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Inoamor Deseo Yen
Department of Education, Philippines

Correspondence:
Inoamor Deseo Yen
Department of Education, Philippines

Enhancing Self-Help Skills of Children with Exceptional Needs in a Public SPED Center through Interrelated Need-Based Operations (INO)

Inoamor Deseo Yen

Abstract
Self-help skills are vital to children growing up as it enables them to adapt to their immediate environment. But for children with exceptional needs, self-help skills mean surviving on day to day basis. This practical and reactive action research investigated the efficacy of Interrelated Need-Based Operations (INO) in enhancing self-help skills of children with exceptional needs in Catarman SPED Center. Using the mixed methods concurrent embedded design approach, the observation checklist of the pupils' self-help skills along with dressing, food preparation, and grooming, and hygiene as well as an interview with the parents were administered simultaneously. The observation scores were analyzed through descriptive statistics and the Wilcoxon Signed-Rank test evaluated the test of difference. The parents' responses were subjected to thematic analysis. Total population purposive sampling technique were used to identify and sample the participants. Findings revealed that there was a small significant difference in the pupils' self-help skills before and after INO was administered. To corroborate these, the testaments of the parents showed that INO expedites the cultivation of self-help skills as it facilitated dressing maneuvers, serve up food preparation practices, and nurtured grooming and hygiene. It is recommended that learners in the SPED class be given enough time and effort in terms of enhancing their self-help skills. They are important members of society, hence they should be treated as one.

Keywords: self-help skills, special education, positive reinforcement, instructional videos

Introduction
Children with exceptional needs will learn grooming and other self-help skills such as food preparation, dressing and others as soon as they are able. These skills should be taught from the time the child is very young, because the sooner and in more ways the child can become independent, the happier he or she will be. The child who has developed sufficient self-help skills is more likely to be integrated into a regular classroom setting and have better experiences with peers.

One role of special education is to increase the functional independence of children receiving services. Practitioners have used systematic instruction to teach academic, social, self-help, recreation/leisure, and vocational skills to different categories of children. However, children with intellectual disabilities show a continuous limitation in one or more of the adaptive behavioural patterns of communication, personal hygiene, domestic life, social skills, self-control, community interaction, health and security. Academic function, work-life and spare-time utilization have continued to playout in the quest to educate children with intellectual disabilities. Children with intellectual disabilities are categorized into mild, moderate, severe and profound (Papazoglou et al., 2014).

Children with intellectual disabilities can acquire self-help skills if teaching methods are applied effectively (Gargiulo, 2006). These skills must be developed in whatever setting, whether home or school, for maximum independence. Development of such skills may assist children with intellectual disabilities to increase autonomy, co-dependence and nurturing problem-solving in the house, school and in the whole community at large (Lombardi, 2011).

Improving self-help skills in children with intellectual disabilities and the acquisition of hygiene protection skills and behaviour through training in this social group remain a major

institutional and community concern of care receivers and researchers, hence the need for individuals with ID to increase independent daily living abilities (Bouck, 2014). Teaching independent living self- help skills is a process that begins at birth and goes on into adulthood. Children with disabilities find these skills difficult to perform for various different reasons. However, they will need to acquire these skills as best they can to live as independently as possible. Even if they cannot live independently, being independent in self -care will take a lot of burden off the caregivers. Thus, this is often the most important goal for a child with a disability. That is why it is so important to plan independent living skills lessons for students with intellectual disabilities (Ayres & Cihak, 2010).

There are various methods a teacher can use to teach children with intellectual disabilities. One of the popular methods for behaviour modification is the use of operant conditioning techniques with the use of rewards and punishments. However, most studies are not clear as to how these techniques could be done. Also, no further studies were available as to the extent on which these reinforcements are able to develop self-help skills to children with exceptional needs.

Banking on instructional videos, charts, demonstration techniques, this study looked into the effectiveness of Interrelated Need-Based Operations (INO) in enhancing the self-help skills in children with exceptional needs in Catarman SPED Center during the school year 2020 - 2021. The results of this study would be able to guide teachers of children with exceptional needs and other stakeholders for the benefit of the learners.

Research Questions

Generally, this action research aimed to determine the efficacy of INO in developing the self-help skills of children with exceptional needs at Catarman SPED Center.

