Employer and Employee Opinions of Thematic Deficiencies in New Athletic Training Graduates

W. David Carr, PhD, ATC*, Jennifer Volberding, PhD, ATC†

*University of Kansas, Lawrence, KS; †Oklahoma State University, Stillwater, OK

Context: Anecdotal information has been shared for several years that employers do not feel that new athletic training graduates are ready for the workforce. To date there have been no studies of employers and employees to determine deficiencies in order to confirm or refute this position.

Objective: To explore the opinions of employers and employees (recent graduates within the last 3-5 years) about the level of preparation and readiness for the work force of new athletic training graduates. Specifically, the purpose was to examine the themes emerging from interviews with employers and employees about the employee's abilities.

Design and Setting: A mixed methods quantitative/qualitative design involving in-depth focus group interviews. Interviews were conducted in a controlled environment during the National Athletic Trainers' Association Annual Symposium in June of 2010.

Participants: Eleven employers and five employees were available at scheduled times during the symposium. Extensive networking efforts were conducted to solicit participants from 3 work settings; college/university, high school/clinic/outreach, and emerging practices.

Data Collection and Analysis: Focus group interviews were videotaped then transcribed verbatim and analyzed deductively. Peer debriefing and member checks were used to ensure trustworthiness.

Results: Several 'thematic' deficiencies, or abilities, that were lacking emerged from our analysis. Both groups cited: 1) interpersonal communication, 2) decision making/independence, 3) initiative, 4) confidence, and 5) humility/ability to learn from mistakes as abilities that were deficient in new graduates. Administrative skills was the only thematic deficiency cited by the employees but not the employers.

Conclusion: Limitations of current curriculum education models and employer-driven on-the-job-orientation and experience were identified as areas of concern.

Key Words: Employer opinions, focus group interview, qualitative research

Dr. Carr is currently an assistant professor in the Health Sport and Exercise Sciences Department at the University of Kansas. Please address all correspondence to W. David Carr, PhD, ATC, University of Kansas, 1301 Sunnyside Ave, Robinson Center, Rm 161C, Lawrence, Kansas, 66045-7567. wdcarr@ku.edu

Employer and Employee Opinions of Thematic Deficiencies in New Athletic Training Graduates

W. David Carr, PhD, ATC

INTRODUCTION

What should a new athletic trainer (AT) be able to do upon graduation? Some may suggest that passing the Board of Certification (BOC) exam is what they should be able to do upon graduation. However, even with certification, anecdotal reports have suggested that "new graduates can't get 'it' done" (G. Gardner and S. Brown, email communications, February 2011). The problem is that no one has defined what 'it' really means. Some may say that education reform within athletic training has essentially created two perspectives with differing opinions and solutions for this issue. To make a generalization, the ATs who went through the internship route to certification often carry the mantle of clinical preparation through independent experience while their curriculum-based colleagues champion clinical preparation through appropriate levels of supervision. The theme of new graduates not being prepared was shared by Dr. Kraeger in a guest editorial within the National Athletic Trainers' Association (NATA) News.[1] Dr. Kraeger, became certified via the internship route, suggested that the lack of independent hands-on experience was resulting in less skilled graduates. Those who champion the current clinical education models will often cite liability and licensure issues associated with unsupervised clinical experiences.

To date, we have been unable to find any published research that has been conducted to measure the opinions of employers and employees about the abilities that are deficient in new AT graduates. When trying to define what 'it' really means, one must consider multiple perspectives or stakeholders in this unknown commodity. Recent graduates have the unique perspective of being in the field and coming face-to-face with the deficiencies of their professional preparation. Likewise, employers of recent graduates are in a position to decide what is needed and what is lacking in their new employees. Much of the published research on employment of ATs is focused on salary and setting statistics and was conducted before educational reform.[2-4] Weidner[5] and Laurent[6] have explored the perceptions about professional preparation from the perspective of recent AT graduates. These studies examined perceptions within pre-determined content areas; however, they did not allow for the participants to identify areas of weakness in their professional preparation. In addition to Weidner[5] and Laurent,[6] Arnold et al[7] focused on employer perceptions of new AT graduates. Like the previous studies, the authors utilized survey methods with pre-determined sets of criteria for participants to rate or rank. There was no opportunity in any of these studies for participants to provide input into areas of perceived weakness and for those ideas to be explored in any detail.

