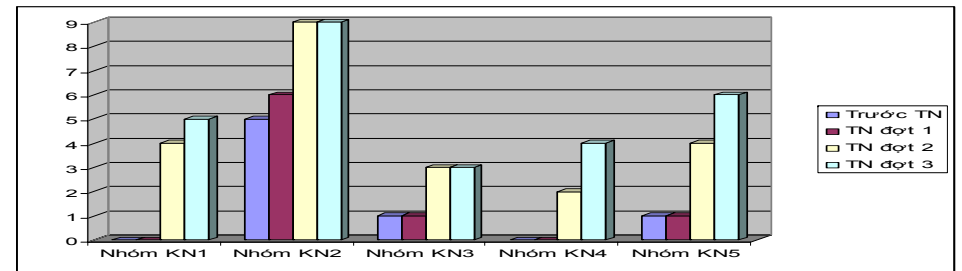


Figure 3.7. Experiment results of D.A. through measurements

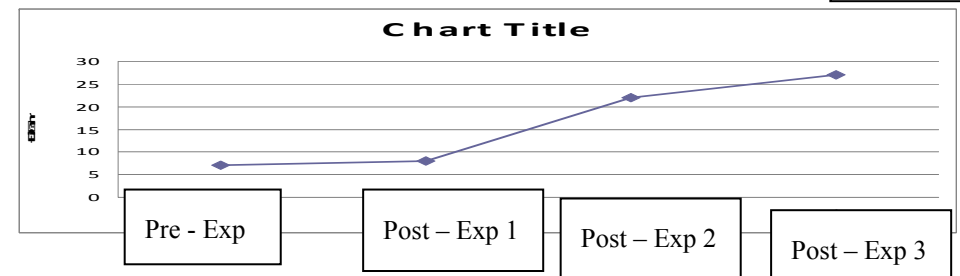


Figure 3.8. Mean 5 areas of CS of Case Study 2 (D.A.) after experiment times

To gain this progress, teachers had applied 10 methods to develop CS during intervention experiment for D.A. Especially, method 3 (Collaboration with parents), method 6 (Individual Support at Inclusive Preschool and at Intervention Center), method 7 (Establishment of friendship Circle) were considered as key methods that greatly effected to D.A.'s progress.

3.2.3. Case study 3: M.D. (39 months)

Applying proposed methods for experiment for M.D., we could see the positive changes in his CS. The progress in CS in terms of skills of attention,

imitation, take turn, comprehensive language listening and language use. The most progress was skill of take turn.

In addition to assessment result of CS, we also assessed developmental areas for M.D. by Small Step with the result: Chronological age was 47 months, intelligent age was 38 months (compared to chronological age was 39 months and intelligent age was 23 before experiment). According to DSM-IV, M.D. has had 12/49 symptoms (pre-experiment result was 32/49 symptoms). The CARS result: M.D. gained 35 points equivalent to mild degree (pre-experiment was 38 points and equivalent to severe degree). Behavior result witnessed that echolalia behavior and running around had disappeared.

In 10 proposed methods, it could be seen that method 4 (Applying typical communication techniques for CwA), method 6 (Individual support at preschool, intervention center and at home) and method 9 (Creating friendship environment) were considered as best suitable with M.D.

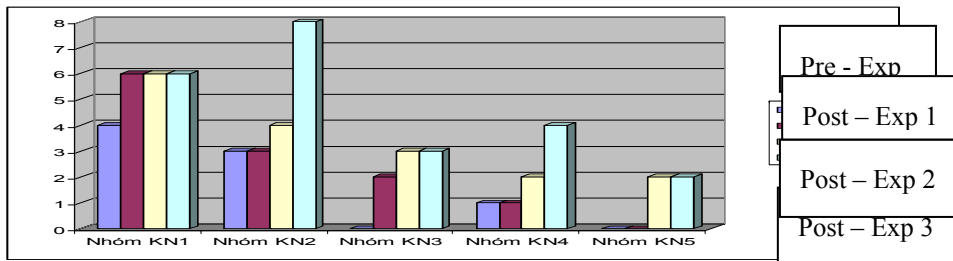


Figure 3.11. Experiment results for M.D.