Specifically, it sought to provide answers to the following:

1. What is the level of self-help skills of children with exceptional needs during the pre-assessment?
2. What is the level of self-help skills of children with exceptional needs during the post-assessment?
3. Is there a significant difference in the self-help skills of the children during the pre-assessment and post-assessment?
4. How can the Interrelated Need-Based Operations (INO) enhance the self-help skills of children with exceptional needs?

Hypothesis

Ho: There is no significant difference in the self-help skills of the children during the pre-assessment and post-assessment.

Methodology

This study reflected the practical action research model of Grundy (1983) because the intervention, Interrelated Need-Based Operations (INO), was designed and developed by the researcher. Also, the reactive research model of Craig (2009) was shown in this study since the concern regarding the skills of Children with Exceptional Needs in Catarman SPED Center had been encountered. Moreover, Creswell's (2013) mixed methods concurrent embedded research design was used. The quantitative data from the pre-test and post-test and the qualitative data from the observations were collected and analyzed simultaneously. Then, the results were combined to gain an in-depth understanding of the efficacy of Interrelated Need-Based Operations (INO) in enhancing the self-help skills of children with exceptional needs in Catarman SPED Center. In addition, the iterative action research cycle proposed by (Froilan and Adarayan- Morallos 2019) composed of the following steps: design intervention, implement, assess, and reflect was utilized. A homogeneous purposive sampling technique (Froilan & Adarayan, Morallos 2020) was used to identify and select the four participants, 2 males, and 2 females. Descriptive statistics and the Wilcoxon Signed-Rank test was used to analyze the quantitative data while the interview responses were processed through Saldaña's (2015) thematic analysis model.

Further, the intervention, INO, was composed of video lectures with demonstrations, a digital guide, and a pupil's progress chart. It underwent validation by the Master Teacher and School Head in Catarman SPED Center.

Results and Discussion

Level of self-help skills of children with exceptional needs during the pre-assessment

Table 1 presents the pupils' level of self-help skills of children with exceptional needs during the pre-assessment. In general, the pupils displayed very satisfactory performance (*M* = 3.42, *SD* = 0.42) in self-help skills along with dressing up, food preparation, and grooming and hygiene.

Generally, the pupils dressed up very satisfactorily (*M* = 3.48, *SD* = 0.50). In particular, they were outstanding in terms of Item 9 (*M* = 4.25, *SD* = 0.83), "*Put on shoes.*" However, it can be gleaned that the pupils performed satisfactorily in terms of Item 10 (*M* = 2.75, *SD* = 0.83), "*Ties shoes"*, Item 5 (M = 3.00, SD = 0.71), "*Starts a zipper,"* Item 2 (*M* = 3.25, *SD* = 0.43), "*Puts on a pullover shirt,*" and Item 1 (*M* = 3.25, *SD* = 0.43), "*Puts on a front opening shirt or jacket*." This means that that putting on their shoes was easy but they struggle when it came to tying shoes, starting a zipper, putting on a pullover shirt, and putting on a front opening shirt or jacket. It indicates a lack of motor skills and cognitive processes in performing such self-help skills.

In terms of food preparation, the pupils displayed a satisfactory performance (*M* = 3.29, *SD* = 0.39), in general. Specifically, they showed outstanding performance in terms of Item 1 (*M* = 4.25, *SD* = 0.43), "*Drinks from a cup*." In contrary, they performed satisfactorily along Item 4 (*M* = 2.75, *SD* = 0.83), "*Spreads with knife*," Item 5 (*M* = 2.75, *SD* = 0.83), "*Makes sandwich,*" Item 6 (*M* = 2.50, *SD* = 0.50), "*Uses a can opener*." It can be opined that the research participants were used to drinking from a cup. But spreading with the knife, making a sandwich, and using a can opener was a challenge for them.

Overall, their performance in grooming and hygiene was very satisfactory (*M* = 3.50, *SD* = 0.38). In particular, they performed very satisfactorily along Item 6 (M = 4.00, SD = 0.71), "*Brushes teeth,*" and Item 2 (*M* = 4.00, SD = 0.00), "*Washes and dries face.*" However, they only managed to show a satisfactory performance as regards Item 7 (*M* = 3.25, *SD* = 0.43), "*Trims fingernails/toenails*." This means that they already mastered the skill of brushing their teeth and washing and drying their faces. On the contrary, they still need additional training in trimming their fingernails/toenails.

