

CLS to Higher Education Administrator: The Right Place – Right Time

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OBJECTIVES: To document the career paths of women clinical laboratory scientists who have transitioned from employment in a full service clinical laboratory to the higher education arena and who have administrative positions at the dean's level, including assistant and associate dean positions.

METHODS: A multi-site case study design was selected for this qualitative research involving a purposive sample of eight research participants. Data collection was guided by ten open-ended questions in seven face-to-face and one telephone semi-formal interviews.

SETTING AND PARTICIPANTS: The purposive sample included women who held a current higher education administrative position at the dean's level, including associate and assistant dean positions, in a university setting. These women also possessed a background in clinical laboratory science. The participants were located in eight higher education institutions in Nebraska, Illinois, Ohio, Tennessee, Missouri, and Texas.

MAIN OUTCOMES MEASURES: Experience as a clinical laboratory scientist, experience as faculty, experience as a higher education administrator, description of career path.

RESULTS: The participants of this qualitative study selected clinical laboratory science as their area of formal education through various means. Through no intentional action on their part, all of these women became faculty members in clinical laboratory education programs. By exhibiting the

necessary knowledge and skills, these faculty members were selected to move into higher education administrator positions. The participants indicated their career paths were determined by "being in the right place at the right time" versus pre-determined career goals.

CONCLUSION: Participants in this study indicated having a background in clinical laboratory science enhanced their ability to obtain a position as a higher education administrator.

ABBREVIATIONS: CLS=Clinical laboratory science; CLS/MT=Clinical laboratory scientist/medical technologist; CLT/MLT=Clinical laboratory technician/medical laboratory technician; CLE=Clinical laboratory education.

INDEX TERMS: career paths of women clinical laboratory scientists; women higher education administrators; women's leadership skills.

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INTRODUCTION

Women, in increasing numbers, are joining their male colleagues as higher education administrators. However, only a small percentage of these women possess an academic background as clinical laboratory scientists. This qualitative case study sought to document the career paths of women clinical laboratory scientists who have transitioned from the clinical setting to the higher education arena and held an administrative position at the dean's level, including assistant and associate dean positions. The findings indicated that even though these women possessed an academic background in clinical laboratory science, their experiences paralleled those of women higher education administrators with degrees in other academic areas.

BACKGROUND

In the 21st century, an increasing number of women are seeking and obtaining leadership positions in higher education.¹⁻³ Women have progressed from being unable to attend college to holding leadership positions that guide the vision and mission of these institutions. A significant number of women are earning doctoral degrees and applying this knowledge as higher education administrators.^{4,5} As leaders in higher education, these women bring their own set of characteristics and skills to the table. Their collaborative leadership style, knowledge, skills, and commitment are valuable to the success of the institutions they serve.

The career paths that women follow to obtain positions as higher education administrators are varied. The traditional path includes experiences as faculty, program director, division chair, and dean. At critical points in their careers, women have participated in various professional development opportunities. These experiences have fostered new skills, added knowledge, and enhanced the skills identified as those of a competent leader. However, it is not mandatory that women follow this traditional path.

Women clinical laboratory scientists add an additional component to their career paths. Their first career is as a clinical laboratory scientist (CLS) in the hospital setting. As CLSs, they perform a variety of laboratory tests that provide the physician with the necessary data to make a diagnosis and to determine treatment for the patient. A small number of these women move from the clinical setting to the educational setting where they fill the higher education roles as faculty members in CLS and clinical laboratory technician (CLT) programs. Additional opportunities to move up the career ladder are offered to those that display the necessary traits

and operant skills. The career paths of this unique group of women clinical laboratory scientists who have successfully transitioned to higher education administration are the focus of this study.

LITERATURE REVIEW

In the early days of laboratory testing, pathologists trained personnel on-the-job⁶. As advancements in the testing and correlation of results with disease processes and patient conditions increased in complexity, formal education programs were established. The first of these programs was located in a hospital setting. Clinical laboratory education (CLE) programs were later developed in two-year and four-year academic settings. In both settings, there existed a need for a program director and didactic faculty. Since the majority of the laboratory workforce consisted of women⁶, it made sense that the largest percentage of CLE program directors and didactic faculty also were women.⁶ When women moved to the education arena, new and different skills were required to conduct administrative tasks. These tasks included recruitment of students, curriculum development and revision, budget preparation, maintaining national program accreditation, program evaluation and assessment, and ensuring program stability and viability through strategic planning.

