

Effects of a Facility Dog on Student Learning and the Learning Environment

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### **Abstract**

Educators must consider alternative teaching strategies. Facility dogs as an instructional enhancement are an innovative teaching approach. This case study, guided by human-animal bond theory, investigated how the presence of a trained facility dog, Smooch, affected the school environment. Interviews, field notes and observations were used to gather data. Findings indicated that the facility dog improves student learning; enhances the learning environment; helps address students' social, emotional, and behavioral needs; improves the environment for staff; and serves as an alternative teaching tool. The findings relative to helping to address students' academic, social, emotional, and behavioral needs will be discussed.

### **Introduction**

As a result of recent trends in education, teachers have become accountable for improving student performance and are being encouraged to consider alternative teaching tools to raise the quality of instruction (No Child Left Behind [NCLB], 2002). However, the alternative teaching methods available to teachers are limited. This study explored an innovative alternative—the use of a facility dog as an instructional strategy--to improve student achievement. Although no single strategy will be effective with every student, it is important to explore creative approaches to teaching and learning to better meet students' diverse learning needs.

Humans have benefited from animal companionship for centuries (Grier, 2007; Netting, Wilson, & New, 1987; Walsh, 2009a). However, it is only within the last few decades that animals have come to be used to facilitate student learning. Facility dogs are becoming increasingly popular in schools throughout the United States (Friesen, 2010),

but little is known about how the presence of a facility dog alters student learning and conventional assumptions about how the learning environment should be organized. Consequently, this study investigated how a facility dog used at the research site affected the learning environment.

The research site was a private school in the Northeast United States with approximately 200 students. In an attempt to help students at this school fulfill their academic potential, a unique approach to instruction was incorporated into the school curriculum. In October 2011, a facility dog named Smooch (pseudonym) became a member of the instructional staff. It was assumed that the dog would help to provide a calm environment conducive to student learning and academic success (Research Site Newsletter, 2011). In fact, reports from the research site newsletter indicated that the facility dog had led to breakthroughs and sustained progress for students by providing an incentive to work harder and stay focused (Research Site Newsletter, 2011).

The purpose of this case study was to investigate how the presence of a facility dog influenced the learning environment. Few empirical studies have been published on the use of facility dogs with students. While there have been studies on their use with elementary-aged students, very few studies have been conducted on middle school students. The goal was not so much to narrow this gap in learning theory as to expand the range of instructional innovation. As such, the focus of this case study was an investigation of the perceptions of middle school personnel regarding the impact of a facility dog on learning and the learning environment in their school.

### **Purpose of the Study**

The purpose of this study was to investigate how the presence of a facility dog affected the learning environment for middle school students at the research site. The findings of this study may provide teachers and administrators with an alternative approach to meeting students' academic needs and enhancing the learning environment.

### **Review of the Literature**

#### **Conceptual Framework**

The conceptual framework for this study was human-animal bond theory (HAB), which postulates that human-animal relationships have the potential to positively impact the well-being of humans. HAB theory is based on Wilson's (1984) theory of biophilia, the concept that humans are innately attracted to other life forms (i.e., animals, plants, and insects) and that contact with nature can bring about positive change. Specifically, humans' desire to associate with animals can potentially bring meaning to life and a sense of personal fulfillment (Kellert & Wilson, 1995). HAB and biophilia relate to facility dogs because it is assumed that the creation of a bond between students and animals in school can positively influence various aspects of the teaching and learning environment.

Although the majority of published studies focus on the social/emotional benefits of the HAB, researchers have only begun to explore the potential companion animals may have to improve perceptual, cognitive, and language development (Melson, 2003). As Kellert and Wilson (1995) contended, "the human need for nature is linked not just to the material exploitation of the environment but also to the influence of the natural world on our emotional, cognitive, aesthetic, and even spiritual development" (p. 44).

### **Alternative Teaching Techniques**

No single teaching technique is effective with all students, as each person has particular intelligences, skills, and learning needs (Gardner, 1998). Consequently, alternative approaches to teaching are necessary to meet the diverse needs of today's students (NCLB, 2002). These alternative teaching approaches involve the combination and integration of "different educational theories, stances, and models about teaching, learning, and instruction in novel ways to address the needs of unique learners" (Bramwell, Reilly, Lilly, Kronish, & Chennabathni, 2011, p. 228).

