

Engaging Students: Using Video Clips of Authentic Client Interactions in Pre-Clinical Veterinary Medical Education

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ABSTRACT

The present study evaluated third-year veterinary medical students' perceptions of a communication lab protocol. The protocol used clips of fourth-year veterinary medical students working with authentic clients. These clips supplemented course material. Clips showed examples of proficient communication as well as times of struggle for fourth-year students. Third-year students were asked to critique interactions during class. One hundred and eight third-year students provided feedback about the communication lab. While initial interest in communication proved low, interest in communication training at the end of the course increased substantially. The majority of students cited watching videos clips of authentic client interactions as being an important teaching tool.

Key words: communication training, authentic client, video review, student feedback, filmed interactions

INTRODUCTION

The benefits of teaching effective communication skills to future human and veterinary medical professionals have been well established in the professional literature.¹⁻³ Among the strategies for teaching communication skills, using authentic client filmed interactions is one strategy that has been considered an effective and beneficial teaching tool. This is due to the realism of the video clips and the lasting effects of interactions.⁴ Authentic client filmed interactions are often used with the limited purpose of providing feedback to the professional-in-training participating in the interaction. This study suggests repurposing authentic client filmed interactions into a cost-effective training tool to enhance communication skills training of pre-clinical veterinary medical students.

Communication Skills and Authentic Client Filmed Interactions

It has been established that teaching communication skills to future human and veterinary medical students is associated with important and lasting benefits. When comparing human medical students who had received training to those who had not, those who received communication training were found to have superior communication skills at post-test, and their skills continued to be evident for up to five years after training and graduation.⁵⁻⁶ Comprehensive and interactive communication training is also expected to yield better results, in that more extensive training is associated with better outcomes.⁷ In human medicine, effective communication skills are associated with improved diagnostic and medi-

cal problem solving, improved outcomes of care, and increased clinician and client satisfaction.⁵⁻⁶ In veterinary medicine, effective communication skills are associated with improved client satisfaction, reliable recall of information,⁷ increased treatment adherence, more empathic delivery of bad news, and effective management of euthanasia.⁸⁻¹⁰

Communication skills training often includes a combination of lectures (in small or large groups) and skills practice followed by feedback, using simulated clients and/or authentic client interactions. No empirical evidence to date suggests that there are significant differences in outcomes when comparing training using simulated clients and authentic clients.¹¹ Each training strategy has its merits, and training programs often utilize either a combination of the two strategies (simulated and authentic client interactions), or choose the strategy that is a better fit for the program.

Authentic client interactions have been described as a strategy that provides a naturalistic setting for student training in which clients may be in a real state of inner worry and dependence upon the student-in-training. Students, on the other hand, maintain dual attention as they make efforts to utilize the communication skills learned previously and also to provide the best treatment to the authentic client, a service that has consequences beyond the exercise of communication training.⁴ Benefits of using video review as a teaching tool include improving a student's recall of interactions, which enhances students' ability to evaluate the cognitive processes used during the interaction.¹² More specifically, video reviews have demonstrated effectiveness in changing practitioners' behavior during clinical interactions with patients.¹³

Student Engagement

One of the struggles in an educational setting is student engagement. In particular, achieving student engagement can be a challenge when students do not understand the relevancy or importance of particular material. Some within veterinary medicine have made a strong appeal for improving student engagement to improve the learning process.¹⁴ Specific benefits of engaged learning include collaborative learning, which fosters student engagement.¹⁵ Group learning is a powerful way that students learn from each other. In fact, Thurman et al.¹⁶ found that although students may claim to have a preference for individual learning and teacher direction, understanding and engagement is enhanced when students have the opportunity to learn from one another. Positive learning outcomes happen when students find the material engaging.

As applied to teaching communication skills to veterinary medical students, the process should include invested and engaged students. Initially, some veterinary medical students might not realize how essential developing good communication skills will impact their ability to be successful and effective clinicians. This mindset may lead to disengagement from the material. It is necessary that veterinary medical educators develop strategies to engage their students. Regardless of the method of delivery for teaching communication skills, educators should consider that their role as a communication coach could lead to improved student engagement.¹⁷

Veterinary medical programs have used authentic filmed client interactions. Training often consists of individual or group feedback sessions after viewing an authentic filmed interaction. Students appear to be satisfied with the combination of authentic filmed client interactions and feedback sessions. Hafen et al.² highlighted students' evaluation of their program, which includes authentic client filmed interactions and individual feedback sessions, rated as "good" or "superior." Authentic filmed interactions are considered a strategy for communication skills training that promotes reliable learning. And yet, the use of authentic filmed interactions is largely restricted to its use in feedback sessions. This study presents an approach to using authentic filmed interactions as a tool in teaching communication skills to students in their pre-clinical years, which enhances engagement and changes perceptions. The protocol for the training and students' feedback are reported.

