



Dog-Assisted Education as A Pedagogical Tool

José Carlos Suárez Ramírez*

President of the Canarian Association for Individual and Family Development, Spain.

***Corresponding author:** José Carlos Suárez Ramírez, Associate Professor, President of the Canarian Association for Individual and Family Development, Spain.

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Summary

The presence of Assisted Education dogs in educational centres facilitates the inclusion of educated animals in present and future society. Specifically, the present action of the dog in the classroom as a secondary protagonist favours well-being, prosocial behaviour, the emotional dimension, cognitive capacities and values in the pupils. The programme lasted two months, with two weekly sessions, 5 of which were attended by the assisted education dog.

The teaching methodology applied was based on teaching with the presence of the Assisted Education dog as a motivating and interest-generating live element, being close to the teacher and controlled at all times. The working hypothesis is based on an initial survey of the students, complemented with the final survey at the end of the course. The initial survey collects information related to the level of attention, motivation, emotional management, and level of peer relationship, asking the opinion about the presence of a dog in class to collaborate in educational activities. During the last class session, the final survey is carried out, which collects information related to the benefit or otherwise of the classroom environment, the level of well-being, calmness, attention and participation.

This research aims to obtain results that indicate whether the presence of the assisted education dog favours academic development in the teaching-learning process of the pupils and the improvement of well-being in the classroom.

Keyword: Assisted Education; University Students; Wellbeing; Attention

Working Hypothesis

The presence of the assisted education dog in the classroom benefits the teaching- learning process by generating a more pleasant working environment (stress reduction), increasing the level of attention, concentration and participation.

Objectives

1. To offer motivating learning where the pupils are the active elements in their cognitive, social and personal learning process with the presence of the assisted education dog in the classroom.
2. To develop the teaching-learning process with the presence of an assisted education dog.
3. To encourage the improvement of affectivity and self-esteem with the presence of an educational assistance dog in the classroom.
4. To favor attention span and motivation.
5. To create working environments that favor the interaction of teachers and pupils in the classroom activity with the presence and contact with the dog (stress reduction).
6. To help each pupil to actively interact through dialogue or discussion with classmates, the teacher and the assistance dog.
7. To encourage social interactions and prosocial behaviour.
8. To develop emotional intelligence.
9. Encourage teaching innovation.

Didactic Contents

The fundamental knowledge, abilities, skills and attitudes for the development of knowledge and socialisation that pupils must acquire during the teaching-learning process are based on the following:

- Stress reduction
- Social and emotional skills
- Development of cognitive abilities (attention, concentration, ...)
- Dog-assisted education as an educational and prosocial complement.

Competencies

As know-how, the combination of knowledge, capacities, or skills, and attitudes appropriate to the context being worked on, are the following:

- Competence in linguistic communication (includes a personal component involved in communicative interaction in three dimensions: attitude, motivation and personality traits).
- Cultural awareness and expressions (allow access to different manifestations of cultural heritage, such as the environment and respect for animals and their social inclusion).
- Social and civic competences (relates to personal and collective well-being "optimal physical and mental health" and how a healthy lifestyle can contribute to this. It involves knowledge to understand and critically analyse codes of conduct and generally accepted practices in different societies and environments, as well as their tensions and processes of change).

Population

This research is carried out with a group of students in the 2nd year of Social Work at the ULPGC during the 2021/22 academic year. The number of students that make up the subject is 80. The face-to-face survey carried out in the second-class session, given the pandemic situation, meant that not all the students were present, so that the responses obtained were 61. At the same time, it should be noted that one question in the survey was of a qualitative nature, to which only 50 students responded.

Work Methodology-Intervention Procedure

The teaching methodology applied in this innovative educational experience is based on direct teaching carried out by the teacher, who plays the main role, with the presence of the educational dog as a motivating element in the teaching explanation, improving well-being in class, reducing stress and improving attention and participation. The Assisted Education Dog is close to the teacher and controlled at all times, attending 5 direct face-to-face sessions.

This research is carried out with a group of students in the 2nd year of Social Work at the ULPGC. The number of students in the class is 80, not all of whom attend face-to-face sessions on a continuous basis. The number of students who completed the anonymous questionnaires were 61, both in the initial and final questionnaires. Students who did not fill in the initial anonymous questionnaire because they did not want to or were not in class were not allowed to fill in the final anonymous questionnaire. It should be noted that only 50 students answered the qualitative questionnaire. In order to test the working hypothesis, an initial survey was carried out, complemented by another face-to-face survey on paper on the last day of the course.

