

# Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association

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Volume 9 | Issue 2

Article 2

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September 2023

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### Recommended Citation

Wise, Stephanie and Kutz, Matthew R. (2023) "Leadership and Management Curricula Trends in Athletic Training Education," *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*: Vol. 9: Iss. 2, Article 2.

DOI: <https://doi.org/10.25035/jsmahs.09.02.02>

Available at: <https://scholarworks.bgsu.edu/jsmahs/vol9/iss2/2>



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## ***Leadership and Management Curricula Trends in Athletic Training Education***

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**Purpose:** Leadership and management skills both are needed by athletic trainers. However, most professional education emphasizes management-related behaviors. The purpose of this study was to differentiate between leadership and management behaviors taught in athletic training programs and explore the pedagogical strategies used in teaching those behaviors. **Method:** A cross-sectional exploratory design was used to survey Athletic Training Program Directors (PDs). The Leadership and Management Education Assessment Instrument (LMEAI) was developed for this investigation. The LMEAI collected standard demographic characteristics of respondents and used a 5-point Likert scale (1 = extremely important to 5 = not at all important) to assess importance of different leadership and management behaviors as well as pedagogical strategies used to teach those important behaviors. **Results:** Cronbach coefficient  $\alpha$  for the LMEAI was  $\alpha = 0.88$ , item analysis ranged from  $\alpha = 0.868$  to  $0.883$ , indicating strong internal consistency/reliability. Twenty percent (20%) of PDs did not report teaching any leadership skills. Kruskal-Wallis tests indicated no differences in pedagogical strategies according to age or gender. Mann-Whitney U tests identified differences in ethnicity when teaching “cultural competency” ( $p=.041$ ). Differences were also seen between degree levels when teaching “verbal communication” ( $p=.004$ ), “communication” ( $p=0.23$ ), and conflict management ( $p=.003$ ). Lecture was the main method of instruction reported for didactic education, while self-reflection was reported as most often used for clinical education. **Conclusions:** Similarities were seen in pedagogical strategies used when instructing leadership and management for both didactic and clinical education, however, educators should consider integration of content across the curriculum with separate methods for instructing leadership and management, respectively. Educators should consider diverse pedagogical techniques other than lecture to deliver leadership related content. **Key Words:** *curriculum, pedagogy, education, organization*

The importance of practicing leadership has been shown to be necessary to move athletic training forward.<sup>1</sup> Without leadership, organizations that employ athletic trainers would become obsolete.<sup>1</sup> Many leadership behaviors have been identified that are important for athletic trainers to practice inside and outside their professional role.<sup>2</sup> An example of some of these leadership behaviors include cultural competence, professionalism, ethical and legal responsibilities, team decision-making, and patient primacy.<sup>3</sup> To make leadership an important part of their clinical and professional identity the development of leadership knowledge, skills, and abilities should start early in an athletic trainers' professional education. Leadership behaviors have been correlated with athletic training student's clinical behaviors and were shown

to positively influences their clinical behavior as they progress through their education.<sup>4</sup> Several professional agencies including the National Academy of Medicine, the Board of Certification (BOC), Inc., and the Pew Commission all explicitly call for some level of leadership training as a prerequisite for entry-level practice.<sup>5 (p.5), 6 (p.61), 7 (p.40)</sup>

Leadership and management are not mutually exclusive but are generally considered to be distinct (Figure 1).<sup>1,8-11</sup> However, integration and assessment of various leadership content in professional education is limited.<sup>1</sup> While both are equally important and necessary, healthcare professionals such as athletic trainers, physical therapists, and nurses have been known to treat management and leadership as synonymous terms.<sup>8</sup> While over 200 definitions of leadership have been

identified, leadership can be loosely described as creating relationships to motivate others to achieve a common goal.<sup>1,9,10</sup> Management, however, focuses more on the internal workings of an organization and include planning, coordinating, building, and directing.<sup>9</sup> Many athletic trainers, regardless of setting or role, practice leadership skills even when not in a formal leadership position.<sup>1,8,12</sup> Athletic trainers serving in “leadership” positions tend to struggle more when access to leadership development is limited.<sup>8</sup>



