Journal of Leadership Education

# Leadership education in allied healthcare graduate programs: what does the curriculum reveal?

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Received 7 May 2024
Revised 4 August 2024
Accepted 3 September 2024

## Abstract

**Purpose** – The purpose was to examine the core curriculum of the top 50 graduate programs in occupational therapy (OT), physical therapy (PT), nursing, speech-language pathology (SLP) and audiology programs. The study aimed to answer the following questions: Do SLP and audiology program curricula include leadership in course offerings? How do their leadership offerings compare to those of other healthcare graduate programs? It was hypothesized that SLP and audiology programs included fewer leadership courses than other healthcare graduate programs.

**Design/methodology/approach** – This quantitative analysis evaluated the core coursework of the 250 healthcare graduate programs. The data sample included the top 50 OT, PT, nursing, speech-language pathology (SLP) and audiology programs. The graduate programs were examined for leadership content within the core coursework. A thematic text coding guide was developed following the "Ready, Willing, and Able" leadership model created by Keating, Rosch and Burgoon (2014). A Chi-Square was used to test for a categorical relationship between the graduate programs and leadership curricula. A percentage was calculated for each field to determine the number of schools offering a leadership component within their core curriculum.

**Findings** – The study revealed that SLP and audiology graduate programs are less likely to include leadership within the curriculum. Descriptive percentages revealed that 68% of nursing, 82% of OT, 42% of PT, 12% of audiology and 6% of SLP graduate programs included a leadership component within the core coursework. Based on the study findings, it is concluded that there is a missed opportunity for leadership preparation within the SLP and audiology curriculum. Leadership education is a crucial component to consider when developing competent clinical leaders. Following the findings, leadership development for SLP and audiology graduate programs is recommended.

**Research limitations/implications** – A limitation of this study is that data collection relied on a single source, US News Educational Rating, to obtain the program rankings. However, US News Rankings is reliable and readily available. Another limitation is the overwhelming lack of literature on speech-language pathology and audiology leadership education. Finally, most programs had the curriculum and progression schedule publicly available on their website, but not all. Some programs do not make the curriculum information available to the public online. To minimize this limitation, the researcher contacted one or more programs via email to clarify their curricula.

**Practical implications** – This study serves as a starting point for further exploration into leadership education for SLP and audiology graduate programs. It suggests curriculum considerations, such as leadership development and identifies the need for future research. The literature review hints at a potential correlation between different leadership styles and profession selection, a hypothesis that could be further investigated. This underscores the urgency and potential for future research in this area, particularly for prospective students.

**Originality/value** – This study breaks new ground in the field of healthcare education. It is the first of its kind to investigate leadership education in SLP and audiology graduate programs. The researcher's review of



The researcher thanks all the researchers who contributed to this field of educational leadership. The researcher would also like to acknowledge Dr Stober for his significant mentorship and contributions to educational leadership.

*Conflict of interest statement:* The author declares that there are no conflicts of interest.

*Funding statement:* The author has received no funding for this research from any public, commercial or not-for-profit entity.

Journal of Leadership Education
Vol. 24 No. 3, 2025
pp. 333-344
Emerald Publishing Limited
1552-9045
DOI 10.1108/JOLE-05-2024-0062

literature, research questions, study design, analysis and findings are all original contributions. The work has been synthesized and triangulated, adding unique insights to the field. This study's originality is a crucial first step for SLP and audiology graduate programs, sparking a focus on leadership within the curriculum.

