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Training Needs of Licensed Veterinary Technicians Employed in Augusta County, Virginia

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TRAINING NEEDS OF LICENSED VETERINARY TECHNICIANS

EMPLOYED IN AUGUSTA COUNTY, VIRGINIA

by

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B.S. December 2013, Old Dominion University

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ABSTRACT

TRAINING NEEDS OF LICENSED VETERINARY TECHNICIANS EMPLOYED IN AUGUSTA COUNTY, VIRGINIA

Jeannie Kay Skelton
Old Dominion University, 2016
Co-Directors: Dr. Philip A. Reed and Dr. John M. Ritz

The problem of this study was to determine the training needs of Licensed Veterinary Technicians in Augusta County, Virginia to improve their knowledge and skills in the veterinary field. The study was guided by research questions that were developed to determine what the training needs of Licensed Veterinary Technicians are, what their preferred method is for obtaining continuing education credits, what methods they use to obtain new knowledge and skills, and if on the job training is effective. A survey was designed to determine what training methods are being used, what is preferred, and what training is needed in the future. The survey was given to 33 LVTs, 24 of which responded during the two-week period. Data was collected that showed LVTs working in Augusta County, Virginia want to earn more than the required six hours of continuing education credits and that they prefer in person training. The data also showed that on the job training is the most favorable source of continuing education and the most effective means of gaining and improving new knowledge and skills for LVTs.

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CHAPTER I

INTRODUCTION

Augusta County is the second largest county in Virginia and includes the cities of Staunton and Waynesboro. Seventeen veterinary related facilities are located in this region. Working in these facilities are Licensed Veterinary Technicians (LVT) who have earned an Associate of Applied Science in Veterinary Technology from an American Veterinary Medical Association (AVMA) or a Committee on Veterinary Technician Education and Activities (CVTEA) accredited school and passed the Veterinary Technician National Exam (Regulations Governing the Practice of Veterinary Medicine, 2015). Besides earning a degree, these LVTs are required to obtain at least six hours of continuing education credits per calendar year to maintain their licensure. These hours must be documented and can come from sponsored continuing education, seminars, professional journals, and online modules that have been approved by the Registry of Approved Continuing Education (RACE).

The occupation of Licensed Veterinary Technician requires extensive knowledge and skills pertaining to the veterinary field. In relating the field to human medicine, a technician does the work of a nurse, anesthetist, dental hygienist, laboratory technician, radiology technician, phlebotomist, and educator to name just a few. To obtain and improve upon the skills needed for these tasks, one must be kept up to date with in person and online continuing education courses and on the job training. While completing training is important for licensure, it is invaluable to the patients and clients that the technician community serves on a daily basis.

Statement of Problem

The problem of this study was to determine the training needs of Licensed Veterinary Technicians in Augusta County, Virginia to improve their knowledge and skills in the veterinary field.

Research Questions

This problem was guided by the following research questions:

RQ₁: What are the expected training needs of Licensed Veterinary Technicians?

RQ₂: What is the preferred method of obtaining continuing education credits?

RQ₃: What other means are used to obtain new knowledge and skills?

RQ₄: Is on the job training effective at each hospital?

Background and Significance

Like human medicine, in veterinary medicine there is a strong need for proper training of anyone involved with patient care. While some individuals see animals as just that, many people consider them part of the family and will do almost anything to make sure they stay healthy. To support that relationship, Licensed Veterinary Technicians are there to provide excellent patient care that is backed by a thorough education and continued improvement of knowledge and skills.

In order to keep technicians current in their skills and knowledge each veterinary facility must push for and maintain options for receiving the continued education that is needed by the technicians. It has been shown that organizations that put a larger emphasis on training have higher levels of job performance and employee retention (Harel & Tzafiri, 1999). By asserting

the need for continued education, facilities that provide a means of training and knowledge acquirement show their technicians that constant improvement is necessary. It gives them a sense of purpose and belonging to the veterinary community.

The importance of what a technician does and how much the community values their position can be evidenced with the growth of the occupation. According to Augusta County's Labor Market Information (2016) report, over a 10-year period, the occupation is estimated to grow by almost 67%. With this, there will be an even greater need to provide better training and education options. Technicians will be in need of training that is relevant and current to the trends in veterinary medicine and is substantial and meaningful to their area of expertise.