**Figure 1.** Comparison of Leadership and Management behaviors and skills

Leadership skills directly affects the quality of patient care, patient satisfaction, and patient outcomes.<sup>1,8</sup> Utilizing leadership skills learned in professional education can aid clinicians in challenging the status quo by advocating for the patient and for innovative practice models.<sup>1</sup> Moreover, professionals who demonstrate any acquired leadership skills tend to be more involved, which helps provide growth and forward momentum for the profession.<sup>13-14</sup>

While leadership behaviors and skills can be learned through personal experiences, formal education is helpful.<sup>3,15</sup> Doctorate of Physical Therapy (DPT) students showed significant improvements not only in the frequency of leadership behaviors but also in the application of the behaviors when related curriculum was integrated.<sup>16</sup> Additionally, physical therapy students showed the most improvement in leadership skills that were less developed. Similar improvements were also observed in practicing nurses (RN’s) who participated in leadership development programs.<sup>17</sup>

It is likely that with improved leadership skills, athletic training students can have more confidence and a shorter learning curve as they enter their clinical practice. However, with the limited exposure in professional education, athletic trainers often have to seek out leadership training and development on their own, after graduation, either through additional advanced education, personal leadership development, books, or podcasts.<sup>9</sup> Sadly, according to the BOC Practice Analysis (PA) (8th Ed.), only 8% of the BOC exam is allotted to Domain 5 (Health Administration and Professional Responsibility), down from 13%.<sup>6,18</sup> Furthermore, most of that 8% is related to management (e.g., budgeting, facility design, record keeping, etc), leaving even less for leadership content. As Drake suggests, with multiple leadership-related skills needing to be developed, education around leadership should occur throughout the professional athletic training curriculum.<sup>15</sup>

Before making recommendations on integrating leadership into existing curriculum we thought it prudent to explore current practices associated with teaching leadership in athletic training education. As the knowledge and practical application of these skills can occur within the classroom and during their clinical education, various methods may be used. Therefore, the purpose

of our study was to explore the importance of teaching leadership and management and to differentiate between the leadership and management behaviors taught within athletic training education. Additionally, we wanted to explore the various pedagogical strategies used when teaching leadership and management behaviors.

As a result, we framed the following three research questions:

1. How important do PDs believe teaching leadership and management behaviors are in athletic training education?
2. What pedagogical strategies are being utilized to teach leadership skills in athletic training?
3. What pedagogical strategies are being utilized to teach management skills in athletic training?

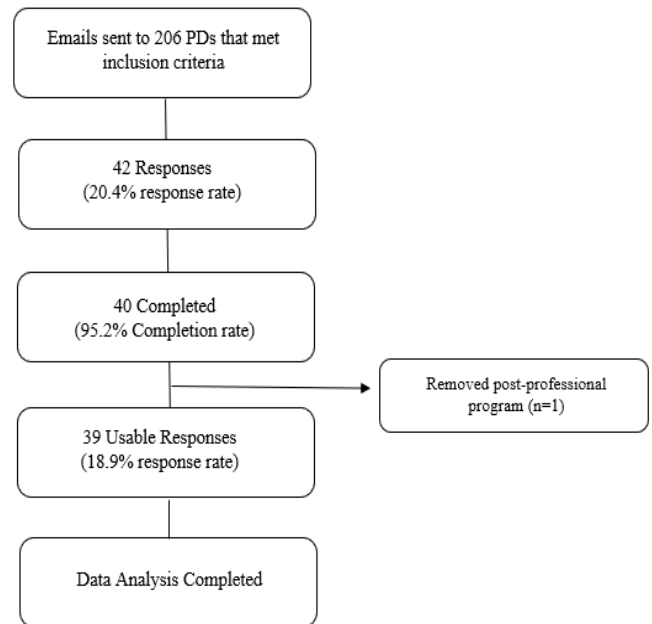
## METHODS

The purpose of this study was to explore the importance of teaching leadership and management and to differentiate between the leadership and management behaviors taught within professional athletic training education. A cross-sectional exploratory design was used to collect data that included Cronbach  $\alpha$  coefficient, Spearman rho correlations, Mann-Whitney U, Kruskal-Wallis analysis, and measures of central tendency. To be consistent with the quality of reporting results, the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines were used.<sup>19</sup> This study was approved by the primary investigator's Institutional Review Board.