### **Animal-Assisted Therapy (AAT) and Animal-Assisted Activities (AAA)**

The Delta Society is one of the largest organizations in the United States responsible for the certification of therapy animals. Animal-assisted therapy is a goal-directed intervention in which an animal that meets specific criteria is an integral part of the treatment process. AAT is directed and/or delivered by a health/human service professional with specialized expertise, and within the scope of practice of his/her profession (Delta Society, 2009a, para. 1). Animal-assisted activity (AAA) provides motivational, educational, recreational, and/or therapeutic benefits to enhance quality of life and is administered in a variety of settings by trained professionals with animals that meet specific criteria (Delta Society, 2009b).

The use of facility animals to bring about positive change is growing in popularity because this technique is compatible with a wide range of therapeutic modalities to address a variety of issues (Chandler, Portrie-Bethke, Barrio Minton, Fernando, & O'Callaghan, 2010). Facility dogs are an effective treatment for stress (Barker, Knisely, McCain, Schubert, & Pandurangi, 2010), anxiety (Cole, Gawlinski, Steers, & Kotlerman,

2007; Hoffmann et al., 2009), substance abuse (Wesley, Minatrea, & Watson, 2009), and depression (Souter & Miller, 2007). As facility dogs have been effective at treating a broad spectrum of symptoms with many different populations in a variety of settings, it was important to explore the effect of a facility dog on the academic needs of students in an educational environment.

### **Facility Dogs and the Emotional Needs of People**

Maslow's (1943) hierarchy of needs indicates that all people have innate physiological, safety, love and belonging, esteem, and self-actualization needs. In addition to meeting the academic needs of students, today's teachers are faced with the challenge of meeting the social and emotional needs of students (Elksnin & Elksnin, 2003; Fischman, DiBara, & Gardner, 2006). Some argue that teachers are unable to meet the social, emotional, and academic needs of their middle school students singlehandedly, and, therefore, should work closely with school counselors to create a positive and nurturing learning environment (Marlow, Bloss, & Gloss, 2000). Haynes, (2002) commented that "Children in today's society face many stresses from a variety of sources that have a major impact on their psychosocial adjustment and academic performance in school" (p. 109). Hence, there is a need for a bridge between teachers' instructional strategies and the services provided by school counselors to facilitate learning, as teachers and school counselors share the same need to connect with students and engage students in the learning process. The introduction of a facility dog can help educators and counselors establish meaningful relationships with students to enhance the learning environment.

The use of a facility dog was found to be exceptionally effective in a counseling setting with children. Perhaps this was because interactions with a facility dog occurred in a “twilight area between reality and play” (Parish-Plass, 2008, p. 28). A facility dog borrows aspects of both worlds, allowing children to navigate between the two realms in relation to their needs and inner processes at any given time (Parish-Plass, 2008). These findings are particularly important to teachers, as they suggest that facility dogs have the potential to inform teachers of their students’ needs, limits, and/or current state of mind. Because a facility dog might provide an additional way to form meaningful connections with students in the classroom, it is important to explore whether a facility dog might assist teachers at the local school to form better relationships with students, thereby improving the conditions for learning.

### **Facility Dogs, Learning, and the Learning Environment**

Gardner's (1998) findings on learning indicate that humans possess a multiplicity of intelligences. Given the interdisciplinary nature of a facility dog intervention, it could be argued that a facility dog program aligns with each of the intelligences for different reasons. Students have diverse learning needs and are uniquely smart (Aborn, 2006). Therefore, every student experiences the world in a different way, and students may have varying learning styles or learning preferences. Teachers must construct their lessons to meet the diverse needs of learners in their classrooms (NCLB, 2002).

Thompson and Wheeler (2008) stated that an effective learning environment involves the establishment of a safe, supportive, and respectful learning atmosphere. Building a safe and positive classroom community is critical to student achievement and is an important component of an engaging learning environment (Rushton & Juola-

Rushton, 2008; Sutliff, Higginson, & Allstot, 2008). Thompson and Wheeler (2008) found that several elements must be taken into account to create a positive learning environment in family and consumer science classrooms. Specifically, teachers must consider the physical, intellectual, and emotional aspects of the learning environment to positively support student development. Research suggests that the presence of a facility dog helps to foster feelings of safety and security in children (Born, 2008; Jalongo Astorino, & Bomboy, 2004). Facility dogs, therefore, appear to support the development of an effective emotional learning environment.