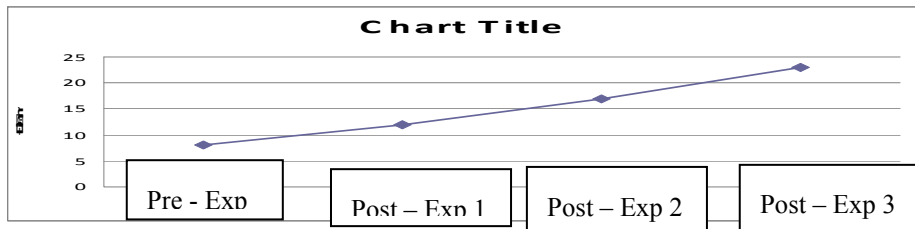


Figure 3.12: Score Mean categorized in 5 areas of CS through measurements for M.D.

3.2.4. Case study 4: Đ.A. (33 months)

Experiment results of Đ.A. through measurement times presented his progress in CS, the most significant progress was imitation skill.

We measured developmental areas for Đ.A. by Small Step as following: Chronological age was 42 months, intelligent age was 33 months (compared to results done pre-experiment with chronological age was 33 months and intelligent age was 22,6 months). According to DSM-IV: Đ.A. has had 18/49 symptoms (compared to the result of 41/49 symptoms). Result done by CARS was 33 points equivalent to mild degree (compared to pre-experiment result was 43 points equivalent to severe degree). Assessment result about behaviors informed that atypical behaviors such as alone playing, non-sense word speaking and turning around were minimized. In 10 proposed methods, we realized that method 4 (Applying typical communication techniques for CwA), method 6 (Individual support), method 9 (Create friendship environment) were best match with Đ.A. as those methods have greatly impacted on Đ.A.

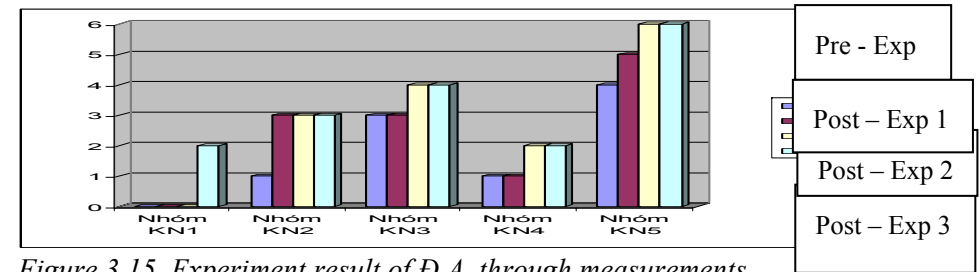


Figure 3.15. Experiment result of Đ.A. through measurements

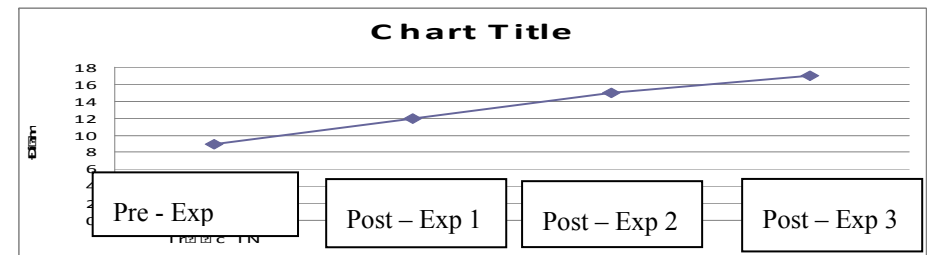


Figure 3.16: Score Mean categorized in 5 areas of CS through experiment measurement

3.2.5. Case study 5: D.K.H. (34 months)

From figures 3.19 and 3.20, it is clear that all areas of experiment result for D.K.H. has had positive changes in every measurements. His CS was improved, especially the skill of comprehensive language listening.

