Methodology

Distance Learning in Forensic Nursing: The Lived Educational Experience

Matthew M Lunn* and Jonathan W Caudill
University of Colorado Colorado Springs, Colorado, USA

*Corresponding author: Matthew M. Lunn, University of Colorado Colorado Springs, Colorado, USA; E-mail: mlunn@uccs.edu

Received Date: 29 January, 2018; Accepted Date: 03 April, 2018; Published Date: 17 April, 2018

Abstract

This phenomenological study was the first to understand nursing students’ lived experiences while taking a forensic nursing course in a distance learning format. Previous studies have shown the effectiveness of distance learning for reaching a wide variety of students in a changing academic landscape as well as individuals looking for educational options in an asynchronous setting. However, there was a deficit in the literature as it related to distance learning in forensic science fields. This study involved interviews with undergraduate and graduate nursing students at a large research university in the northeast United States. The three resulting themes were: asynchronous classes build motivation through independence, being confident in your support systems helps reduce online anxiety and learning in your own space improves focus. The findings in this study seem to support findings in similar studies focused on general nursing courses.

Keywords

Distance Learning; Forensic Science; Online Education; Nursing; Student Success

Introduction

There are a number of studies examining the field of distance learning and how it applies to nursing education [1-8], but there remains a void as it relates to nursing students studying to be practitioners in forensic science disciplines. Distance learning in forensic nursing is a key area to study because there is an interest in students wanting to go into forensic science fields. This could include a traditional nursing forensic specialty such as a sexual assault nurse examiner but in recent years has included fields such as medicolegal death investigation. Because of this, universities have been expanding their offerings to meet this demand. Furthermore, certified forensic practitioners are required to complete continuing education throughout their career that is now commonly taught through distance learning methods. The need for more distance learning courses will only increase over time. For example, recent recommendations made to the United States Attorney General indicate that all medicolegal death investigators in the United States should become nationally certified [9]. As a minimum requirement to be able to sit for certification, many professions require a degree beyond secondary school. The federal government has initiated this process through the National Institute of Standards and Technology (NIST) by creating an Organization of Scientific Area Committees (OSAC) with the goal to "coordinate development of standards and guidelines for the forensic science community to improve quality and consistency of work in the forensic science community" [10]. This national movement in forensics makes this line of research all that more important in that if distance learning can be shown to be an effective method for educating aspiring forensic scientists, it could address the issue of educating hard-to-reach populations, such as individuals in rural areas or working professionals, who otherwise would not have access to the training to become certified in a particular field. This study's aim was to develop a better understanding of the perceptions of nursing students’ lived experiences while taking a forensic nursing course in a distance education format. Specifically, this study was guided by the following research question: What is the experience of nursing students taking forensic courses in a distance learning format? Answering this question will further the knowledge base as it relates to utilizing distance learning for forensic disciplines. As the number of distance learning programs continues to expand and the demand for forensic professionals continues to increase, it is important to ensure that the general principles that are being taught are appropriately being learned and applied in this vital public health and safety field.

Literature Review

To understand the experience of nursing students taking forensic courses, it may be helpful to examine how this has been accom-
plished successfully within both traditional and non-traditional students among general nursing courses. Additionally, since many students go into nursing as a second career or enter graduate school later in life [11], adult learning theory provides context to the various learning styles that might be used for a wide variety of students because of the complexity of adult learning [12-13]. Cercone et al., [14] suggested that adult learners need to be respected for the experiences that they bring to the educational system and that instructors need to be mindful that these students are utilizing new technologies that were not present the last time they were in school. There are instructional benefits in working with adult learners such as those who are returning to school to learn forensic principles as opposed to traditional students.

