Who Let the Dog In?
How to Incorporate a Dog into a Self-Contained Classroom

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Abstract

Described in this article are outcomes, procedures, and suggestions for incorporating a dog into a classroom for students with emotional or behavioral disorders. First, the outcomes for the inclusion of a dog are presented and are reported from an empirical study conducted by the author. Next, details are provided on how teachers would initially prepare for the incorporation of a dog by conducting preliminary meetings, selecting a dog, establishing classroom policies and procedures, obtaining written consent, and providing information to colleagues. Then illustrations are given on how to utilize the dog in classrooms to benefit students through building relationships, providing lessons in character development, preventing and de-escalating emotional crises, and incorporating into academics. To conclude, the author provides a discussion of her study to report conclusions, implications, and recommendations. To support the inclusion of a dog into a classroom as a research-based intervention, a review of the literature is embedded.

Keywords
animals, emotional disorders, special education

SUGGESTED CITATION:
Educators of students with emotional or behavioral disorders (E/BD) are continually seeking positive behavioral interventions and supports to afford these students success academically, emotionally, behaviorally, and socially. As the severity of these disorders intensifies, often the degree of creativity and innovation of the interventions amplifies as well. An innovative approach for working with these students, especially those in self-contained classrooms, is the incorporation of a dog into the school setting as a full-time member. The following is a case study revealing the effects a dog had on a boy with oppositional and aggressive behaviors who was a student in the author’s classroom:

Each day Matt entered the classroom, the dog (J.D.) would greet him excitedly, and they would play together. When Matt would leave for breakfast, the dog would cry and stay by the door until he returned. J.D. was often found sleeping on top of or underneath Matt’s desk throughout the day. When Matt did not feel physically well from tonsillitis, he slept on a beanbag in the classroom, and J.D. would curl up next to him and sleep as well. During one interview, Matt revealed how the toy poodle had taught him about sharing by saying, “J.D. taught me how to do what he wants to do, not what I want to do!” In other words, the dog responded warmly to activities that pleased him and walked away or barked when he was displeased. Matt also considered the dog a better friend than humans, because J.D. played with him more and accepted him “no matter what.” In particular, he noted that dogs “forgive better” than humans. Matt gave the toy poodle credit for helping him control his anger, because if J.D. saw him getting mad, he would come over to him. School was made easier because of J.D.’s friendship, and Matt felt that all kids in the school district would benefit from having this dog around. When interviewed, Matt’s mother felt the toy poodle was influential in increasing her son’s self-esteem, his ability to make friends in the summer, his dramatically improved behavior, and his increased willingness to get on the school bus each day. She also said that being able to touch J.D. was very calming for Matt and that he would remember this dog for the rest of his life. (Anderson & Olson, 2006a, p. 45-6).

What are the Potential Outcomes of Incorporating a Dog?

In her dual role as researcher and classroom teacher, the author conducted a research study on the effects of placing a dog, as a full-time member, into a self-contained classroom for students with severe E/BD. The study was conducted in an urban elementary school serving approximately 400 students from predominately low socioeconomic areas of the city. Six students participated in the study (three boys and three girls). Their ages ranged from 6-11 years with the following racial groups represented: Asian American, Native American, Euro-American, and African American. Each student carried from one to three diagnoses, including Asperger’s Syndrome, Attention Deficit Disorder with Hyperactivity, Bipolar Disorder, Intermittent Explosive Disorder, Depression, and Reactive Attachment Disorder. All of these students had been placed in this self-contained classroom because they had been unsuccessful in
the general education classroom within this school or from neighboring schools. Although there was opportunity for each of the six students to spend time in one or more general education classes, they were accompanied by their teacher or a paraprofessional. The dog used in the study was a 2-year-old toy poodle named J.D. (Anderson & Olson, 2006a).