## Respondents

Athletic training PDs from Commission on Accreditation of Athletic Training Education (CAATE) accredited programs were surveyed to assess importance and potential differences in pedagogical strategies between leadership and management. PDs contact

information was collected from the CAATE Website (in the public domain) in April of 2021. PDs were contacted by email if their program was identified as having an active status. Program directors were excluded if their program was seeking accreditation, withdrawing accreditation, degree change pending, or on probation. A total of 206 PDs were invited to participate in this study (Figure 2).



**Figure 2.** Methodology Flow Chart

## Instrumentation

The Leadership and Management Education Assessment Instrument (LMEAI) was developed for this investigation and consisted of 21 questions in three sections (Table 1). Section 1 (10 questions) consisted of respondent demographic characteristics including ethnicity, age, experience, type of program, and leadership role with an association or organization. Section 2 (6 questions) assessed the importance of leadership and management behaviors using a 5-point Likert scale of perceived importance ranging 1 to 5 (1 = extremely important to 5 = not at all important). Section 3 (5 questions) assessed the leadership and management

pedagogical strategies used by instructors in didactic and clinical education formats.

The LMEAI defined leadership and management using definitions from the existing athletic training literature.<sup>1,9</sup>

Cronbach coefficient  $\alpha$  for the LMEAI was  $\alpha = 0.88$ , with an item analysis range of  $\alpha = 0.868$  to  $0.883$ , indicating strong internal consistency-reliability.

Section	Question
Demographics	1. What is your sex? (MC) 2. What is your ethnicity? (MC) 3. What is your age? (MC) 4. How many years have you been certified? (MC) 5. What is your highest degree earned? (MC) 6. Please type in your major/concentration for any advanced degree. (open-ended) 7. What NATA district do you reside in? (MC) 8. What type of athletic training education program does your school offer? (MS) 9. What is your average annual salary? (MC) 10. Do you currently serve in a leadership role in either a state, district, or national level association?(MS)
Importance of Leadership and Management	11. Are leadership skills currently taught within the athletic training program? (MC) 12. Are athletic training students required to take a formal leadership course (other than the typical Organization and Administration in AT course)? (MC) 13. Are management skills currently taught within the athletic training program? (MC) 14. How important is it to you that leadership skills be instructed and evaluated in your athletic training program? (MC) 15. Are athletic training students required to take a management course (in addition to the typical Organization and Administration in AT course)? (MC) 16. How important is it to you that management skills be instructed and evaluated in your athletic training program? (MC)
Pedagogical Strategies	17. Do you teach leadership and management separately? (MC) 18. What curriculum methods do you (or other core faculty in your program) utilize when teaching leadership in your athletic training program? (MS) 19. What curriculum methods do you (or other core faculty in your program) utilize when teaching management in your athletic training program? (MS) 20. What technique do you use MOST OFTEN to teach/instruct each of the following LEADERSHIP skills/behaviors? (MS) 21. What technique do you use MOST OFTEN to teach/instruct each of the following MANAGEMENT skills/behaviors? (MS)

**Table 1.** LMEAI Survey Questions [MC- multiple choice, MS- multi-select

**Statistical Analysis**

Statistical analysis was conducted using SPSS 26.0 (SPSS Inc, Chicago, IL). Because assumptions of normality were violated, non-parametric analysis was used *posteriori*. Mann-Whitney U tests were conducted to compare differences between sex and pedagogical strategies ( $p \leq .05$ ). Kruskal-Wallis analysis was used to determine differences in curricular use and demographic characteristics of respondents. Methods of

central tendency and frequencies were also reported when necessary.

**RESULTS**

Of the 206 PDs invited to participate, there were 39 usable responses (18.9% completion rate). Respondents (Males = 16, Females = 23) varied in their experience and other demographic characteristics. Table 2 describes the respondent’s demographic characteristics.

The majority of respondents (95%) reported that teaching and evaluating leadership skills were *at least* moderately important, of those 31% stated they were *very important*, and 25% *extremely important*. Similarly, for management skills 97% reported that teaching and evaluating management skills were *at least* moderately important, of those 36% *very important*, and 28% *extremely important*.