Successful Interactions with Adult Learners

Adult learners tend to be very motivated towards their educational goals and, typically, are task oriented learners [13]. However, though, distance learning platforms must provide an environment that promotes positive attitudes and satisfaction through effective interaction. This level of interaction is important to developing the idea of a community within the course [15]. For example, Boling, Hough, Krinsky, Saleem, and Stevens [16] found an increase in satisfaction among students who had taken multiple distance learning courses where faculty were readily available, provided feedback specific to their coursework, and were able to accommodate their schedules outside of normal hours. The students, and their unique needs, must be considered when designing programs in a distance learning environment [17]. Adult learners also must take ownership in their studies in order for them to be successful [18]. Taking ownership is done, in this instance, by students realizing the importance of their own personal and professional growth. As future practitioners in forensics, taking ownership of their studies should not be a challenge for most as they will need to stay abreast on the latest material in order to effectively perform their job functions and, in some cases, maintain their certification. Adult students are known to be more motivated. Bruns et al., [19] found that approximately 90 percent of law enforcement professionals from one urban department furthered their education even though they felt their agency did not support their academic ventures. This illustrates the internal motivation of professionals seeking to advance their professional knowledge and improve their job performance even when it is not required. Yet, even with obvious employment-related motivation, faculty members who are teaching in a distance learning format should still strive to improve critical thinking from their students through implementation of learning theories to improve their understanding of the material being covered. Transformative pedagogy has been shown to encourage successful interactions to assist students by encouraging students to think critically about their previous experiences and then challenge traditional educational approaches [20]. Richardson et al., [21] postulated that the online environment, if approached by faculty with the proper learning theory, can promote more collaboration than seen in a traditional setting. This collaboration between students and faculty in an online environment can be accomplished through blogs, discussion posts, and collaborative programs designed for group projects. By implementing these guided discussions and projects, students can compare their ideas as among their peers [22] and among national and international experts instead of faculty within a certain geographic area [23]. The transformative pedagogy would also encourage faculty to not only utilize multiple electronic resources but to also try to promote action-oriented activities to improve these students' daily practice [24]. While there is a deficit in the literature as it relates to distance learning in forensic disciplines, distance learning has been implemented successfully in general nursing.

Implementation of Distance Learning in General Nursing Education

The profession of nursing has effectively used distance learning as a means of educating a changing student population that includes a greater number of non-traditional students for many years [25-29]. However, a study by Nguyen, Zierler, and Nguyen [30] showed that while students were able to learn effectively utilizing distance learning modules, they only learned at an entry level. This could indicate that more research is needed to determine what could be done to train students to reach an expert level in a specific discipline or skillset. However, if the goal is to educate neophytes into the profession of forensics, training someone at an entry level may be sufficient. The important question, from a forensics principles perspective, is whether or not practicing nurses can adequately expand their knowledge base as well as reinforce what they already know. Rush, Waldrop, Mitchell, and Dyches [31] were able to demonstrate that distance learning did allow for proper professional development through in-course interactions at the undergraduate level. This may not, however, translate to professional growth among graduate students that already have a solid knowledge base. Yet, there are indications in the literature that training credentialed nurses through distance learning can be accomplished successfully. Students in nursing programs have been shown to have the same examination scores whether the coursework was completed in a traditional classroom setting or through a distance learning platform [2, 4-8]. Additionally, comparable results have been demonstrated in graduate programs [1, 3]. In order, in part, to make the necessary leap to using technology to bring students to an expert level, faculty members must be educated on the most up-to-date technologies to reach a wide variety of students [30, 32]. This is an important consideration because not every distance learning student will learn the same way, as is the case with students in a traditional classroom.

A study by Mancuso-Murphy et al., [33] stated the following regarding moving courses from a traditional setting to one utilizing an online format:

If it is done in a systematic and orderly way, with the incorporation of a theory of learning, teaching strategies that address multiple learning styles, use of technology with multiple capabilities,
and a focus on creating an interactive, collaborative community of learners, course redesign for the web can result in a high-quality educational experience with pleasing results for both faculty and students.

The important message to consider with the above quotation is that a thoughtful approach to course design can allow classroom material to be presented in a distance learning format to a wide variety of students. It is also important to understand what motivates students that choose to take courses in a distance learning format as well as the students’ attitudes towards taking the course in an online learning environment.

Theoretical Framework

Lawton’s et al., [34] supportive learning in distance education theory was the framework utilized for this research. The theory has four conceptual areas: the student, the tutor (or professor), the environment, and the course. Additionally, this framework has three stages of a course: meeting, guiding, and moving on. The student concept focuses on their ability to adapt to the online learning environment and their level of confidence in taking the courses in this type of a platform. In the meeting phase, students should feel comfortable accessing the material and they should develop a relationship with the tutor. In the guiding phase, students need to continue the contact with the tutor as well as develop relationships with their fellow students. The development of relationships with other students helps to build a support network for the students to help them through the course. In the last phase, moving on, the student must prepare for the ending of the course and prepare for the next course they are going to take. Additionally, this last stage marks the end of the support group that the student has developed over the course.

The tutor concept focuses on the instructor’s ability to be helpful, their subject matter knowledge, and the ability to provide outside resources to increase students’ knowledge. In the meeting phase, tutors must reach out and engage their students to start to build a relationship so that the student feels like they can reach out to their faculty member. During the guiding phase, the tutor uses their knowledgebase to impart the course information to the students, and in the moving on phase, the tutor must ensure the students have an effective learning experience. Additionally, the tutor must prepare the student to wrap up the course information and be prepared for the next course in their program of study. The environment and course factors speak to the ability of the distance learning platform that is used to disseminate the information. This includes a location to exchange information, lectures, and written resources. This also includes the ability for an environment and course platform to be used to effectively measure student growth.

