

The BaRK (Building Reading Confidence for Kids) canine assisted reading program: One child's experience.

Barbara Fisher and Merle Cozens | Avondale College of Higher Education, New South Wales

Abstract

This study investigated the effectiveness of the BaRK program for Zack, one disengaged reader. The BaRK program is a canine assisted literacy program in which a child reads one-on-one to a trained therapy dog. The 'Neale Analysis of Reading Ability' was used to compare Zack's reading accuracy and reading comprehension ages before and after the program. His perception of the program and possible correlations with the test results were also assessed. Results indicated dramatic gains in both accuracy and comprehension with greater gains occurring in comprehension. Possible reasons for the successful outcome of this study are discussed, along with its limitations and suggestions for further research.

Introduction

It is widely accepted that a child's confidence and success with books and reading, particularly at the initial stages, shows a direct relationship to his/her attitude towards reading. Every child needs to be engaged in the reading process from a very early age if they are going to succeed at school, and later in the workforce (Ecklund & Lamon, 2008). But how can a teacher identify if a child is engaging with literacy learning? According to Guthrie (2001), "engaged readers seek to understand: they enjoy learning and they believe in their reading abilities. They are mastery orientated, intrinsically motivated, and have self-efficacy" (p. 1). However, not every child finds reading an engaging task. It follows, therefore, that any new idea or suggestion which has the potential to actively involve a child in literacy learning, or re-ignite their love of reading, is worthy of investigation.

One relatively new program, that has the potential to engage students, involves trained therapy dogs and their volunteer owner/handlers. In a controlled environment, the dog and the volunteer handler sit and listen while the child reads aloud to them. According to the Story Dogs (2013a) website, "the non-judgmental, loving nature of dogs gives this program its magic. Children relax, open up, try harder and *have fun* reading to a friendly and calm dog." These interactions involving therapy animals are "designed to promote improvements in the physical, social, emotional and /or cognitive functioning of human participants" (Smith & Meehan, 2010, p.1). Jalongo (2005) reporting on Friedmann, Thomas, and Eddy's research (2000) says that:

when children were asked to read aloud under three conditions (to a peer, to an adult, and to a therapy dog), the presence of the therapy dog reduced children's blood pressure and heart rate to normal levels and diminished other observable signs of anxiety. (p. 54)

These anecdotal comments seem to suggest that a canine assisted literacy program may have academic as well as therapeutic value. Its non-threatening and unusual approach to reading instruction may encourage the disaffected and disconnected reader to reconnect with literacy.

The development of canine assisted literacy programs

The first, and possibly the best-known canine assisted literacy program, *Reading Education Assistance Dogs (R.E.A.D.)*, which commenced in 1999 in the state of Utah in the USA, was designed by Sandi Martin, a nurse and board member of the Intermountain Therapy Animals (ITA) organisation (Dunlap, 2010; Intermountain Therapy Animals, n.d.). She had noticed the positive benefits that animals brought to patients so began the *R.E.A.D* program, believing that it had the potential to benefit disengaged readers. The original program involved an ITA trained dog and its handler for a fifteen-minute time slot with a ratio of one-to-one dog-to-client (see Figure 1) in a library setting (Intermountain Therapy Animals, n.d.). Within a year the program had successfully moved into the school system (Stone, 2007).

INSERT FIGURE 1 APPROXIMATELY HERE This photo is typical of the delightful interaction witnessed between dog and child wherever canine assisted reading programs are conducted

The success of this literacy concept soon spawned a variety of similar literacy programs but with a range of adaptations. Some of the more widely publicised programs include: *Bonding, Animals, Reading, Kids and Safety (BARKS)* (Stone, 2007, Smith, 2009); *Sit Stay Read* (Stone, 2007, Smith, 2009); *Canine Assisted Reading Education (C.A.R.E.)* (Stone, 2007) *Reading with Rover* (Paradise, 2007); *Paws for Reading* (Truett & Becnel, 2011) and *All Ears Reading* (Smith & Meehan, 2010). While maintaining the crucial element of a child reading one-on-one to a dog, these programs vary in a number of aspects including age level of the children (Kindergarten through to upper primary-aged students); length of one-on-one reading time with the dog (fifteen minutes up to thirty minutes); the venue (public libraries, schools, child-care centres, bookshops); those responsible for the selection of participants (self-selected, teachers, reading specialists, parents); selection of reading materials (child, teacher, dog handler); and the ability level of the participants (children who are learning-disabled, normally achieving readers, children with autism, disengaged readers).