Successful CLE program directors must demonstrate a solid skill set that includes written and oral communication, budget planning, student assessment strategies and analysis, the ability to work with advisory board members and clinical affiliate representatives, program promotion, student recruitment, purchasing and inventory management, grant writing, curriculum and policy development, program accreditation, and strategic planning. As program directors develop an understanding of higher education and demonstrate success within their CLE programs, the natural step up the career ladder is to seek and obtain positions as higher education administrators.

In 1920, women constituted 47% of the undergraduate enrollment in higher education. Thirty-two percent of college presidents, professors, and instructors were women in 1930. During the period from 1930 to 1960, the proportion of women receiving bachelor degrees and their first professional degrees fell to 24%. During this same time, only 9% of doctoral degree recipients were women. In 1965, the Higher Education Act helped to increase the number of women undergraduates. Legislative actions such as Affirmative Action and Title IX also opened the doors of opportunity for women in higher education. During the 1970s, women

faculty and administrators strived to find ways to improve their status within their professions.¹

In 1978, women made up 52% of students at the masters level and 40% of students at the doctorate level.⁷ Women constituted 51% of the total student enrollment in higher education in 1980. During this same period, women made up 25% of full-time faculty in higher education: 8% were full professors, 16% were associate professors, 28% were assistant professors, 29% were instructors, and 18% held deanships.¹ During the mid 1990s, 39% of newly employed faculty were women and represented almost five times the number of veteran women faculty. Furthermore, research institutions hired women at twice the rate of comprehensive institutions.² In the mid 1970s, the ratio of male presidents to female presidents was 20:1. By 1992, the ratio was 10:1.³ During the 21st century, women continue to break through the “glass ceiling” of educational leadership.

Since the beginning of higher education in America, women have struggled to be considered equal to men.¹ Even though women made up the majority of educators, few were encouraged to move their careers beyond the classroom. However, during the last fifty years, educational leadership roles for women have changed. Women have demonstrated they possess the characteristics and competencies to be leaders in the academic arena. Increasing numbers of women have moved into administration and researchers interested in this phenomenon have identified requirements that assist women in gaining these positions. These requirements included: pursuit of advanced degrees such as a doctorate, participation in leadership development activities, formation of a relationship with male and female mentors, demonstration of high levels of competence, and the development of problem solving and team-building skills.⁴

Most of the earlier leadership studies looked at men as leaders; more recent studies focused on women as leaders.^{1,3-5,8-14} Some studies indicated that women are effective leaders yet have different styles than men. The leadership styles of women clinical laboratory scientists who have become higher education administrators were a component of this study.

METHODOLOGY

Case Study Design

Case study research design offered the best opportunity to explore and document the career paths of women clinical laboratory scientists who held higher education administra-

tor positions. Yin¹⁵ stated, “In general, case studies are the preferred strategy when ‘how’ and ‘why’ questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context” (p. 1). The use of case studies allows the researcher to secure knowledge about phenomenon, an organization, selected groups, or an individual. Case study research designs also allow the researcher to “retain the holistic and meaningful characteristics of real-life events.”¹⁵

A multi-site case study was selected as the design for this qualitative research. Participants were located at eight higher education institutions at the university level that were located in Nebraska, Illinois, Ohio, Tennessee, Missouri, and Texas. Data collection was guided by ten open-ended questions in seven face-to-face and one telephone semi-formal interviews.

Purposive Sample

Three sources were used to identify probable participants: a clinical laboratory educators’ electronic list of participating members, the National Network for Healthcare Programs for Two-Year Colleges, and program directors of NAACLS accredited CLS/MT and CLT/MLT programs in the predetermined geographic region. Each source was asked to identify women who held a current higher education administrative position and possessed a background in clinical laboratory science. The initial contact was via an email that included a request for each source to submit contact information for an identified individual. Eight women in higher education administrative positions that possessed a background in clinical laboratory science and met the study criteria were contacted and asked to participate in the study.

Participant Demographics

The eight participants involved in this study had a previous history of employment in the clinical laboratory. These women had experience in clinical chemistry, hematology, coagulation, blood bank, and/or microbiology in a hospital clinical laboratory setting. Seven of the participants were clinical laboratory scientists with a formal degree in the field. The eighth participant held a degree in chemistry with employment in a clinical laboratory setting. Seven of the women held the title of dean, assistant dean or associate dean. The eighth held the title of assistant vice president. Regardless of differences in the position titles, job functions were similar and thus the researchers determined that the participant met the criteria of the study.

