

Educating children with special needs about wildlife

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Introduction

Teaching about the importance of environment and wildlife to humans with above average intelligence is an easy task. But teaching about the same things to children with special needs with mild to moderate mental retardation is tough and a challenging task. The students of the Bachelor of Rehabilitation Science (Mental Retardation) of the National Institute for Mentally Handicapped, Manovikasnagar, Secunderabad, Andhra Pradesh (henceforth, Primary Educators) with the help of the Wildlife Conservation Educators from Department of Zoology, Osmania University, Hyderabad, Andhra Pradesh (henceforth, Secondary Educators) undertook this challenge. The programme included 15 pre-vocational students (of *Karavalamban Kendra* of National Institute for Mentally Handicapped, Secunderabad (henceforth, Target Group) with an average age of 16 1/2 years (range 14-18 years) with mild to moderate mental retardation. The Target Group had some knowledge about the common domestic animals but lacked any information about wild animals. The Target Group could comprehend some of the abstract concepts with the help of critical thinking and was also independent in most of the traveling skills. The Primary Educators planned to initiate the Target Group to appreciate and love wild animals through a set of novel education modules including classroom approach of 'Unit' and 'Social Learning Theory', and also field outreach approach, with the help of Secondary Educators, by exposing them to wilderness in the Nehru Zoological Park, Hyderabad.

Rationale

Special children need special teaching techniques for initiating them in to novel fields. The Educators felt that innovative teaching modules combining classroom training and field exposures leave a lasting impression on children with special needs and they too need to be exposed to the variety of wild animals through progressively enhancing education programmes aimed at enriching their knowledge. Experience indicates that the children with special needs when exposed to such teaching experiments show positive learning capabilities.

Aims:

- To teach the Target Group about the wild animals using the 'Unit' and 'Social Learning Theory' approach specifically about:
 1. Basic differences between 'Reptiles' and 'Mammals'.
 2. Differences between young and adult.
 3. Recognize selected animals and physically describe them.
 4. Learn about their natural habits – their food and homes.
- Create awareness about the environment among the Target Group.

Animals Selected for teaching

Mammals -- Monkey, Elephant
Reptiles -- Crocodile, Snake

Classroom Approach:

The programme executed in the classroom by the Primary Educators provided a base for need based and functional learning to the Target Group. The classroom activities

included six sessions each with an unique teaching module that aimed at gradually exposing the Target Group to the topic. Each session lasted two hours and was facilitated by selected Primary Educators (Table 1).

Before starting the sessions, the Primary Educators had interactive talk with the Target Group to assess their knowledge in relation to the topic and inform the Target Group about the process. Each session began with short lecture by one or more of the Primary Educators followed by individual to individual interactions to enable the Target Group to understand the topic better by using various education materials developed by the Primary Educators including animal models, flash cards, animal cutouts, animal drawings, and exposure using multimedia. The Primary Educators also enacted a skit titled "Strength in Unity" including the target animals. The second, fourth and sixth session concluded with short quiz to assess the Target Group's grasping abilities.

The classroom approach was designed under the guidelines of teaching methodologies emphasizing on social learning theory and unit approach that enables children with special needs to grasp the general concepts with ease. These learning methodologies basically aim at developing social competencies, arithmetic concepts, communication skills, health and safety, and locomotory skills among the Target Group (Table 2).

Field Exposure Approach:

As the zoo is the near simulated wilderness in urban setting they play an important role in education programmes targeting creation of awareness among the common man about wild animals and their needs. It was felt that the children with special needs, being denied of such exposures should be given an opportunity to visit, admire and learn in a safe and friendly environment that the zoo provides. In this regard, the Primary Educators along with the Secondary Educators planned one-day trip to the Nehru Zoological Park, Hyderabad. At the Zoo, the Target Group was taken to enclosures having target animals where each Primary Educator interacted with one individual of the Target Group (11 in all, see Appendix 1) and exchanged information. The Secondary Educators kept record of the responses of the Target Group.