Management skills were reported to be taught by all respondents in their respective programs. However, 20.5% (8 programs; 3 – Bachelors, 5 – Masters) of respondents indicated that they do not teach leadership skills at all. All respondents reported that the Organization and Administration course was where all management (and leadership if it was taught) was instructed. A majority (82.1%) of respondents reported not requiring students to take any additional leadership content and 87.2% of programs do not require any additional management content outside of the required curriculum.

**Pedagogical Strategies and Curricular Content**

Kruskal-Wallis did not reveal any significant differences in pedagogical strategies of PD’s according to age, years of experience, or leadership role. Respondents reported using a variety of pedagogical strategies for teaching leadership and management didactically and clinically (Table 3). In didactic education, lecture and textbook/chapter readings were utilized the most for both leadership and management. A majority (89.7%) respondents reported using lecture to teach leadership; and 95% of respondents used lectures to teach management. Assigned readings were reported as very frequent pedagogical strategies for leadership (79.5% of the time) and management (84.6% of the time). Field trips were the least used curricular strategy. While few differences were found in pedagogical strategies PDs did report utilizing journal reading assignments

Characteristic	No. (%)
Sex	
Male	16 (41)
Female	23 (59)
Ethnicity	
White/Caucasian	37 (95)
Black or African American	0
American Indian or Alaska Native	0
Asian	0
Native Hawaiian or Pacific Islander	0
Other	0
Age, y	
20-29	0 (0)
30-39	12 (31)
40-49	13(33)
50-59	12 (31)
60+	2 (5)
Years of Experience, y	
0-5	0
6-10	1 (2.5)
11-15	9 (23.1)
16-20	9 (23.1)
21-25	9 (23.1)
26+	11 (28.2)
Highest Degree	
Bachelor’s	0
Professional	1 (2.5)
Master’s	3 (7.7)
Post-Professional	3 (7.7)
Master’s Clinical Doctorate (DAT, DPT, MD)	32 (82.1)
Research Doctorate (Ph.D., Ed.D.)	
NATA District	
1	1 (2.6)
2	6 (15.3)
3	3 (7.7)
4	10 (25.6)
5	8 (20.5)
6	1 (2.6)
7	3 (7.7)
8	1 (2.6)
9	5 (12.8)
10	1 (2.6)
Type of Program	
Bachelor’s	8
Master’s	34

**Table 2.** Participant Demographics [Abbreviation: NATA, National Athletic Trainers’ Association]

(18%) and podcasts or audio (12.8%) more often when teaching leadership compared to management. Within clinical education courses, self-reflection was used 53.8% of the time to teach leadership and 43.6% of the time to teach management. Peer-learning and clinical evaluation strategies were reported to be used more frequently in clinical education courses than in didactic education relative to learning leadership and management content.

Programs offering a graduate degree taught verbal communication (p=.004), communication (p=0.23), and conflict management (p=.003) differently than undergraduate degree programs.

**DISCUSSION**

The purpose of this study was to explore the importance of teaching leadership and management in professional athletic training education and identify the behaviors and related pedagogical strategies implemented in athletic training education. The Accreditation Council for Graduate Medical Education officially identifies six core competencies, however, Hartzell et al. states that “leadership” is often the “seventh competency.”<sup>20</sup> Hartzell and colleagues emphasize leadership’s importance in the education of healthcare clinicians as it facilitates interprofessional collaboration and enhances quality patient-care.<sup>20</sup> With the majority of our respondents indicating that leadership was at least moderately important, 55% stated leadership was very or extremely important. Kutz and Stiltner identified many soft skills associated with leadership that PDs reported as either very important or extremely important, however, many of these are not evaluated during didactic or clinical education.<sup>21</sup> Many leadership behaviors and related skills are not adequately addressed in professional (entry-level) athletic training education and appears to be decreasing. This seems to be supported by the recent change noted between the 7th and 8th editions of the BOC PA, where Domain 5 decreased from 13%

