

Summary Report of Pre-and Post-Survey Results for Entomology Educational Videos

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Table of Contents

| | |
|--|----|
| Introduction and Statistical Analysis Information..... | 3 |
| Background on Videos..... | 4 |
| <i>Hooked on a Human</i> Summary of Results, Pre- vs. Post-Survey..... | 5 |
| <i>The Most Deadly Animal on the Planet</i> Summary of Results, Pre- vs. Post-Survey..... | 15 |
| Future: Summary Report Part 2 (2021)..... | 26 |

Introduction and Statistical Analysis Information

The following discusses the overall trends and results seen for online Canvas pre-and post-surveys for three of Justine's educational videos and one short Canvas survey for a fourth video. This material includes pre- vs. post-survey graphs and data with comments about the analyses generated from Canvas and the UNL statistics department, which helped us with running some data and putting it into a useful format. I want to specifically thank Kelsey Karnik, the statistics PhD student who provided us this service.

The blue bar graphs represented in this summary report were generated by Kelsey for this project. The other graphs were produced through Canvas (please note that the green bar on these graphs is just Canvas' way of marking the first response, it does not mean it is necessarily the correct response). My analysis below each graph explains the results.

Please note that there are slight differences in the results between some of what Canvas generated and Kelsey's data. It was not significant and the fact that all 143 students did not always answer every question in both surveys could account for this. Thus, when Kelsey ran the numbers and used different tests than what Canvas did, it may have generated slightly different result percentages, but the overall trends were still apparent (for example, Canvas may have shown that 69 students answered a question while Kelsey's showed 66 answered it). Because we are more interested in general patterns between pre- and post- survey data, this does not have much impact on the results. I chose to use the graphs generated in Canvas for some questions because those visually represent those questions well and provide responses by students and percentages in an easy-to-read graphical representation. I have used the blue bar graphs from Kelsey for other questions that visually show impact without the need to discuss specific numbers or percentages.

Finally, for the open-ended questions, I manually looked through the Canvas survey responses and counted common phrases, which led to some obvious patterns. Kelsey also ran some "common words" graphs for me. Again, I explain the findings of each of these.

Although these videos are all educational and entertaining, they are very different in their approach. In Part 1 (2020), we will look at the ***Hooked on a Human*** and ***The Most Deadly Animal on the Planet*** video survey results. These two videos were not created as part of the grant, but I did conduct surveys about them as part of the grant in my online Insect Biology course (ENTO 115), taught through our Learning Management System Canvas, to provide me with information about how undergraduates learn from this type of tool. In Part 2, we will also compare this data with the approach used in our two new grant videos, ***Tick TikTok*** and ***The Ultimate Recyclers***, to determine how video format affects student learning and engagement. In addition, the two new video surveys will be given not only to ENTO 115 students, but also distributed/expanded to include additional undergraduate and graduate courses. This will provide a wider audience and data set. The surveys for these new videos were/will be distributed in late 2020 and early 2021 and reported as Part 2 of this summary in 2021.

Background on Videos

Justine LaViolette is a former grad student (graduated December 2019) of the Entomology department. During her time in our department, she created many educational videos that are meant to teach the public about entomological concepts in a creative way. This includes college students who may have little knowledge or interest in insects.

Before discussing the results of the first two videos, here is a bit of history and information about each of them.

- ***Hooked on a Human***

This video features a song parody of *Hooked on a Feeling* and uses puppets and human characters to teach about ticks and tick bite prevention. It was created initially for my ENTO 115 class in Fall 2019 when Justine was working as a Graduate Teaching Assistant for that course (online and on-campus).

I distributed a pre- and post-survey (based on questions Justine developed for her thesis) to students in my online ENTO 115 Insect Biology Canvas course in Spring 2020. There were 143 students in the class.

Video link: <https://vimeo.com/358842610> (password: ento115)

- ***The Most Deadly Animal on the Planet***

This video about mosquitoes features puppets and involves an interview and informational format. It was created as part of Justine's research/thesis.

Again, I distributed a pre- and post-survey based on Justine's questions to my ENTO 115 students in Spring 2020.

Video link: <https://vimeo.com/378642186> (Password: ento115)

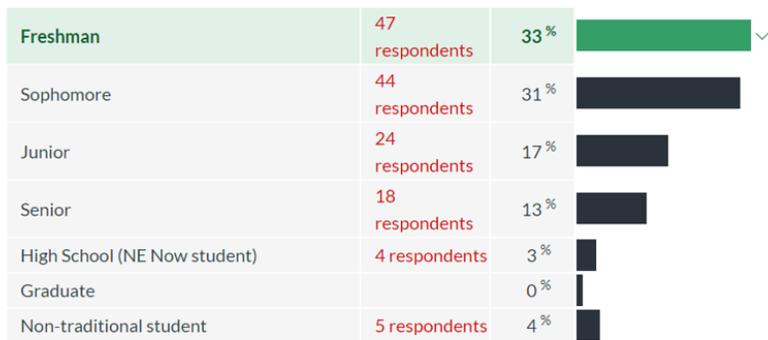
***Hooked on a Human* Summary of Results, Pre- vs. Post-Survey**

Students were given online pre- and post-surveys about the *Hooked on a Human* video to determine if their knowledge and behavior changed/would change upon viewing the video. I will discuss here some highlights and general observations of what we found.

Note that in most post-surveys, fewer people (136) responded than in the pre-survey (142), but the numbers were not enough to skew the results significantly. I will note trends based on respondent numbers or percentages, depending on the question and the graph used. In addition, the visual representation of these graphs provides obvious patterns from pre- to post.

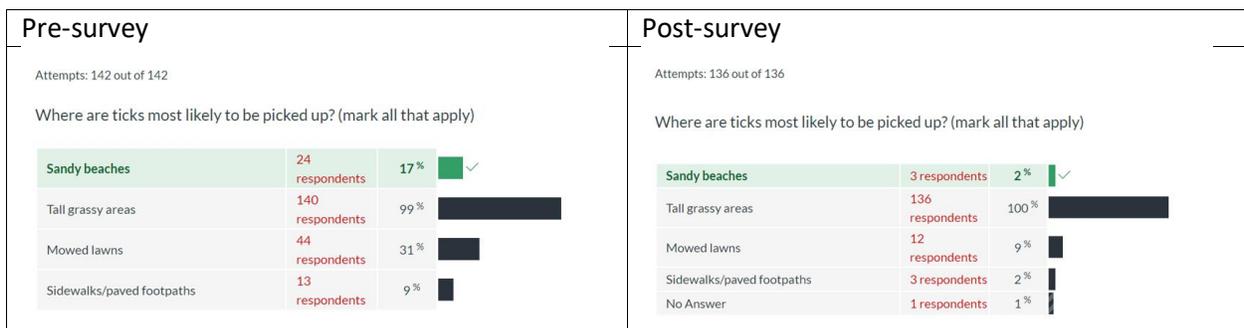
Attempts: 142 out of 142

Please indicate your grade level:



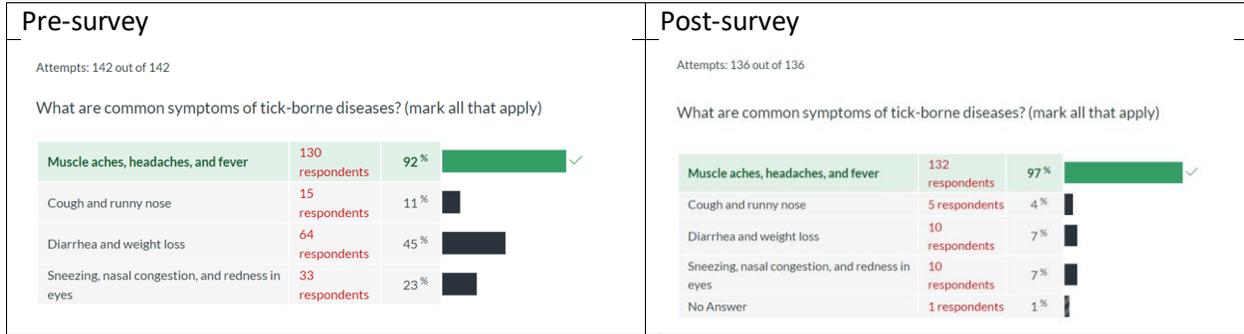
The first pre-survey question was a demographics one to determine student grade levels. ENTO 115 is an undergraduate class, although occasionally a graduate or non-traditional student will take it out of interest or to meet a deficiency. From this graph we can see that most students taking the survey (64%) were freshmen or sophomores.