Developmental areas of D.K.H were assessed by Small Step with the result: Chronological age was 43 months, intelligent age was 35 months (compared to pre-experiment, chronological age was 34 months and intelligent age was 23,8 months). The result assessed by DSM-IV, D.K.H. has had 11/49 symptoms (compared to 28/49 symptoms pre-experiment). The result assessed by CARS, D.K.H. has gained 32 points equivalent to mild degree (compared to 36 points equivalent to mild degree before experiment). Behavior results reflex that the behaviors of tiptoed walking, echolalia and non-sense talking were completely disappeared.

In all 10 proposed methods, method 4 (Applying typical techniques to develop CS for CwA), method 6 (Individual supporting given by teachers at preschool and at home) and method 10 (create problematic situations) were the most suitable with D.K.H.

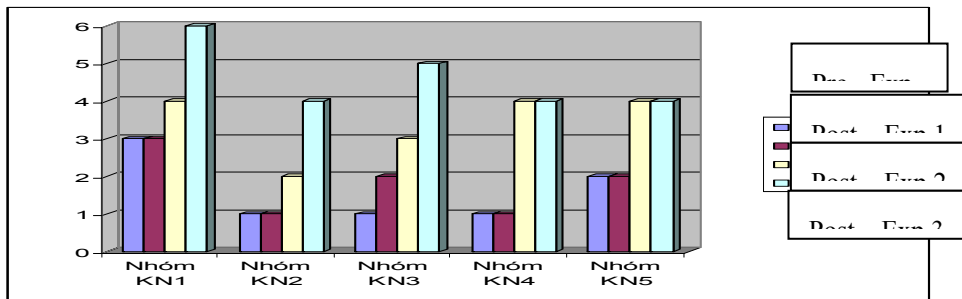


Figure 3.19. Experiment result of D.V.H. by measurements

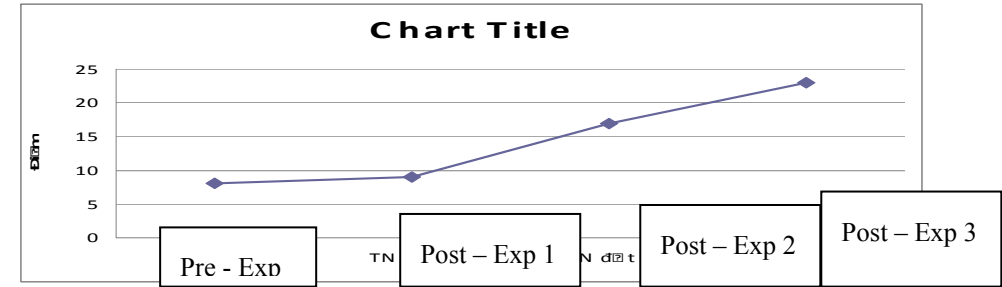


Figure 3.20: Score mean of 5 areas in CS of D.K.H. by measurement time

3.2.6. Discussion about 5 cases study

Figure 3.11 and 3.12 presented results of 05 cases study and those results were not similar. The case of Nh.A and D.A. gained highest points at 19 in the third measurements, CS of two these cases were higher than that pre-experiment. The case of M.D. gained the lowest point compared to 04 cases left with only 15 points in the third measurement.