### **The Use of Facility Dogs in School-Based Occupational Therapy**

The research site provides school-based occupational therapy to qualifying students. Sams, Fortney, and Willenbring (2006) completed a quantitative pilot study comparing the effects of a facility dog on children with autism in school-based occupational therapy. Autistic students received two occupational therapy sessions per week for 15 weeks one session with and one session without the facility dog. Two trained researchers maintained detailed field notes on participants' use of language and social interactions in all sessions. The findings indicated that children showed more improvements in language use and social skills in the facility dog sessions than in the traditional occupational therapy sessions (Sams et al., 2006). Since facility dogs were effective at improving social and language skills in an occupational therapy sessions, it is important to explore how the dog may affect learning and skill acquisition in a classroom setting.

A similar study was conducted using a multiple case study design to explore the effects of facility dogs in school-based occupational therapy (Roehm, 2010). Findings

indicated that participants' fine motor skills improved slightly, while a significant improvement was noted in participants' focus, motivation, and participation in occupational therapy exercises (Roehm, 2010). The implications of these findings suggest that facility dogs might be effective in a school-based occupational therapy setting and that they may have the potential to improve student interest, participation, and skill development. Finally, if facility dogs are effective in occupational therapy settings to improve participation and student interest, it is worthwhile to explore whether the dog has a similar effect on participation and student interest in a classroom setting.

### **Facility Dogs in the Classroom**

Griess (2010) explored the impact reading to a facility dog has on the reading progress of learning disabled students. The results were statistically significant, indicating that students read for a longer amount of time when accompanied by the facility dog (Griess, 2010). Additionally, the researcher received favorable feedback from students regarding the facility dog experience, in general. Facility dogs, therefore, made reading a more positive experience for participants, which suggests that facility dogs might be an effective technique for reluctant or struggling readers.

In another study exploring the impact of facility dogs on reading skills, the researcher explored school data and teacher responses to the Canine Assisted Reading Education (C.A.R.E. to Read) program questionnaire (Paradise, 2007). The results indicated that students in the facility dog group showed greater improvements in reading than their non-facility dog counterparts (Paradise, 2007). Furthermore, students in the facility dog group showed improved class participation, more advanced critical thinking

skills, had a more favorable outlook toward schoolwork, and showed higher self-esteem than students in the non-facility dog group (Paradise, 2007).

Austrian researchers tested the notion that facility dogs can positively influence elementary school students' classroom behavior (Kotrschal & Ortbauer, 2003). The researchers found that in the presence of the facility dog, behavioral outbursts diminished along with hyperactivity and aggressive behaviors particularly among boys, making the class "socially more homogenous," in general (Kotrschal & Ortbauer, 2003, p. 147). Additionally, with the facility dog, shy students became more involved in the social aspects of the class, showing that the use of facility dogs is an innovative way to improve the socialization of students (Kotrschal & Ortbauer, 2003). Although the researchers studied elementary school students, the findings demonstrated that using a facility dog is an effective way for teachers to improve classroom behaviors, enhance teaching conditions, and improve the learning environment, in general.

### **Facility Dogs and Students with Disabilities**

The research site offers programs and services for students with disabilities. Facility dogs are particularly effective in an educational setting among students with emotional, developmental, physical, and/or learning disabilities. For example, Esteves and Stokes (2008) completed a controlled experimental study on three students with mental retardation in elementary school (one with an additional hearing impairment, and two with Down's Syndrome diagnoses). The study aimed to determine what social effects the presence of a facility dog would have on student-teacher and student-dog interactions. The findings suggested that in the presence of the dog, students demonstrated increased

communication and interacted more favorably toward their teachers and the dog (Esteves & Stokes, 2008).