Current Study

To develop an understanding regarding the perceptions of undergraduate and graduate students’ lived experiences associated with taking a forensic nursing course in a distance learning format, a phenomenological research study was performed. Moustakas’ et al., [35] described the basis of phenomenological study as not only focusing on the type of experience itself, but also how the experience was felt by those involved. For felt experience to be captured in the research study, interviews were conducted to understand the experience of nursing students taking forensic courses in a distance learning format. This in-depth examination of the students’ perspectives not only fills the current void in the literature but provides a basis for future educational offerings through understanding the experience of previous distance learning forensic nursing students. The use of a phenomenological research design specifically provides the rich detail necessary to understand the students’ experiences with this change [35]. As distance learning courses and programs continue to expand, it is important to understand the student experience as a cornerstone for developing quality academic programs that allow for success equal to or greater than what has been shown in other nursing distance learning platforms [2, 4-8].

Methodology

Data Collection

Data were collected through interviews of students recruited through electronic means. Students were all from a large research university in the northeast part of the United States that enrolls a diverse student body. Study participants were enrolled in at least one forensic course in a nursing program. The participating students first took a survey through a popular online survey platform and were then asked to participate in a telephone interview; this study focused solely on the interviews. The interviews were recorded and transcribed for later analysis.

Sample

Thirty-two students completed the online survey (six males and 26 females; 12 graduate and 20 undergraduate). Of the 32 students that took part in the survey, 14 students agreed to be interviewed for this study. Of those 14 participants, all but one were female, and 11 were undergraduate students and three were graduate students. The forensic nursing courses, and some of the graduate programs that students can enroll in at this university, were specifically designed for distance learning to, in part, attract students from outside of the mostly rural area of this university. However, all the students that took part in the interview portion of this research could easily commute to the campus if it were required. Their reasons for the proximity and their future residence goals were different based, in part, on their status as either a traditional or non-traditional student. The older, non-traditional students were interested in staying in the same location where they currently resided due to several factors, but the most common reasons for taking online classes involved familial responsibilities. These included spouses, children of various ages, and many of the older, non-traditional students worked full-time in addition to attending school. Because of this, their study environment varied from that of their younger peers. They
were more likely to study in public locations of their homes so that they could still feel a connection to the rest of their family members. Additionally, at work while the loud noises of alarms, bells, and verbal orders being passed along between staff members were filling the space, many of the older students tried to find short windows of time during breaks or between treating patients to work on their studies.

Unlike the older, non-traditional students, the younger, traditional students generally had dreams and aspirations to move to the major city in the state to start their careers instead of staying around the region where this research university was located. In a separate distinction between the traditional and non-traditional students, the younger students, regardless of where they lived, preferred the benefits associated with quiet locations away from other students who might have different study habits. This was also true of students who lived at home with their parents but unlike their non-traditional student peers, they too preferred to study alone in a personal space. Lastly, both traditional and non-traditional students who generally took brick-and-mortar classes preferred the comfort and quiet of their own space afforded to them by the distance learning format instead of learning the information in a large lecture hall where other students could be a distraction.

Analysis

Interview transcriptions were used to examine students’ perceptions by identifying significant statements related to their ability to learn and what hindered or facilitated their experience. This was accomplished through three stages of coding, starting with identifying statements in the transcripts and comparing those to notes collected by the lead author during the interviews. This process allowed for the development of key areas of focus. Consistent with Moustakas’ et al., [35] method of data analysis for a phenomenology, significant statements were identified in the transcripts that could be grouped together into larger themes or clusters. These themes were then used to describe the “how” and “what” associated with the students’ experiences. An inductive method of coding was utilized to generate the themes organically through what was being seen in the transcripts being reviewed, and a focus was placed on constantly reevaluating the transcripts to ensure the themes were consistent with the students’ stated experiences [36]. Once all the significant statements were identified, then re-coded and codified, they were clustered into themes of meaning. The identified codes were then listed and organized.

Findings

Individual statements from each theme are used to illustrate how the students’ experiences happened and in what context. In an attempt to answer the research question, each question in the interview was designed to solicit multiple aspects of the students’ perceptions and provide an understanding as to what may make teaching this content successful for future students. The research question attempted to develop an understanding of the experiences of a broad range of students taking forensic nursing courses in an online learning platform.