The participants were asked to complete a demographic information form. Five of the professionals were between 50 and 59 years of age, one was younger, and two participants were over the age of 60. Three of the participants held doctorates in philosophy, one completed the doctoral coursework but did not complete a dissertation, one held a doctorate of arts, one held an educational doctorate, and two possessed masters degrees. The number of years as a faculty member for these participants ranged from 10 to 39 years; three women were in the 20 to 39 year range. Five women were full professors, two were associate professors, and one was an assistant professor. Five of the eight participants were married. Seven of the eight participants were mothers.

Each of the eight participants was assigned a pseudonym and a university name that corresponded with a Greek letter. The selected pseudonyms included: Ann at Alpha University, Brianna at Beta University, Debra at Delta University, Gwen at Gamma University, Kelly at Kappa University, Lynn at Lambda University, Olive at Omega University, and Teresa at Theta University.

Interview Process

The informed consent and demographic information were reviewed and collected prior to beginning the interview process. The interviews were conducted in the natural settings of the participants between November 2005 and December 2005. Seven of the interviews were conducted in a face-to-face method. The eighth interview was conducted via telephone. Each participant was encouraged to ask questions related to the study prior to the start of the interview.

Each interview was guided by a semi-formal interview format that consisted of ten open-ended questions that provided opportunity for the researchers to ask “how” and “what” types of questions such that the interviewees would be more likely to share their experiences and knowledge. The interview questions may be found in Figure 1. The interview format allowed for complete, accurate, and reliable oral documentation. The oral interviews provided the mechanism to gain rich data from the interviewees in short periods of time.¹⁵⁻¹⁸ Participant curriculum vitas also were requested and subsequently provided to the researcher. The information in the curriculum vitas was used to verify the information provided by the participants on the demographic information form.

Data Analysis

As indicated by Bogden and Bilken,¹⁹ “analysis involves working with the data, organizing them, breaking them

into manageable units, coding them, synthesizing them, and searching for patterns” (p. 146). The coding process involved the grouping of similar topics in categories such as major topics, unique topics, and leftovers.¹⁶ The data analysis phase consisted of reading and rereading the transcripts and reflecting on the meaning of the statements.¹⁶ Data reduction involved the chunking of data into manageable pieces. Taylor and Bogdan²⁰ suggested keeping track of hunches, interpretations, and ideas when looking for emerging themes. This theme was supported by three categories that were developed from 45 data codes.

Data Validation

Although qualitative research does not lend itself to reliability and generalizability as does quantitative research, validity can be confirmed. Creswell¹⁶ and Merriam²¹ identified various strategies that include: triangulation, member checks, rich-thick description, clarification of researcher bias, evaluation of negative/discrepant information, a prolonged time in the research environment, peer debriefing, and use of an external auditor. For this study, member checks, rich-thick descriptions, and an external audit were used to validate the data.

RESULTS

The *Getting to the Right Place at the Right Time* theme was based on the three different careers experienced by each of these women. They experienced shared phenomena in the clinical laboratory, as a higher education faculty member, and as a higher education administrator. Participants related their high school academic strengths, college experiences, clinical laboratory science training, and clinical experiences. During their time as faculty, their teaching experiences were presented. And finally, they described their experiences as women higher education administrators.

Getting to the Right Place at the Right Time

This major theme supported the first research question, which was, “What are the lived experiences of women higher education administrators with a background in clinical laboratory science during their career path?” A major commonality of this group of women was the fact they had three different careers. The majority of the participants followed a traditional career path with experiences as a clinical laboratory scientist, a university faculty member and related experiences, and finally as a higher education administrator. One participant transitioned from a position as a part-time procedure writer to an associate dean position. Each of these participants experienced three career stops in their journey.

The Clinical Laboratory

The first stop was the clinical laboratory. Since clinical laboratory science is an often over-looked career choice, it was interesting to discover how this group of women obtained entry into the field. Five of the participants indicated a love for math and science when in high school. Ann at Alpha University stated, "I liked chemistry...and I thought

working in a laboratory sounded like a fun thing to do. I decided to go into chemistry and I never regretted it. I think it has been a fun career for me." Kelly at Kappa University indicated that the clinical setting "...just seemed to be a perfect mesh for me. I loved the science." One participant discovered the clinical laboratory science profession after talking to her high school counselor. Indicating that a