**Keywords** Graduate programs, Program curriculum, Leadership, Leadership education

**Paper type** Research paper



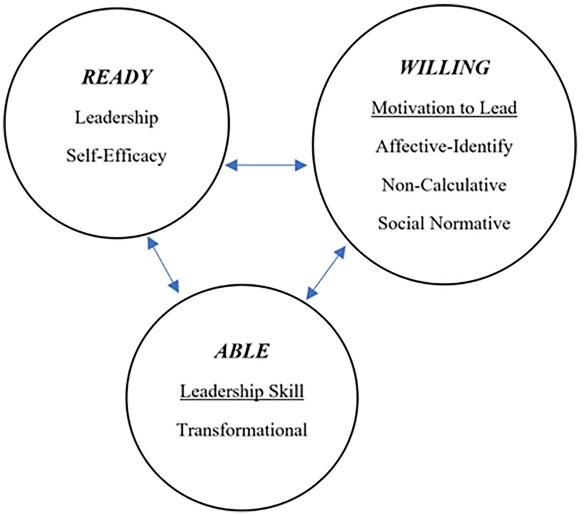
## Introduction

Developing clinical leaders is an important goal for allied healthcare graduate programs. Unfortunately, a validated general framework or theory for leader development does not exist (Avolio, Reichard, Hannah, Walumbwa, & Chan, 2009). The theoretical background for this study was the "Ready, Willing, and Able" leader model. This model is centered around leadership capacity and the assumption that influential leaders should possess competence in leadership skills, which are transformational, and exhibit a degree of leadership self-efficacy (Keating, Rosch, & Burgoon, 2014). A transformational leader is an individual who strives to change the status quo by actively motivating followers and improving attitudes or outcomes (Hine, 2014). Charismatic influence, motivation, intellectual stimulation and individualized consideration are common descriptors of transformational leadership (Stone, Russell, & Patterson, 2004).

The belief in one's capacity to achieve a desired outcome explains the concept of leadership self-efficacy. Motivation is included in the model because Keating *et al.* (2014) stated that motivation to lead stems from three separate sources: (1) affective identity motivation, (2) social-normative motivation and (3) non-calculative motivation. A careful examination of the Keating *et al.* (2014) "Ready, Willing, and Able" leader model clarifies affective identity motivation as the motivation that measures the degree to which individuals feel personally drawn to leading their peers and establishing followership. Feelings of responsibility to others or followers and to lead a group(s) are considered social-normative motivation, and the calculative-non-calculative spectrum of motivation includes the degree to which individuals analyze their leadership effects. For example, calculative motivation is when individuals embrace conducting a self-centered analysis of their leadership effects. Non-calculative motivation is the degree to which individuals avoid conducting a self-centered analysis of the effects of their leadership (Chan & Dragsow, 2001).

While the "Ready, Willing, and Able" leader model by Keating *et al.* (2014) theoretically guided this study, it is essential to note that there is no single leadership theory or model that predominates in higher education (Rosch & Anthony, 2012). However, leadership models such as the relational leadership model, the social change model and the leadership challenge model have been linked to or utilized within higher education systems. Therefore, applying or infusing leadership theory in higher education is a familiar concept. Figure 1 displays the model described by Keating *et al.* (2014), which served as the theoretical background for this study.

This model served as the theoretical framework for this study. It was also instrumental in guiding the development of quantitative code selection. The first stage of Keating *et al.*'s (2014) model and readiness is associated with leadership and self-efficacy. Paglis and Green (2002) defined leadership as determining where a group is currently at and where the group will need to be in the future and creating a plan for reaching that goal. In alignment with this study's purpose, Paglis and Green's (2002) definition of leadership complimented this model's leadership component as it related to the research questions. Self-efficacy is the extent to which individuals believe themselves capable of successfully performing and/or completing a specific behavior (Bandura, 1986). Paglis and Green's (2002) study determined that individuals with favorable judgment (positive self-efficacy) were expected to realize the need for change, initiate change efforts and persistently move toward change, even when faced with obstacles (Paglis & Green, 2002). Therefore, supporting an advocacy component




**Source(s):** Figure credit to Keating *et al.* (2014)

**Figure 1.**
Leadership capacity model: being "ready, willing, and able" to lead

within this model, and because of this, the researcher believed self-efficacy aligned with advocacy. This is an essential component of this model by Keating *et al.* (2014), and it further supports its appropriateness for use in this study.

In terms of the "willing" stage of the Keating *et al.* (2014) model, it was recognized that an individual's willingness to lead does not equal the actual skill to lead. Therefore, the presence of leadership development in the healthcare graduate program curricula was of interest to this study. Leadership development was viewed as a willingness and motivation to lead, as depicted in the "Ready, Willing, and Able" model. Roupriel, Ririne, and Grenier (2019) defined leadership development as development programs that work from the principle that leadership is not fixed but can grow and expand. Finally, the "able" stage of Keating *et al.*'s (2014) model included the theme of transformational under leadership skills, which led the researcher to believe that transformational was synonymous with an "able" leader. In alignment with the "able" stage of Keating *et al.*'s (2014) model, the curriculum of healthcare graduate programs was investigated for the presence of "leader" and "transformational." The "Ready, Willing, and Able" leader model developed by Keating *et al.* (2014) was the guiding lens for creating the curricular leadership quantitative codes, and a complete list of these codes with supporting definitions can be found in Table 1.