The significance of this study will be to bring forward issues related to training offered to LVTs in the county. Thorough training not only provides the necessary skills and abilities, but it also promotes job satisfaction (Costen & Salazar, 2011). Licensed technicians that have the options of choosing what they learn, how they learn, and how they apply their new knowledge and skills will be better equipped to take care of the county's pet population. Licensed Veterinary Technician opinions will be obtained and used to provide insight into what they want in the training opportunities in their field.

Limitations

The following limitations were established and may have a bearing on the results of this study:

1. The research was limited to licensed technicians working in the veterinary facilities in Augusta County, Virginia.

2. The findings may have been affected by employee attitudes, truthfulness of responses, and past and present experiences with continuing education and training, all of which could set limitations.

Assumptions

The study was based on the following assumptions:

1. All licensed veterinary technicians possess training needs.
2. All licensed veterinary technicians participating have completed some continuing education or training.
3. An assessment of continuing education and training will provide insight into what types of training are needed.

Procedures

This research focused on the perceived training needs of Licensed Veterinary Technicians working at veterinary facilities in Augusta County, Virginia. A survey was distributed to technicians working at these hospitals. The survey helped identify what types of continuing education and training were being used and what the technicians felt were important topics that should be covered in training. The data gathered from the respondents was analyzed to determine the continuing education and training needs for the county technicians.

Definition of Terms

The following definitions are provided to assist the reader in understanding terms used throughout the study:

- **American Veterinary Medical Association (AVMA):** An association that advocates for veterinarians and acts as a leader and voice for that community (The American Veterinary Medical Association, 2016).
- **Committee on Veterinary Technician Education and Activities (CVTEA):** A subset of AVMA that regulates and provides accreditation to technician programs (The American Veterinary Medical Association, 2016).
- **Continuing Education (CE):** Education courses received after leaving formal education programs; six hours of credit time needed to maintain LVT licensing in Virginia.
- **Licensed Veterinary Technician (LVT):** A fully trained individual who performs the duties of animal nurse, laboratory technician, radiography technician, anesthetist, surgical nurse, client educator, etc.
- **On the Job Training (OJT):** Training that is received while one is working – usually monitored by a supervisor or superior.
- **Registry of Approved Continuing Education (RACE):** A program created to develop and apply uniform standards for providers and programs of veterinary continuing education (American Association of Veterinary State Boards, 2016).
- **Training:** An activity aimed at conveying information/instruction to improve performance or skill level.

Overview of Chapters

Chapter I provided an introduction to the problem and presented several questions to be answered throughout the research. An introduction to Licensed Veterinary Technicians and the process of becoming one was provided to show the extent of training needed to maintain a license. Limitations such as the research focusing on one county and only licensed veterinary technicians have been set. The ideas that all licensed veterinary technicians need continuing education and have participated in training in some form were assumed. Important terms that may help the reader understand key concepts in the veterinary domain were provided. The research procedures that will be used to determine the continuing education needs of technicians were explained.

Chapter II provides a review of the literature that is relevant to the research study. The literature helps identify important components of effective training and what the perceptions are toward training that is needed to be a competent technician. Chapter III presents the methods and procedures that were used to organize and analyze the data gathered in this study. Chapter IV addresses the findings of the survey and Chapter V provides a summary of results, conclusions centered on the research questions, and recommendations for needed continuing education and training.

CHAPTER II

REVIEW OF LITERATURE

The problem of this study was to determine the training needs of Licensed Veterinary Technicians working in veterinary facilities in Augusta County, Virginia. In reviewing the literature, it was found that there are many benefits to employee training that include increased productivity, stronger skills, increased knowledge, and more confidence and autonomy. This review is categorized into the employee thoughts on their training needs, the relationship between training and job performance, on the job training, and continuing education.

Employee Thoughts on Their Training Needs

When the topic of training is brought up in the workplace, an image of sitting in a classroom listening to a lecture is conjured. Although training can be of great value to the business and to each individual employee, there is still the notion that most training is cookie cutter and does not apply to every given work situation. Employee perception plays a big role in the effectiveness of training. It has been shown that employees perceive a training program to be effective if they think that they are being taught new things, their performance is improving, and the training is preparing them for the future (Osborn, 2016).