The implications of this study are quite profound. The researchers confirmed that (a) teachers must explore alternative teaching strategies to meet the needs of developmentally disabled students and (b) with improved communication, teachers can focus on facilitating social development, educational tasks and, ultimately, learning (Esteves & Stokes, 2008). Finally, the authors recommended that teachers could benefit greatly from incorporating a facility dog into their classrooms because dogs can help facilitate learning in the areas of daily living, reading, and writing (Esteves & Stokes, 2008). Anderson and Olson (2006) conducted a similar qualitative study of six emotionally disturbed students in a self-contained classroom with a therapy dog. Study findings indicated that the presence of the therapy dog decreased the number of emotional outbursts and positively impacted students' emotional steadiness, opinions toward school, and character development (Anderson & Olson, 2006).

### **Conclusion**

It is clear that facility dogs may be a useful tool for teachers, counselors, and caregivers in a variety of settings at the national and local level. As a result, it is necessary to further explore whether a facility dog may be an effective teaching tool and how it impacts the learning and the learning environment at the research site. The apparent lack of published, peer-reviewed information on the impact of facility dogs on this topic indicates that this study is timely and necessary. This is a new field of study that warrants research. Since all experiences are unique, a qualitative study approach was

selected to best understand the perceptions of middle school personnel about the impact of facility dogs in their school.

### **Methodology**

The purpose of the larger case study was to investigate how a facility dog affects the academic needs of students and the learning environment. Data were collected from three groups of school personnel (middle school teachers, the school counselor, and the principal) as suggested by Creswell (2009). The knowledge produced from case study research draws upon experience and is, therefore, clearer and more concrete than abstract (Merriam, 2009). By interviewing different groups of school personnel, one can gather information from various perspectives. Additionally, case studies are contextual in nature (Merriam, 2009); this aspect of case study research was consistent with the intent to explore only participants' experiences rooted in the context of the school.

### **Context of the Study**

The context of this study was a small private K-12 school where a trained facility dog, Smooch, was a full-time member of the instructional team. Smooch was accompanied by a handler, and the team visited every classroom regularly. Smooch assisted in all aspects of student growth and positively impacted the learning environment (Target School Newsletter, 2011).

### **Research Question and Participants**

The central research question that guided the study follows: How does the presence of a facility dog affect student learning and the learning environment? Case study research typically employs a purposeful sampling procedure (Hancock & Algozzine, 2006). The focus of the study was middle school students; therefore, middle

school personnel with experience working in the presence of a facility dog qualified to participate in this study. If some participants were not available for face-to-face interviews while at the research site, interviews were scheduled via Skype or telephone. Participants were four middle school teachers, one school counselor, one principal, and a teacher who was the facility dog's handler.

### **Data Collection, Analysis, and Trustworthiness**

Three interview protocols were developed: one for teachers, one for the school counselor, and one for the principal. Interviews lasted approximately 30-45 minutes and were designed to elicit participants' beliefs about how the facility dog affects the learning needs of students and the learning environment at the research site. Interview data were transcribed verbatim and analyzed for categories and themes. In the last stage of data analysis, a thematic analysis was completed to organize the data into themes which comprised the findings of the study. The effectiveness of the categories was ensured by continuously adding new information units until (a) all relevant information had been assigned a category, and (b) each unit of information fit into only one category (Hancock & Algozzine, 2006).

Member checking was conducted to ensure that an accurate representation of each participant's experience was portrayed. Because data are interpreted by researchers, it is important to enhance the trustworthiness of the findings using various approaches (Krefting, 1991; Merriam, 2009). Therefore, interview data were gathered via the perspectives of teachers, the school counselor, and the principal as, "a means of checking the integrity of the inferences" (Schwandt, 1997, p. 163). Other methods used to enhance

trustworthiness were: setting aside researcher bias through the process of reflexivity (Krefting, 1991), coding and recoding, triangulation, and including verbatim quotes.

### **Findings**

Three interview protocols were used in conjunction with field notes and observations to gather the data necessary to address the research question: How does the presence of a facility dog affect student learning and the learning environment? The problem underlying this study is that educators must find alternative methods to improve learning, yet unconventional teaching strategies available to educators are limited. The following five themes emerged from the larger study: (1) the facility dog improves student learning; (2) the facility dog enhances the learning environment; (3) the facility dog helps to address students' social, emotional, and behavioral needs; (4) the facility dog improves the working environment for staff; and (5) the facility dog is an alternative teaching tool. For the purposes of this article, the findings relative to helping to address students' social, emotional, and behavioral needs will be discussed.