Leadership, or lack thereof, is a suspected contributor to some of the issues faced by speech-language pathology and audiology. Before examining the curriculum, the available leadership studies and documented professional issues centered on speech-language pathology and audiology were reviewed. The literature documented concern for recruitment into the field of speech-language pathology. Byrne (2010) reported that research shows a need for overall public visibility and knowledge about speech-language pathology. Byrne (2010) further described the need to increase the general public understanding of the speech-language pathology practice (Byrne, 2010).

An older study conducted by Emanuel, Donai, and Araj (2012) stated that a profession's long-term lack of visibility could result in the inability to meet workforce demands and lead to encroachment by other professional fields. The literature has identified and documented an increasing need for speech-language pathology and audiology students. This lack of

| Included Keywords | Excluded keywords | Descriptors | Rational |
|---|---|---|---|
| Leadership | | Leadership education, exposure to leadership opportunities | Answers the research question regarding leadership readiness and preparedness |
| Advocacy | | Teaching to be advocates, preparing for advocacy roles, exposure to being an advocate for patients | Answers the research question regarding leadership readiness and preparedness |
| Leadership development | | Developing leaders, leadership education | Answers the research question regarding leadership readiness and preparedness |
| Leader | | Leaders, leading and to lead | Answers the research question regarding leadership readiness and preparedness |
| Transformational | | Transformative to transform, transformationally, transformative education | Answers the research question regarding leadership readiness and preparedness |
| | Patient management | Providing patient clinical care | This does not include a professional leadership theme and does not answer the research question |
| Practice management | | Leading a practice or preparing for practice management | Answers the research question regarding leadership readiness and preparedness |
| | Practice management | Business, economic and finance education | This does not include a true professional leadership theme and does not answer the research question |
| | Business and finance | Business, economic and finance education | This does not include a true professional leadership theme and does not answer the research question |
| | Professional issues and perspectives | Professional issues and decision-making and diversity discussions | Does not reflect a true leadership theme and does not answer the research questions |
| | Ethics | Professional issues and decision-making and diversity discussions | Does not reflect a true leadership theme and does not answer the research questions |
| Teaching and mentoring | | Teaching future students how to educate and mentor | Aligns with leadership and was believed by the researcher to answer the research questions |
| | Clinical management and decision-making | Providing patient clinical care | This does not include a professional leadership theme and does not answer the research question |

**Table 1.**
Curricular leadership code development

**Source(s):** Table by the author

visibility could lead to potentially devastating outcomes for the professions, as speech-language pathology and audiology are both faced with an increasing shortage of faculty members. Interestingly, in 2013, Davidson, Weismer, Alt and Hogan reported a need for educators to teach future clinicians because empty faculty positions would affect the expansion and growth of the profession. This literature-based trend and potential outcome are concerning. The literature has established that poor visibility for the professions leads to decreased student numbers, eventually leading to reduced faculty positions and a lack of clinicians, ultimately leading to a stalling of growth for the professions.

Beyond visibility and professional growth lie additional concerns. Messersmith, Lockie, Jorgensen, Vaith, and Falk (2014) identified specific issues for audiology regarding legislation across the United States for the provisions of the services. The bottom line is that the current legislation must accurately reflect the degree requirements or the full scope of audiological practice (Messersmith *et al.*, 2014). Compared to other healthcare professions, the current reimbursement for clinical services is not commensurate with audiologists' education level and scope of practice. Professional growth demands responsibility regarding how legislation impacts the provision of services, which needs to be improved in audiology (Messersmith *et al.*, 2014). While Messersmith *et al.* (2014) addressed this issue with legislation and compensation, this suggests a more significant problem with the profession of audiology (and speech-language pathology), which is a need for more leadership and absent advocacy.