Question: Where are ticks most likely to be picked up?



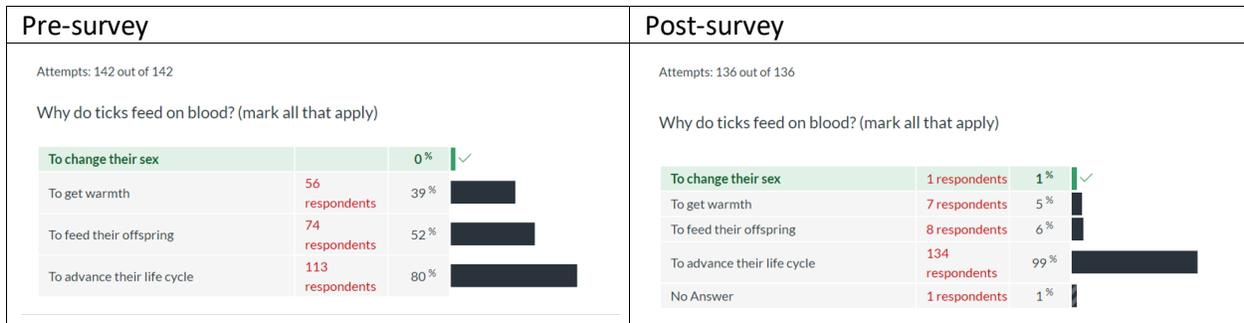
In this question, respondents were able to choose one or more answers. 140 answered *tall grassy areas* in the pre-survey and 136 in the post (although the percentage went up due to fewer respondents in the second survey). The difference, however, is that more of the other choices were also picked in the pre-survey whereas when students learned that tall grassy areas was the correct answer from the video, this was reflected in the post-survey.

Question: What are common symptoms of tick-borne disease?



In this question, students were able to choose one or more answers. Although most (130) got the correct answer of **muscle aches, headaches, and fever** in the pre-survey, this answer did go up (132) in the post survey. Also, other answers that were selected in the pre-survey were not selected in the post survey, indicating that student knowledge about this topic increased after they watched the video.

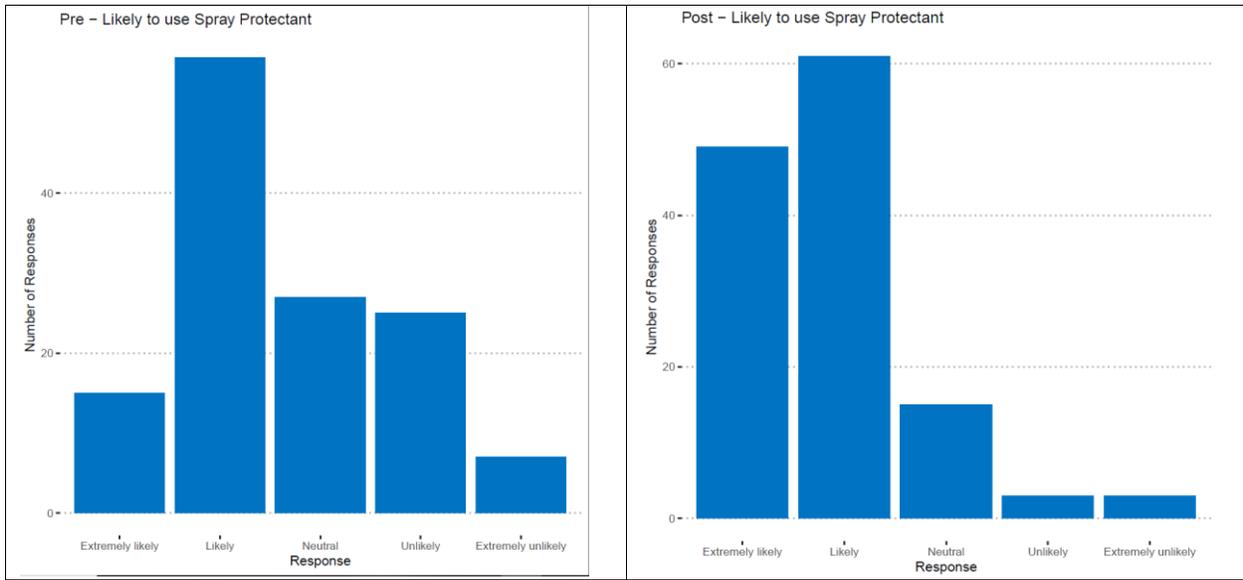
Question: Why do ticks feed on blood?



In this question, students could mark all the reasons they thought applied. There were significant differences between the pre-survey and the post survey. The correct answer was **to advance their life cycle**, which was chosen by 113 respondents in the pre-survey and 134 respondents in the post. Although this went up from pre- to post, it is worth noting that the other answers of **to feed their offspring** and **to get warmth** were also chosen frequently in the pre-survey compared to the post, where students learned that these were not correct answers.

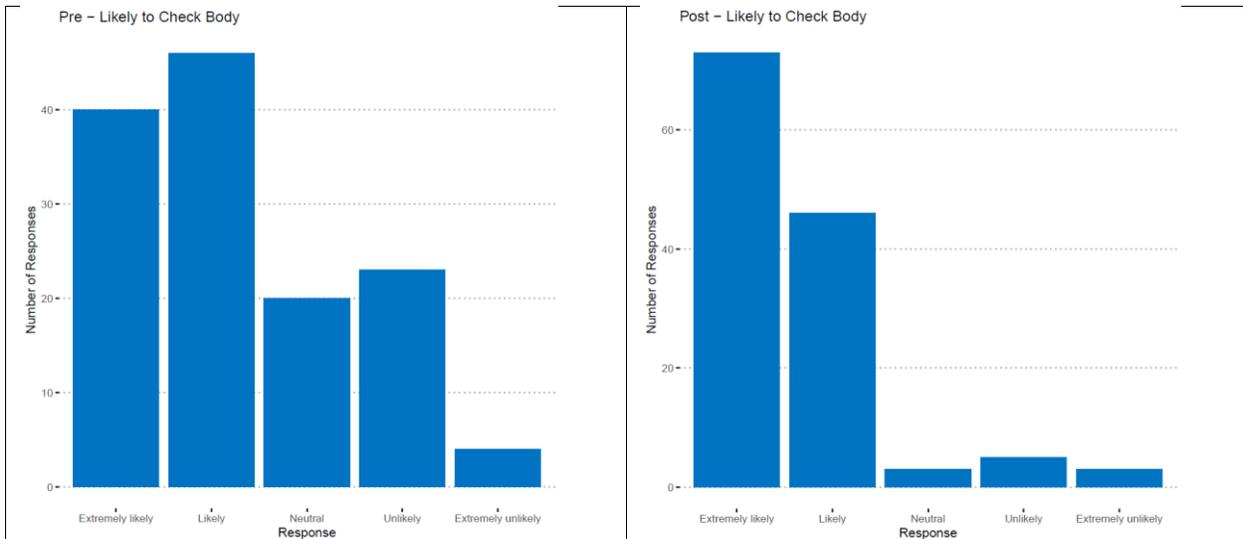
The graphs in the next few questions represent how many students answered the question with the corresponding option on the X axis. They give more of a general, yet highly visible, representation, with responses shown in increments of ten rather than exact respondents or percentages.