First theme: Asynchronous classes build motivation through independence

The experience of students that were enrolled in an online forensics course was resoundingly in favor of the material being available at a time that was convenient for them. Stephanie (Pseudonyms were used in place of the participants’ actual names.) stated that “the beauty of doing (a course) online is that I can read through half of a PowerPoint … and if I feel myself start to lose focus I can just step away.” It was this individual’s belief that being in a traditional classroom deprived her of fully understanding the material if she was not able to focus for whatever reason at that set time. She continued, “you don’t really miss something when you’re doing it at your own pace.” The asynchronous nature also spoke to the increased motivation some of the students had for the material. Debra felt that not having the restrictions of a set time and place for the coursework also improved her motivation. She reported, “I feel like if I have to be somewhere at a specific time it would make me less interested in doing it. I feel like I grasp the information a lot better because I can do it on my own time, it’s flexible, and it’s not like a strict schedule.” The strictness of the schedule of a traditional classroom was also an issue with the graduate students that were interviewed. According to Nora, she “likes to work at (her) own pace and be independent. In-person classes take up more of your time simply by the fact that you actually go to class.” This feeling of independence was also noted by other students.

The feeling of being independent in an asynchronous learning environment helped motivate many of the subjects who were interviewed. Cassie stated, “I like posting the discussions, I’m learning a lot, doing my own research (along with the) good combination of different videos and print (materials). If you’re not as driven, I could see how you would kind of lose yourself.” Britney expanded on this by stating, “You have to take the initiative. There is a lot of material out there to find and access.” The belief that the ownership of students, both undergraduate and graduate, to get the most out of the online forensic classes they were taking was pervasive. The students had this belief that they were completely in charge of their education and it was on them to stay motivated and learn the material. Britney summed up the self-reliance and motivation nicely when she stated, “Time management is essential since it is an online class and there’s no required time that you have to sit down and do it.” Allison supported this by stating, “(The classes) might get overwhelming sometimes. So, in that sense I have to know how to organize myself.” The discipline exhibited by these students working independently through the material seemed to be intrinsic and related to their future goals in a number of instances. This discipline was especially pronounced because none of the participants reported wanting to go into a forensic specialty when they were done with their academic program. However, there was a real sense of pride conveyed that they were learning something
that was not a traditional topic for nursing students. "We have the independence to go out and find the knowledge ourselves," stated Stephanie when discussing learning a new topic within the nursing school. For other students, the practicality of the information, they believed, would serve them well later in their careers. Britney reported wanting to work in an emergency department once school was completed and believed the education she was receiving regarding forensic principles would be useful in that environment. Nora also believed that the new material motivated her to work hard in the course and that the “nursing and forensic topics all intertwine.” The applicability of the forensic material created a new perspective for how these students viewed their issues related to patient care and could indicate support for expanding the use of nurses in forensic disciplines, particularly in public health or death investigation functions, where having significant healthcare knowledge is necessary for success.

Second theme: Being confident in your support systems helps reduce online anxiety

A very common theme that many participants expressed was that a proper support system, or the perceived proper support, made their online experience less stressful. This support system was experienced in four different ways by the subjects of the study. It was experienced in support provided by the professor, support provided by the learning platform, in this case Blackboard, support provided by technology services should a problem occur, and the sense of a community with other students. The support provided by the professor was an essential aspect of students’ experiences taking forensic courses in an online environment. Many subjects described how the professor’s involvement and their communication skills made online courses more enjoyable than traditional classes. The ability and comfort level of being able to ask questions was a major piece of this. The "professors really make themselves available," according to Whitney and Nora expanded on this by stating, “I find that online instructors are better at communicating with students versus in-person class instructors because (the in-person instructors) just usually put it off and wait till they see you again or they forget.” Britney supported this when stating, “it’s easier, honestly, than a regular class because a teacher in an online class is very receptive to emails and they are quick to respond.” The same subject believed, however, that it is sometimes hard to appropriately get a point across in non-verbal communication. Other students spoke to their comfort level with communicating with online instructors. Cassie, a graduate student, reported that she “would be less inclined to ask questions in (a traditional) class.’ This emotion was not limited to students who were graduate students. It was also shared by multiple undergraduate students, such as Debra who felt she would be “more intimidated going to speak to teachers when I can just email. I’m very open with email and I’ll always be very curious.” Stephanie echoed this feeling of intimidation with speaking in-person to faculty members as she too found it unlikely that she would go to their office hours. Allison also enjoyed the ease of communicating with professors via email, but did opine, “I actually wish that I had those in-person office hours.”