#### **The Facility Dog Meets Students' Social, Behavioral, and Emotional Needs**

##### **Social Needs**

Many of the participants noted that the facility dog encourages social interaction. Participant A said, "Smooch provides another mode of socialization which [their] kids really need. It gives them something else to talk about. Having Smooch is a conversation starter." Similarly, Participant C explained that with the support of a facility dog there are more opportunities for socialization because, "he provides a method for students to interact that enables them to interact more in a non-threatening way."

Participant E noted that Smooch “enhances sociability” citing an example of how there are autistic students at her school who will not communicate with others, but will have conversations with Smooch. Those students have now become more verbal and social as a result of Smooch, according to Participant E. Furthermore, Smooch acts as a bridge that connects the classroom to the community. Participant E’s students often go on field trips around town and people in the community will ask the students about the facility dog because he accompanies them wherever they go. Students will explain the program to strangers, further improving their communication and social skills.

### **Behavioral Needs**

Participant B observed that Smooch also helps assuage the drama and conflicts that often arise with middle school-aged students. She said that as soon as students start petting Smooch, “it seems like all the worries and all the drama with the teenagers just leaves and they all focus on Smooch.” Additionally, Participant C said Smooch “is part of the everyday social environment.... A lot of students do have some difficulties interacting with other students...so Smooch provides another avenue for interacting.” Furthermore, participant B shared that Smooch comes at the end of the day for their lesson. She explained that, “by that time, a lot of them have had it with each other so it’s a nice break. They all come back together so it’s a nice way to end the day.”

Part of the facility dog program involves the opportunity for a small group of students to have *quiet lunch* with Smooch. As in any school, the cafeteria can be a noisy place at lunch time which is overwhelming to some students. These students may request a quiet lunch, and teachers may also recommend students for the quiet lunch which is offered every other week by grade level. Participant E explained that in quiet lunch, the

lights are off, and everyone eats their lunch quietly with Smooch. This opportunity mid-day may give students the ability to de-stress, relax, and refocus their energy for their afternoon classes.

The participants all referenced Smooch's ability to be both calm and excited. Just like a teacher, a facility dog must be versatile. When asked which of Smooch's qualities have the most influence on students, Participant E responded:

His calmness, his cheeriness, his ability to sit still and have a book read to him and his ability to run around like a regular dog and fetch things and bring them back. That's why he's a facility dog –because he can do two things: he can be calm and he can be fun at recess. He has amazing stamina. He'll go all day.

Participant D also said that Smooch has a very calming effect on everyone but gets excited when people play with him, which she said was a very nice feeling. Smooch's ability to transform lends well to the school environment as students often have to sit quietly and be calm in one class, and then be physically active and energetic in another. Smooch serves as a wonderful role model to students for appropriate behavior.

### **Emotional Needs**

Smooch is also known for his physical support to students. Participant E shared a scenario in which a student broke his leg and was in a wheelchair. Upon returning from physical therapy, Smooch sensed that the student was upset so he approached the student and gently placed his head on the student's lap. The student had a big smile on his face and proceeded to pet Smooch. In today's schools, teachers are warned against making physical contact of any kind with students. Having a facility dog might help teachers to provide students with the physical and emotional support students need.

The facility dog program has done wonders to improve students' confidence. Participant B expressed that Smooch helps students feel comfortable and accepted in class. She said, "I think they [students] don't feel intimidated by him because dogs don't judge people if they have a speech problem or a special disability." Participant A also mentioned that, "School can be intimidating for some kids and Smooch has just added peace and a sense of calm to that." She explained that many students in her class have a *self-soothe box*. This is a small box that holds a selection of calming items chosen by the student. Participant A noted that many students put a picture of Smooch in their self-soothe box. This indicates that a mere photograph of Smooch can calm a student down, assisting students to learn self-soothing skills.

In addition to improving students' confidence, Smooch has also helped to eliminate fear in certain situations. For example, every year the students perform a play at the school. One year, there was a student who suffered from intense stage fright but wanted to participate in the school play. So, the music teacher assigned him a role that involved Smooch. The student went on stage and successfully delivered his lines because Smooch was standing right next to him. Another example involved a student who was initially very afraid of dogs but because of Smooch's calm temperament and peaceful disposition, the student is no longer afraid of dogs.