With that perception comes the idea that employees need more efficient, compact training modules. There is a need for short blocks of training that can be completed in 30 minutes or less, that cover pertinent information, and that do not interfere with their busy work schedule. Daylong classroom activities are no longer seen by employees as the best way to learn a task. A new concept called micro-learning is being applied. This type of learning places a focus on small segments of important information. This concept allows employees to feel as though they

are being given the option to learn what is important to them without feeling the pressure of learning to perform. Measuring the effectiveness of training based on the number of courses completed is being phased out whereas measuring the impact on business and employees is becoming more prevalent (Gale, 2016).

Relationship Between Training and Job Performance

An idea that goes with what employees think concerning training is that there is a strong relationship between what training employees receive and their performance on the job. This is a key factor when it comes to training LVTs who work in veterinary facilities. In these facilities, employees must have proper training in order to provide patient care and client services. High quality technician training is necessary to make sure patients receive the best care that is not only up to date but thorough as well.

Employee training and job performance provides the backbone for a successful and productive business. “The skill level of the people... are as important to the company’s success as the quality of its facilities or track record of accomplishments” (Haines & Spreen, 2015, p. 10). This points to the importance of continued training for employees because it comes down to the skills and knowledge they possess that keeps businesses running and functional. Without well-trained employees, any business, no matter how cutting edge, will become outdated. In order for training to be effective and to increase job performance, workers need to make the connection between what they are taught and how it can be applied to their current job.

This connection also brings to light the idea of transfer of training pertaining to performance. According to Baldwin and Ford (1988), there are three factors that affect transfer of training. These factors include trainee characteristics, training design, and the work

environment. Most investigation into how transfer of training proceeds has been done with horizontal transfer where employees can use what they have learned in one area and apply it across settings or situations along the same level of skill or knowledge, in turn increasing job performance. The most important caveat with transfer of training is that the training must be seen by the employees as having high value and quality to them in order to have a high transfer of training and in turn increase performance (Saks & Burke-Smalley, 2014).

Many employees see training as a means to improve their skills and move up through the workforce. Training that is perceived as important by the employee will bring the dual benefits of employee satisfaction and increased job performance. Providing consistent training through mentoring, observation, and role-play will increase the chances that the employee will gain new skills and be able to utilize them in practice (Rivers, 2011). In addition, giving adequate and timely feedback on the trainee's progression is key to their satisfaction and improving performance.

On The Job Training

Looking at how veterinary facilities function shows that they must continue working while learning takes place. Each business only employs enough staff to get the work completed efficiently. Knowing that stopping work for training sessions is both impractical and detrimental to the business, they employ a technique referred to as on the job training for many of their training tasks. On the job training is a process in which one employee, usually the supervisor or lead person in the work area, teaches or passes knowledge and skills along to another employee at the location in which the actual work is performed. Although this technique can be applied to most work settings, it is most prevalent in settings where the job is technical and hands on

training works best. The process took effect during World War I when workers had to learn fast and efficiently and the timeframe to do so decreased from years to months. Charles Allen developed a four-step module that included preparation, presentation, application, and inspection, all of which are components of today's on the job training programs (Jacobs & Jones, 1995).

Continuing Education

While earning a certain amount of continuing education (CE) credits for Licensed Veterinary Technicians in the state of Virginia is mandatory, there are few regulations on the topics or means from where those credits originate. The original idea of continuing education was to disseminate up-to-date techniques, product information, and protocols to the community in order to improve knowledge. Now the idea encompasses a more suitable and patient centered theme of improving clinical practices (Kitto, Goldman, Schmitt, & Olson, 2014). This new concept will benefit the veterinary community and the patients to which it caters. Throughout the life of a worker, continuing education is something that happens as an ongoing process whether the worker knows it or not. For health professionals, it is a structured requirement that is supposed to provide an education that is based on current trends. The difficulties in providing current information are constantly being assessed and online continuing education is becoming more prevalent. With the concept of online programs, there have been studies that show no significant difference between online and in person training when it comes to achieving learning outcomes (Cook et al., 2008).

Summary

Chapter II provided a review of literature that brings to light key aspects of continued training for LVTs. How they perceive career training and how they would like to receive training was covered. The concept of effective training leading to increased job performance was also discussed. This concept is followed by the notion that transfer of training is more effective if the employee sees it as useful and pertaining to their situation. On the job training was brought to light as one of the major components of continued education among technicians. Continuing education was also discussed as a required means of staying cognizant, skilled, and licensed in their chosen profession. Chapter III provides a review and explanation of the methods and procedures used to collect and analyze data.