Critical to the successful implementation of any of these canine assisted reading programs is the selection and training of suitable dogs (See Figure 2) and the provision of resources and training for their handlers (Intermountain Therapy Animals, n.d.). Foremost in providing this training have been professional organisations such as The Delta Society, The Rainbow Therapy Group, and Intermountain Therapy Dogs (Smith, 2009). Before being included in any program, all dogs and their handlers must meet specific criteria and training, including a health check and vaccinations (Intermountain Therapy Animals, n.d.; Story Dogs, 2012). Currently, according to Shaw (2013), approximately 3000 volunteers, can be found across 49 states of the US, four teams in Canada and 59 teams throughout Europe and around the world.

INSERT FIGURE 2 APPROXIMATELY HERE A trained Delta Classroom Canine™ ready and eager to listen to his next story.

Australia is relatively new to the concept of canine assisted literacy programs so consequently their accessibility is limited. Currently available programs include the following:

1. *Story Dogs*. The *Story Dogs* program began in the Tweed region of northern New South Wales but has been extended to include the Gold Coast region in Queensland (Story Dogs, 2013b). This 2009 literacy program was an initiative of Janine Sigley

and Leah Sheldon in Murwillumbah, New South Wales and modelled on the United States of America *R.E.A.D.* program (NSW Government Department of Education and Communities, 2011).

2. The *Delta Classroom Canines™ Program*, which originated in Geelong, Victoria (Mathieson, 2009), provides assistance for those children who have difficulty with reading and writing but are not part of a remedial reading program. The dog and its handler work with either an individual child or a group of children in the classroom setting (Delta Society, n.d).
3. The *Special Human Animal Relationships in Education (S.H.A.R.E. Reading Dogs Program)* is a Gold Coast, Animal Welfare League Queensland initiative. This program is classroom based and involves the volunteer handlers and their dogs being assigned a regular group of up to six students who need extra help with reading. Each child in the group is allocated an individual reading time with the dog of ten to fifteen minutes. To assist in the evaluation of this program anecdotal questionnaires are collected from all participants, volunteer dog handlers, teachers and students (Animal Welfare League Queensland, 2013).

BaRK's history

The *Building Reading Confidence for Kids* (BaRK) program, the subject of this research project, began in 2008 at the Windale Public Library, Lake Macquarie, New South Wales (Parsons, 2008; Tobin, 2012) in association with Delta Classroom Canines™ (Lake Macquarie City Library, 2010). It is a library-based, free after-school program with one local high school using it as a classroom program (Lake Macquarie City Library, 2010).

The BaRK program (see Figure 3) was inspired by and modelled on *R.E.A.D.*, the original United States of America canine assisted reading program (Lakes Mail News, 2012). According to Parsons (2008) and Lakes Mail News (2012), it is believed that Lake Macquarie was the first local council to implement a canine assisted literacy program within Australia. BaRK is a free program which targets reluctant readers in the middle-upper primary school classes (Flynn, 2010). Delta Classroom Canines™ provides the dogs and their handlers, who are all volunteers (Lake Macquarie City Library, 2010).

INSERT FIGURE 3 APPROXIMATELY HERE The BaRK Program Brochure

Since 2008 the BaRK program has continued to expand and in 2013 it was available at four sub-branch libraries across the Lake Macquarie City Council Region (Flynn, 2010; Scott, 2010). Originally, says Flynn (2010), teachers referred children for the program but now, with the expansion of the program, parents are able to nominate their child to participate in the program. To make BaRK a distinctive canine assisted literacy program, upon graduation each child receives a certificate and a couple of small gifts (Flynn, 2010).