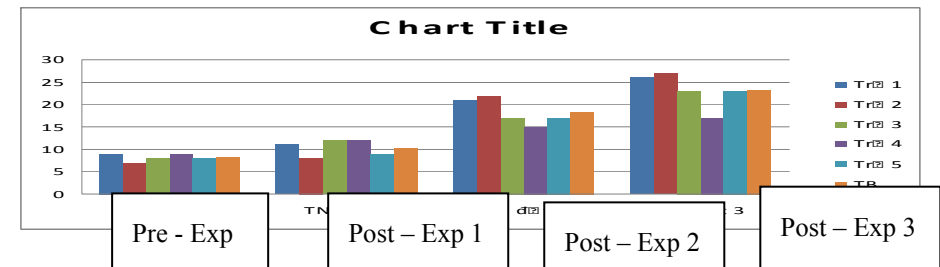


Figure 3.11: Scoring Comparison of 05 cases by measurements

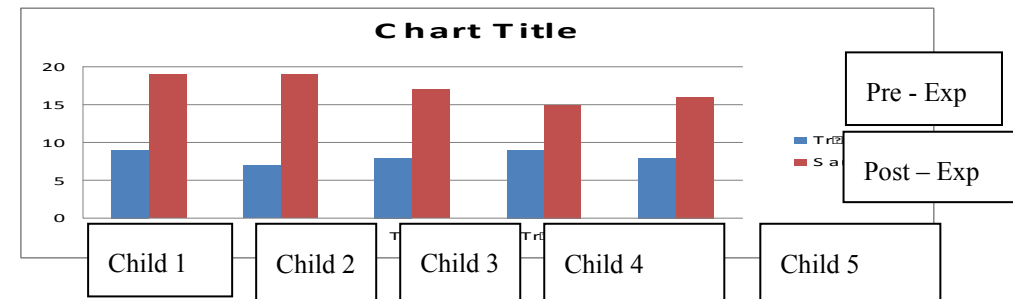


Figure 3.12: Scoring Comparison of 05 cases pre-experiment and post-experiment

Summary of chapter 3

1. CS of CwA 3-4 years old in inclusive preschool classes has improved significantly from proposed methods used in the experiment
2. Experiment results confirm the appropriateness and effectiveness of proposed methods to develop CS for CwA in inclusive preschool classes.
3. Experiment all proposed methods but it is different in each period and each individual. Therefore, in education for CwA, it needs to emphasize on individualization.
4. Experiment results are different for each case study that refers to a new research direction in which investigates on influence factors on setting up and development of CS for CwA. Since detection, intervention to how inclusive education organizing for CwA in order to minimize disadvantages for the child.

SUMMARY AND RECOMMENDATIONS

1. Summary

- CwA is children who exhibit the delay or disorder in spoken language; poor communication and interaction; stereotyped behaviors; poor secondary thinking. Characteristics of CwA are varied but all exhibits the difficulty in communication;
- Currently, CwA is integrated in inclusive preschools, the most disadvantage of CwA is communication. Poor vocabulary, barriers in initial communication thus CwA have limited to communicate with teachers and other friends.
- Researching on proposing methods to develop CS for CwA 3-4 years old is implemented based on characteristics of CwA. Methods focus on development CS for CwA to ensure covering general requirement in organizing daily activities in preschool, to ensure the role of CwA as actors in the process of activity participation that generating positive interaction between normal children and CwA.
- Proved by experiment results, it is stated that 10 proposed methods that were

researched and experimented in the dissertation were a continual and integrated system exhibiting its scientific, reliability, feasibility and effectiveness in our country condition.

- In order to support CwA develop CS, it needs suitable methods given by teachers and the collaboration between family – school – society.

2. Recommendations

- Schools should encourage teachers working in inclusive classes having children with disabilities and CwA particularly. Schools should place numbers of children with CwA ranging from 1 child to 2 children per class, should organize training courses for teachers about knowledge, skills, methods of caring and teaching in inclusive classes, create advantage environment for CwA to develop in inclusive settings.
- Inclusive teachers working with CwA should self improve professional knowledge about CwA. Actively contact with parents in order to develop plan and provide better teaching methods.
- Training, management and research agents of early childhood education need research, provide guidance materials, references to promote professional information resource for preschools to meet the diversity need and ability of children in implementing preschool curriculum and improve quality of inclusive education.
- Parents should actively contact with teachers to discuss about their children' schooling issues; should explore knowledge from printed materials and experience exchange; supportively involve in educational process for their children.