The design of the study was qualitative using an intrinsic case study approach. For triangulation, data was collected from multiple sources. Each student was interviewed six times, and their parents participated in two interviews each. Participant observations were conducted each day during social skills instruction since the dog was incorporated into the lessons. Additionally, every student had a daily one-on-one session with the dog when observational data was collected. Antecedent-Behavior-Consequence Analysis forms and student Problem-Solving Sheets (described later in the article) were completed each time a student engaged in severe verbal or physical acts (considered emotional crisis). This data was quantified and compared to baseline data to analyze a trend in the number of emotional crises. In addition, the professional literature was extensively reviewed (see box, "Review of the Literature").

The author utilized a holistic analysis that was guided by an overarching research question: What happens when a dog becomes a member of a self-contained classroom for students with severe emotional or behavioral disorders? Data was systematically reviewed and classified into codes, categories, themes, and assertions. Throughout this process, research audits were conducted for the purpose of validity.

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**Review of the Literature**

Over the past decade, researchers working in educational and therapeutic settings have linked learning and healing with animals, finding that caring for animals can improve self-esteem, alleviate anxiety and depression, improve social skills, and foster verbal and nonverbal communication (Huddart & Naherniak, 1996). Teachers, who have had animals as part of their classroom communities, reported the animals helped children with problems ranging from shyness to aggression and with difficulties in expressing emotion appropriately (Huddart & Naherniak, 1996).

Chandler (2001) concluded that there are many benefits of integrating animals into classrooms, especially through animal-assisted therapy and animal-assisted activities. Animals can enhance students’ learning in the following ways: (a) gaining knowledge about animals, (b) learning humane animal care, (c) training animals, (d) practicing discipline, (e) incorporating an attitude of kindness and compassion, (f) learning about nurturance, (g) practicing loyalty and responsibility, and (h) experiencing human-animal bonding.

Animals can be used as sources for motivation and behavior management for students who are receiving special education services for their emotional disorders (Zasloff, Hart, & DeArmond, 1999). Animals can assist in behavior management for these children by teaching them behaviors that have not been acquired through the teachings of adults (George, 1999) and by providing them with opportunities for being in control and assuming responsibility (Lee et al., 1996). For children who are highly aggressive, Katcher and Wilkins (1994) concluded that animal-assisted therapy and education can have large, lasting, and broadly distributed therapeutic effects. These effects may include a decrease in agitated and aggressive behaviors, an enthusiastic interest in learning, and an improvement in behavioral control in their regular education classes. In addition, Bayer (2000) mentioned that these innovative programs of incorporating animals also build patience in these children.
Reported in Table 1 are the outcomes of the dog's placement in the self-contained classroom with a few supporting comments from students and their parents (Anderson & Olson, 2006a, 2006b).

Identified in the remaining contents of this article are the procedures and policies for incorporating a dog into a classroom setting. Since the information is based on the author's research and classroom experience, anecdotes of student-dog interactions are embedded to strengthen the transition from research-to-practice.

**How is a Classroom Prepared for a Dog?**

Like any new teaching procedure or practice, incorporating a dog into a classroom takes thorough planning. Prior to the dog's inclusion, the following steps are recommended: conduct preliminary meetings, select a dog, establish classroom policies and procedures, obtain consent, and provide information to colleagues.

**Step 1: Conduct Preliminary Meetings**

Inviting a dog into a classroom should not be a unilateral decision. The thoughts, ideas, and concerns of all stakeholders should be informally solicited by conducting preliminary meetings with administrators, parents, classroom paraprofessionals, and students for the following reasons: (a) to briefly explain the idea and goals, (b) to gain their initial support, and (c) to learn of dog-related allergies or phobias. Unfortunately, if any person in frequent contact with the dog has allergies or there is a stakeholder who strongly opposes the incorporation of a dog, then this pursuit should be abandoned for the time being.

Researchers... have linked learning and healing with animals.

Since these meetings are only preliminary, individuals may be supportive, yet skeptical. It is recommended that a comprehensive handbook be constructed to clearly identify and explain the policies and procedures of how the dog will be included in the classroom.