Research into the effectiveness of canine assisted literacy programs

While a great number of USA-based anecdotal reports extol the virtues and value of canine assisted literacy programs (e.g., Jalongo, 2005; Shaw, 2013), according to Smith (2009), few empirical research studies, either qualitative or quantitative, have evaluated the effectiveness of these programs in improving children's reading skills (p. 34). Those studies that are available have generally found significant results for improvements in oral reading fluency and accuracy (e.g., Smith, 2009; Smith & Meehan, 2010), along with significant increases in

engaged reading time (Griess, 2010), and significant improvements in reading skills such as the ability to explain, describe, analyse and infer (Paradise, 2007).

The only available Australian research study on a classroom-based canine assisted reading program (Jenkins, 2009) used a phenomenological research design. A number of principals and teachers were interviewed about the perceived benefits of integrating therapy dogs from the Delta Society's Classroom CaninesTM program into classroom environments. Jenkins's research uncovered a number of perceived benefits, including positive effects on current reading programs and increased time in reading engagement, but no attempt was made to measure actual achievement gains of the students.

As there are still many gaps in the literature, more Australian research is needed, if this form of literacy intervention is to become more widespread and available (Jenkins, 2009). The current study seeks to fill some of those gaps. It was designed to evaluate the effectiveness of the BaRK program for one disengaged child. It involved using a standardised test administered before and after the completion of the program so as to compare the child's results with same aged peers. An audio-taped interview of the child's responses to the program was also chronicled. The researchers posed the following questions:

1. What effect will the BaRK program, involving an eight weekly, fifteen-minute tutoring sessions with a trained therapy dog and its handler, have on the child's oral reading accuracy and reading comprehension levels?
2. Is there a correlation between the child's attitude to the program and the pre- and post-test results?

The research

Zack, the student in this research study, was in Year 5 when the intervention took place. Prior to the commencement of this study he had been involved in private tutoring for approximately twelve months. His mother had originally organised the tutoring sessions with the researchers because of her concerns regarding Zack's attitude towards and his progress in literacy acquisition and development. His knowledge of and interest in things such as insects, and other various scientific subjects, was intriguing, and not indicative of a student who is challenged academically.

Early on in the private tutoring program *Form L* of the *Peabody Picture Vocabulary Test-Revised* (Dunn & Dunn, 1981) was administered, when Zack's chronological age was eight years and eleven months. This is a receptive vocabulary norm referenced test screening for verbal ability and is useful as a bench mark of Zack's range of receptive vocabulary knowledge. The analysis of the data indicated a Percentile Rank of sixty and a Stanine Score of six. These scores indicated that Zack was in the high end of the average score range when compared with his chronological age group. These results seemed to indicate that Zack was not engaging with literacy, rather than being an academically challenged literacy learner.

Approximately a year later when Zack's chronological age was nine years and ten months the researchers quite unexpectedly discovered the BaRK program advertised in the local newspaper. This advertisement describing the soon-to-be-conducted BaRK program at the Toronto Public Library (Lake Macquarie, NSW) suggested to the researchers that this program may be suitable for re-engaging this child with reading. So with the parent's permission it was organised for Zack to attend the program for one term.

Zack's involvement in the BaRK program

The program is designed to last for eight weeks and Zack was asked to commit to attending each of the weekly sessions. A special area was organised and prepared in the library so the program could provide a non-threatening, comfortable and non-judgmental engaging literacy experience. Materials required for each session included: a mat for the dog to sit on and access to drinking water- provided by the dog's handler; two large bean bags for the comfort of the dog's handler and Zack provided by the library; and reading material, chosen by Zack from the library stacks.