CHAPTER III

METHODS AND PROCEDURES

This chapter discusses the methods and procedures used to determine the current training needs and preferred modes for gaining new skills and knowledge as it pertains to the LVT profession. A description of the population, instrument design, data collection, and statistical analysis are included in detail.

Population

The population for this study consisted of all Licensed Veterinary Technicians employed at the 17 veterinary facilities within Augusta County. Due to the small number of technicians working in the county, all working technicians were given the opportunity to participate in the study. The population included both men and women that varied in age, experience, and education. Participation in the study was completely voluntary and responses were kept confidential and destroyed once the data was processed. This study was reviewed by the College of Education's Human Subjects Review Committee and approved as an exempt study (Project 924229-1).

Instrument Design

The instrument used for this study was a survey consisting of seven multipart questions that were both open and closed form items. The survey questions were guided by the study's research questions. Questions 1, 2, 4, and 7 were designed in part to answer the first research question. Survey items 5 and 6 were designed to answer the second research question. Items 1 and 2 were designed to answer research question three and items 1, 2, and 3 were created to

answer the final research question. The purpose of the survey was to determine what means of obtaining continuing education credits and new knowledge and skills LVTs prefer and what topics they think are most relevant to their careers. A copy of the survey can be found in Appendix A.

Methods of Data Collection

The survey was hand delivered to LVTs at each of the facilities. Attached to each survey was a cover letter (Appendix B) stating the purpose of the study and direction on how to complete the form. Because the study involves human subjects, the cover letter also includes information on how confidentiality will be maintained and how completing the survey comes with minimal risk to the participants but will provide valuable information for the research.

Statistical Analysis

The survey questions were designed to help determine what training methods are being utilized, what is preferred, and what training is needed in the future. The first research question was the basis for four items regarding the methods used, valuableness found in LVT training, and topics that are addressed in training. The second and third research questions were addressed with two of the survey questions that related to methods of receiving CE credits. The fourth research question was the basis for three of the survey items relating to OJT. Once the surveys were completed, the data were reviewed, analyzed, and tabulated. Responses to the quantitative questions were reviewed and the central tendency was determined. The responses to the qualitative questions were reviewed and the trends were recorded in number and frequency. The information gathered from the survey responses was used to draw conclusions and make recommendations for future LVT training and continuing education options.

Summary

Chapter III provided an overview of the methods and procedures that were used to complete this study on training needs of Licensed Veterinary Technicians in Augusta County, Virginia. The population was described as one that encompasses all LVTs employed at one of the 17 veterinary facilities. A survey was designed to reflect the research questions and was given to employees in order to gather information on the topic. Chapter III concluded by describing how the gathered data will be analyzed and applied to the study. Chapter IV presents the findings from data collected throughout the research. It provides a statistical analysis of the data gathered from the survey responses and concludes with a discussion of the findings.

CHAPTER IV

FINDINGS

The purpose of this study was to determine the training needs of Licensed Veterinary Technicians employed in Augusta County, Virginia. A survey was designed to help determine the methods used by the LVTs to gain new knowledge and skills and to determine what their thoughts are toward the available training. This chapter presents the findings from the collected data.

Survey Response Rate

Augusta County is home to 17 veterinary facilities, two of which do not employ Licensed Veterinary Technicians. Of the remaining 15 facilities, three chose not to have their technicians participate in this study. The 12 participating veterinary hospitals employ 33 LVTs, which provided the study's respondents. The surveys were delivered to these hospitals with a two-week completion deadline set. Following the two-week deadline, surveys were collected and the data and results were computed based on the responses that were completed. See Table 1.

Table 1

Survey Response Rate

Surveys Given	Number of Responses	Response Rate (%)
33	24	73%

Survey Results

The survey items were designed to elicit LVT thoughts on the training that they receive both on the job and through continuing education options. The survey consisted of seven items whose results are as follows.

Question 1 was used to determine the methods used by the LVTs working in the county to obtain new knowledge in their profession. The methods included on the job training, mentoring, online modules, professional journals, wet labs/seminars, and sponsored continuing education and the technician was to check all that applied to their situation. Twenty-four (100%) LVTs responded to this question. Of the 24 responses, 24 technicians (100%) have used on the job training, 21 respondents (88%) have used mentoring, 20 (83%) have used online modules, 15 (63%) have used professional journals and wet labs/seminars, and 21 (88%) have used sponsored continuing education. See Table 2.