	Didactic Education N (%)		Clinical Education N (%)	
	Leadership	Management	Leadership	Management
<b>Lecture</b>	35 (89.7)	37 (95)	2 (5)	2 (5)
<b>Textbook/Chapter Reading</b>	31 (79.5)	33 (84.6)	8 (2.6)	0
<b>Professional/Trade Books</b>	6 (15.4)	5 (12.8)	1 (2.6)	1 (2.6)
<b>Videos</b>	12 (30.8)	8 (20.5)	0	1 (2.6)
<b>Case Study Analysis</b>	25 (64.1)	23 (59)	3 (7.7)	6 (15.4)
<b>Guest Speakers</b>	22 (56.4)	18 (46.2)	4 (10.3)	4 (10.3)
<b>Self-Reflection</b>	25 (64.1)	20 (51.3)	21 (53.8)	17 (43.6)
<b>Peer-Learning</b>	7 (17.9)	6 (15.4)	9 (23.1)	11 (28.2)
<b>Peer Discussion Board/Groups</b>	15 (38.5)	14 (35.9)	4 (10.3)	4 (10.3)
<b>Role Plays</b>	10 (25.6)	7 (17.9)	7 (17.9)	3 (7.7)
<b>Debates</b>	6 (15.4)	5 (12.8)	0	0
<b>Podcasts/Audio</b>	9 (23.1)	4 (10.3)	1 (2.6)	1 (2.6)
<b>Games or Simulations</b>	6 (15.4)	4 (12.5)	2 (5.1)	1 (2.6)
<b>Service Learning</b>	8 (20.5)	3 (7.7)	7 (17.9)	4 (10.3)
<b>Journal Readings</b>	18 (46.2)	11 (28.2)	5 (12.8)	3 (7.7)
<b>Field Trips</b>	2 (5.1)	2 (5.1)	0	0
<b>Socratic Questioning</b>	10 (25.6)	9 (23.1)	4 (10.3)	1 (2.6)
<b>Clinical Evaluation</b>	8 (20.5)	7 (17.9)	16 (41)	13 (33.3)

**Table 3.** Curricular Methods utilized by Program Directors

to 8%.<sup>6,18</sup> Jones and Sackett report that in nursing education it is the typical “Organization and Administration” course where leadership and management skills are

taught.<sup>22</sup> Our findings indicate a similar trend in athletic training education.

Within AT education, PD's report a heavier focus on management skills, leaving leadership skills targeted less. While not all athletic trainers may seek a formal leadership role, athletic trainers are still exposed to situations and experiences that challenge them to improve their communication and negotiation skills and facilitate change both in and outside of their organization. If PD's assess similar importance of teaching leadership and management content, leadership content should be taught as frequently as management.

No PDs reported requiring students to enroll in leadership or management courses outside of the traditional organization and administration course. Within athletic training, most organization and administration courses are placed near the end of the student's academic preparation. This reality is likely due to the needed focus on developing the requisite clinical skills. While necessary to focus on clinical skills the limited attention to leadership capacity may imply lesser importance. Our findings suggest more time may be needed for students to appropriately learn, practice, refine, and implement leadership behaviors. Appendix A provides examples of how leadership concepts can be integrated throughout the curriculum. While many concepts can be introduced in an organization and administration course, integrating and expanding leadership behaviors with the clinical content can allow the student more opportunities to learn and practice these behaviors, which have higher probability of transfer into practice. Pharmacy schools have created ways to integrate leadership curricula throughout their programs including didactic, experiential, and blended didactic/experiential elements.<sup>23</sup> Janke reported this allowed the students more time to practice these skills while receiving

feedback from faculty.<sup>23</sup> Students can then build on their leadership skills learned in their professional programs in post-professional education by cultivating more advanced skills.

Also of interest is that our findings indicated 20% (N=8) of respondents reported not teaching leadership at all. This was similar to previous findings by Drake who reported 18.1% of programs not addressing leadership content.<sup>15</sup> Of our respondents who identified not teaching leadership, 62.5% were at the Master's degree level. With the degree transition and less time to integrate a full curriculum, it is possible leadership instruction may continue to fall and may only prepare the students to fail with an ever-changing healthcare system.<sup>1</sup> Another trend that seems to be supported by the decrease of Domain 5 content on the BOC's exam.

It has been assumed that leadership skills are more abstract and therefore cannot always be as accurately evaluated as management skills. Both leadership and management skills (CAATE Standards #55, #88) however, are identified as requirements by the *2020 Standards for Accreditation of Professional Athletic Training Programs*.<sup>24</sup> Since leadership skills are not defined as clearly within the standards, this could lead to programs focusing more on the management skills and aspects of athletic training. As seen in the 8th edition of the BOC PA the domain tasks are more closely aligned with management skills in developing policies and procedures and ensuring documentation best practices.<sup>18</sup> As noted earlier, 20% of our respondents reported no leadership skills at all. It should be noted that both areas are distinct and offer unique outcomes that are important for athletic trainers in clinical practice.