**Step 2: Select a Dog**

Preferably, the dog selected to be a member of the classroom community should be certified by a professional organization (e.g., Delta Society®), which certifies the dog has passed tests related to obedience and temperament. Examples of breeds that have been successfully incorporated into classrooms include: Toy Poodle (Anderson, 2004), Labrador (Ruth, 1992), West Highland Terrier (Arce, 2002), and Golden Retriever (Owens & Williams, 1995). It is also recommended the dog be owned by the classroom teacher or by the individual overseeing the student-dog interactions since it is imperative to understand the animal's behavioral patterns. With the dog being owned by the teacher, the logistical issue of caring for the dog during nights, weekends, and breaks is addressed.

It is equally important to select a dog who enjoys ongoing interactions with students. The animal's needs and well-being must be considered and accommodated in order for successful implementation. In the event the dog would become distressed or uncooperative, he would need to be removed for the physical and emotional safety of all members in the classroom community.

Lastly, there must be an ongoing commitment to ensuring the dog is current on vaccinations and is groomed frequently. Keeping documentation of this maintenance care is suggested. The financial obligation for
feeding, grooming, and vaccinating (in addition to other medical needs) is typically the responsibility of the teacher who owns the dog. However, it is recommended to request financial support from school administration, particularly for grooming, since the dog is a research-based intervention employed for meeting students' needs.

Table 1. Outcomes of Study

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Supporting Quotes</th>
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<tbody>
<tr>
<td>Students’ attitudes toward school improved.</td>
<td>“He makes school so much better, and I like going because J.D. is there.”</td>
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<tr>
<td></td>
<td>“She is excited to come to school. Where before, she was kinda crabby to come to school. I don’t really get that crabbiness anymore.... She’s been excited to get up and go now. Before, we were always crabbing and grumblng at each other. I think it has made a difference.”</td>
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<tr>
<td>Students found companionship with the dog.</td>
<td>“J.D. makes me feel good. I’m his friend.”</td>
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<td></td>
<td>“...because he wants to play with me. Dog friends are nicer than human friends because they play with me more.”</td>
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<td></td>
<td>“Dog friends forgive better, because humans don’t really like forgiving people.”</td>
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<td></td>
<td>”He accepts me no matter what.”</td>
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<tr>
<td>Students used the dog to remain in control of their emotions and behaviors in order to prevent them from entering into emotional crisis.</td>
<td>“When I’m about to have a bad day, I just pet and hold J.D. to calm down.”</td>
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<td></td>
<td>“He comes up to me. He doesn’t want me to get mad, so he helps me with my problems.”</td>
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<td></td>
<td>“It [petting J.D.] makes me forget about being angry.”</td>
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<tr>
<td>Students used the dog as a de-escalation tool to calm their minds and bodies when they did enter into emotional crisis.</td>
<td>“He helps me by coming to me. He wants me to pet him. He knows when we are feeling mad and sad, so we can calm down. Hmmm, when I was out of the quiet room or time-out, he brings his ball to me to play fetch. He can sense if I’m still mad, and he wants me to get calmed down. Dogs just know when we’re happy, sad, or mad. They just look at you.”</td>
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<tr>
<td></td>
<td>”When I am mad he brings me one of his toys. He helps me slow down and keeps my engine right.”</td>
</tr>
<tr>
<td>Students demonstrated self-regulation by managing their behaviors toward the dog through appropriate verbal and physical interactions; no acts of aggression were directed toward the dog.</td>
<td>”You have to be good for them, to be good for you.”</td>
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<tr>
<td></td>
<td>”J.D. won’t be by someone who be bad to him. If someone hits him he will go away from people not nice.”</td>
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</tbody>
</table>
Students' peer interactions became more frequent and positive.

"He taught me to be more friendly to other kids and more nice. Not to get mad at them."

"Like, he can make me have better choices, not hitting my friends."

"Sharing him with other people is helping me get along."

Students' interactions in the home setting increased.

"It's nice to see her show emotion because we went so many years without her showing affection, and she is just starting to come out with me... for 9 years I did not see a lot of affection. She would not give it out. She still won't say 'I love you,' but you know to see her be affectionate with J.D."

"She is now holding my hand voluntarily... those are firsts and those things are a big change. I like the way things are going between her and I."