METHOD

Communication Lab

The communication lab is required for students in their third year of veterinary medical training at the Kansas State University (KSU) College of Veterinary Medicine (CVM). It was developed as an addition to the communication training protocol already in place at the KSU CVM since 2007. The previous protocol included communication training offered to students in their fourth-year community practice rotation. It utilized authentic client filmed interactions and individual feedback sessions

with students focused on improving their communication proficiency (for a complete description of the protocol, see Hafen, Rush, and Nelson; Hafen, Siqueira-Drake, Rush, and Nelson).^{2,18} The communication lab gives students greater exposure to some of the benchmarks of effective communication before their fourth year of training, when they are expected to interact with clients and patients and to apply their communication skills in practice. Skills taught in the communication lab are commonly emphasized in the communication literature, both in human and veterinary medicine.^{10,19,20}

Clips of authentic client filmed interactions of fourth-year veterinary medical students are used throughout the third-year communication lab at KSU CVM. Behavioral scientists who lead the communication training at KSU CVM (PhD-level licensed marriage and family therapists) select video clips from fourth-year students' community practice rotation that would be helpful in illustrating specific communication skills. By introducing the use of authentic client filmed interactions, students' levels of engagement and interest in learning such skills were expected to increase. Third-year students are likely to be more engaged in communication training if they can put themselves in the role of the student-in-training, which, in this case, is achieved by having students watch filmed interactions of their fourth-year colleagues struggling and succeeding with communication skills discussed in the communication lab. Informed consent for the use of videos for teaching purposes is provided by both students and clients of the Veterinary Medical Health Center (VMHC).

Communication Lab Protocol

Students meet for the communication lab for a total of three hours, in three one-hour segments during the fall semester. The third-year class, which includes approximately 120 students, is divided into groups of 20 students each to facilitate group discussion. Labs are conducted by two behavioral scientists. All communication lab experiences occurred on Friday afternoons.

The first module of the communication lab is focused on client engagement, specifically, non-verbal communication. The behavior scientist leads discussions and directs experiential activities that stimulate students to actively participate in discussions about elements of non-verbal communication (e.g., eye contact, body positioning, avoiding barriers, open vs. closed stance, tone of voice), and how they may affect clinician-client interactions. After initial activities and group discussions, students watch authentic filmed interactions of fourth-year students during their community practice rotation, illustrating non-verbal communication. After watching video clips, students have a group discussion focused on their impressions of the observed interactions.

The second module continues to expand on client engagement and highlights the importance of client education. First, students review the previous class and then participate in experiential activities and group discussions about the difference between open-ended and closed-ended questions. In addition, students are involved in

Table 1: Communication skills feedback form

	Very low	Low	Moderate	High	Very high
1. Rate your level of interest in the topic before attending the class	<input type="checkbox"/>				
2. Rate the level of knowledge and awareness you gained from attending this class	<input type="checkbox"/>				
3. Rate how important this information will be in your future	<input type="checkbox"/>				
4. What parts of the class did you consider most helpful?					
5. What was unhelpful or unnecessary?					
6. What other topics would you like to have covered in the class?					
Please provide any additional comments on the reverse side of this page					

group discussions about strategies to engage clients, including building rapport, demonstrating empathy, offering praise, and providing feedback of positive findings. Students watch videos of authentic filmed interactions demonstrating situations where these skills would apply (specifically, a video about empathy in client interactions, and examples of open-ended questions) and again engage in group discussion. In groups, students practice common situations in which they would have the opportunity to educate clients, and then they watch authentic filmed interactions as examples of client education.

The third module is focused on the use of medical terms and the discharge. After a brief review of previous modules, students participate in experiential activities that mimic the experience of clients interacting with clinicians who utilize overly technical language. Students participate in group discussions about what terms they would have to clarify to clients, and practice how they would explain these terms using non-medical terminology. Groups discuss the ideal structure of the discharge and the communication skills necessary during the discharge (e.g., open stance, clarity, listening, and availability to answer questions). Students watch authentic filmed interactions illustrating the discharge and the utilization of medical terms with understandable explanations, followed by discussion of the videos. At the end of the last module, students are asked to fill out anonymous evaluations of the course, including multiple choice questions as well as open-ended questions about the lab (see Table 1).

Sample

The communication lab is part of the curriculum of students in their third year of training at KSU CVM. As the communication lab is part of the standard curriculum, participation in the lab is mandatory. Providing responses to lab evaluation was voluntary. All third-year veterinary medical students enrolled in their fifth semester at KSU were invited to participate in this study ($N = 117$). According to enrollment records, students in this class are primarily female (70%), Caucasian (89%), in their mid-20s (mean age is 26.5 years), and scholastically gifted (average veterinary college cumulative GPA = 3.4).