### **Pedagogical Strategies**

We found that PDs reported *rarely* utilizing different types of pedagogical strategies when teaching leadership or management. Research suggests that it is important to use different



curricular techniques as it allows students to learn the concepts and skills in a variety of formats.<sup>26-28</sup> Despite there being no best practices for how to teach leadership vs. management, Kutz and Scialli reported that distinct leadership content is important to teach in athletic training education.<sup>11</sup> Athletic training programs only varied slightly; we found a large majority utilize only lectures to teach leadership. This finding is similar to Frich et. al.<sup>29</sup> who reported that physician educators utilized didactic lectures most often. However, group work, project-based learning, and simulation exercises were also used by physician educators to teach leadership.<sup>29</sup> These additional methods allow the learner to be more engaged in the learning process and may enhance retention. By mainly using lectures and case studies, a student's ability to foster personal and professional growth are limited.<sup>30</sup> While the educator is available for support, more student-led methods allowed learners to become more confident in their skills.<sup>26</sup> Therefore, our recommendation is for faculty to introduce leadership early and use a variety of faculty led and student (peer) facilitated techniques. Furthermore, many of these skills can be applied to a variety of courses throughout the student's formal education, and not relegated to Organization and Administration courses.

Our study showed that programs offering a graduate degree taught verbal communication, communication, and conflict management differently than those with a bachelor's degree. In all these content areas, those offering a bachelor's degree relied primarily on lecture whereas those with a graduate degree utilized various methods of instruction including lecture, case studies, group projects, and discussions. We can speculate that those offering a bachelor's degree may be only introducing the content in lecture format. Programs offering a graduate degree may spend more time comparatively on the same topics, however, utilizing

additional pedagogical methods to enhance learning and retention.

Most of the research on leadership education reports on student satisfaction related to the content and not on outcomes of content delivery.<sup>27,29</sup> If the intended outcomes of leadership education is to drive innovation, enhance performance, induce change, or improve patient outcomes, more research is needed that assesses outcomes of such education.<sup>1,2,8</sup>

### **Clinical Education**

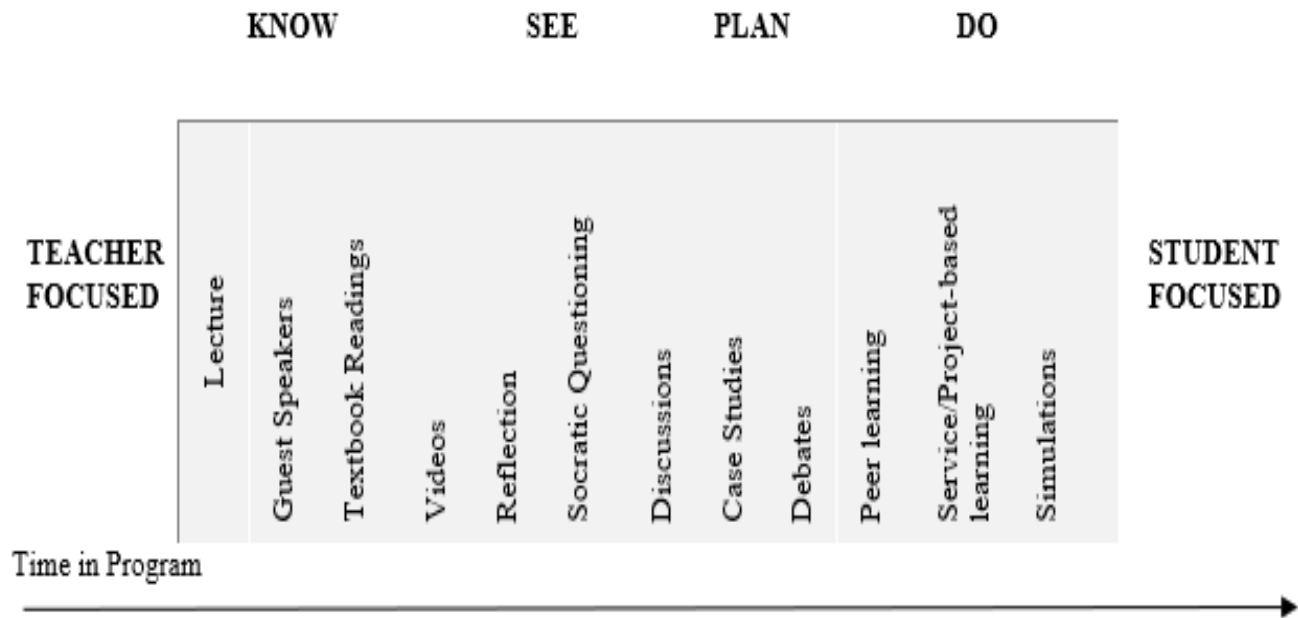
Self-reflection and clinical evaluation were methods used when teaching leadership and management in clinical education. As self-reflection has been identified as being favorable among leadership participants, this method can allow the individual to evaluate their cognitive, emotional, and clinical skills.<sup>27</sup> Peer learning has also shown to be beneficial among nursing student's leadership and management course's clinical components.<sup>31</sup> While slight, some of our respondents identified peer learning within clinical education. Therefore, being intentional to identify, promote, and allow more opportunities for peer learning during clinical education can allow more autonomy in developing athletic training student's leadership and management skills.

