

The Impact of the Classroom Canines Program on Children's Reading, Social and Emotional Skills, and Motivation to Attend School

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Abstract: New, Wilson and Netting's 1986 research demonstrated that domestic animals are an integral component of many people's social support network. While such animals, particularly dogs, have since been successfully used as therapy dogs in clinical situations since the 1960s, the use of dogs in the learning environment has only recently been trialled. Turner (2011) evaluated the use of dogs within the adult learning environment, ultimately concluding that dogs can be a beneficial bridge between adults and education. Jenkins (2009) and Sorin (2012) investigated the value of dogs within the primary school system, finding benefits including enhanced literacy, and improved social skills. Bassette and Taber-Doughty (2013) found that on-task behavior increased in primary school students with emotional and behavioural disabilities through a dog reading program. Increasingly, the value of dogs within a variety of learning environments, is being recognized. In Australia, the Delta Society's 'Classroom Canines' program, where children read to dogs, was developed to assist children with literacy and/or social/emotional skills. This research investigated the impact of the Classroom Canines™ program on the reading, social/emotional skills and motivation to attend school of 11 students, aged 5 – 11, in a primary school in Australia. All students had been identified as falling below, or being at risk of falling below, the academic benchmarks for their year level. The study used both quantitative and qualitative data, including reading scores, attendance records, classroom observations, interviews with teachers and students, and researcher journals. The study found that reading scores and attendance improved, but further that children were more motivated to learn, felt better about themselves as learners, and seemed to get along better with their peers.

Keywords: Dogs in Primary School Classroom, Dogs and Literacy Learning, Dogs and Social-Emotional Learning

Introduction

Research conducted by New, Wilson and Netting (1986) identified that pets are an integral component of the social support network for many individuals with 95% of those surveyed saying that they talk to their pet, 82% identifying that their pet assists them when they are feeling sad and 65% stating that touching their pet makes them feel better. Furthermore, pet interactions are known to benefit people physiologically, socially, psychologically and cognitively, including lowering blood pressure and pulse rates (Katcher, Friedman, Beck and Lynch 1983), increasing self-esteem, enhancing and initiating social interactions (M^cNicholas, Collis and Morley, as cited in Lane, M^cNicholas and Collis 1998).

Possibly the first measured research involving dogs and children was conducted by Levinson in the early 1960s (Heimlich 2001). He noted that the inclusion of dogs in his therapy sessions with withdrawn children facilitated discussion and positive therapeutic intervention. Animals are also reported to be significant to the social and cognitive development of children (Martin and Farnum 2002). The inclusion of dogs in the learning environment has proven significant for children experiencing challenges with comprehension, literacy, concentration, and in overcoming learning difficulties such as Attention Deficit Hyperactivity Disorder, Conduct Disorder and Autism (Scott, Haseman and Hammett 2005). Bassette and Taber-Doughty (2013) found that on-task behavior increased in primary school students with emotional and behavioural disabilities through a dog reading program.

The Delta Society, Australia was established in 1997 to foster and enhance the mental and physical well-being of human beings resulting from contact with and bonding between people

and their companion animals. Classroom Canines™ is one of the programs offered by Delta with an aim of fostering literacy and social development in primary school students as well as enhancing their social and cognitive development. To date there has been minimal research about the Classroom Canines™ program in Australia. Jenkins (2009) investigated teachers' responses to the Classroom Canines™ program in primary schools in southern Australia. Perceived benefits of the program included: improved community links; positive effects on reading practice; academic improvements; increased social emotional wellbeing; positive effects on children with autism; and increased engagement in reading. Sorin (2012) conducted research on the program implemented in a primary school in northern Australia, interviewing students and teachers. Benefits reported confirmed that dogs in the classroom can enhance the experiences of students as they grow and develop relevant literacy (writing) and social/emotional skills. Further the study found: increased positive sense of self as learner; increased positive social interaction between students and with teachers and dogs; increased motivation and on task behavior; and better attendance at school.