Procedure

At the conclusion of the small group communication training protocol described above, participants were asked to complete a survey (Table 1). Time allotted to complete this activity was five minutes. While students were required to attend the small group training as part of their academic experience, there were no grades or points associated with this activity. Whether specific respondents provided feedback or not was not tracked. There were no incentives offered to provide feedback. Likewise, there were no consequences for declining to provide feedback.

Researchers collected and reviewed the surveys. The investigation was granted permission to study human subjects by the KSU Institutional Review Board.

Measure

A researcher-designed class evaluation survey was distributed during the last class to assess students' perceptions of the course (see Table 1). Students were handed blank evaluations at the end of the last class and were asked to deposit completed evaluations in boxes located by the classroom doors as they left the class. Students' responses to the evaluation were anonymous to foster truthfulness in their responses.

The evaluation included three Likert scale questions²¹ and three open-ended questions. For the first three questions, students used a five-point scale (from *very low* to *very high*) to rate their perceived level of interest in communication before attending the lab, their perceived level of awareness and understanding about the topic after attending the lab, and the importance of communication skills in their future. These questions were meant to gauge students' level of engagement in the course. Three additional questions inquired about students' perceptions of what was most and least helpful, and what students would like to have added to the course. These questions had the purpose of assessing students' perceptions regarding class interventions affecting their learning experience.

To evaluate students' general attitudes and perceptions about the communication lab, researchers used descriptive statistics such as mean, frequency, and percent. A

Table 2: Frequency of positive and negative written comments ($N = 105$)

Student suggestions	Helpful teaching interventions		Areas for improvement	
	Frequency	% of class	Frequency	% of class
Watching student videos	58	55.2		
Discussion of clinical situations	19	18.1		
Non-verbal training exercises	13	12.4		
More clinical scenarios			32	30.5
Already a good communicator			18	17.1
More role play/practice			10	9.5

Table 3: Ratings of communication skills training received ($N = 108$)

Perception of class	Mean	SD
Initial interest in communication skills	2.71	0.94
Level of knowledge gained through class	3.23	0.97
Importance of knowledge for professional future	3.72	1.08

change score was computed for each student. This score represents the difference between the student's views of future helpfulness of information with the student's initial interest for the topic of communication training. To compare initial interest of students, independent t -tests were computed using the change scores. These tests compared students with low, moderate, and high initial interest in the class. For written comments, researchers reviewed responses and categorized each response. Examples of these categories are listed in Table 2.

RESULTS

Of the 117 eligible third-year veterinary medical students at KSU, 108 (92%) participated. As a group, these veterinary medical students reported low initial interest ($M = 2.71$; $SD = 0.94$) in communication training (Table 3). However, these same students reported that they gained

valuable knowledge through the experience ($M = 3.23$; $SD = 0.97$) and that knowledge would be important in their future careers ($M = 3.72$; $SD = 1.08$).

Frequency of helpful teaching interventions and areas for improvement were assessed (Table 2). Watching authentic video segments of previous KSU veterinary medical students was clearly valuable, with 55% of students describing this teaching intervention as helpful. While participants reported value in reviewing clinical scenarios (18%), they indicated wanting additional exposure to these types of scenarios (31%).

While students admitted to having initial low (38%) or moderate (46%) interest in communication skills (Table 4), these same participants readily agreed that the class moderately (45%) or highly (38%) provided new knowledge that would be moderately (29%) or highly (62%) helpful in their future professional careers. When evaluating individual respondents, only 5% of students experienced a negative score when comparing future helpfulness of the information presented with their initial interest in communication training (Table 5). In contrast, 65% experienced a positive difference score.

Results of independent t -tests for low, moderate, and high initial interest groups revealed that those within the low interest group were statistically more likely to experience a greater change score than those in the moderate or high interest groups (Table 6). It should be noted that those in the moderate group were also more likely to experience higher change scores than those in the high interest group.

Table 4: Frequency of initial interest, knowledge gained in class, and future helpfulness of communication skills within initial interest categories ($N = 108$)

Student rating	Frequency (%) of very low/low	Frequency (%) of moderate	Frequency (%) of high/very high
Initial interest of communication	41 (38.0)	50 (46.3)	17 (15.7)
Knowledge gained in class	18 (16.7)	49 (45.4)	41 (37.9)
Future helpfulness of information	10 (9.3)	31 (28.7)	67 (62.0)

Table 5: Frequency of difference scores between future helpfulness of information and initial interest in communication training (*N* = 108)

Difference score	Frequency	% of class
-1.0	5	4.6
0.0	32	29.6
1.0	35	32.4
2.0	31	28.7
3.0	3	2.8
4.0	2	1.9

DISCUSSION

Summary of Findings

Findings indicate that the main goal of the communication lab was achieved: students' level of interest in client communication increased. At the end of training, students perceived their awareness and knowledge of client communication to be high, and acknowledged that communication skills would be highly relevant in their future veterinary medical professions. Further, authentic client filmed interactions appeared to have the greatest effect on students' learning and engagement as compared to brief lectures, experiential activities, and class discussions. Specifically, 55% of students found videos most helpful and 31% wanted to see more clinical scenarios in class. These promising findings suggest that identifying interventions that dramatically increase student engagement, such as showing clips of authentic client filmed interactions, can yield results.