These actions are based on an interpretative (foundational) support, from a mixed (quantitative and qualitative), descriptive perspective. The research carried out with university students has been carried out in a controlled way through 2 survey models, elaborated and validated on the basis of the previous knowledge obtained from the theoretical foundation. The initial survey collects information related to the level of attention, motivation, emotional management, and level of relationship between peers (quantitative), and together with this, they are asked their opinion about the presence of a dog in class to collaborate in educational activities (qualitative). During the last class session, the final survey is carried out, which collects information related to the benefit or otherwise of the classroom environment, the level of well-being, calmness, attention and participation.

In the initial survey, a rating scale is applied to 4 questions that make it easy to obtain grades between one option or another; it has 3 possible answers (high, medium or low). Another question presents a closed answer option (yes or no), and finally, the last question, of a qualitative nature, allows for personal opinions to be written down. The final survey presents a rating scale modality that is carried out with 5 questions. The answers to choose from are (Strongly Agree, Agree, Neutral, Disagree or Strongly Disagree). The last question presents a closed response option (yes or no). The study variables are the following: attention/concentration to explanations, level of participation, benefit of classroom environment, social relations, emotional management and motivation.

Theoretical Framework

Animal-assisted interventions in educational settings

As [16], points out, the intervention is called Animal Assisted Education (AEA) the educational process that has defined objectives (learning to read and write, numeracy, etc.) led by an educational professional. Previously, from the work of [15], it can be inferred that the use of animals in the classroom, related to the academic school curriculum, generates an increase in the development of physical, intellectual, social and emotional skills, and along with this [29], point out that the presence of a dog causes relaxation, happiness and security in the classroom environment.

Different authors from the last century [2], have investigated the benefits of the presence and action in educational centres of animal-assisted therapies or education. Thus, in the physical aspect, petting a dog improves and causes a state of relaxation and a decrease in blood pressure. A study carried out by Allen, [3] showed that a group of people showed better results in solving mathematical exercises and a decrease in blood pressure when they were accompanied by pets than with the close presence of other people who were affectionately close to them. The presence of an animal, specifically a dog in the classroom, on a psychological and emotional level, leads to the following:

- It causes an improvement and promotion in the development of verbal communication and language.
- The main executive functions, such as memory, attention and planning, increase in their development.
- Sense of humour, affective behaviours of a positive nature (laughter, tenderness,) are increased, encouraging play, affection and physical contact both towards the animal and the other users.
- It causes an improvement in the control of impulsive behaviour.
- It decreases the feeling of loneliness, isolation and depression, increasing the feeling of security, improving mood, independence, self-worth and motivation, causing positive affective state with an increase in self-esteem and sense of achievement [8].

The Purina Foundation (1998), had already concluded since the last century the benefits of the presence and interaction with animals, so in the field referred to those cases of insecurity, shyness, loneliness, etc., it is caused that the presence of the animal increases acceptance, affection and empathy in children. To which [10], pointed out that different types of learning of diverse aspects are caused through interaction with this type of animals, such as: discussing how they feel in certain situations; how to give and receive affection.

The main benefits of the presence of assistance dogs in the classroom, established by Rogelio Martinez (2008), can be inferred as the following:

- Relationships: the presence of animals in the classroom can incite an improvement in safe emotional communication.
- Entertainment: this living stimulus within the classroom, causes interest and amusement just by its presence.
- Acceptance: one of the main benefits of animals in the classroom is that they do not give marks or grades. They don't rate or make judgements; they just are and are.

- Empathy: the level of understanding and acceptance of others, beyond their actions, is increased through modelling.
- Socialisation: animals encourage relationships between people.
- Mental stimulation: the presence of an animal favours communication within the classroom, encouraging attention, motivation and reading ability.
- Physical contact: children who want to have physical contact with animals grow in emotional and physical aspects in a more favorable way.

Another aspect that demonstrates the benefit of the presence of assisted education dogs, studied more than a decade ago, is obtained from [23], who verified how blood pressure decreased when reading aloud when a dog appears in the test room. Other research by [26,32], concluded that animal-assisted therapies caused, to varying degrees, benefits for children, adolescents and/or adults in terms of their emotional well-being and behavioural problems, which can be extrapolated to the classroom environment with users (students and teachers). In the educational field, vocabulary, attention span, development of longer short term memory, etc. are increased and improved. In the social sphere, the social interaction of the individual is facilitated (social facilitator) causing an increase in the level of social interaction with colleagues and professionals of the centre, and where the animals favor inclusion and cooperative play, improving the performance of group activities, acting as an animator for dialogue between pupils in the classroom [1]. Already, indicated that with the presence of an animal, young people feel more secure, anxiety decreases, self-esteem and acceptance of their own image increases, in order to express themselves.