This research further examined the Classroom Canines™ program, this time in the context of its impact on children's reading, social/emotional skills and motivation to attend school.

The research took place at a primary school in northern Australia. It involved 11 students, aged 5 – 11, who had been identified as falling below or being at risk of falling below the academic benchmarks for their year level. Utilising both quantitative and qualitative data, including reading scores, attendance records, classroom observations, artifacts (work samples), interviews with teachers and students, and researcher journals, it attempted to evaluate the impact of the Classroom Canines™ program on reading, social/emotional skills and motivation to attend school. This paper presents some of the findings: improvements in reading scores and attendance; and improvements in motivation, sense of self as a learner, and social interactions with peers.

Literature Review

From ancient times, cultures across the world have incorporated and appreciated the presence of animals in daily lives (Zhu, Potte, Xie, Hoffman, Deng, Shi, Pan, Wang, Shi, Wang, She, and Wu 2004). For centuries animals have aided with tasks such as hunting and transportation, and have been noted for providing companionship for humans for over 600 years (Hirschman 1994). Animals were often featured in mythology (Mallon 1992) and continue to be accepted in cultures and societies in a variety of ways, providing a common theme in films, entertainment (Burt 2001), and advertising campaigns (Rock and Lail 2009). Animals, and dogs in particular, are incorporated into society in human-benefiting areas such as animal-assisted therapy, teaching, work, and research. Dogs aid humans in many ways: they may undergo training to serve as companion dogs (Duffy and Serpell 2008), police and service dogs (Dorriety 2005), cancer-sniffing dogs (Cornu, Cancel-Tassin, Ondet, Giradet and Cussenot 2011), search and rescue dogs (Jones, Dashfield, Downend and Otto 2004), and therapy dogs (Friesen 2010a).

Many agree that owning a companion animal can enhance one's quality of life (Heimlich 2001). People often embrace animals as part of their family (Hirschman 1994) and large groups such as the Royal Society for the Prevention of Cruelty of Animals (RSPCA), have been set up to protect their well-being (Burt 2001). Yet, while many animals are protected under such organizations and laws, documents show that historically, human affection for animals has been stronger for some animals over others (Stokes 2007), particularly 'man's best friend,' the dog (Wade 2002).

While dogs are now commonly used in therapy, they can also be used in education (Friesen 2010a; Mallon 1994). Melson (in Becker and Morton 2002), observed that infants, who learn through the senses are drawn to animals chiefly because animals are loaded with information; you can see them, touch them, hear them and smell them. Dogs in the classroom help to build a

child's self-esteem (Meadan and Jegatheesan 2010) and emotional stability by providing a friend with whom the child can bond (Friesen 2010a). Children have an easy time trusting a non-judgmental animal (Siegal 2004).

Classroom animals have also been documented to aid in the development of a child's social skills, where an interaction with an animal increases a child's awareness of others' feelings (Goleman 1990; Jalongo 2005; Meadan and Jegatheesan 2010). Social skills are especially critical as a child develops, where studies correlate high social capabilities with the overall success of an individual (Siegal 2004). Dogs can help build community ethos and enable teamwork within the class, because students work together to look after the animal and learn to take turns in their one-on-one encounters (Friesen 2010b; Meadan and Jegatheesan 2010). As the whole classroom shares the experience of their new canine friend, students also have more in common and therefore have an experience to talk about (Meadan and Jegatheesan 2010).

Animals additionally promote self-control in students where a child must be appropriately behaved in order to spend time with the animal (Flom 2005). This behaviour is highly enforced in the presence of an animal and carries over to other areas of the classroom (Siegal 2004). Animals have been known to help with a diverse range of behavioural disorders, including cases of Conduct Disorder (CD) and Attention Deficit Hyperactivity Disorder (ADHD) (Geist 2011). Classroom dogs encourage students to be more attentive, cooperative, and alert (Friesen 2010a), which enhances their classroom performance.