Question: How likely are you to protect yourself with a spray protectant when going to tick infested areas (woods, fields, etc.)?



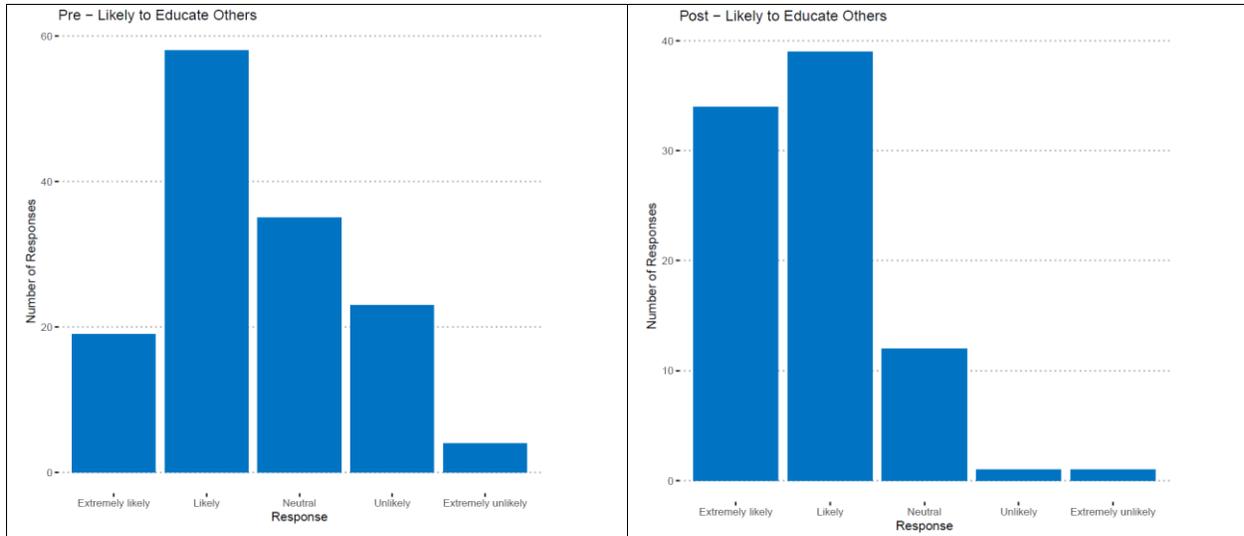
These graphs demonstrate that many students, before watching the tick video, said they would **likely** (just over 60 students) use spray protectant when entering tick infested areas. There were many who were also **neutral** (over 20) or said they were **unlikely** (over 20) or **extremely unlikely** (between 10 and 20) to use spray protectant. In contrast, after watching the video, although the **likely** response didn't really change, a larger number said they were **extremely likely** (going from under 20 in the pre-survey and between 40 and 60 in the post-survey), and the **neutral**, **unlikely**, and **extremely unlikely** (all under 20) numbers trended downward from what they were in the pre-survey. This is a good indication that students learned the importance of using spray protectant for ticks by watching the video.

Question: How likely are you to check your body or others for ticks after being in a grassy or wooded area?



In these graphs, we see that around 40 students in the pre-survey responded that they were **extremely likely** to check their body for ticks and over 40 were **likely** to after being in a grassy or wooded area. **Neutral** and **unlikely** responses were also rather high, even if not as high as the other categories. These responses went down substantially post-survey, with **neutral**, **unlikely**, and **extremely unlikely** all falling under 10. The **extremely likely** also raised significantly to over 60 and **likely**, while still high at over 40, was now lower than the **extremely likely** response. Again, this is a good indication that students learned from this video the importance of checking the body for ticks.

Question: How likely are you to educate others on how to take steps to protect themselves from ticks?



These graphs show that pre-survey, students were **likely** (close to 60) to educate others about how to protect themselves from ticks, but other responses were also spread across the board, with both **neutral** and **unlikely** higher than **extremely likely**. However, in the post-survey, the **likely** response, while still high (close to 40), looked to be replaced by more **extremely likely** responses. The **neutral**, **unlikely**, and **extremely unlikely** responses went down significantly; again, adding to the **extremely likely** category. This indicated that students learned in the video the importance of educating others about protection from ticks.

Question: The video taught me important information about ticks.

Attempts: 136 out of 136

This video taught me important information about ticks.

| | | | |
|----------------------------|----------------|------|-----------------------------------|
| Strongly agree | 61 respondents | 45 % | <div style="width: 45%;"></div> ✓ |
| Agree | 69 respondents | 51 % | <div style="width: 51%;"></div> |
| Neither agree nor disagree | 6 respondents | 4 % | <div style="width: 4%;"></div> |
| Disagree | 1 respondents | 1 % | <div style="width: 1%;"></div> |
| Strongly disagree | 3 respondents | 2 % | <div style="width: 2%;"></div> |
| No Answer | 1 respondents | 1 % | <div style="width: 1%;"></div> |

This question only appeared in the post-survey. The responses were positive with primarily **strongly agree** (45%) and **agree** (51%), with a total of 96%.

Question: The song in this video helped me to better engage in learning about ticks and their control.

Attempts: 135 out of 135

The song in this video helped me to better engage in learning about ticks and their control.

| | | | |
|----------------------------|----------------|-----|--|
| Strongly agree | 51 respondents | 38% | |
| Agree | 63 respondents | 47% | |
| Neither agree nor disagree | 18 respondents | 13% | |
| Disagree | 1 respondents | 1% | |
| Strongly disagree | 2 respondents | 1% | |
| No Answer | 2 respondents | 1% | |

This question only appeared in the post-survey. The most responses were **strongly agree** (38%) and **agree** (47%), a total of 85%, indicating that the song had a positive effect in learning engagement.

Question: The humor in this video helped me to better engage in learning about ticks and their control.

Attempts: 136 out of 136

The humor in the video helped me to better engage in learning about ticks and their control.

| | | | |
|----------------------------|----------------|-----|--|
| Strongly agree | 49 respondents | 36% | |
| Agree | 73 respondents | 54% | |
| Neither agree nor disagree | 11 respondents | 8% | |
| Disagree | 1 respondents | 1% | |
| Strongly disagree | 4 respondents | 3% | |
| No Answer | 1 respondents | 1% | |

This question only appeared in the post-survey. The most responses were **strongly agree** (36%) and **agree** (54%), with a total of 90%, which indicated that humor had a positive effect on learning engagement.

Question: The use of puppets in this video helped me to better engage in learning about ticks and their control.

Attempts: 136 out of 136

The use of puppets in this video helped me to better engage in learning about ticks and their control.

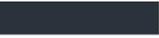
| | | | |
|----------------------------|----------------|------|--|
| Strongly agree | 30 respondents | 22 % |  |
| Agree | 60 respondents | 44 % |  |
| Neither agree nor disagree | 35 respondents | 26 % |  |
| Disagree | 10 respondents | 7 % |  |
| Strongly disagree | 3 respondents | 2 % |  |
| No Answer | 1 respondents | 1 % |  |

This question only appeared in the post-survey. The largest number of respondents said they **agree** (44%), but a more **neutral** position (26%) was fairly even with the **strongly agree** (22%) response. While it appears that some students were indifferent to the use of puppets as a method of learning engagement, the results still show that 66% of students responded with **agree** or **strongly agree**, thus demonstrating this method enhanced student learning about ticks.