A comprehensive review of the speech-language pathology and audiology literature revealed minimal peer-reviewed studies on leadership throughout the field. Interestingly, Erol, Upton, Macckenzie, Donnelly, and Upton (2015) reported that having clinicians from across different clinical disciplines in leadership could address some of the challenges around leadership within healthcare. However, leadership skills in clinicians' continuing professional development still need to be improved (Erol *et al.*, 2015). The competencies needed for healthcare leadership sometimes differ from those required to perform effectively in a clinical role (Erol *et al.*, 2015). There appears to be an obvious need for clinical leadership in speech-language pathology and audiology based on the lack of available leadership literature and professional leadership concerns. While limited research has been conducted on the effects of leadership on speech-language pathology and audiology, there appear to be adverse effects from a lack of leadership and poor advocacy.

The literature review has led to suspicion that speech-language pathology and audiology students might benefit from leadership development and/or integrated leadership curricula, which should be investigated. The researcher believes leadership development is a logical next step based on the previous literature. Simon, Christi, Graham, and Call (2014) have stated that an academic understanding of leadership's nature is only one element in better preparing future leaders. Additionally, practical skill development in leadership is another element that will help emerging leaders as they progress from lower to higher levels of responsibility (Simon *et al.*, 2014). It is questioned if leadership-integrated curricula would help future students grow and develop into "ready, willing, and able" leaders who are prepared to influence and position themselves as clinical leaders.

This study was designed to address only some of the issues described above. However, it does serve as a step toward understanding the need for leadership readiness and preparation in speech-language pathology and audiology graduate curriculums. Determining leadership preparation at the graduate level is important because graduate studies and graduate programs are responsible for developing clinical leaders. The future clinical leaders are being trained in our accredited graduate programs, and there is a dependence on these future clinical leaders. These students are the future of the profession of speech-language pathology and audiology. They will be called to address the above-mentioned leadership challenges, making this study significant.

The study aimed to answer the following questions: Do SLP and audiology program curricula include leadership in course offerings? Specifically, how do their leadership offerings compare to those of other healthcare graduate programs? With these questions in mind and considering the existing literature, a difference in the frequency of leadership courses among speech-language pathology and audiology programs compared to other healthcare programs was suspected. The study was designed to test this hypothesis and answer the research questions quantitatively. Since the literature revealed low professional visibility, poor recruitment and absent advocacy, among other leadership concerns for audiology and speech-language pathology, the purpose of this study was to gain knowledge and insight into the leadership preparation and readiness made available to graduate students across five different healthcare fields of study (OT, PT, nursing, audiology and speech-language pathology). Additionally, the purpose was to determine if leadership readiness, as identified through the program curriculums, differed between speech-language pathology and audiology as compared to other healthcare graduate programs (OT, PT and nursing). The purpose of selecting the above-listed healthcare graduate programs of the study was due to the similarities between requirements, the time course of study and the preparation for clinical practice. Furthermore, successful completion in the selected healthcare graduate programs resulted in what is considered to be the terminal degrees required for clinical practice in the respective fields, which made these fields and programs of study appropriate for comparison.

## Methods

For this study, a quantitative analysis was conducted on the coursework or curricular sequence of the healthcare graduate programs. The total data sample included 250 healthcare graduate programs. The study design included the top 50 OT, PT, nursing, speech-language pathology and audiology graduate programs. All selected programs were evaluated for leadership content within the core coursework or curricular sequence. The programs were identified based on leadership keywords and thematic text sets. The researcher developed a thematic text coding guide, following the "Reading, Willing, and Able" leadership model developed by Keating *et al.* (2014).

Data collection included the examination of OT, PT, nursing, speech-language pathology and audiology graduate programs. These five programs of study were chosen based on their similar roles in the allied healthcare field and their required clinical curricula. To determine the top 50 programs for each healthcare field, US News Education provided online sources for the top-ranked graduate programs for the different healthcare fields. The 50 samples from each field of study resulted in a total sample of 250 graduate programs. All program and curriculum data were publicly available via online sources.