Table 2

Question 1: Methods of Gaining New Knowledge

	Number of Respondents using method	Percentage of those using method
On the job training	24	100%
Mentoring	21	88%
Online Modules	20	83%
Professional Journals	15	63%
Wet labs/seminars	15	63%
Sponsored Continuing Education	21	88%

Question 2 was used to indicate how valuable each method was to the technicians for gaining new knowledge. A Likert scale consisting of responses with corresponding numerical rankings of not at all (1), slightly (2), moderately (3), very (4), and extremely (5) was used. Twenty-four (100%) of the technicians responded to this question. For OJT, 75% of the technicians reported it as extremely valuable, 21% as very valuable, and 4% as moderately valuable. On the job training concluded with a calculated mean of 4.71. For mentoring, 54% reported it as extremely valuable, 20% as very valuable, 13% as moderately valuable, and 13% as not being valuable at all. Mentoring had a calculated mean of 4.04. For online modules, 4% of technicians found them to be extremely valuable, 12% found them to be very valuable, 38% reported them as moderately valuable, 29% reported them as slightly valuable, and 17% found them not valuable at all. The use of online modules had a mean of 2.58. Professional journals are found to be very valuable amongst 9% of technicians, moderately valuable with 33% of technicians, slightly valuable with 25% of technicians, and not valuable with 33% of technicians. Professional journals had a mean of 2.17. For wet labs and seminars 38% of technicians found them to be extremely valuable, 29% reported them as very valuable, 4% found them to be moderately valuable, 29% found them not valuable at all. Wet labs and seminars had a mean of 3.46. Sponsored continuing education was reported as extremely valuable by 17% of technicians, very valuable by 54%, moderately valuable by 13%, slightly valuable by 8%, and not valuable by 8%. Sponsored continuing education had a mean of 3.63. See Table 3.

Table 3

Valuableness to Professional Development

		Not at all	Slightly	Moderately	Very	Extremely	Mean
OJT	# of Responses	0	0	1	5	18	4.71
	%	0%	0%	4%	21%	75%	
Mentoring	# of Responses	3	0	3	5	13	4.04
	%	13%	0%	13%	20%	54%	
Online Modules	# of Responses	4	7	9	3	1	2.58
	%	17%	29%	38%	12%	4%	
Professional Journals	# of Responses	8	6	8	2	0	2.17
	%	33%	25%	33%	9%	0%	
Wet Labs/Seminar	# of Responses	7	0	1	7	9	3.46
	%	29%	0%	4%	29%	38%	
Sponsored CE	# of Responses	2	2	3	13	4	3.63
	%	8%	8%	13%	54%	17%	

Question 3 asked technicians what percentage of on the job training contributed to their knowledge and skills as it pertains to their profession. Of the 24 respondents, 22 (92%) responded to this question. Three of the 22 technicians that responded to this question stated that 100% of their knowledge and skills came from OJT. Four of the LVTs stated that 90-99% of their knowledge and skills came from OJT. Four stated that 80-89% came from OJT. Five technicians stated that 70-79% came from OJT. One technician attributed 60-69% of their knowledge and skills to OJT. Two stated that 50-59% came from OJT. One technician reported

40-49% and two technicians reported 30-39% of their knowledge and skills came from on the job training. See Figure 1.

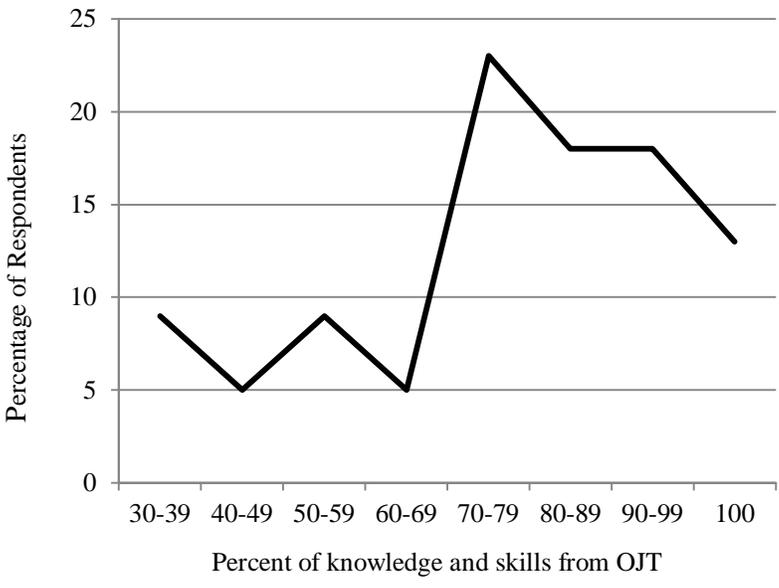


Figure 1. Frequency of responses by the percentage of knowledge and skills obtained through on the job training.