The purpose of our project was to capture the opinions of what is missing in new AT graduates from the perspective of employers and recent graduates. Our main questions were, "Are new graduates prepared upon graduation?" and "What qualities or abilities are lacking?" Our intent was to allow the employers and employees to define what 'it' means.

METHODS

In order to capture the opinions and allow for detailed exploration of the identified themes, a qualitative method was chosen. We felt that focus group interviews would create an open and wide-ranging discussion amongst peers. To ensure open and candid responses, all participants were informed that confidentiality would be maintained and no individual or institution would be identified. All participants reviewed and signed an informed consent form that was approved by an institutional review board. All interviews were conducted by the same researcher, an AT with expertise in qualitative research design.

A pilot focus group interview was conducted with a sample of convenience from the local community to establish the questions and data collection process. The initial set of questions was based upon our intent to determine if employers and employees felt that new graduates were prepared for the workforce and if not, what abilities were lacking. The pilot focus group meeting had 3 employers (two representing college/university and one representing high school/clinic/outreach) and 4 employees (three representing college/university and one representing high school/clinic/outreach). Minor modifications to the format of the questions were made based upon the pilot study. Results of the pilot study were used to modify the data recording process with the use of an additional backup digital voice recorder.

Participants

A sample size of 5 to 15 participants has been shown to provide an adequate variety of responses and is a manageable number of people for conducting a focus group interview.[8,9] For the full scale study, an a priori target was established of 5-15 participants for each group (employer and employee) from each work setting (college/university, high school/clinic/outreach, and emerging practices) and from across the nation to establish geographical diversity. This goal was unattainable due to restrictions on scheduling and availability at the annual symposium and led to some potential participants not being available. A revised target of 5-10 participants from each group (employer and employee) was reached. Those 3 work settings were chosen as they represent the largest employment settings for athletic trainers. Potential participants were identified via networking with NATA committee chairs for the predetermined work settings and were then recruited via email. To be eligible, all participants had to be in attendance at the 2010 NATA Annual Symposium. Participants were eligible to be considered as an employer if they were currently, or in the recent past (last 3-5 years) had been, in a supervisory role of new AT graduates. Participants were eligible to be considered as an employee if they were a recent AT graduate (within the last 5 years). We chose the time frame of the last 5 years so that the most current education practices would be factors in the preparation of new graduates. Two focus group interviews were scheduled before the participants arrived at the annual symposium. The employee group consisted of 5 participants from 3 NATA districts

(2, 3, and 5) and the employer group consisted of 11 participants from 6 NATA districts (2, 3, 4, 7, 9, and 10). Table 1 describes the demographics of the participants.

Table 1. Focus Group Participant Demographics

Characteristics	Number
Employers	
Male	11
Female	0
Mean age	39
Mean years of BOC certification	15.5
Practice setting	
College/University	8
High School/Clinic/Outreach	2
Emerging Practices	1
Route to certification	
Internship	7
Curriculum	4
Employees	
Male	0
Female	5
Mean age	25.2
Mean years of BOC certification	2.6
Practice setting	
College/University	2
High School/Clinic/Outreach	3
Emerging Practices	0
Route to certification	
Internship	0
Curriculum	5

Data Collection

Two focus group interviews, one employer and one employee group, with a list of core questions to direct the discussion were utilized. Divergence was encouraged as each participant was allowed to express their opinions. Probing questions were utilized to expand upon responses and ensure clarity. Each interview included a set of core questions:

1. Are new AT graduates prepared for the workforce? If no, in what way are they not prepared?

2. What abilities or factors were lacking upon graduation?

Each interview began with a discussion of the purpose and intent of the study, then shifted to the pre-determined core questions. Interviews ranged from 45 to 60 minutes and were moderated by the same moderator to ensure consistency and reduce any researcher bias. Interviews were conducted in a controlled environment (hotel conference room) free from distraction and were video/audio recorded on digital video disks and a back-up digital audio recorder. This project was approved by an IRB panel and all subjects completed a signed consent form prior to data collection.