The graduate programs were identified using leadership keywords and thematic text sets. A thematic text coding guide was developed and followed the "Reading, Willing, and Able" leader model developed by Keating *et al.* (2014). Courses that described developing or being leaders, leadership, advocacy, transformational and/or leadership development were included as having a leadership component. Courses that described ethics, interprofessional or educational development and solely business were not classified as having a leadership component. Therefore, courses that identified leadership, developing leaders, transformational education and/or developing advocacy were identified with a "Yes" and placed into the leadership curriculum group. Programs without leadership curriculum, including those that offered courses in inter-professional issues, educational development and solely business, were identified as a "No," and placed into the without leadership curriculum group.

*Data collection and analysis protocol*

US News Education provided the rankings of the top 50 graduate programs for each field of study, OT, PT, nursing, speech-language pathology and audiology, which was utilized to generate a total data sample of 250 curricular sequences. A list of the top schools for each field of study was printed, and these schools were then transferred and recorded on a separate Microsoft Excel file. Most curricular data are publicly available via each graduate program's website. The 250 programs' websites were examined for a core curriculum outline or course sequences. If the curricular data were not provided on the website, the program's department was emailed and information on the available courses and curricular sequences was requested. Fortunately, if the data were not available on the website, any programs in question were responsive for filling in missing curricular information.

The graduate programs that were then examined for a leadership component within their core curricula were placed into one of two groups: one group for programs with a leadership component and the other for programs that did not include any leadership courses. It is important to note that many of these graduate programs, in addition to a course list, provided course descriptions. If any courses were listed as practice management but provided a description that discussed a leadership theme, they were included in the "Yes" group. If a course was listed as patient management, it was placed into the "No" group, as this was thought to imply clinical patient care, and it did not have a true leadership theme. If any courses titled administration, supervision and/or mentoring described a leadership theme, they were included in the "Yes" group. However, if the same titled course described the program or school personnel and policies, it was placed in the "No" group.

This study utilized a Chi-Square analysis to test for a categorical relationship between the different programs and leadership curricula. A $5 \times 2$ Chi-Square analysis was conducted to determine the presence of a relationship between the program and response (Yes/No). The Social Science Statistics website (https://www.socscistatistics.com/tests/chisquare2/Default2.aspx) was utilized to run the data. The Chi-Square analysis results were displayed, reporting the p-value and interpreting the significance of that value. The raw data output, as calculated from the Social Science Statistics. Finally, a percentage was calculated for each of the different fields to determine the number of schools offering a leadership component within their core curriculum. The results revealed the percentage of leadership components for each of the different healthcare programs. This value was used as descriptive statistics for this study.

## Results

This study utilized a Chi-Square analysis to test for a categorical relationship between the different programs and leadership curricula. A $5 \times 2$ Chi-Square analysis was conducted to determine the presence of a relationship between program and response (Yes/No). The Social Science Statistics website (https://www.socscistatistics.com/tests/chisquare2/Default2.aspx) was employed to run the data. The Chi-Square indicated that there were significant differences between the "Yes" versus "No" responses in nursing, OT, audiology and speech-language pathology. The direction of difference is substantially different in nursing, OT, and PT versus audiology and speech pathology. The Chi-Square statistic is 91.7898. The $p$-value is $< 0.001$. The result is significant at $p < 0.05$. There is a significant relationship between the variables. Therefore, speech-language pathology and audiology programs are less likely to include a leadership component within the program curriculum, $\chi^2$ (4. $N = 250$) = 91.7898. $p < 0.001$, and is displayed in Table 2.

Additionally, the percentage was calculated for each of the different fields to determine the number of schools offering a leadership component within their core curriculum, which is displayed in Table 3. The descriptive values revealed that 68% of the nursing, 82% of

occupational therapy and 42% of physical therapy programs included a leadership component. Whereas, only 12% of all audiology and 6% of all speech-language pathology programs included any leadership component. Therefore, the results revealed there is a difference in the frequency of leadership courses among speech-language pathology and audiology programs when compared to other healthcare programs.