Figure 1. Interview protocol

1. Please describe your career path upon obtaining your bachelor's degree in medical technology.
2. What event or individual motivated you to move into an administrative position?
3. Leaders are often described as individuals with notable skills and characteristics, what leadership skills and/or characteristics do you possess?
4. What training or professional development opportunities have you participated in that attributed to your career success?
5. Mentoring is often something that happens along one's career path, what experiences have you have in a mentoring relationship?
 - a) Describe your mentor, ie position, gender, special events, type of relationship.
 - b) Have you mentored others, especially women, as they move through their careers?
6. The literature often cites barriers or obstacles for women administrators in higher education. Have you experienced barriers or obstacles during your career path? If so, please describe your experiences.
7. As a woman, what opportunities have you experienced in moving up the career ladder?
 - a) Have you accepted all of the opportunities presented to you?
 - b) Have you turned down advancement opportunities? If so, why?
8. Some research studies indicate that women are breaking the 'glass ceiling' of administration in higher education. Do you agree or disagree with this statement?
 - a) What events in your career would indicate your agreement?
 - b) What events in your career would indicate your disagreement?
9. It is often stated that women have 'paid a price' for success in administrative positions. What experiences have you had that either support or refute this statement?
 - a) Identify the experiences that support this statement.
 - b) Identify the experiences that refute this statement.
10. Women often balance career goals with marital and/or family commitments. Have you faced conflicts between these commitments?
 - a) If so, how did you resolve these conflicts?
 - b) What advice would you give women pursuing administrative positions in higher education?
 - c) If you could redo your career choices, would you make the same choices? If so, why? If not, why?

career day at the local hospital piqued her interest in the clinical laboratory, Olive at Omega University said,

“You could visit the various areas of the hospital and – you’re going to laugh – but I signed up for physical therapy and maybe pharmacy. One of the two couldn’t accommodate me so they sent me to the lab. I really had never even thought about the lab... didn’t know it existed, but fell in love with it.”

Additional opportunities to learn about a career as a clinical laboratory scientist occurred during Girl Scout activities, volunteering as a candy striper in the hospital, and during college experiences. Debra from Delta University earned a degree in liberal arts with the intention of attending medical school. She stated,

“I couldn’t get a job because I had this liberal arts education and I could do nothing. I kind of fell into medical technology as a fluke. I called around and found a couple of hospitals that had medical technology schools so I applied to the ones that paid a stipend.”

The path by which seven of the participants earned their degree in CLS varied. For some, their training was university-based; others gained their education via a hospital-based program. The eighth participant earned a degree in chemistry. However, she was employed as a clinical chemist in a hospital laboratory. Upon earning their degrees, all had experience in a clinical laboratory for varying lengths of time.

The participants began their careers as laboratory professionals working in a full-service hospital laboratory. Most participants had experience in clinical chemistry. Ann, employed as a clinical chemist in the lab, described her time in clinical chemistry as “... a very, very exciting time to be in the lab, because it was just going from manual to automation. I participated in that whole process, because I would be the one who would set up the new method.” Additionally, hematology and coagulation, blood bank, and microbiology were other areas that provided clinical experiences. In this setting, they honed their skills as detail-oriented professionals who were highly organized and guided by strict policy and procedures. Their critical thinking and communication skills enabled them to carry out their responsibilities with

accuracy and precision. As a vital member of the healthcare team, these women clinical laboratory scientists played an important role in quality patient care.

During their tenure in the clinical laboratory, these women assumed the role of clinical instructors and became involved in the training of CLT/CLS students from local colleges and universities. By working as clinical instructors for an academic program, their professional skills and abilities to teach and to relate to students were evaluated by the CLE program directors. When a CLT or CLS faculty position became available, several of these women were hand-picked for the position. Kelly at Kappa University stated,

“The director of the program here called me. They were changing [the program format] and moving some basic courses throughout the curriculum and they were adding faculty. They called me and asked if I was interested in teaching. I said, ‘Sure, why not?’ ”

Olive at Omega University shared,

“I’d really like to go into education. They were opening a new position in the laboratory and the [laboratory manager] said if I would agree to stay he’d promise it to me. I became the first education coordinator who was a medical technologist at the hospital-based program.”

However, a few of the participants actively sought opportunities in higher education.

Professors in Higher Education Departments

After obtaining experience in the clinical setting, these clinical laboratory scientists had opportunities to transition into education. Becoming a faculty member at the university level represented the second career stop for these participants. Lynn at Lambda University stated,

“A position came open at this university at the instructor level. I had finished my masters so I decided to switch to the university. [Just when I arrived] the program director position came open. [I] immediately knew this was what I wanted to do for the rest of my life – was the university work. I had no idea I wanted to be an administrator at that point in time, but I knew I wanted to teach and to do research...”

Two of the participants moved from the role of clinical instructor to program faculty after being contacted by the CLE program director. Although some of the participants progressed from the clinical area to higher education because they were identified as candidates for the faculty position, other participants actively sought positions as faculty at higher education institutions. Participants of the study also earned positions as clinical laboratory education program directors.