Data Analysis

The audiotapes were transcribed verbatim by the moderator. Both the moderator and lead researcher reviewed the entire transcripts to become familiar with the content. Data was analyzed with HyperRESEARCH 2.7 (ResearchWare, Inc., Randolph, MA) by coding each participant response with a 1 to 3-word description of the meaning or theme. An open coding scheme was used in which both researchers independently created a theme for each comment.

Trustworthiness

To enhance the trustworthiness of the data analysis, peer debriefings and member checks were used. Transcripts were independently reviewed and coded by the primary and secondary author. Both reviewers met to discuss the coding and themes that emerged from the transcripts. Disagreements occurred with less than 10% of the coded themes. Minor differences in the terminology used for the identified themes were resolved through this process. Inter-rater reliability was not calculated as both authors were coding the same transcripts and consensus was reached on each coded entry. As the researchers worked through the discussion of coding themes, it was felt that saturation was achieved as no new themes emerged from the transcripts. The peer debriefing process allowed the researchers to analyze the transcripts without influencing the results.[8] Member checks were completed by asking 2 participants from each group (employer and employee) to review the transcripts and coded themes for consistency. The 2 participants who responded (1 employer and 1 employee) indicated that they agreed with the coded themes and that they reflected the responses from the focus group meetings.

RESULTS

The participants were encouraged to openly discuss their opinions pertaining to the abilities or factors a new graduate should possess upon graduation. The results of our analysis found several thematic deficiencies common to both groups and are presented according to each theme. Table 2 illustrates the incidence and percentage of each thematic deficiency as cited by each participant group.

Interpersonal Communication

Interpersonal Communication was the most common thematic deficiency cited by both groups as a skill that was lacking in new graduates. Employers cited this 13 times and employees cited this 11 times. The consensus was the communication with coaches, athletes/patients, parents, peers, and physicians were skills that new graduates were not prepared to handle.

A college/university employer made the following observation:

  Every one of the deficits that everyone said they need is interpersonal skills. It wasn't they need to have a good basis in emergency training, a good basis in rehab…so how do we improve interpersonal skills?

This theme of communication was reinforced by a high school/clinic/outreach employee where communication with parents is critical. With all accredited ATEPs housed within universities, students get a strong university/college setting experience. Interaction with parents is not as prevalent in the university/college setting when compared to the high school setting.

A high school/clinic/outreach employee said,

  My vice principals don't do half as much parent contact as I do…You have to be able to speak the language that they understand…Being able to speak to your student is different than to a coach or a parent.

As highlighted by both quotations, new graduates need the ability to communicate with a divergent group of stakeholders. Interpersonal skills/communication is an ability that comes with practice and should be mentored by clinical instructors. Students need the opportunities to not only observe the challenging discussions that take place but participate in those discussions whenever appropriate.

Decision Making/Independence

Employers cited decision making/independence 8 times while employees cited it only 3 times. For employers, decision making/independence was tied with Initiative for the 2nd most cited ability/factor with 21% of the total comments. However, for employees, this was tied with Initiative and the least cited ability/factor with 7% of the total comments.

A college/university employer stated,

  I think that along with that independence, the decision making factor skills aren't always there. They have the skills but sometimes can't connect the points…

This was reinforced by another college-university employer who stated,

  They have all this information but which way should I proceed with it…I have all this stuff now; what do I do with it?

An emerging practices employers stated,

  …they have a good foundation of knowledge and I think it is the application of that knowledge that they are lacking."