## Discussion

This study examined the required core curricula and coursework from the top 50 schools in five different professional healthcare fields. The data sample included the top 50 programs for each healthcare field (OT, PT, nursing, SLP and audiology), resulting in 250 graduate programs. US News Education provided the data source for each healthcare field's top 50 ranked graduate programs. Chi-Square analysis was used to test for a categorical relationship between the different programs and leadership curricula. The $5 \times 2$ Chi-Square analysis indicated that a significant difference between the "Yes" versus "No" responses does exist across the five different healthcare fields (nursing, OT, PT, audiology and SLP). Upon a closer look, the direction of difference was substantially different in nursing, OT and PT versus audiology and speech pathology. Speech-language pathology and audiology programs are less likely to include a leadership component within the program curriculum.

The mean data was used as a descriptive value, and percentages were calculated for each healthcare field. The results showed that 68% of the nursing programs included a leadership component within the curriculum or coursework, 82% of all the occupational therapy programs had a leadership component and 42% of physical therapy programs included a leadership component. In comparison, only 12% of audiology programs and 6% of speech-language pathology programs had any leadership within their curriculum or coursework. These results agreed with the hypothesis and determined that audiology and speech-language pathology programs were significantly less likely to provide their students leadership within the curriculum or any type of leadership coursework.

**Table 2.**
Chi-square analysis of curricular quantitative results

| | Yes | No | Row totals |
|---|---|---|---|
| Nursing | 34 | 16 | 50 |
| OT | 41 | 9 | 50 |
| PT | 21 | 29 | 50 |
| AuD | 6 | 44 | 50 |
| SLP | 3 | 47 | 50 |
| Totals | 105 | 145 | 250*** |

**Note(s):** $^{*}p < 0.05$. $^{**}p < 0.01$. $^{***}p < 0.001$
**Source(s):** Table by the author

**Table 3.**
Percentage of leadership components per healthcare program

| Healthcare program | Leadership component (%) | *N* |
|---|---|---|
| Nursing | 68 | 34 |
| Occupational therapy | 82 | 41 |
| Physical therapy | 42 | 21 |
| Audiology | 12 | 6 |
| Speech-language pathology | 6 | 3 |

**Source(s):** Table by the author

*Missing a leadership opportunity*

There are confirmed leadership concerns for speech-language pathology and audiology. As identified by the existing literature, these concerns include professional shortages, recruitment issues, overall public visibility and knowledge (Tolan, 2021). Erol *et al.* (2015) reported that having clinicians from different clinical disciplines in leadership could address some challenges around leadership within healthcare. This study identified that leadership development needs to be improved in speech-language pathology and audiology graduate programs. Moreover, the speech-language pathology and audiology curriculums are deficient in leadership readiness compared to other healthcare graduate program curricula. Most of the speech-language pathology and audiology graduate programs do not plan leadership in the curriculums, as evidenced by the findings of this study. Based on that finding, it begs the following question: What do these programs intend to do to prepare the future clinical leadership of these programs? This study has revealed that nursing, occupational therapy and physical therapy actively include leadership in the curriculums. The focus of this study was not to imply that speech-language pathology and audiology have poor-performing leaders in the fields that speech-language pathologists and audiologists are not good leaders or that leadership opportunities are devoid within these programs and their respective programs. Specifically, this study was designed to examine the curriculums, determine if leadership was present and identify how speech-language pathology and audiology compared to other healthcare graduate programs for leadership curricula. Based on this study's findings, the author believes there is room to improve the graduate program curriculums.

Following successful completion of these graduate programs, speech-language pathology and audiology students enter a clinical career. The missed opportunity for leadership within these graduate programs is an important finding, especially considering how clinical leadership is involved in patient/client care. The responsibility of patient and clinical care most certainly requires leadership skills. Clinical speech-language pathologists and audiologists are leaders in making good, appropriate clinical decisions that support their patients' or clients' needs (Tolan, 2021). Arguably, these students or young professionals are thrown into leadership roles whether they are prepared for the challenge or not. Therefore, this missed opportunity for leadership readiness throughout the curriculum should be discussed and addressed. Because speech-language pathology and audiology curriculums differ from other allied healthcare graduate programs' preparation for clinical leaders, there is a missed opportunity to expose and prepare graduate students for clinical leadership demands and leadership roles, starting at the graduate program level via the curriculum.