There were, however, students that did not feel that it was easier to communicate with faculty members in an online learning environment. Two of the subjects felt that the immediacy that an in-person classroom provided for asking questions and receiving feedback was more beneficial. Rachel stated that “you can see (professors) during office hours or right after class if you have a question. (For online classes,) you have to wait a little bit for (the professor) to see the email and respond.” This sentiment was reported by Megan as well, but she felt it was more of the feedback that an in-person interaction brings that would improve her education. She stated, “The teacher can see certain things that the class is struggling with. If you don't speak to the professor, don't know the professor, it is hard to understand what they're teaching because it is very impersonal.” These were, however, not the prevailing viewpoints on the topic. The availability of resources and organization provided by the learning platform, at this particular university it was Blackboard, was an important part of the students’ experience, particularly those who were returning to school later in life. Nora believed “many adult learners who’d just come back to school and weren’t very familiar with online classes and everyone seems to say it is very user friendly.” While Nora was a non-traditional graduate student, some of the traditional undergraduate students felt the same comfort level with the platform and had the benefit of experience with the same platform. Whitney reported the she “used Blackboard since high school. It is helpful to have all of the resources there, so you can find everything right on the page.” The previous statement from Whitney also reiterates another perceived benefit that other students reported; the ability to have all of the resources organized in an easy to use fashion. Anne reported the benefits of having resources built into the learning platform including readings, lectures, and additional outside resources like videos or websites. This was supported by Debra who preferred the recorded lectures that were loaded into the online learning platform because she liked “to go back and review lectures for a better understanding.” Another individual, Stephanie, reported that in certain classes different resources help improve her understanding of the material. She stated, “in a science class, sometimes videos can be very helpful because they just tend to break things down and provide a visual at the same time.” There was, however, a lot of anxiety reported by most students associated with connectivity problems, even if they had not personally experienced it.

The support provided, or perceived availability of support, by technology service was an important component of a successful experience in distance learning. This was illustrated by Britney when she stated, “I worry about the online classes if the internet crashes, or Blackboard is not working. Sometimes I get nervous …if Blackboard isn’t working it is very stressful.” The need for the students to understand what to do in the event of a technical difficulty was something that was important to the students’ experiences. Technical professionals that a student could call at any hour, including overnight, was something that reduced the anxiety for Anne. She summed it up nicely when she stated, “if
it is hard to contact somebody … people panic.” If the students and faculty members of a particular course are thought of as a community, a number of the students interviewed believed that forming connections and learning from each other was an essential aspect of their experience as nursing students in an online forensic course. Being part of a community and having a close connection with other students seemed as less of an emphasis than simply learning together through information sharing.

A number of the students felt that without the course-wide discussions they would not have gained the same amount of knowledge. Anne stated, “the whole feedback (associated with the discussion posts) is excellent. You’re engaged, you’re listening, and you’re seeing what other students are putting out in the discussion board.” Elizabeth expanded on this point when reflecting on the experience. “I learned a lot of new information that I wouldn’t have thought of otherwise.” Elizabeth also believed that having back and forth discussions with other students made it easier to build relationships with them, even in a digital environment, when compared to a traditional classroom because there might not be the built-in discussions associated with a lecture environment. Additionally, other students saw the value but did not believe it was essential to their experience. Allison believed the connections with other students would be beneficial if “you don’t understand something, or you didn’t catch something that the professor said. So, it is pretty important to me at times.” Stephanie also felt it was situational and “it is very up to you and the kind of person that you are. I haven’t had difficulty being able to reach out to other members of my class. Some students, however, did want more of a connection with the faculty and other students. Anne had a previous experience where the students and professor in an online class would “get together, sign in, and talk to hear each other’s voices. That kind of gives this a more cohesive feeling.” Britney supported this experience as beneficial when she stated, “it would be helpful if once a week we could call in if we have questions, or listen or actually talk to the teacher.”

Adam and Sarah also made mention of the benefits of an occasional time when everyone could call in to discuss the material. They even suggested a webcam option so that students could put a face to a name. Sarah also stated that without some sort of voice or video meeting the online classes can feel “less engaging.” One individual, Nora, had a dissenting comment regarding the idea of using webcams to communicate as a class. She felt that using webcams for online classes where the students are “being filmed in their own homes and stuff is kind of weird.” Debra and Whitney also saw the benefit of a regular call-in or webcam, but these two individuals preferred an activity such as that be optional as it would be inconsistent with the asynchronous nature that so many students cherish with online learning.

**Third theme: Learning in your own space improves focus**

The last identified theme spoke to the environment in which students preferred to learn their course material and the perceived benefits of doing so in an isolated space. Many students felt the benefits of learning in an environment of their choice instead of a lecture hall. The experience of the group as a whole was expressed quite well by Rachel:

I feel like it’s easier to pay attention ‘because it’s more one-on-one. There are no distractions. In my house, I can close my door, put on headphones, and tune everything out. But in a lecture hall, there are so many people around. Not everyone is paying attention. So, your mind kind of drifts off and you look at what everyone else is doing.

