

REFEREED ARTICLE

A Literature Review on the Effects of Learning with Therapy Dogs in Schools: Social and Emotional Learning and Readiness To Learn

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Abstract

The presence of a dog supports self-regulation, interpersonal skills, and readiness to learn in and out of the classroom. Somehow, dogs are able to improve student learning, sometimes through dog-student or dog-teacher interactions, and at other times by simply being present in the room. Most research has focused on the positive effects of having a dog in the classroom. It would be interesting to note what dogs do to affect students positively.

Learning is a complex process. Teachers are spending more and more time on supporting student regulation and readiness to learn in the classroom, in order to improve student learning. Cesar Millan, a famous dog trainer, believes that dogs have “become the world’s foremost experts on every type of human behavior” (Millan & Pelletier, 2017, p. 15), and so dogs are apt at supporting people. This review of the literature explores how the presence of a dog, paired with thoughtful instruction, has the potential to produce significant results in developing social and emotional learning skills (SEL), and in being ready to learn.

SEL with Dogs

The benefits dogs have on SEL has been studied in a variety of settings. Notably, studies have been done in schools, clinical settings, and a pediatrician’s office. In schools, the focus was on self-regulation and social education. The clinical setting assessed physiological responses. The pediatric study investigated physiological responses and behavioural measures. Across all settings, people have benefitted in SEL that incorporated dogs.

SEL in the Classroom

Student regulation is improved by the presence of a dog in the classroom. An American research teacher studied this phenomenon in a self-contained classroom with students ages six to eleven years (Anderson & Olson, 2015). All six students were present because they did not function successfully in a normal classroom setting. Notably, all students had clinical diagnoses and had displayed emotional crises in both the previous classroom settings and the self-contained classroom. The teacher provided a behaviour baseline of two months without a dog, followed by two months with a pet dog that resided in the classroom during the school day. For all four months, social skills were taught, directly incorporating the dog in the last two months. The results were significant, showing a drastic decrease in emotional crises for all six students. Notably, the most dysregulated student went from 16 crises in the first two months down to 7 crises in the following two months. It is apparent that daily interactions with a pet dog, coupled with lessons in social skills, have the potential to improve student regulation for students with the greatest emotional needs.

In Austria, a study focused on the benefits of providing social education curriculum to third-graders at three schools. One group of children had no dog, a second group had a therapy dog present, and the third group incorporated dog interactions with the social curriculum (Tissen et al., 2015). Measures assessed social behaviour, impulsivity, empathy, risk behaviour, and relational aggression. The results were positive in all three groups, showing improvements in social behaviour and empathy. However, the group that integrated the therapy dogs with the

curriculum showed improvements across all targeted areas. Therapy dogs are proven to support children in achieving higher scores for learning and applying SEL curriculum.

Other studies on SEL also found positive results. For classroom behaviour assessment, one study found that students attended to the teacher more, and that student behaviour improved overall (Brelsford et al., 2017). In addition, there was an increase in social interactions for students who were usually withdrawn. Common elements across studies included more peer social interaction and an increase in student regulation (Kropp & Shupp, 2017). In one school, a teacher used her dog to aid students in regulating and as an incentive for good behaviour (Coleman & Coleman, 2016). The same teacher used the dog as a third point of reference, whereby the student and the adult would look at the dog, rather than each other, to promote regulation. The CARing Kids curriculum was tested in Hong Kong with therapy dogs. Students who worked with the dogs and the curriculum were found to have less aggression and more self-control (Ngai et al., 2021). In all studies, the presence of a dog supported an increase in regulation, student SEL, and application of the curriculum.

SEL in a Clinical Setting

Dogs support regulation in the classroom; they also support regulation in clinical settings under stricter scrutiny. In one South African clinical study, subjects who interacted with a dog had a decrease in blood pressure and an increase in bonding/affiliation neurochemicals (Odendaal & Meintjes, 2003). One theory is that dogs (and other animals) calm a person by providing comfort through physical contact and a redirection of focus away from the source of stress.