### **Implications for Educators**

Recent graduates in athletic training reported struggling with basic soft skills and leadership skills including interpersonal communication, decision-making independence, confidence, time management, taking initiative, and reflective practice.<sup>32</sup> Therefore, we recommend that leadership skills be integrated and assessed throughout the athletic training students' educational experience. It is imperative that leadership objectives are created, articulated as such, and evaluated in several courses, including clinically based courses. Educators should also consider more student-directed methods

for instruction as this can help foster their knowledge and confidence. With the integration of leadership and management content throughout the curriculum, the initial teacher-directed methods (i.e. lectures, readings) could transition to more student-directed methods (i.e. case studies, peer learning, simulations) as the student progresses through the program (Figure 3). Allen et. al. proposed a Know, See, Plan, Do (KSPD) model for leadership curriculum development.<sup>33</sup> The *Know* component is the introduction of the basic concepts and is the stage of knowledge acquisition. This can include leadership theories, styles, traits, and concepts such as contextual intelligence. The *See* component is integrating and making connections of the knowledge into their environment and daily life. The deeper understanding of the content allows the student to practice it more regularly. The *Plan*

component allows students to analyze various pieces of information to plan out the decision-making process and recognize how leadership is connected to clinical decisions. Lastly, the *Do* component allows students to fully synthesize their knowledge, gather various perspectives, and take action accordingly. The KSPD model can be utilized with the various instructional strategies when integrating leadership content throughout the curriculum. Lastly, as simulations are becoming increasingly utilized in athletic training education, incorporation of leadership and management concepts could be included in simulations. For example, a student could be given a layered injury management scenario where they would *also* have to practice their conflict resolution or interpersonal communication skills to resolve an awkward situation with a bystander or other stakeholder.



**Figure 3.** Teacher vs. Student focused methods using the KSPD model for curriculum development

**Limitations and Future Research**

Like all research, this study had limitations. Timing of the survey and limited or reduced availability of faculty due to a the COVID-19 Crisis could have negatively affected response rate. It is noteworthy to acknowledge that PDs

may also not be the instructor for the courses where leadership and management content are taught. The survey did not specify to forward to the faculty member who may be responsible for developing and teaching the content thus, leaving them to make assumptions as to current methods,

techniques, and content being used. However, we can presume the PD has in-depth knowledge of the curriculum. Future research should ask open-ended questions to better understand why PDs or faculty members utilize certain pedagogy methods when teaching various leadership or management content. It should also be noted that leadership content is easily “lost” in the curriculum. It is not always the case that leadership is excluded from the curriculum or a course, but it is often not emphasized (i.e., pointed out for what it is) or valued (i.e., evaluated), and consequently seem as if it is missing. It may be possible that PD’s and faculty simply need to be made aware of the differences between management and leadership so that leadership can be clearly identified and evaluated where it naturally occurs within a course. Furthermore, understanding the students’ perspective on the best methods for learning leadership and management topics can help PDs (and faculty) formulate better ways for knowledge retention and practical application. Admittedly, leadership skills may be more difficult to assess, future research should also identify the outcomes of the integration of leadership skills into simulations and how to better assess leadership skills within clinical education.