This was further supported by other students, including Britney who saw challenges with trying to learn in a non-traditional setting. She reported, “if I don’t actually pull myself away from everyone else, I find it very hard to concentrate. But once I actually find the time to sit down and do it in a quiet spot, then I’m able to get it done.” Stephanie also expressed the importance of having an academic mindset and environment even when at home. She stated, “I don’t believe in trying to do work in bed or on the couch with the TV on. I try to put myself in as much of a school environment as I can.” Another individual, Debra, believed that the home environment allowed her to avoid being “distracted by other people,” and Allison expressed this experience too by being able to “concentrate by myself.”

The course material seemed to be a factor in the environmental experience as well. Multiple subjects reported that it was easy for them to study at home because they enjoyed the course content. Nora even believed that the excitement related to the course content allowed her to study in a less focused environment. “If I’m interested in the course, I can read the information in the busiest of settings. Whereas if it is a boring class, I really have to alter my studying and usually I’ll just do it at home when it’s quiet.”

**Discrepant remark**

Examining discrepant remarks in the transcripts helped to improve the trustworthiness of the findings. One of the subjects, a graduate student, provided an insight into her experience as an online learning student that was not echoed by other students but was of interest. Cassie stated, when talking about discussion posts, that it was frustrating to her that it appeared other students were using the same academic journal articles that she had used when they later posted their reply to a professor’s discussion thread. Cassie felt that a particular feature of the Blackboard learning platform helped eliminate this perceived use of her hard work for another student’s reply. She stated that some courses utilized a feature in the discussion boards so that “you can’t see the other people’s posts until you post.” This was viewed as something that increased the fairness of her experience.

**Discussion**

With respect to the research question – what is the experience of nursing students taking forensic courses in a distance learning format – the findings seem to reflect findings presented in previous studies focused on online nursing courses. This may
Technology support was also an important component to the
that of other nursing courses offered in an online environment.
However, because this is the first study of its kind in an emerging
arena, future studies should focus on confirmation of these
similarities to general nursing courses, or if there are differences in
the various forensic nursing disciplines such as sexual assault
nurse examiners or medicolegal death investigation. Woo and Kimmick [8] suggested that students who took a course in an
online learning environment appeared to be more stimulated and
engaged than the students who took the course in a traditional classroom. This phenomenon was supported by the first
theme where a number of students reported feeling motivated to
learn the material, particularly when they found the material
interesting, and help guide their learning experience. The mo
tivation felt by the students was also fueled by the students’ be
lief that the asynchronous nature of the courses allowed them to
take ownership of their studies. Boling et al. [16] discussed the
need for students to be able to take online courses in an asyn
crsonous nature to fit within their busy schedules. Stephanie’s
statement regarding “the beauty of doing (a course) online is that
I can read through half of a PowerPoint ... and if I feel myself
start to lose focus I can just step away” mirrors this sentiment.
It stands to reason that if this student was not allowed to review
the course material on her own schedule, she would not be able
to absorb as much material and would likely be less satisfied with
the course experience. This was also consistent with the theore
tical framework in that the student role discusses extensively a
student’s ability to adapt to the online learning environment and
the ability to feel confident in taking the courses in this type of
a platform [34]. The confidence to learn the material more fully
came, in part, because of the ability to study when the student
was mentally ready. Additionally, with non-traditional students
like Knowles et al., [18] previously noted, these students must
feel a sense of ownership as it relates to their education. This was
certainly true for Stephanie, a non-traditional graduate student,
when she reported, “I just like to work at my own pace and I like
to be independent.” This feeling of independence as a motivator
was a strong driving force. This individual felt that if they put in
the work, they would see the results.

The second theme that was identified spoke to the many support
systems that make taking a course in a non-traditional setting
manageable. The research by Mancuso-Murphy et al., [33] illus
trated the need for a shared sense of purpose and this included
the communication component between the student and faculty
member. This was also present in Lawton’s et al., [34] theore
tical framework when the importance of the interaction between
the student and tutor are stressed throughout all phases of the
course. Findings presented here appear to align with this con
cept as an essential component of their experience supported by
Debra’s comments on the openness that student felt to commu
nicate with online faculty members and by Whitney’s comments
regarding professors being very available whenever that student
needed to reach out with questions or concerns.

Technology support was also an important component to the
students’ experiences. Previous research discussed the impor
tance of having the most up to date technology [30, 32], and this
was consistent with the students’ reported need for having the
support or knowing where to turn if they needed support with
technical issues. The statement by Whitney how online learning
is only stressful "when there's internet problems," and the state
ment by Britney about the stress associated with Blackboard not
working illustrate the need for programs that offer online courses
to have the support systems in place in the event that there are
technical issues.