The advisability of training future educational trainers means that they should be aware of this complement to education. Thus, in terms of emotional development, if we want to build a full and prepared individual for the society of the future, it is essential to educate our students and children in the affective and emotional world [11]. Emotions shape the functioning of the brain: emotional stimuli interact with cognitive skills. Moods, feelings and emotions can affect reasoning ability, decision-making, memory, attitude and readiness to learn. In addition, research has shown that high levels of stress negatively impact learning, change the brain and affect cognitive, perceptual, emotional and social skills... a favorable classroom climate are essential factors for learning [6].

Subsequently [13], established results that demonstrate that animals can contribute to the process of teaching and learning to manage emotions, and later, in order to influence in this line, it is noteworthy that, "although the inclusion of animals in educational practices is increasingly popular, especially in the United States and Europe, there is still no systematic evidence of its concrete effects,

although several studies reviewing empirical work suggest potential benefits of incorporating animals in educational institutions, in terms of motivation and learning" [17].

Close to the present day [25], points out the positive impact of dogs in educational institutions in terms of social and emotional development, behaviour and enthusiasm for learning. In addition, "the mere presence of the animal, its spontaneous behaviour and its availability for interaction provide opportunities and benefits that would be impossible or much more difficult to obtain without its presence" [21,22].

Classroom climate

The [28], defines well-being in the educational classroom as the whole set of actions that lead to having a good and peaceful time, causing perceptions of satisfaction and harmony, due to the development of the emotional dimension [19]. Pointed out that the presence of an animal, in this case an assisted education dog inside the classroom, causes innate interest on the part of the human being in order to contact with other forms of life (biophilia theory), and due to this interest, influences on knowledge, health and well-being, and sometimes a sense of calm and security are caused.

Reinforcing the results obtained by research related to this subject, Castro Pérez and Morales Ramírez point out that: in order to achieve significant learning, it is important to create a climate characterised by good treatment of people, whether adults or minors, dialogue and respect for individualities (learning pace, special educational needs, cultural and personal values) in order to foster coexistence, participation, freedom of expression, active listening and respect for opinions; all of the above would lead to the enhancement of a climate of joy, creativity, play and companionship. As a consequence of these results from previous studies, this new methodology can be considered as a complement to traditional education through the inclusion of a dog in the classroom in ordinary teaching. Thus [30], indicate that companion animals facilitate and improve social skills and participation in the classroom, reduce stress and anxiety, and reduce problematic behaviour and conduct, improving the classroom climate.

Some experiences in university environments

The first university that allowed the presence of pets in their habitat was Eckerd University in St. Petersburg (Florida, USA), in 1972. Today, 229 of the 1,900 students at the same university have registered pets. Since 2000 in the USA: Pfeiffer University (North Carolina), University of Northern Colorado, Eckerd College of Florida, Southeast Missouri State University, Stephen College and a women's college in Columbia (Missouri). As measured by the same universities, the pets helped reduce students' stress levels, anxiety and depression.

The Universidad Latinoamericana de Ciencia y Tecnología (Ulacit) in Costa Rica. Since July 2018, students, faculty and staff have been taking their pets with them. Goodman- Wilson notes: "Most students reported that pets had a positive impact on their academic performance. There was an effect when it came to somatic anxiety: the physical effects of stress, such as a racing heart and sweaty palms. The new policy emerged from an increasing number of assistance animals. They see this as part of creating a vibrant university community that is attractive and promotes wellbeing". The Complutense University of Madrid, in 2019, is launching a pilot programme to reduce student stress at exam time through interaction with animals, with the support of the faculty dean's office, the applause of the university's leadership and the admiration of professors from other faculties.

A study by [20], at the University of British Columbia (Canada) documented the interactions of 284 undergraduate students with therapy dogs, noting that it is a safe method of reducing stress.