Question: The production techniques were well-done in the video (e.g. framing, focus exposure, pace, continuity, audio; creative, camera, graphics)

Attempts: 136 out of 136

The production techniques were well-done in this video (e.g. framing, focus exposure, pace, continuity, audio; creative, camera, graphics).

| | | | |
|----------------------------|----------------|------|--|
| Strongly agree | 37 respondents | 27 % |  |
| Agree | 76 respondents | 56 % |  |
| Neither agree nor disagree | 22 respondents | 16 % |  |
| Disagree | 5 respondents | 4 % |  |
| Strongly disagree | 1 respondents | 1 % |  |
| No Answer | 1 respondents | 1 % |  |

This question only appeared in the post-survey. Students overall seemed impressed with the production techniques of this video. 83% of respondents chose either **agree** (56%) and **strongly agree** (27%) when asked what they thought of the video production elements.

Question: The tick video is the best video that I have seen in teaching practical aspects about ticks and their control.

Attempts: 136 out of 136

The tick video is the best video that I have seen in teaching practical aspects about ticks and their control

| | | | |
|----------------------------|----------------|------|---|
| Strongly agree | 43 respondents | 32 % |  |
| Agree | 60 respondents | 44 % |  |
| Neither agree nor disagree | 21 respondents | 15 % |  |
| Disagree | 10 respondents | 7 % |  |
| Strongly disagree | 3 respondents | 2 % |  |
| No Answer | 1 respondents | 1 % |  |

This question only appeared in the post-survey. Overall, 75% of students answered either **agree** (44%) or **strongly agree** (32%) when asked about the effectiveness of the video in teaching practical aspects of tick and tick control.

Question: How likely are you to share this video with others through social media, email, or in-person on your electronic device?

Attempts: 136 out of 136

How likely are you to share this video with others through social media, email, or in-person on your electronic device?

| | | | |
|--------------------|----------------|------|---|
| Extremely unlikely | 14 respondents | 10 % |  |
| Unlikely | 27 respondents | 20 % |  |
| Neutral | 58 respondents | 43 % |  |
| Likely | 32 respondents | 24 % |  |
| Extremely likely | 11 respondents | 8 % |  |
| No Answer | 1 respondents | 1 % |  |

This question only appeared in the post-survey. Students were **neutral** (43%) about if they would share this video through social media. However, there were specific comments made in the open-ended section of the survey where some students specifically mentioned that they would or had shared the video with friends.

Examples:

1. I enjoyed the video and already showed my roommates it
2. The video was so fun for me to watch that I forced my friends to watch in the middle of a bar

Question: Please list up to three things you learned as a result of this video

This question was open ended and appeared in the post-survey. I reviewed the concepts that students seemed to bring up most often and calculated a percentage. Please note that although we had 143 students in the class, they did not all answer this survey question, so the n=134 students here. In addition, each student had anywhere from 1-3 answers. The numbers below represent the occurrences of each phrase/closely related phrase.

In some cases, there was overlap in a response, such as “I learned that ticks latch onto you when you walk in grassy areas,” which may apply to a couple of concepts. In general, I counted either one or the other of these in the phrases below.

Most Common statements:

- Ticks need blood/humans to advance their life cycle **104/134 (78%)**
- Ticks can spread disease/cause numerous symptoms (body aches, headaches, fever) **80/134 (60%)**
- Where ticks are found (e.g., grassy areas) **65/134 (49%)**
- Preventative measures (DEET and wearing long sleeves and tucking socks into pants) **60/134 (45%)**
- How ticks attach (e.g., hooks) **36/134 (27%)**
- Check for ticks **13/134 (10%)**

- And one that showed that the students had a sense of humor: “*I didn’t realize ticks were that big and that they could sing*”

As we can see, there were some definite patterns of what students gleaned from the ***Hooked on a Human*** video. The concept listed most often by students was that ticks require blood and/or feeding on humans to advance their life cycle (78%). A close second was that ticks can spread many diseases that cause various symptoms (60%). Following that, 49% of students learned where ticks are found and 45% learned how to prevent tick bites. The fact that ticks attach to humans using “hook-like” mouth parts was noted by 27% of students surveyed, and finally, 10% noted that it was important to check for ticks after being in an area where ticks may be found. This last concept could also be associated with where ticks are found and preventive measures, which may account for it having a lower percentage. There were a few other miscellaneous comments, but these covered the most significant number of responses. It is clear the video impacted the knowledge of these students, as well as prompting behavioral changes (one student noted that they would have to go buy some tick repellent, for example).

Question: Please leave any comments about the video or survey.

This question was open ended and appeared in the post-survey. The following graphs demonstrate words that were seen most often in the comments that students provided. Words such as “video” and

4. I think this video is humorous and helps engage more attention than a normal informational video
5. I thought this video was an interesting way to learn about ticks and I think it will make it easier to review because its information packed but you don't even realize it because its catchy and funny
6. Music is always a good way to learn information
7. This is definitely not what I expected when I pulled the video up. Definitely an entertaining way to learn about something like ticks
8. This catchy song made it easy to remember the information. I liked how the quiz was questions on how likely we were to do something because it made me think about if I actually do it or if I will
9. The video was funny and an effective way to get the message across that ticks suck, but we're an imperative part of their life cycle
10. I thought the video was very catchy and is a great way to remember important information about ticks. I find myself singing this song without even watching it. I am very glad we were shown this.
11. Very cheesy but overall it got the point across
12. The video was super insightful and lots of fun especially because it was made by UNL!
13. The video was humorous and encouraged me to watch the whole video
14. Using a song with the video, helped me to become more interested
15. It was super creative and catchy!
16. I thought the video was highly entertaining
17. This assignment has been my most favorite so far this semester!
18. It was funny I was not expecting it. I will never hear the song Hooked on a Feeling in the same way!
19. I honestly really enjoyed the video even though it was very cheesy
20. I felt like the video was weird but now it is stuck in my head. Good job for that!
21. The video was surprisingly fun! Made me laugh 😊
22. I actually enjoyed the video and it deserves a grammy. The survey was enjoyable because it was simple and easy and everyone likes to get relatively easy points at the beginning of the course
23. Its a cute fun song and catchy 10/10 would recommend
24. If you belly dance in the forest you will get ticks
25. SNL worthy!
26. I found this video humoring, yet educational. Through its lightheartedness about a serious subject, people are able to listen comfortably and understand what they are saying

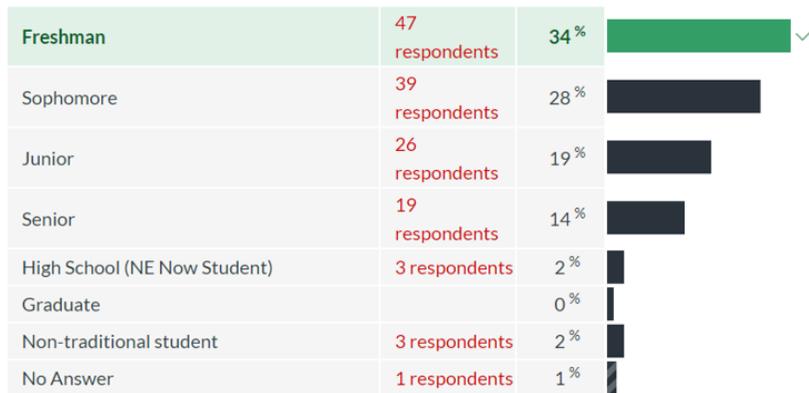
The Most Deadly Animal on the Planet Summary of Results, Pre- vs. Post-Survey

Note that in general, fewer students completed the pre- and post- survey for this video as did the **Hooked on a Human** video (which was offered first). Although both assignments were mandatory and they received a grade for taking it, some still did not complete it. However, 137 ENTO 115 students took the pre-survey and 135 took the post.

In addition, as with the **Hooked on a Human** video, the visual representation of these graphs provides obvious patterns from pre- to post.