Table 1: Level of self-help skills of children with exceptional needs during the pre-assessment.

A. Dressing	Mean	SD	Interpretation
1. Puts on a pullover shirt	**3.25**	**0.43**	**Satisfactory**
2. Puts on a front opening shirt or jacket.	**3.25**	**0.43**	**Satisfactory**
3. Buttons by self	3.50	0.50	Very Satisfactory
4. Puts on pants (does not include fastening)	3.25	0.43	Satisfactory
5. Starts a zipper	**3.00**	**0.71**	**Satisfactory**
6. Removes pants (does not include unfastening)	3.50	0.50	Very Satisfactory
7. Remove shirt	3.50	0.50	Very Satisfactory
8. Put on socks	4.00	0.71	Very Satisfactory
9. Put on shoes	**4.25**	**0.83**	**Outstanding**
10. Ties shoes	**2.75**	**0.83**	**Satisfactory**
11. Remove shoes	3.75	0.83	Very Satisfactory
12. Remove socks	3.75	1.09	Very Satisfactory
13. Selects clothes appropriate to the context	3.50	1.12	Very Satisfactory
Sub-Mean	**3.48**	**0.50**	**Very Satisfactory**
B. Food Preparation			
1. Drinks from a cup	**4.25**	**0.43**	**Outstanding**
2. Eats with a spoon	4.00	0.00	Very Satisfactory
3. Eats with fork	3.75	0.43	Very Satisfactory
4. Spreads with knife	**2.75**	**0.83**	**Satisfactory**
5. Makes sandwich	**2.75**	**0.83**	**Satisfactory**
6. Uses a can opener	**2.50**	**0.50**	**Fairly Satisfactory**
7. Transfers the canned good into a plate	3.00	0.71	Satisfactory
Sub-Mean	**3.29**	**0.39**	**Satisfactory**
C. Grooming and Hygiene			
1. Washes and dries hands	3.75	0.43	Very Satisfactory
2. Washes and dries face	**4.00**	**0.00**	**Very Satisfactory**
3. Combs and brushes hair	3.75	0.43	Very Satisfactory
4. Uses deodorant	3.75	0.83	Very Satisfactory
5. Puts toothpaste in the toothbrush	3.75	0.83	Very Satisfactory
6. Brushes teeth	**4.00**	**0.71**	**Very Satisfactory**
7. Trims fingernails/toenails	**3.25**	**0.43**	**Satisfactory**
Sub-Mean	**3.50**	**0.38**	**Very Satisfactory**
Grand Mean	**3.42**	**0.42**	**Very Satisfactory**

Level of self-help skills of children with exceptional needs during the post-assessment

Table 2 presents the pupils' level of self-help skills of children with exceptional needs during the post-assessment. Generally, the pupils' skills in dressing up were very satisfactory (*M* = 4.50, *SD* = 0.50). In particular, they displayed showed outstanding performance along Item 8 (*M* = 4.25, *SD* = 0.43), "Put on socks," Item 9 (M = 4.25, SD = 0.83), "Put on shoes," and Item 11 (*M* = 4.50, *SD* = 0.50), "Remove shoes." This means that the pupils' skills in putting on socks, putting on shoes, and removing their shoes improved after going through the intervention.

The pupils exhibited very satisfactory performance in food preparation (*M* = 3.79, *SD* = 0.48). Specifically, they showed outstanding performance along Item 1 (*M* = 4.50, *SD* = 0.50), "Drinks from a cup," and Item 2 (*M* = 4.50, *SD* = 0.50), "Eats with spoon," but very satisfactory as regards Item 5 (*M* = 3.75, *SD* = 0.83), "Makes sandwich," and Item 7 (*M* = 3.75, *SD* = 0.83), "Transfers the canned good into plate." It can be opined that after the series of activities during the implementation of INO, the pupils improved their skills in drinking from a cup, eating with a spoon, and making a sandwich on their own. Being able to enhance this set of self-help skills is a good sign that the exercises were tailored to fit their nature as SPED learners.