Employees cited decision making very few times (3) and focused on the discrete ability to manage multiple issues at one time.

A college/university employee said,

  …being able to tell what needs to be looked at right now and what can wait 3 hours until everyone clears out of your office.

This was reinforced by a high school/clinic/outreach employee who said,

  …I think that's kind of your innate sense of emergency management being able to figure out what is important right now and what can be important an hour from now…

Table 2. Incidence and Percentage of Thematic Deficiencies Identified by Participant

Theme	Employers	% of comments	Employees	% of comments
Interpersonal Communication	13	34	11	27
Decision Making/Independence	8	21	3	7
Initiative	8	21	3	7
Confidence	5	13	13	32
Humility/Learn from Mistakes	4	11	5	12
Administrative Skills	0	0	6	15
Total	38	100	41	100

The following points from the quotations above were taken: have the skills but can't connect the points, have a foundation but lack application, and being able to manage what is most important. These quotes indicate an inability to make decisions or think independently. All of these point to the same underlying theme of decision making and independence. It was determined that the 2 groups were discussing the same theme in different terms.

Initiative

Initiative was cited 8 times by the employers and 3 times by the employees. For the employers, Initiative was tied to decision making/independence, however, this was the fifth most cited theme at 7% of the total comments for employees.

A high school/clinic/outreach employer said,

I see it is difficult for some younger folks to take the initiative in not only decision making but also taking the initiative to do something. Waiting to be told what to do or being pointed in the right direction

A college/university employer said,

They are very regimented and now we are handing them students and saying be a CI (Clinical Instructor). Not only is this the first time you get to do a full evaluation on your own on one of our athletes, you now have two students you have to teach, the pressure's on.

A college/university employer echoed that statement with,

…when we look at some of those elder folks who have been around a while and went through the internship route and things, you had to work, you had to be there, you had to do it or you were out of the program…sometimes those hours restrictions give them the competencies but lack the work ethic and the sense of urgency because they say I have finished my hours and now I am out not let me see what I can do.

Initiative was tied for the fifth most cited theme with employees as it was cited only 3 times. Apparently, the employees did not view this as an important factor/ability that new graduates were lacking upon graduation.

A high school/clinic/outreach employee stated,

I think taking initiative because all of a sudden you are in charge, there is no one telling you what to do or set things up. I walked in and they said here's the [athletic] training room.

A college/university employee stated,

I wish someone would have pushed and forced me to do more stuff on my own. I always knew in the back of my mind someone else was behind me to catch if I did something wrong. I wish someone would have just pushed me and said just do it, just do it.

From the above statements, it is clear that new graduates must be able to take the lead on dealing with their patients. While initiative may be an innate characteristic in most, it is also a characteristic that can be nurtured. Allowing more experienced students to lead evaluations, recommend and perform treatments, communicate with coaches, and document injuries treatment with a measure of autonomy while still being supervised will nurture their sense of confidence and encourage initiative.

Confidence and Humility/Learn from Mistakes

We found an interesting convergence between graduates' confidence and their ability to admit mistakes, humility, and learn from them. Confidence was cited 5 times by the employers and 13 times by the employees. Confidence was the most cited ability/factor for employees while it was the fourth highest with 13% of the total comments by the employers. Humility/learn from mistakes was cited 4 times by the employers and 5 times by the employees and accounted for 11% and 13% of the total comments respectively.

A college/university employer said,

…they need to be confident in themselves and stand by their decisions, even if they are wrong…

This theme of confidence and humility/learn from mistakes was reinforced by a college/university employee that spoke about forgiveness and confidence. They said,

…the ability to forgive yourself… confidence and getting your hands dirty but also knowing you will have someone to back you up.