Parents felt the inclusion of the dog was of educational value.

“A year ago at this time, I would have said that he is going to jail! [This April and May have been better?] Oh by far! I’m very happy with where he is at. I just never thought he could get this far. It’s been so much better this year. Maybe J.D. is helping. He is here at the prime time for Matt’s needs. I think he has helped Matt more than what he will admit to us.”

“She enjoyed coming to school. She looked forward to her one-on-one time with J.D. She seemed to be calmer. It was just so motivating for her.”

“... I think she got some really good emotional practice.... I am grateful, because she learned something she couldn’t have in another situation had she not had the opportunity.”

Students' learning was extended by fostering growth in respect, responsibility, and empathy.

Students' behaviors included:
- ensuring J.D. was hooked to his leash for safety
- providing the dog food and water each day
- appropriately praising and disciplining J.D.’s behaviors
- apologizing to the dog if they accidentally hurt him
- accommodating J.D.’s feelings

Step 3: Establish Classroom Policies and Procedures

When formulating policies and procedures for how the classroom environment will function with the dog, it is best practice to hold a team meeting with classroom paraprofessionals to solicit their ideas and concerns. Their investment will assist in the construction of a cohesive program.

Policies for consideration should include providing physical safety for all and interacting with the dog during structured and unstructured times. The following practices are recommended:

1. When the dog is eating or sleeping, students should respect his need to be alone.
2. Only during times of play should students be permitted to remove objects from the dog’s mouth.
3. Students need permission to take the dog outside of the classroom and
should always be accompanied by a teacher.

4. For sanitary reasons, the dog should have a designated spot for elimination, and teachers should be responsible for disposing of fecal matter. This task should not be imposed on para-professionals without their consent.

5. Should a student become physically aggressive, the dog should be placed in a locked kennel as a precautionary measure.

6. Students who become physically abusive to the dog risk not being permitted to interact with him for the remainder of the school year. If this occurs, collaborative discussions should be held with the student's parents.

7. During unstructured times (e.g., recess, centers), students may choose to interact with the dog collectively. Individually, students should earn this privilege by utilizing cooperation and social problem-solving skills during engagement.

8. During structured times, the dog should be permitted to lie on the floor next to students; however, during times of independent reading students should be able to hold him.

9. The dog should not be permitted in the lunchroom.

10. In the event of a dog scratch or bite, the protocol should be as follows: (a) student's parents will be notified and an incident report completed, (b) school nurse will be consulted in non-emergency situations, and (c) 9-1-1 services should be activated in emergency situations. School administration should be informed of all incidences.

**Step 4: Obtain Written Consent**

Following the construction of policies and procedures, a form for parents and students to give their informed, written consent should be developed. Formal meetings with parents and students should be held to meet the dog, to explain policies and procedures, to allow them the opportunity to ask questions, and to acquire their written consent signifying they understand and support the dog's inclusion. These meetings may be conducted individually or as a group. A copy of the handbook and signed consent form should be disseminated to parents.

Formal meetings with administrators should also be conducted. Ultimately, administrative support, verbal or written, is necessary prior to implementation.

**Step 5: Provide Information to Colleagues**

Integrating a dog into the school setting is an innovative practice about which school staff should be informed. Although their formal approval is not needed, a supportive school community is helpful. An efficient way to disseminate information about the dog is at a staff meeting. Presenting the purpose, goals, and procedures for the dog's inclusion might be beneficial, as well as giving staff the opportunity to ask questions. Presenting collaboratively with the building principal is preferred to increase social validation amongst peers.
How Should the Dog be Utilized to Benefit Students?

Building Relationships

Development of student-dog relationships has the greatest potential for helping students emotionally and behaviorally in the school setting since a dog's distribution of attention is usually ongoing and his acts of affection are typically noncontingent. These behaviors can be in stark contrast when compared to students' human counterparts. To foster relationships, a small amount of time daily (e.g., 5-10 minutes) should be allotted for each student to interact with him. During this time students can select from a menu of dog activities such as playing games, holding, petting, reading to, talking to, etc. To provide an optimal environment for these interactions, provide a secluded area within the classroom in order to reduce environmental distractions that are competitors for the dog's attention. Meanwhile, it is vital that all student-dog interactions be monitored for appropriateness.