Finally, dogs promote learning through their physical presence in the classroom. Animals enrich a learning environment and encourage a lighter mentality, which in turn opens new doors for learning in various subjects (Shadforth 2008; Willis 2009), including reading, writing, mathematics, social studies and economics (Siegal 2004). Dogs provide a good learning environment through the relaxation they bring to a classroom. Because animals bring a sense of acceptance (Friesen 2010a) and understanding, students are more likely to overcome individual learning challenges. In addition, dogs can lower blood pressure in children (Friesen 2010a; Siegal 2004) and reduce stress and anxiety, which enables students to feel more comfortable interacting with both peers and adults (Friesen 2010a; Jalongo 2005). Animals enable learning to involve multiple senses, thus stimulating more areas of the brain and increasing one's learning potential (Willis 2009). Dogs also promote social interaction in children. When students interact with a classroom dog, they are frequently in direct contact with the animal, sharing hugs and pats. This direct touch produces endorphins, relaxing the child and encouraging a better social outcome (Levinson 1984). Studies have also found that events incorporating a variety of senses especially smell, allowed students to recall events more easily (Shadforth 2008). Such increase in a student's memory and attention span will therefore enhance the early literacy skills of a child (Davidse, Jong, Bus, Huijbregts and Swab 2011).

Dog literacy programs are becoming increasingly popular in many countries. Hall (2009) noted that the combination of pets and children was a powerful tool when it comes to literacy. A student's ability to learn a language is divided into oral and written, where the influence of oral language dramatically increases a student's ability of 'learning to learn' (Hill and Launder 2010) and therefore, vital for literacy skills. First made popular by Intermountain Therapy Animals in the USA, the READ program provides an accredited dog to whom students read to practice their reading. The READ program recommends each student spend 20 minutes reading aloud to a dog each week, accumulating roughly 14 hours of supervised reading practice per year (Jalongo 2005).

Dog literacy programs are not restricted to reading, but can also involve writing and other areas of curriculum. Additionally, dog literacy programs can be held outside the classroom. For example, dog literacy programs are becoming popular in public libraries. In these programs, similar to the programs conducted in classrooms, students can sign up to read to a dog in 15-minute sessions, ultimately raising a child's self-confidence and increasing their school attendance (Truett and Becnel 2011). Animal-assisted reading programs in schools and libraries

have been conducted in 43 US states, four provinces in Canada, in addition to other countries including India, Hong Kong, China, Australia, and the United Kingdom (Friesen 2010b).

The main component of such literacy programs is that the dog provides a nonjudgmental audience for the student (Friesen 2010b), where students perceive their canine companion to be a “good listener” that can “understand” them (Mallon 1994). ‘Literacy dogs’ prevent students from feeling “lonely” when they share in a reading session, and simultaneously, enable them to develop reading skills at their own pace (Hall 2009). Students have lower blood pressure when they read aloud to a dog (Friesen 2010a), where the calm nature of the dog benefits their ability to learn (Friesen 2010b). Overall, it is becoming increasingly recognized that dogs provide a positive reading environment for students (Townsend 2003).

Finally, in addition to literacy, Siegal (2004) found that READ dogs also encourage writing. For example, a student in the READ program became so motivated to share her/his experience with a literacy dog, that he/she eventually wrote an 8-page paper relaying the event, despite never having written a paper before. Another student also gained such confidence in her reading abilities that her literacy score doubled within 15 months of the dog-literacy program (Siegal 2004). Occasionally, students chose to write stories to the dog that were not required by the teacher (Friesen 2010b), further showing children’s enthusiasm of the sessions.

Programs involving animals and education are gaining popularity worldwide; highlighting the urgent need for research to reveal the impacts of such programs (Friesen 2010b; Friesen 2010a). Recent research in Australia included a project conducted by Turner (2011) that evaluated the use of dogs as ‘mediating artifacts’ within the adult learning environment, ultimately concluding dogs can be a beneficial bridge between adults and education. Jenkins (2009) investigated the therapeutic and educational benefits of the Classroom Canines™ program for school students, focusing on principals’ perceptions of the program. It is noted that the program described in this unpublished research included dog handlers as well as dogs in interactions with students. Focusing on student and teacher interviews and student work, Sorin (2012) found that the program enhanced students’ literacy, motivation and interaction with others, and Fisher (2014) found that a child, identified as a ‘disengaged reader’, had dramatic gains in reading ability (in both accuracy and comprehension) after reading to a dog for 15 minutes a week for eight weeks. The latter case study revealed that the participant maintained these higher reading scores on a 12 month follow-up.