A high school/clinic/outreach employee continued on the theme of confidence and touched upon the theme of communication by stating,

…you can have textbook knowledge and every evaluation skill in the world but if you don't present that knowledge with confidence to your coaches, your parents, your kids, your administrators, nobody is going to think you know what you are talking about…

The theme of confidence and humility was intertwined with statements such as being able to forgive yourself and still have the confidence to get your hands dirty. The theme of humility and learning from mistakes is especially poignant for the novice practitioner who is likely going to make mistakes. Having a supervisor, both as a student and as a new graduate, who understands and expects this but continues to support and guide the practitioner allows a mistake to turn into a learning experience that will never be forgotten.

Administrative Skills

Administrative was the only theme not cited by the employers but it was cited 6 times by the employees for 15% of the total comments. It appears that employees felt uncomfortable with new policies and procedures upon entering the work force.

A high school/clinic/outreach employee said,

> …somebody came up for an insurance form two months after an injury and I was like whoa I was supposed to fill that out? That was a great experience for that learning curve…

A college/university employee said,

> …there are a lot of people in positions that need to be passing information on…the logistics things, the administrative things, clerical things that need to get done.

The fact that employers did not talk about administrative skills while the employees did at some length would suggest that the employers expect a learning curve while employees are at time overwhelmed with a new system. This may be due to a lack of preparation as students or a poor orientation to their new work setting.

DISCUSSION

The participants were recruited with the intent of developing a heterogeneous sample from across the nation. We found that those in the college/university setting were very interested in sharing their opinions as the greatest number of participants came from that practice setting. Through anecdotal discussions, we have found that ATs in the college/university practice setting have been the most vocal group on education and professional preparation issues. One could argue that the college/university group is the closest stakeholder to professional preparation as that is the setting where professional education occurs and that is the largest employment setting for new graduates. Our sample resulted in an all-male employer group and an all-female employee group. There are several possible explanations for the gender discrepancy within the employer and employee groups. It is possible that the gender distribution we found is a rough description of the actual stratification within the profession with more males in supervisory roles and more females in entry-level positions. It is also possible that circumstance and scheduling as well as inclusion/exclusion criteria created this sample.

Relationships between several thematic deficiencies as cited by the participant groups were found. It was interesting that employers cited Decision Making/Independence and Initiative very frequently while employees cited these themes the fewest times. Conversely, employees cited Confidence far more frequently than employers. Interpersonal Communication was the only theme that had similar levels of citation by both groups. Each theme and its relevance to the existing literature are discussed in more detail in the following section.

Interpersonal Communication

The ability to manage interpersonal interactions, such as communicating with patients, coaches, and parents was the most commonly cited weakness of new graduates. This finding is very similar to Massie, Strang, & Ward[10] who surveyed employers and found that interpersonal skills as opposed to technical skills were an area that could be enhanced in entry-level education programs. It should be noted that the study by Massie et al had a very low response rate and their findings cannot be generalized to all employers. Stiller-Ostrowski & Ostrowski[11] also studied perceptions of newly certified athletic trainers about their level

of preparation for psychosocial intervention and referral found similar conclusions. They identified communication as an area in which newly certified athletic trainers felt under prepared. One of their participants suggested that the lack of preparation in communication was the biggest weakness of their education program. Our participants noted that new AT graduates need more experience and opportunities communicating while enrolled in their ATEPs.

Confidence

Confidence was very important to employees, as it was the highest cited theme, however, it was only the fourth highest theme cited by employers. Confidence is an area that is commonly cited by students.[12, 13] Mensch and Ennis[12] used interviews of students and instructors to examine the extent to which pedagogic strategies were reflected in the perceptions of learning experiences. They reported that student confidence was influenced with experiences of autonomy, authenticity, and positive relationships. Harrell et al[13] studied medical student perceptions of confidence during their clinical experiences. They suggested that hands-on experience may be more important to increasing confidence than any other variable they studied. Our study found that confidence is very important to the new AT graduate whereas it appears that the employer understands that confidence comes with time and experience.