Lastly, there was an identified need for students to learn from
others to improve their experience. This was consistent with the
idea of having a community within the course [15]. Brit
ney’s statement, “I like everybody’s posts, who’s responding,
and all the comments that are going on” illustrates that the
back and forth seen between students and faculty gave her a
sense that they were all a community learning together. This was
further illustrated by Elizabeth when she reported that
the discussion boards created a dialog not seen in a tradi
tional classroom. This mirrored Sigala’s et al. [22] findings,
where student learning was promoted by the comparing and
contrasting of ideas among peers. This is also consistent with
Lawton’s et al., [34] framework in that it is the tutor’s respon
sibility to impart their knowledge to the students, and the
students have a responsibility to create a dialog and support
group within themselves to support each other throughout
the course.

The third and final theme that was identified through interviews
with students was the need for an appropriate environment to
learn. This was not a theme that was prevalent in the previous
literature which focused more on being able to access the in
formation in an asynchronous fashion but did not elaborate on
the environment in which they learned. Stephanie stressed the
importance of having an academic mindset and environment
even when in a non-traditional setting when stating, “I don’t
believe in trying to do work in bed or on the couch with the
TV on. I try to put myself in as much of a school environment
as I can.” The statement by Debra, who believed that the home
environment allowed her to avoid being “distracted by other
people;” further supported this important aspect of the online
learning experience. This third theme, while not a focus in a
review of the current literature, was supported by Lawton’s et
al., [34] framework that puts an emphasis on having an envi
ronment that supports learning. The only difference was that
Lawton was discussing the need for the online environment to
be supportive of learning, and not the physical environment the
student was learning in.

Of note, while there were more undergraduate students serving
as participants in this study, the themes were consistent regard
less of the student’s level in the program. This would seem to
support the idea that what makes a course beneficial for one ac
ademic level of students is beneficial for all levels of students, at
least within this research population.

Citation: Lunn MM (2018) Distance Learning in Forensic Nursing: The Lived Educational Experience. J Forensic Sci Digit Investig 2018: 18-26
Limitations

The findings associated with this study certainly have limitations since it relied on the perceptions of the students' lived experiences at only one university, which may not be representative of the larger student population that utilizes an online learning environment. That being said, many of the themes that were identified by the study participants mirrored what the literature stated: making an effective distance learning environment such as strong communication with the students and faculty, and the flexibility and pace of asynchronous courses. Furthermore, this limitation opens the door for future quantitative research to test hypotheses developed on the basis of these qualitative findings. Students' perceptions, while important to understand how to improve the distance learning experience for forensic science courses, do not reflect their mastery of the course material. Further studies should be done to examine the retention and application of the material to ensure that distance learning is an effective means to educate forensic science students that same as it has been shown in general nursing programs [2, 4-8].

Conclusion

The literature review exposed a deficit in what is known about distance learning in forensic courses. However, there was a significant body of literature that supported the use of distance learning mediums to deliver academic coursework. That said, Donavant et al., [37] pointed out that the majority of studies examining distance learning were based on student perceptions, similar to this study. This may indicate that the data supporting distance learning demonstrates less about learners' actual comprehension of the material but instead reflects their appreciation of the convenience. This is not the prevailing view of the literature as a whole but does illustrate an area for improvement in future studies. Additionally, further research needs to be done to confirm that distance learning is a proper method to deliver forensic science education, and how those who were educated through distance learning fared when they entered the workforce. The need for the convenience of both the medium and the availability of experts in the field will only continue to grow over time.

Even with the need to expand the literature to improve the understanding of how to properly implement distance learning as a means to provide high-level education to students wanting to pursue a career in a forensic discipline, the research that has been done indicates that this is an obtainable goal. The aim of this study was to illustrate that the students perceived their ability to learn basic forensic science principles in a distance learning format. The interviews were an important initial step in determining the students' perception regarding their experiences. Understanding this student experience is important as more and more students are matriculating at major universities with a desire to work towards a career in forensics and there is an increased focus on standardizing the credentials of forensic providers.