Beyond the development of student-dog relationships are the student-to-student relationships that can be established or enhanced using the dog as the medium. With the dog as the focus of instruction, social skill lessons can be conducted to directly teach students how to collectively interact with him while using social cooperation and problem-solving. Then during non-academic times of the day, students may be permitted to collectively engage the dog in activities to apply their newly acquired skills.

Based on the author's study, students were motivated to come to school and interact with the dog, particularly during their one-on-one time. One student even came to school sick to avoid missing her time with the dog! Students stated they liked having autonomy to select activities from the menu. They continually tried to invent "dog games" to add to the menu. For example, one student created the game "Find the Treat" where he would hide a treat under one of three cups. Moreover, all students revealed the dog helped them get along better with each other since "sharing" was the contingency for group interactions. Peer interactions extended beyond the classroom. One student, who isolated herself socially since Kindergarten, began requesting a fifth grade peer accompany her when walking the dog so they could converse about animals. Another student served as a cross-age tutor for students with severe autism to model communication skills while playing with the dog.

Developing Respect, Responsibility, and Empathy

Because the incorporation of a dog means the inclusion of another living creature with needs and wants, students must learn to blend domination with respect, to humanely and responsibly care for the animal's needs, and to have empathy for the dog's emotions. Likewise, learning respect, responsibility, and empathy are imperative to students' character development.

For students to acquire these dimensions of character, they need direct social skill instruction, ongoing teacher modeling, and cognitive mediation for understanding the cause and effect relationships of their behaviors. To provide such lessons, the following activities/duties are recommended:

1. On the first day of the dog's arrival, introduce him to the students by in-
forming them about his likes and dislikes. During this discussion, create a chart titled, "Our Dog's Likes and Dislikes." This chart then becomes the list of rules for interacting with the dog and should remain visible to students and augmented as they become more acquainted.

2. Also on the first day, collaboratively generate a list of "needs" a dog would have being a living creature (e.g., feeding, eliminating, walking, sleeping, keeping safe). Then discuss with students the importance of meeting his needs and role-play how to humanely be responsible for these needs. This list then becomes students' daily classroom duties.

3. Through direct social skill instruction, students need to understand the importance of being a "pack leader" for their dog, as well as how to blend their domination with respect. Students must learn how to be responsible for consistently rewarding and humanely disciplining his behaviors.

4. Through active engagement, students must learn how to be responsible citizens by keeping the dog on a leash during walks and appropriately disposing of fecal matter.

5. For students to decode the dog's communication patterns, the classroom teacher will need to act as a social interpreter to mediate their learning. Additionally, the teacher will need to bridge the similarities between the nonverbal communication patterns displayed by dogs and humans.

Documented in the author's study is the case of a second grade student who abused dogs to the severity that the family pet had to be removed from the home. At the end of the study the student stated, "I'm learning my lesson by how to treat J.D., not to hurt dogs. He's a dog of ours and we don't hurt animals." As a result of her humane treatment toward the classroom dog, her mother hoped to successfully reintegrate the pet into their home. As for lessons in empathy, a first grade student had recently been removed from his mother's care and placed into a foster home; he frequently verbalized that he missed her. Similarly, at the beginning of the study when the dog's owner left the classroom, the dog would go to the door and cry. This student would immediately begin petting the dog while offering words of comfort. When interviewed, the student expressed how he knew the dog was sad since he, too, felt sad as a result of missing his mother. The student admitted that being able to pet the dog actually helped him cope with his sadness.

Preventing, De-escalating Emotional Crises

Teachers for students with E/BD spend ample time on direct and situational social skill instruction to equip students with skills and strategies to replace deficits and distortions. Using the dog as the focus of instruction, lessons may include the following: (a) how to use the dog as an emotional calming tool, (b) how to be responsible for meeting his needs, (c) how to be respectful of the dog's needs, and (d) how to use him as a catalyst for socialization (see box, "Sample Social Skill Lesson").