In terms of grooming and hygiene, the pupils demonstrated very satisfactory performance (*M* = 3.97, *SD* = 0.43), in general. Particularly, they showed outstanding performance along Item 1 (*M* = 4.50, *SD* = 0.50), "Washes and dries hands," and Item 2 (*M* = 4.50, *SD* = 0.50), "Washes and dries face," and Item 4 (*M* = 4.50, *SD* = 0.50), "Uses deodorant." It can be said that performing the self-help exercises during the implementation of INO, guided by the instructional videos, helped the pupils improve their skills in washing and drying hands and face, and they learned to use deodorant. Having able to enhance the grooming and hygiene practices of the pupils, INO provides activities commensurate to the motor skills of the pupils. Coinciding these findings, Thomson et al. (2014) found out that videos increased student engagement.

Table 2: Level of self-help skills of children with exceptional needs during the post-assessment.

A. Dressing	Mean	SD	Interpretation
1. Puts on a pullover shirt	4.00	0.71	Very Satisfactory
2. Puts on a front opening shirt or jacket.	3.75	0.43	Very Satisfactory
3. Buttons by self	3.50	0.50	Very Satisfactory
4. Puts on pants (does not include fastening)	3.75	0.83	Very Satisfactory
5. Starts a zipper	4.00	0.71	Very Satisfactory
6. Removes pants (does not include unfastening)	4.00	0.71	Very Satisfactory
7. Remove shirt	4.00	0.71	Very Satisfactory

8. Put on socks	**4.25**	**0.43**	**Outstanding**
9. Put on shoes	**4.25**	**0.83**	**Outstanding**
10. Ties shoes	3.50	0.50	Very Satisfactory
11. Remove shoes	**4.50**	**0.50**	**Outstanding**
12. Remove socks	4.00	0.71	Very Satisfactory
13. Selects clothes appropriate to the context	3.75	0.83	Very Satisfactory
Sub-Mean	**3.94**	**0.49**	**Very Satisfactory**
B. Food Preparation			
1. Drinks from a cup	**4.50**	**0.50**	**Outstanding**
2. Eats with a spoon	**4.50**	**0.50**	**Outstanding**
3. Eats with fork	3.50	0.50	Very Satisfactory
4. Spreads with knife	3.25	0.43	Satisfactory
5. Makes sandwich	**3.75**	**0.83**	**Very Satisfactory**
6. Uses a can opener	3.25	0.43	Satisfactory
7. Transfers the canned good into a plate	**3.75**	**0.83**	**Very Satisfactory**
Sub-Mean	**3.79**	**0.48**	**Very Satisfactory**
C. Grooming and Hygiene			
1. Washes and dries hands	**4.50**	**0.50**	**Outstanding**
2. Washes and dries face	**4.50**	**0.50**	**Outstanding**
3. Combs and brushes hair	4.00	0.00	Outstanding
4. Uses deodorant	**4.50**	**0.50**	**Outstanding**
5. Puts toothpaste in the toothbrush	4.25	0.83	Outstanding
6. Brushes teeth	4.25	0.43	Outstanding
7. Trims fingernails/toenails	3.25	0.43	Satisfactory
Sub-Mean	**3.97**	**0.43**	**Very Satisfactory**
Grand Mean	**3.90**	**0.47**	**Very Satisfactory**

Test of difference in the self-help skills of the children during the pre-assessment and post-assessment

Table 3 exhibits the test of difference in the self-help skills of the children during the pre-assessment and post-assessment. It can be opined that there was a small (d = -0.156) significant difference in the self-help performance of the pupils between the pretest (M = 3.50, SD = 0.48) and posttest (M = 3.96, SD = 0.41), z = - 4.214, p < .001. This means that they earned higher scores in the posttest compared to the pretest. It implies that with INO, their self-help skills along with dressing, food preparation, and grooming, and hygiene improved significantly after watching the instructional videos and guided performance activities. In like manner, Risko et al. (2012) found that student report of mind wandering increased and retention of the material decreased across the video lecture.

Table 3: Test of difference in the self-help skills of the children during the pre-assessment and post-assessment.

Group	N	Mean	SD	Z	*p*-value	Interpretation	Estimate for Effect size	
							d	Description
Pretest	27	3.5	0.48	- 4.214	.000	Significant	-0.156	Small
Posttest	27	3.96	0.41					
Monte Carlo (2-tailed)								

The INO Effect

Generally, the pupils' testimonies of their experiences with the intervention, INO, revealed that it expedite the cultivation of self-help skills as it facilitated dressing maneuvers, serve up food preparation practices, and nurture grooming and hygiene.