### **CONCLUSION**

Athletic training educators utilize similar strategies when teaching leadership and management. PDs reported utilizing more teacher-directed methods such as lecture and textbook readings in didactic education. Leadership instruction is often limited as educators focus more on the management skills required of athletic trainers. With the limited leadership content introduced to students and the lack of any additional leadership content within their curriculum, many students may be frustrated or behind when entering the job market. Thus, we encourage PDs to find ways to integrate leadership content and skills early and often

in a student’s professional education and use a variety of techniques for assessment. Finally, integrating more student directed methods can allow students to become more confident in their skills as they transition to practice.

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**Appendix A. Integration of Leadership Skills Across the Curriculum**

<b>Leadership Skills</b>	<b>Course</b>	<b>Curricular Method</b>	<b>Comments</b>
Communication Listening	Medical Documentation and Terminology	Lecture Readings	Learn basics of communicating and listening
	Evaluation and Assessment	Videos Reflection	Watch how others communicate with patients, reflect on current communication/listening practices when talking with patients
	Psychosocial Aspects of Athletic Training	Discussions Case Studies	Discuss various aspects of communicating in regards to identifying and referring psychosocial issues, work through case studies on talking with and referring patients
	Organization and Administration	Case Studies Peer learning Debates	Complete and present case studies/scenarios, plan and perform debate on third-party reimbursement
	Senior Seminar/Capstone	Project-based learning Simulations	Complete capstone project of high school athletic training workshop or advocating at state legislature, implementation of clinical and non-clinical skills in recorded simulations
Teamwork Conflict Management	Emergency Response in Athletic Training	Lecture Readings Guest Speakers	Learning roles of the various providers involved in emergency situations, EAPs, learn how conflict can affect teamwork during an emergency situation, learn from professionals on navigating conflict in emergency situations
	Strength and Conditioning	Reflection Discussions	See and reflect on communication and teamwork used when an athlete is injured in the weight room, discuss and complete case studies of conflict between ATs and strength and conditioning staff, discuss ways to improve teamwork amongst staff

	Organization and Administration	Debates Peer learning/Role-play	Working with peers to develop a policies and procedures manual for a new clinical site, role-play conflict scenarios with various parties (coach, administration, etc.)
	Rehabilitation Techniques	Case Studies Peer learning Simulations	Review and learn techniques from peers for various rehabilitation case studies, rehabilitation session simulation with newly injured patient, confronting a colleague who isn't giving their patients standard level of care
Emotional Intelligence	Introduction to Athletic Training	Lecture Readings Reflection	Learn about what EI is and its components and how it impacts patient care; self-assess owns EI; journal emotionally-charged situations seen in practice
	Evaluation and Assessment	Reflection Socratic Questioning	Assess strengths and weaknesses of evaluating patients; set goals for improvement and take critique
	Cultural Competence in Athletic Training	Discussions Debates	Discuss the needs of others and how to meet their needs; debate explicit/implicit bias in patient care
	Psychosocial Aspects of Athletic Training	Peer Learning Service/Project-Based Learning	Work with a local support group to hear stories of personal struggles and understanding the needs of the disorders; creating resources for those with mental health disorders
Strategic Thinking Strategic Planning	Medical Documentation and Terminology	Lecture Readings Videos	Learn characteristics of a strategic thinker; identify weaknesses in documentation and construct plan to improve processes as they align with goals
	Clinical Immersive Experience	Reflection Discussions	Perform SWOT on their clinical immersive site; discuss ideas for growth and development and write reflection
	Organization and Administration	Case Studies Peer Learning	Create vision and mission statements; work with peers to compile advantages and

		Service/Project-Based Learning	disadvantages of starting your own business vs. working for someone and things to do for both prior to starting
	Senior Seminar/Capstone	Service/Project-Based Learning Simulations	Creating and distributing surveys to students, coaches, staff, clients, etc. on sports medicine services and using feedback to improve policies and procedures or general operations of the department;