To use the dog as a calming tool for the prevention and de-escalation of emotional
crises, students should first be taught to recognize signs and triggers that result in an emotional arousal. Next, students learn and practice strategies for interacting verbally and physically with the dog about how to hold, play, talk, walk, or simply observe how the dog can calm them psychologically and physiologically (Anderson & Olson, 2006b). Since some students have difficulty with reasoning and rationalizing at the onset of emotional arousal, a visual menu of these strategies can be constructed that is accessible for students to assist in their decision-making. Lastly, students should be informed that any intentional display of inappropriate behaviors in order to interact with the dog will result in postponement of access to the animal for the remainder of the school day.

**Sample Social Skill Lesson**

**Behavioral Objective:** For students to identify ways a dog can help people physically and emotionally.

**Materials:**
*You Have a Visitor: Observations on Pet Visitation and Therapy* by Renee Lamm Esoredi, 2 dog cut-outs for each student, chart paper, and markers

**Instructional Procedures:**
1. Inform students they may all have a turn to hold the classroom dog while going through the book.
2. Introduce book by its title and author, and then ask each student to look at the dog on the front cover and try to identify what the dog is thinking. Each student will share their answer.
3. When going through the picture book, alternate the following questions:
   *What do you think the adult/child is thinking?*  
   *How is the dog helping?*  
   *What do you think the adult/child is feeling?*  
   *How would you feel?*

**Assessment:**
1. Give each student 2 dog cut-outs. On one of them, they need to write how one dog in the book helped a child. On the other cut-out, they need to write how they think their classroom dog can help them.
2. When completed, students will place their dogs on the charts titled, *Dog in the Book* and *Dog in Our Classroom.*
3. Teacher will go through contents of each chart by having students share their responses while asking clarifying questions on how the classroom dog can help them.

**Wrap-Up:**
Referring to the charts, students will be informed that they will be learning strategies on how to use their classroom dog to help them in school, similar to the ways the dogs in the book helped children and adults.

In the event of an emotional crisis, students should have access to the dog as a tool for de-escalation after their emotional state has been evaluated to protect the dog's and students' safety. Additionally, it may need to be standard procedure to contain the dog in a locked kennel when students display acts of aggression. With the teacher's consent and observation, students should be permitted to hold, play with, talk to, walk, or simply observe the dog in their attempt to regain emotional and behavioral control. The teacher's role in the de-escalation process is to provide students with reinforcement for their employment of strategies, to assess students' cognitive deficits and/or distortions, and to engage them in cognitive problem-solving. The dog's mere presence can provide the following in the de-escalation process: (a) a visual and tactile focus for students, (b) a provo-
cation for laughter to enable students to release emotion, and (c) a medium for engaging students in problem-solving discussion (Anderson & Olson, 2006b). Based on the psychoeducational approach, a standard problem-solving sheet should be created to facilitate discussion about problem awareness, viable solutions, and the impact of the dog's presence (see Figure 1). The author created this problem-solving sheet for the psychoeducational reasons stated above, as well as to serve as a data collection tool to evaluate the dog's effectiveness. Students were responsive to this sheet since all students were compliant during its completion and verbalized how engaging in a discussion with the teacher gave them "ideas" for solving problems. These sheets were collected and stored in individual student binders. Occasionally, the author reviewed these sheets with students to encourage the use of alternative solutions for subsequent problems. Initially when students encountered similar problems, the author referenced the sheets to provide verbal prompts; as a result of the sheet's effectiveness, the verbal prompts were faded and students used self-instruction to employ solutions generated previously. For future implementation of this sheet, the author does recommend incorporating positive over-correction in order for students to practice their strategies.