Attempts: 137 out of 138

Please indicate your grade level:



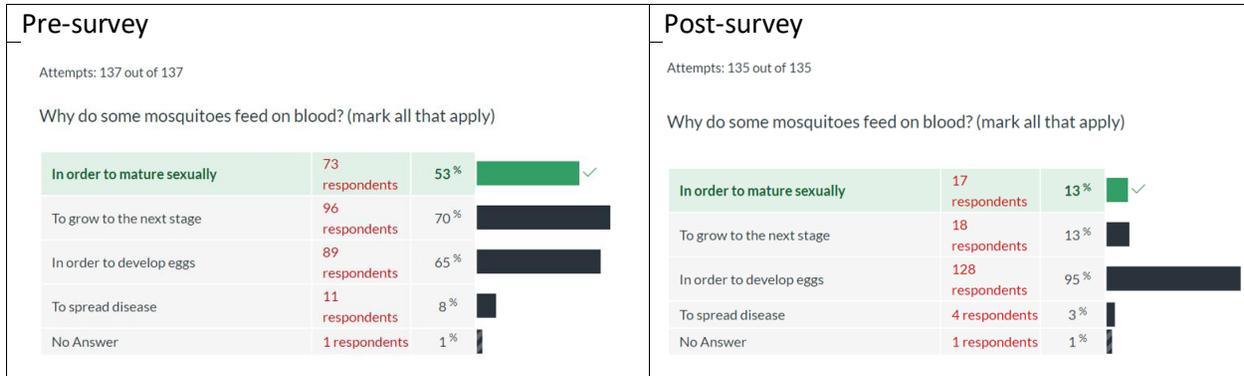
The first pre-survey question was a demographics one to determine student grade levels. ENTO 115 is an undergraduate class, although occasionally a graduate or non-traditional student will take it out of interest or to meet a deficiency. From this graph we can see that most students taking the survey (62%) were freshmen or sophomores. Note that this survey was given later in the semester and although most students took it, it was fewer than the **Hooked on a Human** survey (137 vs. 142)

Question: In which of the following places are mosquitoes most likely to lay their eggs?



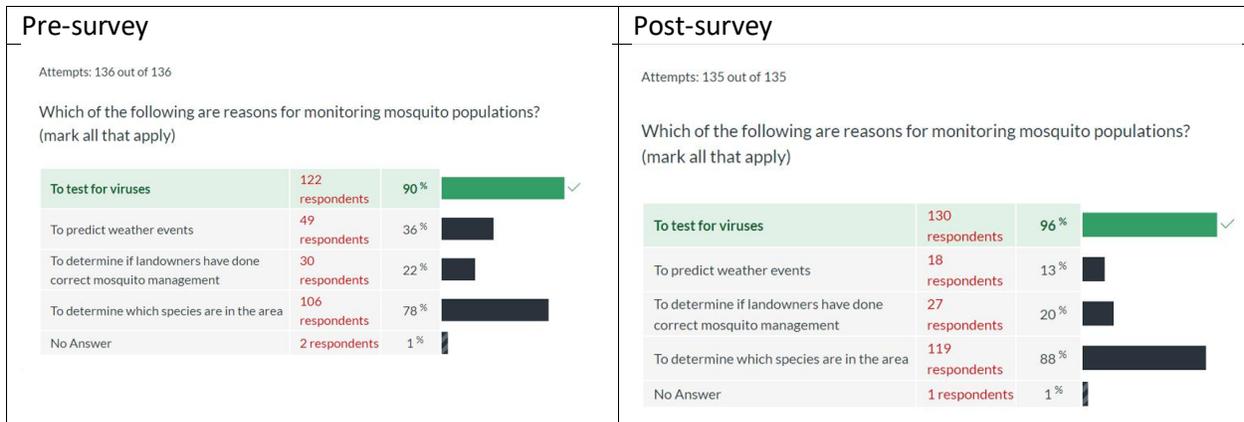
This question potentially could have multiple answers, as mosquitoes lay their eggs in stagnant water. Technically gutters (after a rain) and rain barrels would be the most relevant answers here, but water fountains could make sense if it is a garden water fountain that is turned off and left sitting. All three of these were chosen often in both the pre- and post-survey. In reality, damp soil too is a correct answer for some mosquito species but was not specifically mentioned in the video. Therefore, that choice went down significantly in the post-survey, indicating that students were paying attention to what was discussed.

Question: Why do some mosquitoes feed on blood?



In this question, several answers were high in the pre-survey, including *in order to mature sexually* (73 respondents), *to grow to the next stage* (96 respondents) and *in order to develop eggs* (89 respondents). This indicated that most students really did not know the answer prior to watching the mosquito video. In contrast, 128 responded with the correct answer of *in order to develop eggs* after watching the video, indicating that this concept was effectively communicated.

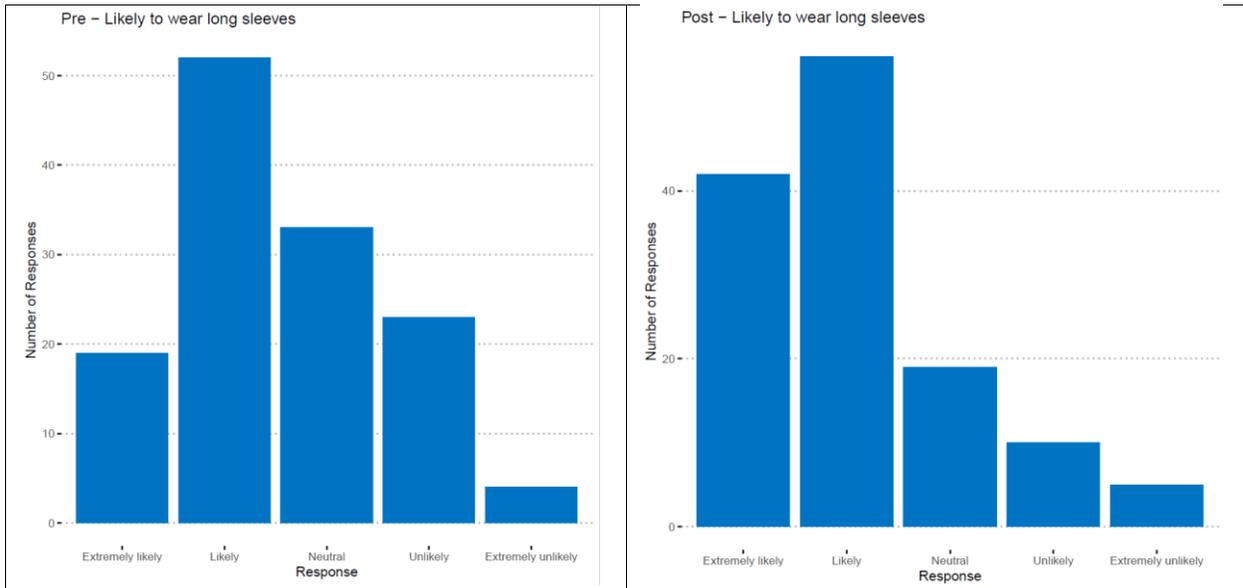
Question: Which of the following are reasons for monitoring mosquito populations?



This question was looking for two answers. The students got these correct in both the pre-survey and post-survey, but the number respondents who got them correct increased. *To test for viruses* got 122 in the pre-survey vs. 130 in the post-survey, and *to determine which species are in the area* got 106 in the pre-survey and went up to 119 in the post-survey. This indicated that students who may have chosen other choices in the pre-survey did select the correct answers in the post-survey.