This research focused on the impact of the program on students’ reading, sense of self as learners and social interactions/ relationships with other students, teachers and dogs. It attempted to distance dog handlers from interacting with students during their time with the dog. It was hoped that by removing adult input and focusing on the child-dog interaction, the researchers would be better able to determine the impact of the dog as a mediating artifact on students’ reading, sense of self as learners and interactions with others. Data in this study were collected from reading scores, attendance records, classroom observations, interviews with teachers and students, and researcher journals.

Methodology

This research was conducted as a single site case study within a social constructivist paradigm. Turner (2011) explains that this paradigm, which is based on Vygotsky’s sociocultural theory, “emphasises the important role that interaction with other people and cultural artifacts play in learning” (25). Dogs in the classroom, Turner argues, should be seen as cultural artifacts that mediate learning.

Yin (2009) defined a case study is an inquiry about a contemporary phenomenon, in a ‘real-life’ context. Further he suggested that a case study benefits from prior theoretical propositions and uses multiple sources of evidence to confirm or disagree with the propositions. In this

research, the case study aimed to explain the impact of the Classroom Canines™ program, and in so doing to describe the implementation of the program within the school context.

This research was mixed method, using both Qualitative and Quantitative data. Wiersma and Jurs (2005) note that this a method often used in evaluation and in school settings, “several issues may be investigated simultaneously” (274). They state that due to the complexity of school issues, multiple measures may be the appropriate way to frame the research (Ibid).

The study aimed to investigate the impact of the Classroom Canines™ program on the reading and social/emotional skills of selected students at a primary school in northern Australia. The key question behind this research was, “How does the Classroom Canines™ program impact upon students’ reading and social/emotional skills?”

The Classroom Canines Program

The Classroom Canines™ program was conducted over a semester in a state-run primary school in northern Queensland, Australia. The school is located in a lower socio-economic suburb. The Australian Early Development Index (AEDI), a measure of students’ school readiness completed by teachers in the first year of formal schooling, indicated that 32.1% of students in the suburb were vulnerable in one or more domains and 23.2% are vulnerable in two or more domains. Twenty three percent of students were assessed as vulnerable in Communication skills and general knowledge; 21% in Social competence; and nearly 20% in Physical health and wellbeing. These are among the most concerning scores in the area.

Administrators at the school chose to focus on students who were falling below, or being at risk of falling below, the academic benchmarks for their year level. A total of 11 students, aged between 5 and 11, participated in the program.

The Classroom Canines™ program involved a dog handler with their Delta Society certified dog attending the school once a week. Students for the most part came one at a time, for approximately 20 minutes, to read to the dog. At the end of the session, students had the opportunity to feed the dog a treat. A research assistant attended most sessions, along with the handler. At times, students were given a prompt by the handler, but mainly they read to the dog uninterrupted for the duration of their session.

Participants

A group of 11 students, 8 boys and 3 girls, who attended either a learning support program, an academic support program, or were considered ‘disengaged’ within the school were chosen by the school for this pilot project. They ranged in age from 5 to 11 years. Six of the 11 attended the School’s Academic Success Program, as they had been identified as falling below or at risk of falling below the benchmarks for their year levels. These students attended a remedial, Academic Success program for 45 minutes, four times a week, for 10 or 20 weeks. Four students were in the Learning Support Program, which they attended for as long as necessary. Two students were identified as ‘disengaged’, particularly with reading.

In total, there were three dogs and their handlers involved with this research. Each week two dogs and their handlers attended the school and the students read to the dogs.