Also, looking at only those students in the low initial interest category, 90% acknowledged the future helpfulness of the communication skills discussed during the lab. This group of students experienced the greatest improvement scores when compared with those who initially rated communication skills training as highly important. When presented with a purposeful and engaging communication training experience, even the majority of the initially uninterested students were able to find value in this exercise. The attitudes of this group should be of greatest concern for communication skills instructors as these students are the least likely to engage. Finally, it should be noted that the communication labs were not

delivered under ideal circumstances as students were mandated to participate and the labs occurred at inopportune times (Friday afternoons), yet the majority of students still found significant value.

Application

When time is limited, such as in veterinary medical communication training where there is an abundance of material to be covered, teaching can be a challenge. This challenge is not limited to teaching effectively over a short period, but also includes increasing student engagement so that the material being taught is seen as relevant. The findings of this study suggest that sharing information with students may not be enough for students to perceive the relevance of communication skills. This brings attention to the importance of information-delivery methods that engage the audience, such as watching examples of authentic client filmed interactions. Students may prefer this intervention because it differs from the teaching methods in their usual classes, where large group lectures are the norm; it invites students to an active learning experience, involving familiar people and a familiar environment, and emphasizes critical thinking.²² Student apathy appears to be less likely, perhaps because it brings the material closer to their reality, making it more personal. Watching other students struggle with seemingly simple communication skills may also have demonstrated to students how professionals often overestimate their communication skills, and how communicating effectively may be more difficult than it seems.²³⁻²⁴

To optimize results, instructors should carefully consider strategies to elicit student engagement in learning communication skills. As noted in the student engagement literature, teaching environments that increase student engagement are those in which students exercise active learning and critical thinking, receive feedback, and participate in small groups.^{22,25} The manner in which authentic client filmed interactions were used in this study could help educate students in general communication skills with clients, but it could also help students in a variety of more specialized communication topics pertaining to veterinary medicine, such as delivering bad news; discussing finances; managing relationships with staff, colleagues, and faculty; discussing diagnoses; and negotiating treatment options.

Table 6: Results of independent samples *t*-tests between level of initial interest in communication skills and change scores (*N* = 108)

	Very low/low (<i>n</i> = 41)		Moderate (<i>n</i> = 50)		High/very high (<i>n</i> = 17)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Low vs. moderate	1.49	1.05	0.90	0.89			2.89	.005
Low vs. high	1.49	1.05			0.18	0.73	4.69	<.001
Moderate vs. high			0.90	0.89	0.18	0.73	3.03	.003

LIMITATIONS

While yielding promising results, this study is not without limitations. The sample for this study was small and included students from only one CVM. Although it was clear from this particular sample of veterinary medical students that perceptions of communication skills did improve, it is unknown whether the results of this study would remain consistent in other veterinary medical programs. Although unlikely, it may be possible that KSU veterinary medical students differ in some meaningful way from veterinary medical students in other programs.

In addition, as it is possible with any self-report measure, students may have felt compelled to respond positively to the evaluations, inflating findings despite responding anonymously. Another limitation to this study was the lack of a control group. To better gauge the effectiveness of the intervention, it would have been helpful to include a comparison group, trained in a different approach, such as a large group lecture. Further, learning outcomes or communication skill improvements were not assessed.

Finally, it is also important to take into consideration that replicating this particular communication skills training may not be possible in all veterinary medical programs. The particular training of the instructors for this course comes from a marriage and family therapy background. That particular training may have affected the delivery of the communication training to the veterinary medical students.

FUTURE RESEARCH

There are several different ways to continue to examine this communication skills training protocol in the future. For instance, pre- and post-test surveys could be administered to veterinary medical students who take this communication skills class in the future. Using this protocol in other veterinary medical programs would make it possible to conduct a comparative analysis of the training interventions' effectiveness in two different settings.

Finally, another potential avenue for future research is examining how two training conditions could affect student engagement: one group of students would be trained using authentic client filmed interactions, while a control group would be trained using a different approach. Comparing student engagement under these two conditions would provide important information about the relevance of the use of authentic filmed client interactions in increasing student engagement within communication skills training.

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