Result Obtained

The initial survey generated the following result

From the quantitative results obtained, it should be noted that 83.6% of the pupils are attentive at a high level in the activities carried out in class, 16.4% are attentive at a medium level, and 0% are not attentive. At the same time, 4.9% show a high level of difficulty with regard to difficulties in relations between peers in the classroom, 21.3% show a medium level with regard to this variable, and the majority of the class, 73.8%, do not show any type of difficulty in relations in class. It is noteworthy that 44.3% of the students express their emotions at a high level, 49.2% are able to express them at a medium level, and 6.5% do not express any type of emotion in class. The variable related to the level of motivation in class shows that 100% of the pupils have a high level of motivation. It should be added that 65.6% of pupils live with a pet at home, and 34.4% do not.

With regard to the qualitative question (personal opinion prior to carrying out the activity, copied verbatim) referring to "what do you think of the presence of a dog in class to collaborate in educational activities?", it should be noted that not all the pupils surveyed answered; only 82% responded to this question (Table 2).

The first item related to the presence of the therapy dog in class, and the level of tranquility it causes, was chosen by 52.4% of the students, with 52.4% in total agreement, 23% in agreement and 24.6% in a neutral position. In turn, the item referring to whether it benefits the working environment, 60.6% totally agree, 29.5% agree, and 9.8% are neutral. The action referring to whether it makes the classroom more pleasant, 85.2% indicated that they totally agreed, 11.5% agreed and 3.3% opted for the neutral option. The item that has to do with attention and concentration

to explanations in class shows that 23% totally agree, 37.7% agree, 36% are in a neutral situation and 3.3% disagree. The level of participation increases in class, leading to the following responses with 18% agreeing strongly, 21.4% agreeing, 50.8% neutral, 8.2%

disagreeing and 1.6% disagreeing strongly. The last item referring to the fact that the assisted education dog could be returned to another subject, causes 100% of the students to choose the option of totally agreeing.

Table 1: Quantitative results.

	High	Medium	Low
What is your level of Attention in class?	51 (83.6%)	10 (16.4%)	0 (0%)
Do you have Relationship problems?	3 (4.9%)	13 (21.3%)	45 (73.8%)
Do you express your Emotions?	27 (44.3%)	30 (49.2%)	4 (6.5%)
What is your level of Motivation?	61 (100%)	0 (0%)	0 (0%)
Do you have pets at home?	Yes	No	
	40 (65.6%)	21 (34.4%)	

Table 2: Qualitative answers.

What do you think about the presence of a dog in the classroom to help with educational activities?	1. I think it is a good idea, especially for people who have an affinity with animals, it helps to maintain a more optimistic atmosphere and motivation.
	2. I find it quite curious. Since, we relate a pet with a purpose of companionship and affection. But we can also use an animal for educational, social and scientific research purposes, among others.
	3. I think it's a good idea, although not being in class I don't really know what its function would be or what it would be for, but in my opinion animals are very good for people and I don't see anything wrong with its presence.
	4. I think that dogs are one of the best companion animals for human beings and that their presence could help in the classroom to improve coexistence, motivation and support those who need it through activities or talks.
	5. I see it as something innovative, which attracts me a lot of attention and I would love to live the experience.
	6. I think it would help a lot. It would help, for example, to increase children's attention, if it is in a primary school classroom. It could also help to reduce stress in these children and increase responsibility in caring for them. It could also improve the emotional well-being of the pupils, among many other benefits.
	7. I think it is right and innovative
	8. Although I do not have a pet at home, I consider that the presence of a dog is ideal in all areas. The affection that children show for them is ideal, it is a way of expressing themselves and a method, as teachers, to observe their emotions, as well as being an added motivation to the activity.
	9. I think it is necessary for people with visual impairment
	10. I think it is a fantastic initiative, as it will be motivating and will even encourage students to concentrate on the different dynamics that can be brought to the classroom.
	11. I think it would be great and it would be very innovative.
	12. I think that the presence of a dog in the classroom would not be detrimental to the methodology of the class, that is, I think that its presence would be more beneficial than detrimental.
	13. I wouldn't mind as it doesn't bother me at all. Besides, I think it could help to understand certain subjects and to take responsibility and act in a more coherent and humble way.
	14. I think it's great, I think we can learn from it and from the experiment to be carried out.
	15. A dog in class can increase motivation, but partly decrease attention. So, I have a bit conflicting opinions.
	16. I have never thought about it before, and I think it could be a good initiative.
	17. I am totally in favor of the presence of the dog. I have seen dynamics outside the classroom that have worked, and if we relate it to the subject, it increases its value even more.
	18. I think it's a great idea.
	19. I think that the presence of a pet already in itself at home gives a sense of responsibility and develops an affective relationship, so in the classroom, apart from this, children should

Table 3: Results in the final evaluation.