The training programs (graduate programs) are responsible for introducing leadership to these students before entering their careers as clinical leaders. With this in mind, speech-language pathology and audiology graduate programs should be motivated and encouraged to develop and include leadership in the curriculum. An introduction to leadership in the curriculum can support and assist in building student clinicians into responsible clinical leaders within their field.

*Leadership development*

Leadership development postulates that today's leaders need to be flexible and ready to adapt. Therefore, leadership development approaches must adapt to different scenarios leaders face in tomorrow's changing world (Turner & Baker, 2017). Based on the overwhelming lack of research on this topic and the illustrated leadership concerns, speech-language pathology and audiology graduate programs would benefit from leadership development and a leadership-infused curriculum. However, developing an education

curriculum is difficult, especially in the changing work environment (Khan & Law, 2015). Regardless of the size, type or origin, the curriculum is considered the heart and soul of all educational institutions (Khan & Law, 2015). Polk (2014) noted that designing and evaluating leadership programs requires asking and answering questions about why leadership development is vital to the program, institution and community. The lack of leadership within speech-language pathology and audiology can answer Polk's (2014) questions about why leadership development is essential. There is a need for leadership development and/or leadership to be infused within the curricula of speech-language pathology and audiology graduate programs.

Upon examination and comparison of the other healthcare graduate programs, it is determined that leadership development is an essential step in moving today's students to become tomorrow's clinical leaders. Moving toward leadership development is a logical, necessary step for the fields of speech-language pathology and audiology. This can mean including leadership coursework in the curriculums, adding leadership workshops, creating healthcare leadership certificate programs or developing leadership mentoring initiatives. Regardless of the approach, infusing leadership can take many different forms. It is not one-size-fits-all. What is suitable for one program might not work for another. However, a demand exists for increased leadership readiness and preparation within the speech-language pathology and audiology graduate curriculum. It is not fair to expect students to be ready for clinical leadership roles without the preparation at the graduate program level. Following the findings of this study, the author would argue that there is a need to explore and evaluate leadership readiness within the speech-language pathology and audiology graduate curriculums.

Leadership development is recommended for speech-language pathology and audiology. Simon *et al.* (2014) have stated that an academic understanding of leadership's nature is only one element in better preparing future leaders. Additionally, practical skill development in leadership is another element that will help emerging leaders progress from lower to higher levels of responsibility (Simon *et al.*, 2014). Leadership development and leadership infused into the curriculum provides potential support for future speech-language pathology and audiology students. Offering leadership on a curricular level is an opportunity to support students' growth into "ready, willing, and able" clinical leaders. Therefore, leadership development is suspected to be essential in helping students become influential leaders capable of initiating positive change within speech-language pathology and audiology.

### *Study limitations*

This study utilized the US News Educational Rating to obtain the program rankings. Limitations exist with using a singular source, although US News Rankings is reliable and readily available. US News Education is the most accessed for publicly available program ranking data, and alternative sources are sparse. Therefore, the researcher must trust the reliability and validity of US News's data. Another limitation is the need for more available literature on leadership, speech-language pathology and audiology. The researcher also observed a need for more follow-up to the available literature studies and the current cited literature as dated. The researcher does acknowledge that the age of available literature could be better. However, this is out of the researcher's control. An additional limitation is the accessibility to curricula data. Most programs had the curriculum and progression schedule publicly available on their website, but not all. Some programs do not make the curriculum information available to the public online. To minimize this limitation, the researcher contacted one or more programs via email to clarify their curricula.

*Future implications*

There are many implications for future research, which are positive outcomes of this study. Research on leadership within speech-language pathology and audiology is minimal, requiring further investigation. Future research implications include, but are not limited to, additional studies looking at existing leadership opportunities for students in these fields of study, current leadership concerns for professionals within these fields, evolving leadership trends and improved leadership readiness.

A study investigating the integration of leadership development for these two fields would be a logical next step. For example, developing and implementing a leadership development program for these fields and evaluating pre- and post-subjective outcomes could yield intriguing outcome measures of leadership development. Additionally, an observation was concluded during the leadership literature review, which has led to a suspected correlation between different adopted leadership styles and the profession selection. For example, with a broad view lens, speech-language pathologists function more in servant leadership roles, whereas audiologists function more in transformational leadership roles. This is just an initial hypothesis; a study investigating different leadership styles or traits correlating with a selected profession (SLP vs audiology) would be enlightening and impactful.