As they progressed in their careers, these women demonstrated the necessary skills to serve as the department chair position. This position afforded them experience in management, leadership, budget development, curriculum development, recruitment, grant writing, professional development, assessment, faculty evaluation, and mentoring.

Higher Education Administration

Program directors, department chairpersons, and division chairpersons are often viewed as administrators; however, for the purposes of this study, the researchers determined positions at the associate and assistant dean and dean were administrative positions. A distinguishing characteristic of the dean's position is the interaction with multiple university-wide personnel and subordinates. Thus, becoming a higher education administrator represented the third career stop for these participants. The opportunities to transition from faculty status to administrator differed among the participants. Seven of the participants moved up the administrative ranks within one institution. These individuals were sought by a university dean or president and asked to consider administration. Ann at Alpha University was considering another employment opportunity and was traveling to complete the second interview when the dean of the college of pharmacy called her and said, "Ann, are you interested in the associate dean's job because I would like to nominate you?" Ann replied, "Well yes I am." The remaining participant actively sought a position at the administrative level. The majority of the participants were in the position of department chairperson prior to advancing to the assistant dean position. Brianna at Beta University stated,

"I was interim department head and then assistant director for the school. I had been in charge of budget and finance... I came on as half-time department head, half-time associate dean with the idea they were grooming me so when [the dean] retired...I could step in. "

Debra at Delta University indicated,

"I was the director of the medical laboratory technician and medical assistant program. [After] the college re-organized, the president asked me if I was willing to move to another campus as division head of mathematics and technology and I said yes. The position as associate dean of instruction opened up and I applied for that and got it. "

Previous experience with faculty, budget and finance, assessment, grant writing, and administrative responsibilities were noted as skills that enabled the participants to be considered for a position in higher education administration.

When further queried about whether they would repeat their career choices, the participants overwhelmingly indicated they would not change their career paths. They were adamant that being laboratory professionals had served them well. This position served as a springboard into higher education - first as a faculty member and then as an administrator. They reported their CLS skills, such as being detail-oriented, being able to organize and prioritize, and possessing a strong work ethic with no fear of commitment, served them well in their administrative roles. Although these women did admit to a desire to have made different choices, as a whole they appeared happy with their career choices. Brianna at Beta University summed up the sentiments of the group when she stated,

"I feel like I am on my third career. I was a medical technologist, a research scientist, and now I am an administrator. Each one fit my life at the time. I would probably say I would make the same choices because they fit my life as it was. Everything colors things and everything changes things."

She further added, "... the choices you make influence where you go. I've been lucky that I've been happy with each career path."

CONCLUSION

Through the use of a qualitative case study research design, eight women clinical laboratory scientists who held positions at the dean's level or equivalent in higher education administration were interviewed. The interview questions were formulated to retrieve information about their career paths as it related to their experiences; skills, training, and profes-

sional development activities; identification of any barriers or obstacles; and how being a woman has influenced their careers as administrators in higher education institutions.

This group of women willingly shared the experiences as they related to their three career opportunities and how each of these professions served them well at that point and time along their career paths. Upon completion of their CLS training, they were all employed in the clinical laboratory setting. From there, they accepted a faculty position in a university system. By demonstrating various skills attributed to quality leadership, they were provided with opportunities to transition to higher education administration.

The experiences of this group of CLSs turned higher education administrators mirrored those of women in other studies with regard to mechanisms to successfully attain and maintain that position. Although some of the personality characteristics of CLSs, i.e. detail-oriented, highly organized, and procedure-oriented, may have attributed to their ability to move to an administrative position, these skills were enhanced by other competencies attained along the way.

Author's Note:

The results of this qualitative research study identified three major themes: 1) Getting to the Right Place at the Right Time, 2) The Right Navigational Skills are Required, and 3) The Right Place Comes with a Price. The participant experiences that support the first theme are presented here.

A Note about Qualitative Research

The researcher that selects a qualitative research method “collects open-ended, emerging data with the primary intent of developing themes from the data” (Creswell, 2003, p. 18). This method of data collection allows for a study of an exploratory nature. The exploration and discovery of data via a qualitative research method often indicates that there is not much written about the participants or topic of study. The data from the participants are used by the researcher to formulate ideas (Creswell, 2003). The ideas then become data codes that are grouped into categories. The major theme development is then based on the identified categories.

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responses will appear in the Dialogue and Discussion section in a future issue. Responses may be edited for length and clarity. We look forward to hearing from you.

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