Question 4 asked how many continuing education credits each technician regularly obtained in one calendar year with the minimum for licensure being 6 hours. Twenty-three (96%) out of the 24 participating technicians answered this question. Five (22%) technicians reported earning the minimum of six credits; one (4%) technician earned seven credits; five (22%) earned eight credits; three (13%) earned nine credits; four (17%) earned 10 credits; two (9%) earned 11 credits; two (9%) earned 12 credits; and one technician (4%) reported earning 20

credits per year. For this question, the mean response was nine hours of continuing education credits per calendar year. See Figure 2.



Figure 2. Frequency of responses by percentage of credit hours earned per year.

Question 5 consisted of three parts with the first asking how many of the participants have utilized online modules to obtain knowledge and skills. Of the 24 participants, 23 (96%) responded. Twenty-one (91%) of the technicians reported that they have used online modules. The second part of the question asked these 21 technicians what percentage of their credits are earned with this method. Of the 21 technicians, 19 (90%) responded. One (5%) technician responded that 3% percent of their credits were earned this way; five (26%) earned 10%; four (21%) earned 25%; four (21%) earned 50%; two (11%) reported earning 90% and three (16%)

reported earning 100% of their credits using online modules. The last part of question 5 asked the technicians that used online modules if their credits were earned through RACE approved courses. Of the 18 technicians that responded to the question, 100% reported that their credits were RACE approved.

Question 6 asked the technicians which method, online or in person, they preferred for obtaining continuing education credits. Of the 24 participants, 23 (96%) responded. Fifteen (65%) reported that they preferred in person options. Three (13%) reported that they preferred online options and five (22%) reported that they did not have a preference over which method they used to obtain credits. See Figure 3.

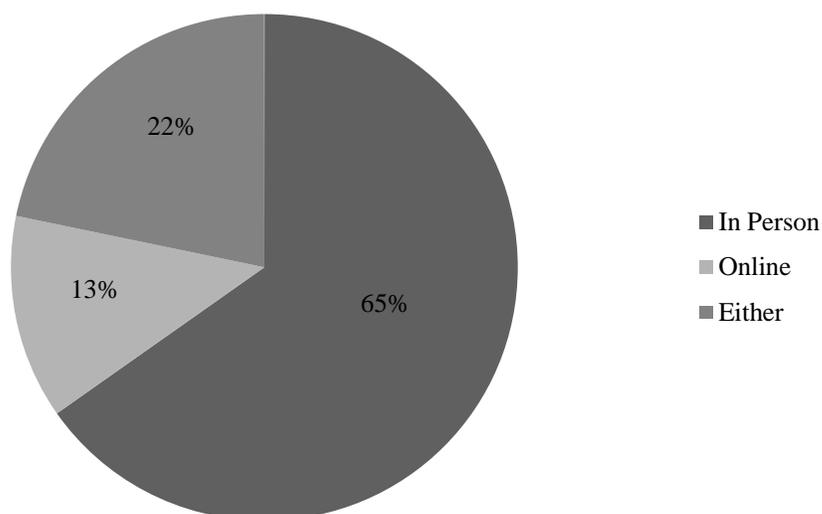


Figure 3. Respondents preferred methods of obtaining continuing education credits.

Participants were asked why they prefer their chosen method. For in person options, the participants cited the need for engagement as the most important aspect with eight mentions. Next was the ability to ask questions with seven mentions followed by better focus in meetings with four mentions. Retaining more information, learning more, and having hands on abilities came next all with three mentions, with networking being mentioned by one technician. For online options, five technicians cited that it is more convenient; two technicians cited that there are often free choices and a larger ability to choose what is being learned, and one technician mentioned that there are fewer distractions.

When asked what their concerns were for the other method, four participants pointed to a lack of engagement with online modules and said that the information was harder to retain. Three participants stated that online modules did not possess quality information and they were too distracted to focus. Two technicians cited the inability to ask questions as their primary reason for not choosing online modules over in person meetings. Concerns with in person meetings included two technicians citing travel time as being a problem, and one technician pointed to the inconvenience of leaving home, and one technician cited in person meetings as being too distracting.