*Conclusions*

In conclusion, the study uncovered that speech-language pathology and audiology graduate programs have fewer leadership coursework offerings throughout their curriculum. This finding pinpoints a missed opportunity for leadership preparation and readiness within the curriculum. Leadership education, coursework or development is a crucial component to consider when educating competent clinical leaders. Following the findings, leadership development for speech-language pathology and audiology graduate programs is strongly recommended.

## References

Avolio, B. J., Reichard, R. J., Hannah, S. T., Walumbwa, F. O., & Chan, A. (2009). A meta- analytic review of leadership impact research: Experimental and quasi-experimental studies. *The Leadership Quarterly*, *20*(5), 764–784. doi: 10.1016/j.leaqua.2009.06.006.

Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.

Byrne, N. (2010). Why do students from related professions choose not to enter speech- language pathology?. *International Journal of Speech Language Pathology*, *12*(4), 344–351. doi: 10.3109/17549500903464346.

Chan, K. Y., & Dragsow, F. (2001). Toward a theory of individual difference and leadership: Understanding the motivation to lead. *Journal of Applied Psychology*, *86*(3), 37–42.

Emanuel, D. C., Donai, J. J., & Araj, C. F. (2012). The awareness of the profession of audiology among entering college students. *American Journal of Audiology*, *21*(1), 41–50. doi: 10.1044/1059-0889(2012/11-0033).

Erol, R., Upton, P., Macckenzie, H., Donnelly, P., & Upton, D. (2015). Delivering the future: An evaluation of a multidisciplinary clinical leadership programme. *British Journal of Healthcare Management*, *21*(1), 30–35.

Hine, G. (2014). Student leadership development: A functional framework. *Journal of Catholic Education*, *18*(1), 79–110. doi: 10.15365/joce.1801052014.

Keating, K., Rosch, D., & Burgoon, L. (2014). Development readiness for leadership: The differential effects of leadership courses on creating 'ready, willing, and able' leaders. *Journal of Leadership Education*, *13*(3), 1–16. doi: 10.12806/V13/I3/R1.

Khan, M. A., & Law, L. S. (2015). An integrative approach to curriculum development in higher education in the USA: A theoretical framework. *International Education Studies*, *8*(3), 66–76.

Messersmith, J., Lockie, J., Jorgensen, L., Vaith, S., & Falk, E. (2014). Legislation impacting audiology and the provision of audiological services: A review of legislation across the United States. *American Journal of Audiology*, *23*(2), 142–150. doi: 10.1044/2014_AJA-13-0051.

Paglis, L. L., & Green, S. G. (2002). Leadership self-efficacy and managers' motivation for leading change. *Journal of Organizational Behavior*, *23*(2), 215–235. doi: 10.1002/job.137.

Polk, D. M. (2014). Focuses for positive change: Preparing leaders for the 21st century in an undergraduate honors program. *Journal of Educational Leadership*, *13*(12), 140–51. doi: 10.12806/V12/12/A1.

Rosch, D. M., & Anthony, M. D. (2012). Leadership pedagogy: Putting theory to practice. *New Directions for Student Services*, *2012*(140), 37–51. doi: 10.1002/ss.20030.

Roupriel, S., Ririne, N., & Grenier, J. (2019). Leadership Development: Three programs that maximize learning over time. *Journal of Leadership Education*, *18*, 126–137.

Simon, S., Christi, M., Graham, W. A., & Call, K. (2014). Pivotal ways of improving leadership and the scholarship of learning and teaching in higher education. *Journal of Business Education and Scholarship of Teaching*, *8*(2), 32–38.

Stone, G. A., Russell, R. F., & Patterson, K. (2004). *The Leadership and Organization Development Journal*, *25*(4), 349–361. doi: 10.1108/01437734010538671.

Tolan, C. M. (2021). Leadership readiness and curricular analysis of different healthcare graduate programs. Doctoral dissertation. Alvernia University.

Turner, J. R., & Baker, R. (2017). Pedagogy, leadership, and leadership development. *International Society for Performance Improvement*, *56*(9), 5–11. doi: 10.1002/pfi.21734.

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