For each of the eight weeks that the program was conducted Flash, the dog, and his handler came to the library (see Figure 4) the same day each week with the weekly session totalling one hour. During this allocated hour there were four, fifteen minute slots when four different children would sit with and read to Flash, the dog, and his handler. Zack, the child in this study, was allocated one of the four available time slots. A large portion of the first session was devoted to him interacting with Flash and the dog's handler so as to feel comfortable. During each session the volunteer handler and her dog listened as Zack read aloud materials he had chosen from the library. When he stumbled or could not read a word the volunteer assisted, but only if requested. At the conclusion of each fifteen minute session an interaction time was allocated for patting and stroking Flash. Occasionally Zack would give the dog a treat, supplied by the dog's owner, and sometimes the dog would demonstrate a selection of his well-rehearsed tricks. This interaction time was a very important aspect of each literacy session. Upon completion of the eight week program Zack was delighted to receive a certificate, a library bag and a couple of other small gifts.

INSERT FIGURE 4 APPROXIMATELY HERE Zack, Flash, the dog, and his handler interacting together in a BaRK reading session.

Measures

As a measure of improvement in reading ability, Zack was pre-and post-tested with the *Neale Analysis of Reading Ability* (Neale, 1999). This test has two parallel forms, Form 1 and Form 2 covering text reading rate, accuracy and comprehension. The raw scores can be converted into measure of Reading Age, Percentile Rank and Stanine scores. For the purposes of this study only the accuracy and comprehension scores were used. Since this study involved only one child the *Neale Analysis of Reading Ability* was chosen as the instrument because, "As a standardized and widely used test, it allows an individual child to be compared to the population" (Spooner, Baddeley & Gathercole, 2004, p.188).

As an indicator of attitude to the canine assisted literacy program, the child was post-tested with a short interview recorded by the researchers. Relationships between his perceptions and the changes in the pre- and post-test results were then examined.

FINDINGS

Results of the pre- and post-tests for Reading Accuracy are found in Table 1, while the results of the pre-and post-tests for Comprehension are found in Table 2. The results indicate a dramatic improvement between the pre-test scores and post-test scores for both reading accuracy and comprehension, with greater gains being made in comprehension.

Reading Accuracy Age: As indicated in Table One, in five months the child's Reading Accuracy Age increased by one year and six months. Whereas the child's Reading Accuracy Age was two years below chronological age at the beginning of the intervention, it was only

eleven months below chronological age by the time of the post-test. This demonstrates a substantial positive change.

Percentile Rank: These scores indicate a noticeable improvement in reading accuracy of nine percentile rank scores during the five month period.

Stanine Score: Improvement from a comparatively low achievement stanine score of three to an average achievement score of four indicates observable progress.

Table 1. A summary of the pre- and post-test results for the *Neale Analysis of Reading Ability Form 1 & 2, Reading Accuracy*.

<i>Neale Analysis of Reading Ability</i>	Form 1- March 28, 2012	Form 2-August 22, 2012
Chronological Age	9 years 10 months	10 years 3 months
Reading Accuracy Age	7 years 10 months	9 years 4 months
Percentile Rank	19	28
Stanine	3	4

Reading Comprehension Age: As indicated in Table 2, there was a substantial positive change in the Reading Comprehension Age scores of two years and eleven months. It indicates the child's comprehension age was now fourteen months higher than his chronological age.

Percentile Rank: Form 2 post-test indicated that the child's percentile rank had increased dramatically by twenty-nine per cent to a rank of sixty-two per cent. Only thirty-seven per cent of students were now better than this child.

Stanine Score: From pre- to post-test there was a change from a stanine of four to a stanine score of six. This indicates substantial progress to the range of moderately high achievement when compared to others in his chronological age group.

Table 2. A summary of the pre- and post-test results for the *Neale Analysis of Reading Ability Form 1 & 2, Reading Comprehension*

<i>Neale Analysis of Reading Ability</i>	Form 1- March 28, 2012	Form 2-August 22, 2012
Chronological Age	9 years 10 months	10 years 3 months
Reading Comprehension Age	8 years 6 months	11 years 5 months
Percentile Rank	33	62
Stanine	4	6

As this research was about encouraging an engagement with reading the child's perceptions of the program were vitally important. Here is a selection of comments transcribed from the audio-taped interview between the researcher and the child at the conclusion of the program.