In a study conducted in Germany and Austria, male children with insecure or disorganized attachment were to determine the calming effects of dogs (Beetz et al., 2012). The children were asked to finish a story and complete math tasks with unfamiliar people in an unfamiliar classroom. One group had a friendly girl, the second group had a toy dog, and the third group had a dog. The group with the dog had cortisol levels that were significantly lower, the students were much calmer, and the cortisol levels were lower the more students pet the dog prior to the test. Regardless of the how, the presence of a dog is proven to support a calmer nervous system and a decrease in anxiety.

SEL in a Doctor's Office

Reducing behavioural distress during a doctor's visit is a goal for many pediatric doctors. In an American study, it was found that the presence of a therapy dog greatly reduced the visible distress of children during doctor's visits (Hansen et al., 2015), which increased the cooperation of many of the children during the exam. Interestingly, a few parents commented on the drastic and positive difference in their child's behaviour during the exam. Since therapy dogs greatly reduced anxiety in children, doctors were able to view patients in a more natural state. In addition, patients were more likely to cooperate with the doctor, increasing the amount of information at the doctor's disposal, aiding in diagnosing patients. While SEL was not taught in this setting, the presence of the therapy dog decreased anxiety in all children, resulting in a decrease in heightened emotions and an increase in self-control, two important aspects of SEL.

SEL Summary

Dogs provide successful SEL support to students across locations. While SEL was directly taught in the classroom, the clinical study and doctor's office showed that patients had reduced distress. The presence of a dog had a positive effect on subjects, increasing self-regulation and improving interpersonal skills. In addition, the active participation of a dog with the curriculum increased student learning across all targeted areas of SEL. This has significant implications for

educators in the classroom. If dogs can support regulation, students will be set up for success when learning in the presence of a dog.

Readiness To Learn with Dogs

Anxiety and attentional difficulties are common challenges for students. Since dogs are proven co-regulators, the introduction of a dog into a classroom has potential to result in student readiness to learn. Studies have shown that dogs support improvements in brain function. Dogs also support students when reading, with positive results showing in assessments, and attitudes and behaviours during reading. Literacy programs with dogs have met with increased reading scores. The results demonstrate that therapy dogs support learning and readiness to learn.

Therapy Dogs Affect Human Attention, Concentration and Executive Functioning

Dogs positively affect brain functioning in areas of attention, concentration, and executive functioning. A Swiss study used a robotic dog and a therapy dog with two groups of children (Hediger & Turner, 2014). The researchers found that the robotic dog did not affect attention and concentration, but the therapy dog positively affected children's attention and concentration for almost an hour after they spent time with the dog. It was hypothesized that dogs have a relaxing effect on children. Hediger and Turner (2014) also disproved the common misconception that therapy dogs distract students from attending to a task. Simply having a therapy dog in the room provided an increase in test scores.

Dogs support improvements in executive functioning skills, such as prioritizing and planning, using working memory, and controlling emotions. In an American study, it was found that college students who received stress management with therapy dogs showed improvements in executive functioning (EF) skills of the at-risk students (Burt, 2021). At-risk students who received stress management training that was delivered through direct instruction did not show increases in EF. Students who were not considered at risk did not benefit from any of the interventions. For at-risk students, using a therapy dog results in improvements in EF, supporting student readiness to learn.

Testing: Reading to a Dog Instead of a Teacher

Therapy dog reading programs have seen results of increased reading scores. In the United Kingdom, it was found that when reading to a dog instead of the teacher, student reading scores increased, including increases in fluency and pacing (Barber & Proops, 2019). However, intonation showed no significant change in score. In addition, students self-reported that they gained emotional benefits such as feelings of being calm or happy. Connecting this to prior studies, it is plausible that dogs reduce student stress, which results in an increase in scores. This would mean that regular testing does not reveal the true ability of students due to stress.