Researchers

Researchers conducted interviews with students and teachers at the beginning and end of the program, and spoke informally to teachers about the program. Further, a research assistant attended most weeks of the program, taking on the role of ‘non-participant observers’. Unlike ‘participant observers’, who try to generate data from the perspective of participants (Wiersma and Jurs 2005), they positioned themselves at the periphery, watching and recording but not participating or prompting.

Data Collection and Analysis

This research utilized a number of data collection tools, including: Pre and Post-program interviews with students and teachers; observations; Attendance data; and Reading Scores.

The Pre and Post Program interviews were semi-structured. The pre-program interviews asked students if they liked coming to school; what they were like as a learner and reader; how they get along with peers and teachers; pets and how they relate to dogs; and about them joining the program. Teachers of each participating student were asked to describe the student as a learner and reader; how they socialize with others, how they thought the Classroom Canines™ program would impact on the student’s learning, and their own attitudes to dogs and other pets. Responses were recorded, transcribed, and put into tables. An example of a pre-program interview is presented in Table 1 below.

Table 1: Pre-Program Interview

Do you like coming to school? What are you like as a learner?	Do you like reading? What are you like as a reader?	How do you get along with other children? Teachers?	Do you have pets at home? Do you like dogs? Tell us about how you get along with dogs or other pets?	We are planning to bring a dog into your class. How do you feel about this?
Yes. You get to learn, play and have stories and play on computers and go to the library. I’m a good learner. I spell and write good and always do sentences good.	Yes. I’m a good reader. I have a little problem – sometimes I just get stuck on words.	I just be their friends. I have 5 friends. Teachers – I don’t get along with them well. They teach me too much stuff. It’s giving me a headache.	I have one dog. It’s a little dog, a girl, 3 years old. I like dogs and fish. I cuddle them and stuff.	Good. I practice at home reading to a dog.

The Post-Program interviews asked students what they did in the Classroom Canines™ program; if and how they had changed as a learner and reader; whether their interactions with peers, teachers and dogs had changed, and their feelings about the Classroom Canines™ program. Teachers were asked how students participated in the program, and whether the students’ feelings about themselves as a learner, their attendance and motivation, and their reading had changed. They were also asked their opinions of the Classroom Canines™ program.

Information in tables was then coded, using open or emergent coding. Concepts were identified, applied to further text, and refined to produce emergent themes. According to Kumar (2005), this process involves reading through interview responses to gain understanding of their meaning and, “from these responses you develop broad themes that reflect these meanings...these themes become the basis for analysing the text” (240 - 241).

Researchers took notes at each session they attended, about what happened, the children’s reading, and any interaction with the dog, handler or themselves. For example, in the first week a researcher wrote about one student:

Has a dog (according to teacher); had been looking forward to reading to the dog, talking about it and practicing his reading). Interacting with handler. Seems interested in what’s happening, looking around the room, at me at someone walking past; turning and smiling at Charlotte. Researchers also wrote reflections following program implementation. For example, one research noted of a student:

Quite a timid child at the beginning, who gradually increased his confidence as the program progressed. Over time I witnessed his relationship with Charlotte (the dog) improve – at the beginning he barely wanted to pat her, but by the end he was kicking the soccer ball and feeding her treats. After the post interview he came up to me quite confidently and asked me if he was reading to the dog next Wednesday. He seemed quite disappointed that Charlotte wasn’t present so he had obviously developed a strong relationship with her.

Researcher data were also coded and used to support other information gathered.

Both individual and year level attendance data were provided by the school (see Figure 1 below), along with students’ reading scores before the program began and at the end of the program. Reading scores for students’ year levels were also provided and this gave comparison data. The quantitative data were examined for individual change as well as for comparison with other students in the program and at the same year level.