Researcher: What was the best part of the BaRK program?

Child: Reading the books with Flash.

Researcher: Was it easier to read to a dog than to someone else?

Child: Yes it was because I don't really feel that intimidated because it is a bit harder to speak to someone who actually talks back to you when you make a mistake.

When the child was questioned about doing the program again he indicated that he did not want to repeat the experience as it had interfered with his regular weekly afternoon activities with his grandpa. He also commented that he had learnt new things through the program and would only consider it again if it didn't interfere with his special grandpa time.

Discussion

The results of this study indicate that the BaRK program was effective in engaging one disconnected reader, as indicated by dramatically improved scores in the post-test. A number of features of the program may have contributed to this outcome. Firstly, as evidenced by the child's comments, he found this to be an enjoyable, non-threatening experience. This is in line with research cited previously demonstrating the therapeutic and academic value of reading to a dog. Secondly, the fact that the child was able to choose his own reading materials may have contributed to the effectiveness of the program. As indicated earlier the child is intrigued by all things scientific, so being able to choose books from this genre may have contributed to his interest and motivation. This would confirm research by Guthrie and Wigfield (2000) which indicates that giving students a choice of reading material increases effort and commitment to reading. Finally, the combination of enjoyment and interest provided by the program may have provided positive, internal motivation which, according to Hidi (2006), can "lead to optimal learning and performance" (p. 78).

Some cautions and limitations

While the BaRK program proved to be very effective in re-engaging the child in this study, (see Figure 5), a number of factors emerged which would need to be taken into account when undertaking any further research of this nature. First, so as to obtain optimal benefit from the program, competing interests would need to be avoided as indicated by the child's reluctance to repeat the program if it clashed with special "grandpa time." Second, this case study involved only one child. Results may not be applicable to all disconnected students. Finally, the child in this study was disengaged rather than academically challenged. For children with learning disabilities, the improvement in tests scores may not be so dramatic. These factors highlight the need for further research of this nature involving a greater number of participants who are disengaged readers, as well as with other populations such as students who are learning disabled.

INSERT FIGURE 5 APPROXIMATELY HERE A delighted Zack displays his BaRK certificate and other gifts awarded him at the completion of the BaRK program.

CONCLUSION:

As there is no available measure or test that specifically measures a child's engagement or disengagement in literacy learning, the researchers used available measures to infer engagement, such as measures indicating improvement in reading accuracy, comprehension, and a positive attitude to the program. This research, therefore, has endeavored to show that the BaRK program has the potential to help children who have become disengaged readers by:

- Re-igniting their interest in reading;
- Improving their literacy skills; and
- Developing renewed confidence and enjoyment in reading.

Guthrie (2004) has outlined the significance of providing appropriate programs for the disengaged reader. He states, "Because engaged readers spend 500% more time reading than disengaged students, educators should attempt to increase engaged reading time by 200%-

500%. This may require substantial reconfigurations of curriculum” (p. 1). Maybe a canine assisted literacy program could provide a learning experience as part of the “reconfiguration of curriculum” that endeavours to re-engage the disengaged learner. This research has demonstrated that the BaRK program provided the impetus and motivation to re-engage one disengaged and disaffected reader.

Further information on the BaRK program can be obtained from:

Julie Dunn, Lifelong Learning Officer for Lake Macquarie City Library
jdunn@lakemac.nsw.gov.au

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Barbara Fisher is currently a Senior Lecturer in the School of Education at Avondale College of Higher Education, Lake Macquarie Campus, NSW, where she has lectured in Curriculum Studies -English for over 20 years. Her research interests include finding new and innovative ways to assist the unique learning needs of "at-risk" and disengaged readers. Contact: barbara.fisher@avondale.edu.au

Dr Merle Cozens is currently an Honorary Senior Research Fellow for Avondale College of Higher Education, Lake Macquarie Campus, NSW, where she previously spent 18 years in

the Faculty of Education as Dean, senior lecturer, course coordinator and researcher. Her research interests include reading disability, special education and metacognition.