After having shown them the target animals, the team had working lunch on the lawns in front of the elephant enclosure during which the Target Group overwhelmed everybody in the vicinity by their excitement and happiness. The Secondary Educators took this opportunity to expose the Target Group to insects like butterflies. After initial reluctance the Target Group let go off their inhibitions and went

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Table 1. Details of the sessions conducted in the classroom and at zoo

Session	Date	Activity	Responsibility*	Materials used
First	05.01.'04	First interaction (Mammals)	C. Gopalakrishna, Tanya Sowmya, Rajendra Kumar	Flash cards, Animal cutouts, Animal models
Second	07.01.'04	Second interaction (Reptiles)	M. Saptagiri, Rajesh Prasad	Flash cards, Animal cutouts, Animal models
Third	12.01.'04	Skit ('Strength in Unity') Scripted by Rajeev Ranjan	C. Gopalakrishna, Prakash Chandra, Imtiyaz Akbar, Rajeev Ranjan, Rajendra Kumar	Animal costumes, Masks
Fourth	19.01.'04	Drawing Competition	Vivek Kumar, Ravi Kant	Drawing sheets, pencils, erasers, crayons, sketch pens
Fifth	21.01.'04	Role Play	Rajesh Prasad Yadav, M. Saptagiri, Ashwini Kumar,	Animal costumes, Masks
Sixth	22.01.'04	Leisure Activity	Paulami Gupta, Neeti Srivastava, Tanya Sowmya, Ashwini Kumar Tiwari	Viewing of film "Jungle Book" and Indian Wildlife CD on computer
At Zoo	25.01.'04 Morning session	Individual-to-Individual interaction	See Appendix 1	Live zoo exhibits
	At Lunch session	About insects	C. Srinivasulu Bhargavi Srinivasulu	Live insects
	Afternoon session	Quiz (Quiz conducted by Mast. C. Aditya)	Tanya Sowmya, C. Gopalakrishna, C. Srinivasulu, Bhargavi Srinivasulu	See Appendix 2
		Role Play	Target Group & Primary Educators	ZOO Educational packet
	Evening	Toy Train Ride	Everybody	Toy Train

* denotes the names of the individuals of the Primary and Secondary Educators responsible for the activity

on to catch grasshoppers and butterflies to satisfy their curiosity and feel the creatures on their hands. The Target Group's quick response baffled the faculty of the *Karavalamban Kendra* who accompanied the Target Group.

Later the Target Group was taken around the Zoo Park to show them other animals in the Zoo, which they liked very much and vociferously enjoyed watching them. After the walk in the Zoo, a quiz and role play was conducted. The Target Group was divided in to two groups and were asked questions related to target animals, to which most answers were accurate. The Secondary Educators made sure that each individual of the Target Group answered to at least one question. The members of the Target Group displayed sense of understanding and responsibility. No one quipped when other members were responding to the questions. One girl with speech problem had full support from other members of both the groups and no one interrupted while she answered in her gestural communication. Every member of Target Group applauded loudly each correct answer indicating sense of unity and understanding. Following the quiz, Secondary Educators handed out the Educational Packets provided by Zoo Outreach Organisation, Coimbatore to everybody. A small interactive session by Secondary Educators targeted the Primary Educators in developing educating skills for creating awareness among the public about wildlife and its conservation. This was followed by the role play by the Target Group with active participation by both the Primary and Secondary Educators. The field exposure session concluded with a ride on the toy train that the Target Group enjoyed immensely.

Conclusion:

This was the first time that this kind of topic was taken up by the Primary Educators to teach the Target Group about wild animals. The carefully planned classroom teaching modules and well executed field exposure with aid of the educational materials provided by Zoo Outreach Organisation have efficiently helped in improving the understanding and comprehension skills among the children with special needs. The experience of educating children with special needs was indeed very beneficial as it has proved successful not only in imparting permanent impression on their understanding about animals but also teaching us many things that can be learned only in their company.

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Appendix 1 Participants of the programme

Target Group	Primary Educators*	Secondary Educators
Mr. Raghav Mehdiratta	Mr. Rajeev Ranjan	Dr. C. Srinivasulu
Mr. G. Kanaka Raju	Mr. M. Saptagiri	Dr. Bhargavi Srinivasulu
Mr. M. Mahesh Murthy	Mr. Prakash Chandra	
Ms. R. Navya	Ms. Paulami Gupta & Ms. Neeti Srivastava	Faculty of the <i>Karavalamban Kendra</i>
Mr. D. Mahesh	Mr. Ravi Kant	Mr. Ganesh Shergwar (Principal)
Mr. Md. Jabeer	Mr. Md. Imtiaz & Mr. Ashwini Kumar	Ms. Radha (Class Teacher)
Mr. Y. Vinay	-	
Mr. K. Venkatesh	Mr. Vivek Kumar	Escort
Mr. G. Veeresh	Mr. C. Gopalakrishna	M/o Ms. J. Gowthami
Mr. R. Shalini	-	
Mr. V. Naga Deepak	-	Quiz Master
Ms. J. Gowthami	Ms. Tanya Sowmya	Mast. C. Aditya Srinivasulu
Mr. Ankit Goel	Mr. Rajendra Kumar	
Mr. Elton	-	
Mr. Ch. Vikram	Mr. Rajesh Prasad Yadav & Mr. Ashwini Kumar Tiwari	