Reading with a Dog: Risk-taking, Student Confidence, and Reading Interest

Not all studies show benefits in test scores; some show only regulatory benefits. A study in the United States used therapy dogs in small homogenous groups of readers, followed by writing activities (Kirnan et al., 2016). Results for the kindergarten to fifth grade students showed a statistically significant increase in reading scores for kindergarten students, but not for grades 1-5. However, students were noted to take risks more often, and had more interest and confidence in their reading. Students with special needs had improvements in reading, and were able to sit for increased periods of time. While statistically significant reading benefits occurred only with the kindergarten class, it was noted that the kindergarten and grade 1 classes integrated the dog reading program into the ELA curriculum, while the higher grades did not. As

well, the teachers had numerous concerns, including the ineffectiveness of the program and implementation challenges such as accommodating student needs and preferences.

Literacy Programs with Dogs

Numerous studies found therapy dogs a beneficial pairing with literacy programs. Two American programs, R.E.A.D. and Tail Waggin' Tutors, were found to increase reading scores for comprehension, reading speed, and accuracy (Kropp & Shupp, 2017). Yet another study found that the R.E.A.D. program provided higher scores in reading rate, accuracy, and comprehension scores when compared to control groups that read to either teddy bears or humans (Brelsford et al., 2017). In one study done with students with learning disabilities, the students assessed with a dog had higher reading scores in comprehension, reading rate, fluency, and accuracy (Brelsford et al., 2017). However, this study was problematic because interventions were provided to students prior to the study start date. A Canadian program, Paws to Read, found anecdotal increases in reading motivation in reluctant readers (Barrett, 2003). Overall, most studies found benefits in student reading scores with a dog present, including common increases in comprehension, reading rate, and accuracy.

Readiness To Learn Summary

The benefits of having a dog present for testing and/or reading practice showed improvement in reading for most students. All research reports that mentioned students with additional needs stated that having a therapy dog supported the student in reading behaviours and reading scores. Since having a dog present is found to improve EF, attention, and concentration, students have the potential for greater success when learning to read by removing stressors that would normally hinder the learning process, with at-risk students or students with disabilities showing the greatest benefits.

Conclusion

The simple presence of a dog has been found to change the way humans interact. Dogs not only aid humans in increasing self-regulation and improving interpersonal skills; they also support readiness to learn. The presence of a dog supports increased test scores and abilities in concentration, attention, and EF. Essentially, the dog may optimize some students' learning ability. Without a dog, students may not be demonstrating their true potential.

There are other areas to consider when looking at capitalizing on the benefits of therapy dogs in schools. Studies exploring the following questions would shed more light on the topic. Can therapy dogs support students who are afraid of dogs? If not, how will those students receive equitable supports? How can therapy dog programs best support students who have dog allergies in an inclusive manner? How do negative teacher and parental attitudes and perceptions affect the results of therapy dog interventions? Should the demonstrated benefits of therapy dogs outweigh people's fears, dislikes, or disinterest? How do dog literacy interventions compare with other literacy interventions? Is there transferrable information from studies done with support dogs? Dog interventions are increasing, but not yet common in North America.

Of great interest is the *how* of therapy dogs. In the above studies, dogs positively supported students by simply being in the room. The dogs sat or laid down in the room. They were touched, pet, or did tricks in between bouts of learning. A few studies included the dogs interactively in the curricula. While it would be easy to pass of these dogs as passive participants, a closer look may reveal new understandings. Dogs are experts at nonverbal communication: "dogs do speak, but only to those who know how to listen" (Pamuk, n.d., as cited in Millan & Peltier, 2017, p. 68). While the current studies focused on the benefits of dogs to SEL and readiness to learn, it would be interesting to learn what dogs do that sets students

up for success. Perhaps it is the *how* and not the *who* that is the key to improving regulation and learning in school. While dogs obviously contribute positively to student learning environments, it could be that teachers can provide similar results through improved nonverbal communication.

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