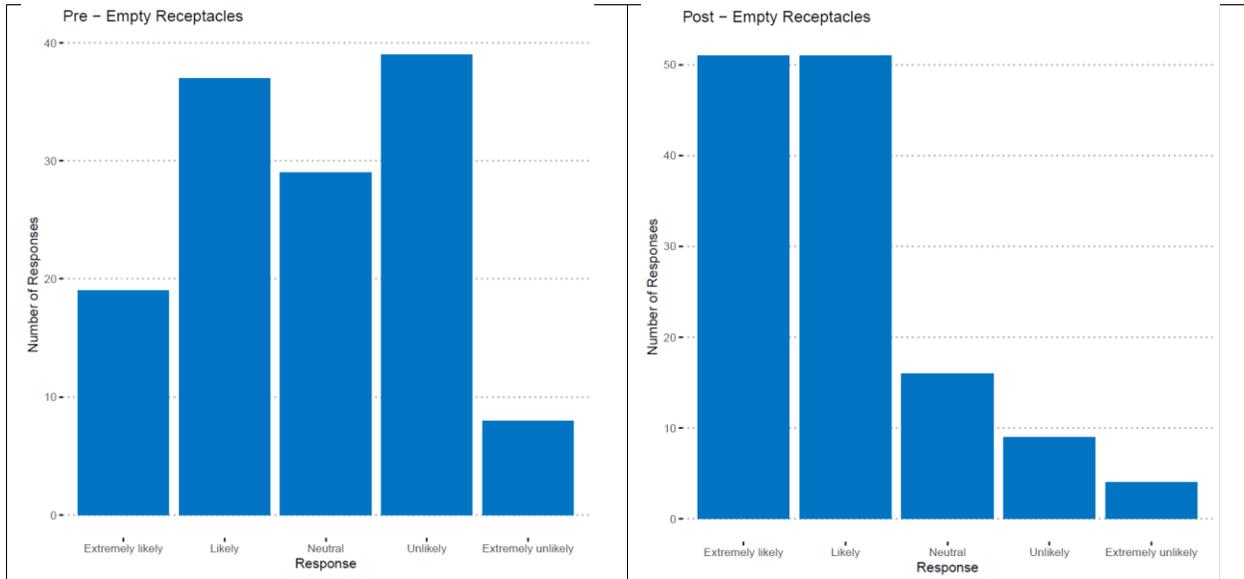
The graphs in the next few questions represent how many students answered the question with the corresponding option on the X axis. They give more of a general, yet highly visible, representation, with responses shown in increments of ten rather than exact percentages.

Question: How likely are you to wear long sleeves and/or pants with the purpose of protecting yourself from mosquito bites?



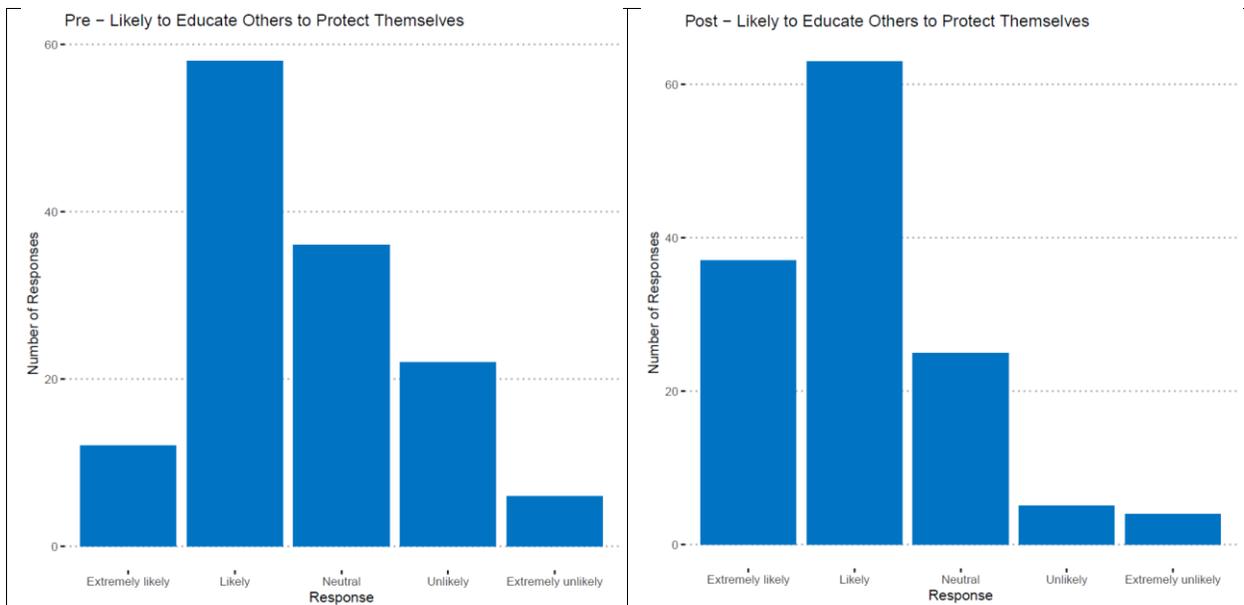
In this question for both pre- and post-survey we saw over 50 responses that said they were **likely** to wear long sleeves/pants to protect themselves from mosquitoes. However, **extremely likely** was under 20, **neutral** was over 30, and **unlikely** was over 20. These three areas showed more significant change after students watched the video. **Extremely likely** went over 40, **neutral** under 20, and **unlikely** under 20. This indicates that more students understood the importance of these prevention measures from the video than they knew before watching it.

Question: How likely are you to make an effort to empty receptacles of standing water in your local landscape?



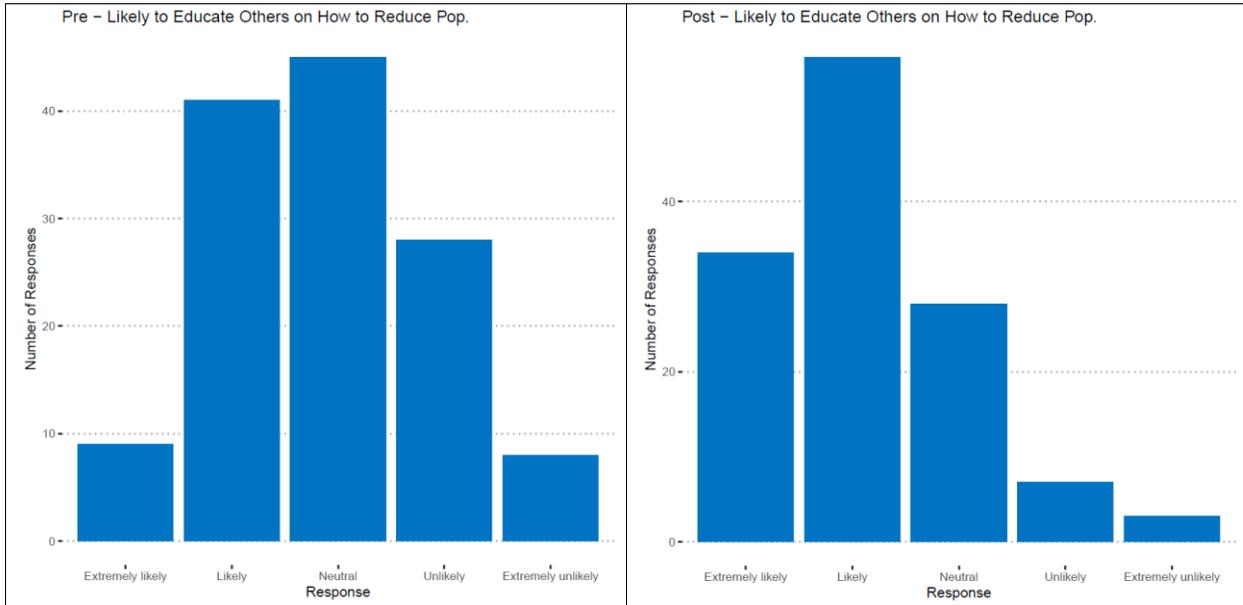
In this question we found that the responses were distributed much more widely across the board in the pre-survey as opposed to the post-survey, where most respondents chose either **extremely likely** or **likely**. The two most dramatic changes were in the **neutral** (from close to 30 to under 20) and **unlikely** (from near 40 to under 10) This indicated that students learned how mosquitoes breed in standing/stagnant water and that removing water from receptacles can decrease mosquito hatch.