Year Level:		Year 1					Roll Class: 1D						
Summary													
Full Day						Part Day							
Explained	Total	Mon	Tue	Wed	Thu	Fri	Explained	Total	Mon	Tue	Wed	Thu	Fri
No	3	0	2	0	0	1	No	0	0	0	0	0	0
Yes	10	2	0	2	1	5	Yes	3	0	1	1	1	0
Full Day Absences													
Date	Day	Reason	Details										
08-Nov-2013	Friday	Illness											
01-Nov-2013	Friday	Illness											
18-Oct-2013	Friday	Illness	mUM PHONED										
18-Sep-2013	Wednesday	Illness											
31-Jul-2013	Wednesday	Illness	Had his tooth pulled out.										
23-Jul-2013	Tuesday	Unexplained											
07-Jun-2013	Friday	Unexplained											
06-Jun-2013	Thursday	Illness											
31-May-2013	Friday	Illness											
28-May-2013	Tuesday	Unexplained											
27-May-2013	Monday	Illness											
22-Apr-2013	Monday	Illness											
19-Apr-2013	Friday	Illness	Medical certificate and mum rang.										
Total Full Day Absences: 13													
Part Day Absences													
Date	Day	Reason	Details										
31-Oct-2013	Thursday	Illness											
24-Jul-2013	Wednesday	Other											
11-Jun-2013	Tuesday	Early Departure											
Total Part Day Absences: 3													
Unexplained Absences													
Date	Day	Part of day	Details										
25-Jul-2013	Thursday	Late (NP)											
23-Jul-2013	Tuesday	All Day											
07-Jun-2013	Friday	All Day											
28-May-2013	Tuesday	All Day											
Total Unexplained Absences: 4													

Figure 1: A student’s attendance data

Findings

The study found that reading scores and attendance improved, but also that there were social and emotional effects, in that students were more motivated to learn, felt better about themselves as learners, and seemed to get along better with their peers. Each of these findings is described below.

Reading Scores and Attendance Improved

Overall there was an improvement to students’ reading. Of the 11 students in the program, five made substantial progress with their reading. This meant that their reading score on standardized tests went up three or more levels. Two of the 11 made some progress, with their reading going up one or two levels. One student said that teachers comment about her reading, saying, “Oh wow, why is your reading so good? I say because I’m reading to a dog.”

Three students' reading levels stayed the same. Of the three, one was identified as having other issues that may have negatively affected his or her reading, and was referred for further testing. Another student's reading level went down during the time of the program. Again, this was determined to be the result of other issues and was referred for further testing.

Further quantitative data (Reading Level - Literacy) provided by the school indicated that participants' reading levels had improved during the Classroom Canines™ program in 2013, compared to the previous year. But perhaps the most striking improvement was that Year 1 and 2 students who participated in the Classroom Canines™ program performed on par with, and even slightly better than peers who were not identified as having learning difficulties. The Classroom Canines™ group had an average increase of 2 points, 2 points compared to an increase of 1.9 for the rest of the students in the year levels.

Overall, attendance throughout the school term improved during the Classroom Canines™ program. One student's attendance decreased (although none of the unexplained absences were Classroom Canines™ days), and two student's (poor) attendance remained the same. But the majority of students did not miss a Classroom Canines™ day, or only missed a day due to ill-health. A teacher commented on her student's attendance, which was 100%, that "she always looks forward to [the day the dog attended]."

It is worth noting that one student missed three days at the time when a new dog was introduced, as the original dog and handler had left the program. This could indicate that the student was not comfortable with the change in the routine/handler/dog.

Social and Emotional Effects

In the initial teacher interviews, aspirations for students beyond reading skills included motivation, confidence, and social and emotional skills. One teacher noted, "I feel the Classroom Canines™ program will have a positive impact on his learning, especially with boosting his self esteem and reading ability." Another hoped that the program would "give motivation to participate, a topic to talk about, and a calming effect around relationship issues." In discussing another student, the teacher commented that she hoped the program would help the student develop, patience for self and others, resilience, and a willingness to try."

Following the program, most students reported improvements to their confidence and sense of selves as learners. Some spoke of their attitude to school:

- I like school more. I'm doing better and listening.
- I'm a better learner.
- Before I didn't like coming to school. Now, yes, because when I get up with the dogs they sniff and after they stopped sniffing and didn't bark.
- I was struggling. Now I'm used to reading. I'm a better learner.