**Figure 1. Problem-Solving Sheet**

<table>
<thead>
<tr>
<th>How did I solve my problem?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was the problem?</td>
</tr>
<tr>
<td>Did the dog help you calm down?</td>
</tr>
<tr>
<td>If so, how did the dog help you calm down?</td>
</tr>
<tr>
<td>How could you have used the dog to prevent yourself from having a crisis?</td>
</tr>
<tr>
<td>The next time you have a problem, what will you do differently to be even more successful?</td>
</tr>
<tr>
<td>Additional Comments:</td>
</tr>
</tbody>
</table>

To illustrate, there was a first grade student in the author’s classroom who had a history of violent episodes. On the one occasion the student entered crisis and was removed to a seclusionary time-out for safety reasons, the dog began barking at the student and continued to bark after being contained in his kennel. Once the environment was certi-
fied as safe by the author, the dog was released but avoided contact with the student. After the crisis, the student verbalized how his behaviors "scared" the dog and how he did not want to go into crisis again to prevent the dog from being scared of him. He had a baseline of five emotional crises (defined as verbal or physical aggression) and was reduced to one crisis after the inclusion of the dog, which was described above. For a third grade student, the dog was an effective de-escalation tool because of his "silly dog behaviors" that provoked laughter for an emotional release to ensue. During one emotional crisis, this student was in a seclusionary time-out due to severe verbal aggression. Allowing ample time for the student to be alone, the author tried to engage the student in a conversation; the attempt failed. After a while, the author wrapped the dog in a blanket like a baby and entered the time-out area saying, "Matt, look at my baby." Overtaken with curiosity, he turned around and instantly began to laugh and pet the dog. After a short duration of petting, the student began to explain his emotions. For this student, he had a baseline of 16 emotional crises and was reduced to 7 crises after the dog’s inclusion.

Generalization

For students to generalize skills for building relationships, preventing emotional crises, and being respectful, responsible, and empathetic, strategies need to be activated to support the use of these skills in general education, home, and community settings. To promote generalization, the author utilized the following strategies:

1. The role plays used during social skills instruction replicated real-life situations/scenarios encountered by students in multiple settings. When possible, actual classroom peers and natural settings were used.

2. Students were equipped with skill cards (about the size of a baseball card) that listed skills/strategies on one side and a picture of the classroom dog on the other. Students kept these cards in their pockets to serve as a nonverbal prompt. A card was provided for the home setting as well.

3. Parents and general education teachers were informed of all skills/strategies taught to support students' usage.

4. Observations were conducted in natural environments (e.g., general education classroom, playground, city park) to: (a) assess the use of skills to make instructional decisions, (b) provide prompts and deliver reinforcement for use of skills, and (c) give corrective feedback.

5. A service learning project was conducted at the local animal shelter where once a week students provided service to dogs by playing with them, walking them, and cleaning their environment.

Evidence of how students generalized their skills in the author's study is when a student admitted placing his skill card on his desk in the general education classroom with the picture side up to remind him of "what J.D. would want him to do." Another student stated how she would go to her bedroom and think about playing with J.D. in order to calm herself when there was a domestic disturbance in her home. During an interview session in the summer when school was not in session, a student explained how when having
a bad day she would look through her photo scrapbook to remind herself about the skills/strategies she learned and to "look at J.D.'s cute little face," which made her feel "happy."

Discussion
From the author's study, two broad-based conclusions were drawn that are consistent with the literature on the therapeutic value of pets to children (Katcher & Wilkins, 1994; Huddart & Naherniak, 1996; Lee et al., 1996; Zasloff, Hart, & DeArmond, 1999; Chandler, 2001). The first conclusion was that a dog, placed in a self-contained educational setting for students with severe E/BD, had positive emotional effects for all six students. Each formed a bond with the dog that was based on a myriad of interactions throughout the study. The strong bond between these children and the dog subsequently contributed to the stabilization of the students' emotions. The students' relationships with the dog were instrumental in effectively managing their behaviors in that they seemed to have a greater sense of self and an increased understanding of their emotional triggers and ways in which to solve their emotional difficulties (Anderson & Olson, 2006a). Students generalized these positive interactions and management of behaviors into the general education and home settings.