Question 7 asked the technicians to state which topics they would like to see addressed in either mode of delivery. Of the 24 participating technicians, 14 (58%) answered this question. Various topics were mentioned that could be placed into 12 categories. In ranked order, the categories were microscope cytology, anesthesia, and management with four mentions each, exotics and patient care with three mentions each, dentistry, radiology, pain management, and end of life issues with two mentions each, and behavior, diseases, and technician techniques with one mention each.

Summary

Chapter IV reported the findings of the survey that was designed to determine the training needs of Licensed Veterinary Technicians in Augusta County, Virginia. Of the 17 veterinary facilities in the county, 14 chose to allow their technicians to participate in the study. Thirty-three surveys were distributed and 24 technicians chose to participate in this study. The survey results were gathered and data were reported that would aid in drawing conclusions and making recommendations in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter provides a summary of what has been presented in this research study. It also provides conclusions based on the data gathered through the surveys completed by the Licensed Veterinary Technicians that chose to participate in the study. Lastly, recommendations will be made that focus on improving LVT training and continuing education options.

Summary

The problem of this study was to determine the training needs of Licensed Veterinary Technicians employed in Augusta County, Virginia to improve their knowledge and skills as they relate to their chosen profession. The following research questions were developed to help guide this study and provide an answer to the problem.

RQ₁: What are the expected training needs of Licensed Veterinary Technicians?

RQ₂: What is the preferred method of obtaining continuing education credits?

RQ₃: What other means are used to obtain new knowledge and skills?

RQ₄: Is on the job training effective at each hospital?

LVTs provide an invaluable service to the community and veterinary field. In order to maintain a high level of knowledge and skills, technicians must continue to stay current on the latest techniques and trends in their area of expertise. In order for this to happen, adequate, high quality, and up to date education and training opportunities must be provided and made. To assess this need for training and for this study to progress limitations and assumptions needed to

be set. The study was based only on LVTs working in Augusta County and the findings may have been affected by employee attitudes, experiences, and truthfulness of responses.

Assumptions were made that all technicians possess training needs, they have completed some continuing education, and that insight will be provided into their training needs with this assessment.

This study was based on LVTs working in Augusta County, Virginia which is home to 17 veterinary facilities. Twelve of the facilities had technicians participate in the study, and this created a population of 33 technicians. From the 33 LVTs, 24 participated in the study.

A survey was designed that would elicit responses from the technicians that would aid in meeting the research questions. It consisted of seven multipart questions that were both open and closed form items. The survey was distributed to the technicians with a two-week return period. Once the surveys were returned, the data were gathered, analyzed, and computed to find the central tendency and number and frequency depending on the type of question.

Conclusions

The following conclusions can be made based on the research questions.

RQ₁: What are the expected training needs of Licensed Veterinary Technicians?

LVTs use on the job training, mentoring, online modules, professional journals, wet labs/seminars, and sponsored continuing education to develop their knowledge and skills. The survey results reveal that all of these methods play a big part in technician training. While technicians are required to obtain at least six hours of continuing education credits per calendar year, the survey results showed that 78% of the technicians earn more than the requirement with

a mean of nine credits per year. It can be concluded that the county technicians desire and want to earn more than the requirement. From question 7 of the survey, technicians want and expect training and continuing education options that are relevant to their occupation. The three most cited needs are microscope cytology, anesthesia, and management training.

RQ₂: What is the preferred method of obtaining continuing education credits?

It was concluded from the survey that 65% of participants prefer in person training and continuing education methods over online modules. The benefits associated with in person methods included engagement, the ability to ask questions, and retaining more knowledge. While 21% of participants have used online modules, only three participants chose that as their preferred method and cited the benefits as convenient, free, and having the option to choose topics.

RQ₃: What other means are used to obtain new knowledge and skills?

Besides online modules and in person continuing education, mentoring, journals, seminars, and on the job training are other ways of obtaining knowledge and skills. From the survey results, journals were the least favorable source of continuing education with a mean of 2.17 while on the job training was the most favorable with a mean of 4.71 and 100% of participants stating that they have utilized this method.

RQ₄: Is on the job training effective at each hospital?