The presence of the therapy dog in the classroom	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Calms me down	32	14	15	0	0
	52,4%	23%	24,6%	0%	0%
Benefits the work environment	37 60,6%	18 29,5%	6 9,8%	0 0%	0 0%
Makes the class more enjoyable	52 85,2%	7 11,5%	2 3,3%	0 0%	0 0%
I am more attentive and concentrated to the explanations	14 23%	23 37,7%	22 36%	2 3,3%	0 0%
I participate more	11 18%	13 21,4%	31 50,8%	5 8,2%	1 1,6%
Would you like me to come back in another subject?	Yes	No			
	61 100%	0 0%			

Analysis of Result

The research that offers data obtained in the initial survey has shown that the level of attention of the students in class is high, with 83.6%. At the same time, 73.8% present a low level of relationship problems. In the aspect of emotional expression, 44.3% show a high level and 49.2% a medium level of their communicative ability. To finish with the educational aspect, it should be noted that all students show a high level of motivation in class.

Studies by different authors at different times, such as [8,27], conclude that the presence of animals (Animal Assisted Education) in educational environments facilitates, improves, and increases the bonds between pupils and teachers, which creates a safe and comfortable environment for the expression of emotions, created from the presence and interaction with the animal, making the teaching-learning process possible in a context that is more suitable for it.

It is worth noting the high rate of students who have a pet at home, 65.6%. With regard to the qualitative question related to the presence of a dog in class to collaborate in educational activities, the responses obtained mostly reflect a positive disposition towards this, as can be seen in the section on the results obtained.

Together with these results obtained in this research from [12], it can be extracted that the participation of dogs can act as social facilitators of trust and modulators of emotional expression, aspects that [5], delimits that cause situations of academic improvement, in which, due to the presence and interaction with animals, increases the motivation of students, decreases the level of stress causing that the performance of students can be improved.

Conclusion

It can be established from this research and the results obtained that the presence of educated animals for educational purposes in academic environments improves the level of tranquility of the students (reduction of stress), benefits the working environment, makes the class more pleasant and preferably the students agree

that they are more attentive. At the same time, it is worth noting that all of the respondents were in favour of the fact that they would like to see the presence of the assistance dog in other subjects. Studies by [18], cited by Martinez [24], talk about seven benefits of ATAC focused on therapeutic and educational objectives. Animals are able to provide emotional support; control, in aggressive people; Socialisation skills; help with physical ability, in people with disabilities; a sense of responsibility and motivation, in terms of academics [31]. Points out that the presence of dogs in the classrooms of educational centres leads to improved affective environments, attention and motivation in pupils and an increase in their willingness and ability to learn.

It could be defined that a pilot project of dog-assisted education in the classroom in university academic environments, has a place and can cause benefits after the results obtained, and in turn, the inclusion of educated animals in society facilitates that they have spaces and functions that take advantage of them according to the Law that protects them as sentient beings. The main obstacle is based on previous difficulties related to fears of consequences of physical or emotional harm on the part of the people responsible for the institution. It is a latent reality that activities with continuity in educational centres, if they are not useful for learning, are not considered useful, due to the demands established by the academic curricula. Being able to include these actions means justifying the pedagogical and learning purpose of the presence of assisted education dogs in the classroom (those who have a pet know from experience what it has to offer). It is also possible that there may be pupils who are reluctant to their presence in the classroom for various reasons (fears, phobias, allergies, rejection, etc.), important elements that will be considered on the basis of previous experience in educational centres.

Limitations of This Research

Carrying out educational actions by a teacher with the presence of a qualified dog of assisted education in the classroom has presented different difficulties mentioned below:

1. Bureaucratic difficulty for access even if the assisted education dog has official insurance as a therapy dog.
2. Lack of innovative attitudes within the educational process on the part of the people who delimit this type of action.
3. Lack of knowledge of this complementary educational technique on the part of teachers, caretakers, and cleaners. With regard to this research, it should be noted that the cleaners of the Faculty of Education complained about the presence of the assisted education dog in the classroom (the dog was sitting on a blanket on top of a chair), entering the classroom while I was teaching to criticize its presence, so they prohibited its presence and could not carry out this research in any group in this faculty.
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Conflict of Interest

No conflict of interest.

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