All students need attention. With what is often just one teacher in a room full of students, it is often difficult for teachers to give individual attention to students. Smooch acts as a teacher's helper, giving unconditional love and attention to everyone.

Participants C and E shared that Smooch is able to sense when a student is having a bad day. "With some of our younger kids, particularly, same with some of our older ones –if

they are having a rough day and they want to come and have a few minutes of schmoozing with Smooch or petting him or talking to him, that's very comforting for some of our students" (Participant C). Smooch will approach the student on his own and rest his head on the student's lap. The student will gently stroke his head and a smile will return to the student's face. Participant E believed that simply being near Smooch lowers her blood pressure so it comes as no surprise that students also experience a similar calming effect when they pet Smooch.

All participants noted that Smooch makes students feel good. Perhaps this is because he is always happy to see everyone as evidenced by his wagging tail. "You never have to worry that he's not going to be happy to see you or not in the mood or busy. That's the great thing about animals" (Participant C). Participant B noticed that students feel like they can "tell Smooch things they wouldn't tell a teacher or an adult" because they feel more open around Smooch. Participant C agreed that Smooch "has made everybody feel happy and comfortable and that certainly helps everyone with learning."

### **Implications**

According to Maslow's (1943) hierarchy of needs, all people have innate physiological, safety, love and belonging, esteem, and self-actualization needs that must be met. Findings of the current study revealed that the facility dog brought people together and decreased the number of interpersonal issues among middle school students. When students argue with or dislike one another, their interactions detract from their ability to focus in class. If a dog is capable of eliminating some or all of these issues, students may be able to pay more attention in class, and, ultimately, learn more. Additionally, it is often difficult for students to find things in common with one another.

With a facility dog program, students may realize that they have more in common than they thought. The dog may even catalyze the friendship-building process, making it easier for students to make new friends. Finally, with a school culture of respect, there would be fewer instances of bullying in today's schools.

The fact that Smooch was part of the *quiet lunch* program indicated that students had additional options about where and how to spend their free time. Some students became easily overwhelmed by the noise in the cafeteria; this option may have helped those students avoid a potentially stressful situation. Furthermore, the *quiet lunch* provided a structure for what was normally an unstructured and chaotic time of day. Some students preferred to maintain a structured daily schedule to avoid behavior outbursts, and the facility dog program gave them that opportunity. This is consistent with Nimer and Lundahl's (2007) statement that participants' behavioral problems decreased and their emotional well-being increased in the presence of a trained animal (Nimer & Lundahl, 2007).

Kotrschal and Ortbauer (2003) found that shyer students became more social around a facility dog. Findings of the current study also suggested that the facility dog improved students' self-confidence, social skills, and overall behavior in class. Participants indicated that all of their students felt accepted and more confident when the dog was present. They believed that this was because the dog gave them attention, did not pass judgment on them, was never moody, and was always happy to see them. Unlike humans, dogs love unconditionally, and their personalities are not affected by personal issues in the same way that teachers' are. Participants of the current study believed that

students could sense Smooch's sincerity, trust him, and respond favorably to his presence.

The broad implication for social change is the creation of a peaceful and harmonious environment conducive to effective teaching and enhanced student learning. The findings established that the facility dog is an alternative tool that can assist educators to better read and address needs of students. Furthermore, the program enhances teacher effectiveness and assists teachers in building positive relationships with their students. The findings derived from this study may contribute to the sparse existing literature related to the use of facility dogs in an educational setting. Specifically, it is hoped that these findings will be used to improve teaching and learning at educational facilities elsewhere.

### **Recommendations for Further Study**

There is minimal empirical research on the effects of a facility dog relative to student learning and the learning environment. Therefore, a closer examination is necessary to better understand how a facility dog program impacts teaching and learning. One of the limitations of this study was the small sample size: therefore, it is recommended that a larger sample be used in future studies to increase the likelihood of transferability. Additional quantitative research is needed to bring credibility to the field of facility dog-assisted therapy, teaching, and learning.

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