Question: How likely are you to educate others in how to take steps to protect themselves from mosquitoes?



In this question, students increased their **extremely likely** and **likely** responses from the pre-survey to the post-survey. **Extremely likely** went from below 20 to near 40 while **likely** went from below to above 60. **Neutral** stayed about the same, but **unlikely** and **extremely unlikely** both decreased. This indicates that many students plan to educate others in taking steps to protect themselves from mosquitoes.

Question: How likely are you to educate others on how to reduce the population of mosquitoes in your neighborhood?



In this question, students increased their **extremely likely** and **likely** responses from the pre-survey to the post-survey. **Extremely likely** went from below 10 to near 40 while **likely** went from around 40 to significantly above it. **Neutral** dipped from above 40 to below it, and **unlikely** decreased significantly from near 30 to below 20. This indicates that many students plan to educate others in taking steps to reduce populations of mosquitoes.

Question: This video taught me important information about mosquitoes.

Attempts: 135 out of 135

This video taught me important information about mosquitoes.

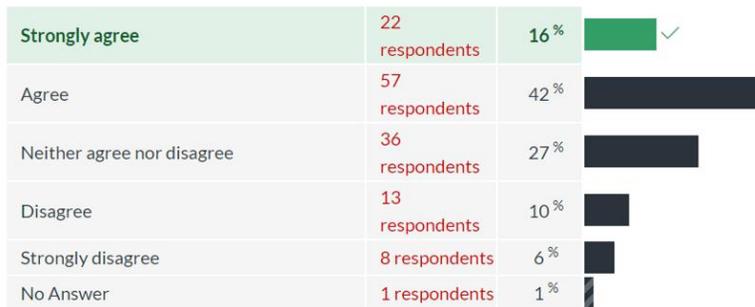
| | | | |
|----------------------------|----------------|------|--|
| Strongly agree | 48 respondents | 36 % | <div style="width: 36%; background-color: #28a745;"></div> ✓ |
| Agree | 75 respondents | 56 % | <div style="width: 56%; background-color: #6c757d;"></div> |
| Neither agree nor disagree | 9 respondents | 7 % | <div style="width: 7%; background-color: #6c757d;"></div> |
| Disagree | 2 respondents | 1 % | <div style="width: 1%; background-color: #6c757d;"></div> |
| Strongly disagree | 4 respondents | 3 % | <div style="width: 3%; background-color: #6c757d;"></div> |
| No Answer | 1 respondents | 1 % | <div style="width: 1%; background-color: #6c757d;"></div> |

This question only appeared in the post-survey. The responses were positive with primarily **strongly agree** (36%) and **agree** (56%), to total 92%.

Question: The use of puppets in this video helped me better engage in learning about mosquitoes and their control.

Attempts: 135 out of 135

The use of puppets in this video helped me to better engage in learning about mosquitoes and their control.

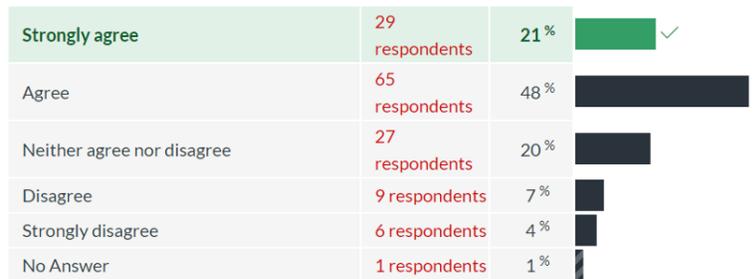


This question only appeared in the post-survey. The largest number of respondents said **agree** (42%), but a more **neutral** position (27%) was higher than the **strongly agree** (16%) response. While it appears that some students were indifferent to the use of puppets as a method of learning engagement, the results still show that 58% of students responded with **agree** or **strongly agree**, thus demonstrating this method enhanced student learning about mosquitoes.

Question: The humor in this video helped me to better engage in learning about mosquitoes and their control.

Attempts: 135 out of 135

The humor in the video helped me to better engage in learning about mosquitoes and their control.



This question only appeared in the post-survey. The most responses were **strongly agree** (21%) and **agree** (48%), a total of 69% that indicated overall that humor had a positive effect on learning engagement.

Question: The production techniques were well-done in this video (e.g. framing, focus exposure, pace, continuity, audio; creative, camera, graphics)

Attempts: 134 out of 134

The production techniques were well-done in this video (e.g. framing, focus exposure, pace, continuity, audio; creative, camera, graphics).

| | | | | |
|----------------------------|----------------|------|--|---|
| Strongly agree | 38 respondents | 28 % | | ✓ |
| Agree | 76 respondents | 57 % | | |
| Neither agree nor disagree | 17 respondents | 13 % | | |
| Disagree | 3 respondents | 2 % | | |
| Strongly disagree | 3 respondents | 2 % | | |
| No Answer | 2 respondents | 1 % | | |

This question only appeared in the post-survey. Students overall seemed impressed with the production techniques of this video. 85% of respondents chose either **agree** (57%) or **strongly agree** (28%) when asked what they thought of the video production elements.

Question: The mosquito video is the best video I have seen in teaching practical aspects about mosquitoes and their control.

Attempts: 135 out of 135

The mosquito video is the best video that I have seen in teaching practical aspects about mosquitoes and their control

| | | | | |
|----------------------------|----------------|------|--|---|
| Strongly agree | 35 respondents | 26 % | | ✓ |
| Agree | 57 respondents | 42 % | | |
| Neither agree nor disagree | 32 respondents | 24 % | | |
| Disagree | 10 respondents | 7 % | | |
| Strongly disagree | 1 respondents | 1 % | | |
| No Answer | 1 respondents | 1 % | | |

This question only appeared in the post-survey. Overall, 68% of students answered either **agree** (42%) or **strongly agree** (26%) when asked about the effectiveness of the video in teaching practical aspects of mosquitoes and mosquito control.

Question: How likely are you to share this video with others through social media, email, or in-person on your electronic device?

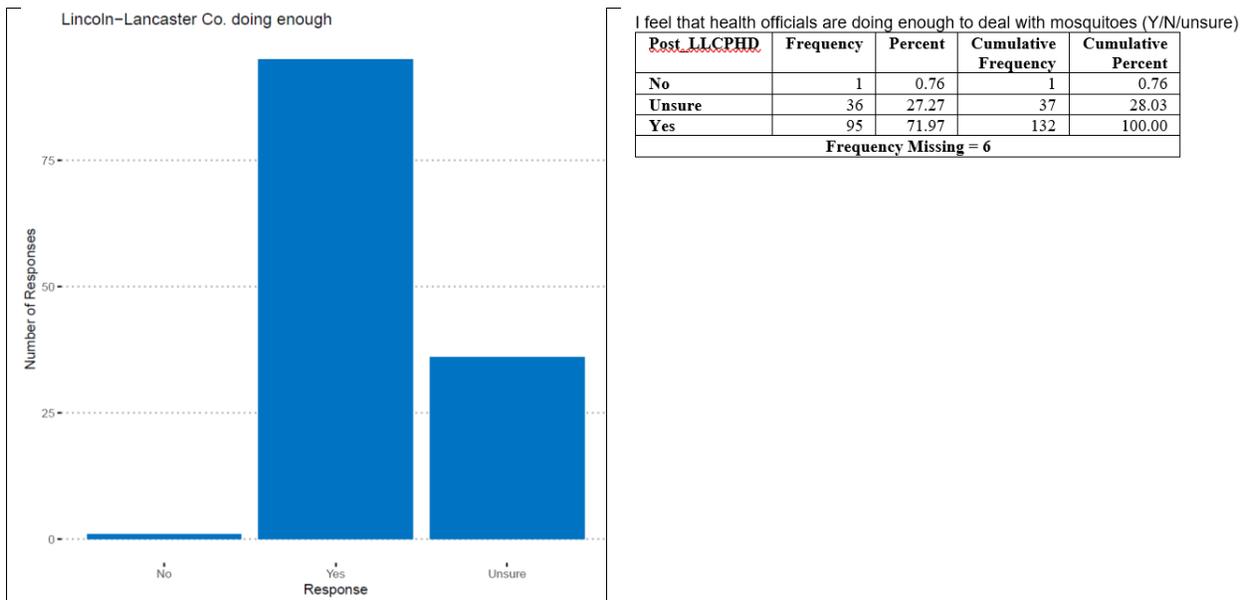
Attempts: 135 out of 135

How likely are you to share this video with others through social media, email, or in-person on your electronic device?