The survey results show that on the job training was utilized the most for obtaining knowledge and skills for this profession. Pertaining to the valuableness of OJT, 75% of the respondents stated that it was extremely valuable. It was found that 86% of technicians believe

that 50% or more of their knowledge and skills were gained through on the job training. The conclusion can be made that on the job training is the most effective means of gaining and improving knowledge and skills for the Licensed Veterinary Technician in this study.

Recommendations

Based on the findings from the survey, the following recommendations can be made:

1. Since 78% of technicians are earning more than the required six credits, they are not participating in training and continuing education solely to keep their licensure. The veterinary facilities should implement regular in house training and education that focuses on the most important topics for their technicians. Topics such as anesthesia, patient care, dentistry, and radiology are all areas that rapidly change and introduce new techniques.
2. With on the job training being the most cited resource for gaining knowledge and skills, each facility should implement a sound onboarding and training guide that is updated routinely. Each facility should delegate a LVT to be the training ambassador that will monitor new training techniques and guide new hires. Having someone that is responsible for training may help ensure each technician is fully trained and functional so that they can provide excellent client and patient care that is required of technicians.
3. With rapidly changing technology and an ever-increasing lack of time, online modules for continuing education will become more prevalent. The convenience of completing modules online is overshadowed by the lack of engagement. Developers of online modules should take into account technician's desire to interact and ask questions about the information that they are learning. While many of the online modules come in one-hour segments, implementing a

question and answer segment and a chat forum can alleviate the technician's feeling of solitude when participating in online continuing education options.

4. While the survey pointed out that 65% of technicians preferred in person methods for continuing education, concerns were voiced relating to travel and inconvenience. Seminars and sponsored continuing education are offered regularly by pharmaceutical companies and specialists but are scheduled after work or in another city or county from where the technicians live or work. To accommodate technician schedules, companies should implement continuing education options that occur in smaller segments and at the hospitals where the technicians are employed. These meetings, or lunch and learns, can be conducted quickly, allow for the technician's need for engagement, and reduce anxiety about attending meetings that occur late or out of town.

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Appendix A

The purpose of this survey is to gather information on the training needs of Licensed Veterinary Technicians in Augusta County, Virginia. The responses that you provide will be summarized and all gathered information would remain confidential. Your responses are greatly appreciated. Thank you ahead of time for taking time out of your day to participate.

Directions: Please mark your selection or write your response in the space provided after each statement or question.

1. Which methods have been utilized to gain new knowledge in your field? Check all that apply.

On the job training	
Mentoring	
Online modules	
Professional journals	
Wet labs/seminars	
Sponsored continuing education	

2. Related to your professional development, indicate how valuable each method has been in gaining new knowledge.

On the job training	Not at all	Slightly	Moderately	Very	Extremely
Mentoring	Not at all	Slightly	Moderately	Very	Extremely
Online modules	Not at all	Slightly	Moderately	Very	Extremely
Professional journals	Not at all	Slightly	Moderately	Very	Extremely
Wet labs/seminars	Not at all	Slightly	Moderately	Very	Extremely
Sponsored continuing education	Not at all	Slightly	Moderately	Very	Extremely

3. What percentage of your knowledge and skills was obtained through on the job training?
4. How many credit hours per calendar year do you regularly obtain?
5. Have you used online modules to obtain continuing education and new knowledge/skills in the past?
 - a. If yes, what percentage of your credits are earned this way?
 - b. Were the modules RACE (Registry of Approved Continuing Education) approved?
6. Do you prefer online or in person continuing education options?
 - a. Why do you prefer this method?
 - b. What concerns do you have with the other method?
7. What topics would you like to see addressed in either mode of delivery?

Appendix B

Dear Licensed Veterinary Technicians,

I am a graduate student currently enrolled at Old Dominion University seeking my Master's degree in Business and Industry Training. As part of this degree, I am conducting a research project that will help identify the training needs of technicians in Augusta County. Being a LVT myself, I know that staying on top of current trends in our field is necessary if we are to be successful at our chosen professions. I am asking each technician that works in the county to participate in this survey so that I can pinpoint the types of training and continuing education options that are relevant to our profession.

Your participation in this study is completely voluntary and you may withdraw at any time. Responses from the surveys will remain confidential, no personal information or identifiers will be gathered. Once collected, all data will be electronically stored on a password-protected computer, reported in aggregate form, and destroyed once it is processed for the purposes of the study. Your participation is important to my research and I thank you in advance for helping me achieve my goal.

Sincerely,

Jeannie Skelton