* The names of the Primary educators have been arranged as per their assigned individual from Target Group for field exposure class

Appendix 2

Questions for the final quiz conducted in Nehru Zoological Park [Questions were developed keeping in view the mental ability of the Target Group by Practical In-charge (Special education) of the Primary Educators at NIMH, Secunderabad, and were asked in vernacular (Telugu and Hindi) by Primary Educators namely, C. Gopalakrishna, P.Gupta, T. Sowmya, R.Prasad Yadav and M. Saptagiri]

On ELEPHANT

1. Which animal has largest ear?
2. Which animal has trunk?
3. What do elephants eat?
4. Which animal has tusk?
5. What colour is an elephant?
6. How many tusk does an elephant have?
7. What is the young of the elephant called?
8. How many times the elephant is bigger than a lion? (a) Same, (b) 4 times, (c) 10 times

On LION

1. Who is the king of jungle?
2. What does the lion eat?
3. Where does the lion live?
4. What is the difference between a male and a female lion?
5. What is the young one of a lion called?
6. What is the colour of the lion?
7. Identify the lion from the following mammals? [Flashcards included – (a) Tiger, (b) Lion, (c) Puma, (d) Cheetah]
8. Lion hunts during the day as well as in night. [Right/Wrong].

On MONKEY

1. Name three things that the monkey eats?
2. Monkey uses its tail for jumping and safety on trees? [Right /Wrong]
3. How many times a Monkey is smaller than a Lion? (a) Half, (b) 6 times, or (c) 10 times
4. Which animal among these lives on trees: (a) Lion, (b) Crocodile, or (c) Monkey.

5. When does a Monkey stays awake? (a) Day, (b) Night, or (c) Both
6. Which animal among these has strong sense of community living and like to be in Groups: (a) Crocodile, (b) Snakes, or (c) Monkey.

On CROCODILE

1. Where does Crocodile lives?
2. What does Crocodile eats?
3. Which animal has long jaw and sharp teeth?
4. When does the Crocodile hunt? (a) Day, (b) Night, or (c)Both
5. Do Crocodile lay eggs or give birth to young ones?
6. Which animal among these has rough and hard skin for its protection: (a) Crocodile, (b) Snake or (c) Lion.
7. Which animal among these can live in water as well as on land: (a) Crocodile, (b) Monkey or (c) Lion.
8. Can Crocodile run? [Yes/No]
9. Can Crocodile jump? [Yes/No]

On SNAKE

1. Which animal is shaped like a rope?
2. Do snakes lay eggs or give birth to young ones?
3. Which is the poisonous animal among the following: (a) Snake, (b) Crocodile or (c) Monkey?
4. What do snakes eat?
5. Which animal among these shed their skin: (a) Elephant, (b) Snake, or (c) Lion?
6. Which animal among the following swallows its food without chewing:

- (a) Elephant, (b) Crocodile, or (c) Snake?

On TORTOISE

1. Which animal has longest life span?
2. Which animal has hard shell covering its body?
3. Do Tortoise lay eggs or give birth to young ones?
4. What does the Tortoise eat?
5. To protect itself from danger which animal hides itself within its shell?
6. How many legs does Tortoise have?

Table 2. Strategies used to achieve the objectives of the programme

Objective 1. To teach the basic differences between reptiles and mammals.

Targeted development/learning theme in Target Group -- Social competencies and arithmetic concepts

Strategy -- Reinforcements, verbal prompting, gestural prompting, modeling and cueing

Materials used -- Animal templates, flash cards and costumes.

Objective 2. Physical description of selected animals.

Targeted development/learning theme in Target Group -- Communications and social competencies

Strategy -- Reinforcements, verbal prompting, gestural prompting, modeling and cueing

Materials used -- Animal templates, flash cards and multimedia

Objective 3. Natural habits – food and homes.

Targeted development/learning theme in Target Group -- Social competencies, health and safety

Strategy -- Reinforcements, verbal prompting, gestural prompting, modeling and cueing

Materials used -- Animal templates, flash cards, skit and multimedia

Objective 4. Differences between young and adults.

Targeted development/learning theme in Target Group-- Communications, arithmetic and social competencies

Strategy -- Reinforcements, verbal prompting, gestural prompting, modeling and cueing

Materials used -- Animal templates, flash cards, role play and multimedia