| | | | |
|--------------------|----------------|-----|--|
| Extremely unlikely | 17 respondents | 13% | |
| Unlikely | 33 respondents | 24% | |
| Neutral | 58 respondents | 43% | |
| Likely | 22 respondents | 16% | |
| Extremely likely | 8 respondents | 6% | |
| No Answer | 1 respondents | 1% | |

This question only appeared in the post-survey. Students were **neutral** (43%) about if they would share this video through social media.

Question: I feel that the Lancaster County Public Health Department is doing enough to help with issues related to mosquitoes.



This question only appeared in the post-survey. As seen in this graph, overwhelmingly students responded after watching the video that they did believe that the Lancaster County Public Health Department is doing enough to help with issues related to mosquitoes (over 75 students; 72%).

Question: Please list up to three things that you learned as a result of this video.

This question was open ended and appeared in the post-survey. I reviewed the concepts that students seemed to bring up most often and calculated a percentage. Please note that although we had 143 students in the class, they did not all answer this survey question, so the n=133 students here. In addition, each student had anywhere from 1-3 answers. The numbers below represent the occurrences of each phrase/closely related phrase.

Some concepts were combined in the results if they were closely related. An example might be that mosquitoes lay eggs in standing water, so you should empty standing water.

Most common statements:

- Mosquitoes lay eggs in damp places, especially standing/stagnant water. You should empty containers with standing water. **94/133 (71%)**
- The Lancaster County Health Department monitors (surveillance), traps (through dry ice/carbon dioxide), and tests mosquitoes for diseases. **79/133 (59%)**
- Female mosquitoes feed on blood for egg development (also were some variations of this, such as saying “mosquitoes” in general feed on blood, not specifying females, and that they feed for growth). **70/133 (53%)**
- Preventative measures you can use to protect against mosquito bites, such as tucking pants into socks and using DEET **44/133 (33%)**
- Mosquitoes are the deadliest animal on the planet; different species carry many diseases **28/133 (21%)**
- Mosquito larvae eat plant and animal matter, adult mosquitoes (males and females) feed on nectar **23/133 (17%)**
- Life cycle/pupation of mosquitoes **16/133 (12%)**

As we can see, there were some definite patterns of what students gleaned from the ***The Most Deadly Animal on the Planet*** video. The concept listed most often by students was that mosquitoes lay eggs in damp places, such as standing water, and that you should empty containers of standing water (71%). The second most common thing learned, at 59%, was about what the Lancaster Public Health Department does to monitor and test for mosquitoes. This was followed closely by the fact that mosquitoes that feed on blood are female and need blood to develop eggs (53%). Preventive measures (33%) and mosquitoes as vectors of diseases (21%) were next. Concepts such as mosquito feeding (17%) and life cycle (12%) were lower; however, these also can be associated with others on the list, such as blood required as nourishment for egg development, so may have been considered as part of those areas by students. Again, as with ***Hooked on the Human***, students definitely seemed to learn some of the most important concepts that ***The Most Deadly Animal on the Planet*** video was trying to convey.

2. I think the humor made the video better
3. Overall, I enjoyed this video and thought it was a very entertaining way to learn about mosquitos in Nebraska
4. I think it is good, it was entertaining yet straightforward
5. I liked the incorporations of the puppets and other questions that were asked and answered
6. I thought this video was a great learning tool!
7. I liked it! The puppet and humor helped me stay engaged in the video and made it fun to learn
8. I really enjoy these videos. They are easy to watch and making learning more interesting
9. I thought it was a cute video!
10. This was great. It was short and playful. Easy to watch and follow along
11. I enjoyed this video! It was short enough to keep me engaged but gave an appropriate amount of information at the same time
12. The video was very educational and provided a lot of humor
13. I thought it was a very good informational video. The humor helped relay the information that was needed
14. I like the creativity of the puppets in the video. It makes it more enjoyable to watch
15. Thanks for creating the video it was good to watch!
16. I thought the video was well put together-concise but informative
17. This was a really interesting survey. Before learning about mosquitoes I had no clue how deadly they can be
18. Loved the video and its humor! Great tool to keep students interested and enthusiastic when learning about these pesky insects
19. I thought this was very beneficial and supplemental to my learning
20. It was a good video and the cheesiness just makes it better 😊
21. It was a really good video! Keep up the good work!
22. I really liked how it showed real life how things are done instead of just using graphics
23. I liked the puppet and the monologue
24. I thought the video was a great visual way to learn about mosquitoes!
25. It was interesting that they used different tools and items to show what they were talking about. Such as the fake mosquito and kiddie pool filled with water
26. Well produced funny informational video, music was great also
27. I thought it was cool that they went and talked to someone at the health department and included him in the video
28. I enjoyed the video. Both the survey and video helped me learn a lot
29. It was a good video I learned a lot and the humor added to it is a nice touch
30. The video was quick and efficient

Future: Summary Report Part 2 (2021)

In 2020, Justine created two additional videos for the CTT grant we received. Because of COVID-19, we had to shift our thinking about how we created videos and Justine ended up filming two that required little to no additional people or location shooting (one was done from her home, the other was done with unedited footage she already had).

For Part 2 of this summary, to be produced by the end of Summer 2021, I will provide the results from the surveys for these two new videos. We also plan to compare survey data from all four projects to determine which type of creative, educational video seemed to be best received by viewers and was most effective in increasing knowledge and/or changing behavior.

- ***Tick TikTok***

This project, which Justine filmed using the TikTok platform, is a short 15 second dance/music video about ticks.

I created a short 4 question survey about this one. I distributed it to three of my classes in Fall 2020 (ENTO 406 Insect Ecology, ENTO 115 Insect Biology, and ENTO 837 IPM in Sensitive Environments) as an Extra credit opportunity. Most of the students in these classes took it. I am going to be offering it again as Extra Credit in Spring 2021 to the ENTO 115 class, so the final survey results will be a culmination of all these courses. I will use Canvas survey data to analyze this one.

Video link: <https://youtu.be/lt1p6UoYcM>

- ***The Ultimate Recyclers***

In Summer 2019, a colleague from the Forensic Science department, an undergrad student, and I conducted pig decomposition and forensic insect succession research out at a forensic study property on UNL's East Campus. Justine joined us several times during our research project to film footage of the insect activity occurring in various decomposition stages. This resulting video is therefore about forensic entomology and uses the footage that Justine took during that summer. It is produced in a "David Attenborough-like" nature show style.

I created a similar survey with relevant questions for this video as we used for the ***Hooked on Human*** and ***The Most Deadly Animal*** videos. I am distributing this to my ENTO 115, ENTO 414/814 (Forensic Entomology), and ENTO 416/816 (Forensic Insect Succession) classes in Spring 2021. I will provide the raw data to the stats dept at the end of the semester so they can work on it over the summer. I hope to have the completed summary report to CTT by the end of Summer 2021.

Video link: <https://youtu.be/u4pTI-Cgq8Q>