From the teacher interviews, there was an overall view that students had improved as learners: three students were described as having more motivation; two of being more confident, and one each of persevering more and having a better attitude:

- C has become a much more confident reader.
- I have seen an improvement in her confidence level when she reads aloud in class.
- His confidence has developed and he has made progress with reading.
- He has become more confident and more inclined to keep going when he is faced with difficult words.

The greatest improvements in social skills reported by both students and teachers were in interactions with peers. Five students reported improvement in peer relations and teachers reported that four students improved in their peer relations. One student said that since the

Classroom Canines™ program began, “Kids are nicer to me and me to them. They don’t pick on me now.”

Some students also reported that their relationships with teachers had improved. One student said, “Yes, I was mucking up in class...I didn’t [really] know the teacher but now I do and I don’t muck up.” Further, both students and teachers reported positive and improved relationships with dogs:

- I’ve been getting along [with dogs], getting better and better.
- I get on better now [with dogs].
- Yes. Other dogs as well as Charlotte. I have a dog at home. I get along with it better.

Discussion and Conclusion

This study investigated the impact of the Classroom Canines™ program on the reading and social/emotional skills and motivation to attend school of 11 selected students identified as falling below or being at risk for falling below the academic benchmarks for their year level. It utilized both quantitative and qualitative data, including reading scores, attendance records, classroom observations, interviews with teachers and students, and researcher journals.

Overall attendance improved during the Classroom Canines™ program. Students who historically had poor attendance records made the point of attending the sessions so that they could read to the dog. Some of the students formed strong emotional bond with the dogs, and, similar to other research in the field (Friesen 2010b), these students chose to write stories to the dog that were not required by the teacher.

For many students, not only did their motivation to attend school increase, but also their feelings about themselves as learners and their interactions with their peers. Other research similarly found that having dogs in a classroom aids in building children’s confidence and self-esteem (emotional skills) and their empathy and interactions (social skills) (Goleman 1990; Jalongo 2005; Meadan and Jegatheesan 2010). In this research, a teacher described one of the students arriving early every dog day, waiting for the dog and handler at the school gates, and enthusiastically escorting them to the reading room. He drew pictures for the dog as well (Figure 2) and even brought in a small toy dog for the dog. (Figure 3). The student reported, “I read with the dog [whose name was ‘Charlotte’]. I read her the story about her – *Charlotte’s Web*. I write about Charlotte.”



Figure 2: Drawing for the dog



Figure 3: Toy dog for the dog

Reading scores improved during the Classroom Canines™ program. An unexpected finding was that the participating students' reading levels appeared to be on a par with the rest of class, i.e. similar to students who were not identified as requiring learning support. The majority of students reported improvements to themselves as learners, including enhanced confidence, attitude and cooperation and reported improvements in social relations with both their peers and their teachers. These views were supported by teachers' impressions. Interestingly, some students' attitudes to animals, particularly dogs, also appeared to improve during the program, despite all the students reporting that they liked animals before the study commenced. Possible reasons for the successful outcomes include the fact that dogs are fun to be around; allowing students to relax, gain confidence and change their attitudes towards learning. Some may even associate these positive learning experiences with dogs and enjoy being around dogs even more.

Limitations to this study included that the research was conducted on a small sample of students and over a short period of time. In addition, only children identified as having problems accessed the Classroom Canines™ program. In the future, the program could be open to all students and research could be conducted on a larger scale and over an extended period of time.

Another limitation was that were concerns that some students had when the dogs in the program changed over due to a volunteer having to leave the program. Consistency with scheduling Delta volunteers, and thus their dogs, appears to be an important point for consideration in the rolling out of future Classroom Canines™ programs.

In conclusion, findings from this preliminary study support the benefits of dog-assisted programs to motivate students and improve their reading, social/emotional skills and motivation to attend school; as well as enhance relationships with people and with dogs. Although further research is required, these results highlight the need for schools to consider dog assisted programs for the classroom to motivate students and promote learning.

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