Facilitate dressing maneuvers. For the parents of the pupil-participants, INO trained their kids in the step-by-step process of dressing up. The repetitive exercises build their motor skills in wearing shirts, buttoning, putting on shorts, and putting on sacks to name a few. According to one parent,

""My child already knows how to put on his clothes without my assistance. He knew this with the repetitive process we do in putting his clothes. He already knows how to button his clothes but sometimes I also assist him in aligning the buttons with the right holes. He also knows how to zip on his pants without any assistance. He can easily put on and remove his clothes on his own. He also knows how to put on his socks and how to tie his shoe laces, but he still takes time with the shoe laces. He is faster for him to remove his shoes rather than putting it on without any help from me. He is also has his own fashion style" (Transcript 1, lines 7-21, p. 1).

Serve up food preparation practices. The testimonies of the parents revealed that INO taught the kids how to prepare food. Through constant and correct practice, they acquired the skill of drinking in a glass, using a spoon and pork, and spreading the bread to name a few. The intervention enabled the pupils to develop those essential self-help skills. In the words of a parent,

""Because of this intervention, my child has learned to drink from the glass without spilling any drop of water. He has also learned to use the utensils, because before he is used to eat using his bare hands. He also learned how to put spread into the bread and make a sandwich on his own. But I always see to it that I assist him, especially, when open canned goods. Instead, I let him transfer the food from the can to the plate on his own" (Transcript 1, lines 31-40, p.2).

Nurture grooming and hygiene skills. The parents' accounts of their observations showed that their kids acquired the basic skills in grooming and hygiene. According to them, their INO taught their kids how to comb hair, wash and dry face, wash the dishes, and brush teeth on their own. These were the crucial changes in the self-help skills of the pupils that can be attributed to INO. A parent gladly said,

"My children learned how to clean their bodies properly. They became more neat and looks pretty because they kept brushing their hair, unlike before. They also know now how and when to wash their hands and faces. Before eating any meals, they don't forget to wash their hands. Above all, their teeth became healthier because they always brush their teeth, and also learned to cut their nails too" (Transcript 1, lines 45-53, p.2).

It can be opined that video lectures and guided instruction improved the self-help skills of the pupils. Utilizing video lectures was found to be an effective avenue for learners to increase engagement and retention, according to Risko (2012). Likewise, in Mayer and Moreno (2003), instructional videos increased students' retention and ability to transfer information.

Table 4: The INO Effect.

Theme	Organizing themes	Noteworthy Statement
Expedite cultivation of self-help skills	• facilitate dressing maneuvers	"*My child already knows how to put on his clothes without my assistance. He knew this with the repetitive process we do in putting his clothes. He already knows how to button his clothes but sometimes I also assist him in aligning the buttons with the right holes. He also knows how to zip on his pants without any assistance. He can easily put on and remove his clothes on his own. He also knows how to put on his socks and how to tie his shoe laces, but he still takes time with the shoe laces. He is faster for him to remove his shoes rather than putting it on without any help from me. He is also has his own fashion style*" (Transcript 1, lines 7-21, p. 1).
	• serve up food preparation practices	"*Because of this intervention, my child has learned to drink from the glass without spilling any drop of water. He has also learned to use the utensils, because before he is used to eat using his bare hands. He also learned how to put spread into the bread and make a sandwich on his own. But I always see to it that I assist him, especially, when open canned goods. Instead, I let him transfer the food from the can to the plate on his own*" (Transcript 1, lines 31-40, p.2).
	• nurture grooming and hygiene skills	"*My children learned how to clean their bodies properly. They became more neat and looks pretty because they kept brushing their hair, unlike before. They also know now how and when to wash their hands and faces. Before eating any meals, they don't forget to wash their hands. Above all, their teeth became healthier because they always brush their teeth, and also learned to cut their nails too*" (Transcript 1, lines 45-53, p.2).

Reflection

Overall, I was elated with the progress in my pupils' self-help ability. I was glad that after having them perform various self-help exercises, they were able to dress on their own, prepare food, and practiced good grooming and hygiene. These basic life skills are essential for them to survive with minimal supervision from their immediate family. The sense of achievement for every self-help skill that they developed drove them to do more on their own. It is now my job to make sure they achieve those things. That is why if there is any I want to add to the mechanism of my intervention that would be to use a buddy system wherein pupils from mainstream education are paired with pupils from the SPED class to perform certain tasks. This is a good opportunity to give the pupils a sense of acceptance and normalcy in their life.

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