References

1. Bata-Jones B, Avery M (2004) Teaching pharmacology to graduate nursing students: Evaluation and comparison of web-based and face-to-face methods. J Nurs Educ 43: 185-189.
2. Buckley K (2003) Evaluation of classroom-based, web-enhanced, and web-based distance learning nutrition courses for undergraduate nursing. J Nurs Educ 42: 367-370.
3. Cragg CE, Dunning J, Ellis J (2008) Teacher and student behaviors in face-to-face and online courses: Dealing with complex concepts. J DiSt Educ 22: 115-128.
4. Frith K, Kee C (2003) The effect of communication on nursing student outcomes in a web-based course. J Nurs Educ 42: 350-358.
5. Leasure AR, Davis L, Thievon S (2000) Comparison of student outcomes and preferences in a traditional vs World Wide Web-based baccalaureate nursing research course. J Nurs Educ 39: 149-154.
6. O'Neil C, Fisher C (2008) Should I take this course online? J Nurs Educ 47: 53-58.
7. Rose MA, Frisby AJ, Hamlin MD, Jones SS (2000) Evaluation of the effectiveness of a web-based graduate epidemiology course. Comput Inform Nurs 18: 162-167.
8. Woo M, Kimmick J (2000) Comparison of internet versus instructional methods for teaching nursing research. J Prof Nurs 16: 132-139.
9. National Commission on Forensic Science. (2015). Certification of medicolegal death investigators. Washington, DC: U.S. Government Printing Office.
10. National Institute of Standards and Technology (2015). Organization of scientific area committees. Retrieved from http://www.nist.gov/forensics/osac.cfm
11. Jeffreys MR (2007) Tracking students through program entry, progression, graduation, and licensure: Assessing undergraduate nursing student retention and success. Nurse Educ Today 27: 406-419.
12. Frey BA, Alman SW (2003) Applying adult learning theory to the online classroom. New Horizons Adult Educ 17: 4-12.
13. Merriam SB, Caffarella RS (1999) Learning in adulthood (2nd ed.). San Francisco, CA: Jossey Bass.
14. Cercone K (2008) Characteristics of adult learners with implications for online learning design. AACE J 16: 137-159.
15. Desai M, Hart J, Richards T (2009) E-learning: Paradigm shift in education. Education 129: 327–334.
16. Boling EC, Hough M, Krinsky H, Saleem H, Stevensa M (2012) Cutting the distance in distance education: Perspectives of what promotes positive, online learning experiences. Internet and Higher Education, 15: 118-126.
17. Nadler L, Nadler Z (1994) Designing training programs: The critical events model. Houston, TX: Gulf.
18. Knowles MS (1980) The modern practice of adult education: From pedagogy to andragogy. Englewood Cliffs, NJ: Prentice Hall/Cambridge.
19. Bruns D (2005) Patrol officers’ opinions on the importance of a college degree. Law and Order 53: 96-99.
20. Cranton P (2006) Understanding and promoting transformative
learning: A guide for educators of adults (2nd ed.). San Francisco, CA: Jossey-Bass.

21. Richardson W (2006). Blogs, wikis, podcasts, and other powerful web tools for classrooms. Thousand Oaks, CA: Corwin Press.

22. Sigala M (2005) Developing and implementing a model for assessing collaborative e-learning processes and products. In P. Comeaux (Ed.), Assessing online learning (pp. 88-98). Boston, MA: Anker.

23. Harris J (2001) Design tools for the internet-supported classroom. Upper Saddle River, NJ: Prentice-Hall.

24. Meyers S (2008) Using transformative pedagogy when teaching online. College Teaching 56: 219-224.

25. Ali NS, Hodson-Carlton K, Ryan M, Flowers J, Rose MA et al. (2005) Online education: Needs assessment for faculty development. J Contin Educ Nurs 36: 32-38.

26. Cook G, Thynne E, Weatherhead E, Glenn S, Mitchell A et al. (2004) Distance learning in post-qualifying nurse education. Nurs Educ Today 24: 269-276.

27. Jeffries PR, Woolf S, Linde B (2003) Technology-based vs. traditional instruction: A comparison of two methods for teaching the skills of performing a 12-lead ECG. Nurs Educ Perspect 24: 70-74.

28. Johnston R (1997) Distance learning: Medium or message? J Further and Higher Educ 21: 107-122.

29. Skiba DJ (2007) Nursing education 2.0: Second life. Nurs Educ Perspective 28: 156-157.

30. Nguyen DN, Zierler B, Nguyen HQ (2011) A survey of nursing faculty needs for training in use of new technologies for education and practice. J Nurs Educ, 50: 181-189.

31. Rush KL, Waldrop S, Mitchell C, Dyches C (2005) The RN-BSN distance education: From education limbo to more than an elusive degree. J Prof Nurs 21: 283-292.

32. Van Der Velde RJ, Rawl CD (2000) Building a faculty development institute: A case study. Online J Dist Learning Administ, 3: 3

33. Mancuso-Murphy J (2007) Distance education in nursing: An integrated review of online nursing students' experiences with technology-delivered instruction. The J Nurs Educ 46: 252-260.

34. Lawton S (1997) Supportive learning in distance education. JAdv Nurs 25: 1076-1083.

35. Moustakas C (1994) Phenomenological research methods. Thousand Oaks, CA: Sage.

36. Creswell JW (2013) Qualitative inquiry and research design: Choosing among five approaches (3rd ed). Thousand Oaks, CA: Sage.

37. Donavant BW (2009) The new, modern practice of adult education: Online instruction in a continuing professional education setting. Adult Educ Quart 59: 227-245.