A second conclusion drawn from the data analysis was that integration of the dog into this self-contained classroom provided each one with lessons in respect, responsibility, and empathy. The six students in this study were respectful of the dog's daily presence, were accepting of his behaviors, were empathic to his feelings, and were able to see the parallel between his feelings and their own. Each student demonstrated responsibility by ensuring the dog's needs were met and his behaviors were managed through appropriate discipline and praise (Anderson & Olson, 2006a).

Although the benefits of having a dog in the classroom are significant, there are implications that need careful consideration. First, there are risks to the health of humans due to animal-related allergies, dog bites/scratches, and zoonotic diseases. Second, there is a hazard of the dog being verbally and physically abused by students with emotional challenges. Third, students' emotional well-being could be jeopardized if students have a dog phobia, if the animal is resistant to bonding with a student, or if the dog would unexpectedly die. Lastly, there are the implications for the classroom teacher who must make time and financial commitments that are long-term. To prevent associated risks, precautionary measures identified in this article should be taken to protect the dog and humans in the school setting.

Educators wishing to incorporate dogs into their classrooms for special needs populations might consider seeking certified therapy dogs. Furthermore, it will be important that written consent from administrators, parents, and students involved is obtained. Rules and regulations to assure the safety of all must be established at the outset, and direct instruction on the care and treatment of dogs must become part of the daily curriculum (Anderson & Olson, 2006a). If incorporating a therapy dog into the school community is not a possibility, pursue alternatives that provide students the opportunity to physically interact with dogs (e.g., service learning project at an animal shelter).

Further study of the value of pets in special education settings is warranted. Rud and Beck (2000) determined that "the interaction of special education students and classroom animals is an area that merits systematic research" (p. 314). Since the author's holistic
analysis gathered data in a single self-contained classroom of children diagnosed with severe E/BD, it would be important to repeat a similar research design in multiple settings with children having other special needs. It is recommended that an embedded analysis be conducted to study each of the following: (a) How a dog affects students' episodes of emotional crisis in regard to duration and intensity, (b) How a dog affects students' sense of self with emphasis on self-esteem, self-awareness, and sense of belonging, (c) How a dog affects students' socialization with peers and teachers, and (d) How a dog affects students' academic performance (see box, "Incorporating into Academics").

**Incorporating into Academics**

It was concluded in a study conducted by Zasloff, Hart, and DeArmond (1999) of elementary school teachers in California who integrated animals into their curriculum, that the animals were popular and effective foci of instruction. “The pet is a powerful tool for more fruitful teaching. When a child is confronted with a living object, his interest and attention are captured. Learning becomes reality-oriented, giving the child emotionally satisfying experiences” (Levinson & Mallon, 1997, p. 110). Melson (2001) also indicated that animals help children develop logical reasoning skills, understand biological principles, and make abstract concepts concrete. For the teachers of students with emotional disorders, it can be extremely challenging to motivate them to learn because of their lack of interest in the subject matter, but animals who make learning interesting can motivate them to learn (Levinson & Mallon, 1997).

Although the effects of having a classroom dog for improving students' academic performance is an area needing further study, the following are suggestions for infusing a dog into academic instruction:

1. During silent and oral reading, holding or sitting by the dog while reading to him. Elementary students have enjoyed reading books about dogs and changing the character’s name to that of their classroom dog (Anderson, 2004).

2. Using the dog as a topic for various genres of writing. For example, the author had each student create a scrapbook using digital photos capturing interactions with the dog. For each picture, students had to write a descriptive reflection. At the end of the year, the scrapbooks were laminated and bound to serve as a keepsake.

3. For science, studying the dog's needs as a living creature, behavioral characteristics, communication patterns, etc. A representation of this is when the author took her students to the local humane society to interact with other dogs in order to observe characteristics and communication patterns. Each student was then expected to compare and contrast his/her individual characteristics and patterns to those of a particular dog in the shelter.

4. In social studies, researching domestication of animals, origin of breeds, past and current issues of humane treatment, roles of service animals, and careers related to animal care. To exemplify, the local humane society gave a presentation to the entire student body on the humane treatment of animals.
References


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