Humility/Learn from Mistakes

Humility and the ability to learn from mistakes were cited roughly equally amongst the two groups as a percentage of their total comments. A convergence was found between humility/learn from mistakes and confidence that was readily apparent within the comments from both groups. Participants in both groups expressed the idea of making decisions with confidence and standing by them even if they were incorrect. Resnick and Jensen[14] described characteristics of therapists considered to be experts based upon the outcomes of their patients. They identified several qualities which included humility where the expert therapists were quick to recognize their own limitations. Our data would suggest that both groups felt it was an important factor that new AT graduates are lacking. Stern et al[15] studied outcome measures for predicting professionalism in medical students. They found significant predictors where students had the opportunity to demonstrate humility in self-assessment. Emphasis should be made with students that make it clear that mistakes are expected and it is important to learn from those mistakes.

Decision Making and Initiative

The fact that decision making and initiative had an equal number of citations within each focus group was interesting. Furthermore, these themes were the second most cited themes for employers, and the least frequently cited theme for the employees. Fuller[16] studied curriculum programs seeking accreditation to study their use of course materials that foster critical thinking and decision making according to Bloom's taxonomy. Fuller found that syllabi learning objectives were roughly evenly split between critical thinking and non-critical thinking but that examinations were primarily non-critical thinking. These findings reinforce the results that employers feel that decision making is lacking in new AT graduates as it appears they are not being taught those skills in the ATEPs. It is important to note that the Fuller study

was conducted in 1997 with a small sample size of 13 programs. Kahanov and Andrews[17] studied AT employers' hiring criteria and identified initiative as 1 of 16 personal characteristics that are highly desired by employers. This would further reinforce our findings that Initiative was an important characteristic to our sample of employers.

Administrative Skills

The theme of Administrative Skills was only cited by employees as an area they were lacking upon graduation. We believe this may be due to employers understanding that these skills will be taught on-the-job as most institutions have differing policies and procedures. The published literature related to administrative skills in ATEPs is primarily focused on perceptions of clinical instructor characteristics.[18-22] In these studies, the modeling of administrative skills by clinical instructors is deemed important. Our results would indicate that beyond entry-level education, new AT graduates desire mentoring in areas of administrative skills.

Limitations and Suggestions for Further Research

The participants in our study were limited in number and representation of the various work settings where ATs are employed. This limitation may have been imposed by the requirement of attendance at the NATA Annual Symposium. Diverse gender representation was lacking within both groups. Additional focus group meetings with employers and employees at NATA district and state association meetings might yield greater participation and diversity. This was an exploratory study to identify themes that are lacking in new graduates. Further study should determine how these issues are being addressed within education programs and employer orientation meetings. While the results of this study may not be generalized to the entire population, this is an important starting point to identifying weaknesses within our professional preparation of students.

CONCLUSIONS

Results indicate that employers and new employees agree about the importance of a few identified themes (Interpersonal Communication and Humility/Learn from Mistakes) while they differed on the importance of the remaining identified themes (Decision Making/Independence, Initiative, and Confidence). It is important that ATEPs consider the identified themes from this study when developing course objectives and ATEPs should begin discussions with their clinical instructors to address and encourage the development of these themes within their students clinical experiences. Furthermore, some of the identified themes (eg, Interpersonal Communication and Administrative Skills) can only be fully developed through experience and on-the-job mentoring from employers.

REFERENCES

1. Kraeger D. Do our AT students need more hands-on experience. NATA News. January: NATA; 2011.

2. Moss L. Entry-level athletic trainer salaries. J Athl Train. 1992;29:205-207.

3. Moss Crayton L. Entry-Level athletic trainer salaries. J Athl Train. 1994;29(3):205-207.

4. Committee NPE. Joint Review Committee: athletic training program graduates placement summary. NATA News 2000.

5. Weidner T, Vincent W. Evaluation of professional preparation in athletic training by employed, entry-level athletic trainers. J Athl Train. 1992;27(4):304-310.

6. Laurent T, Weidner T. Clinical-education–setting standards are helpful in the professional preparation of employed, entry-level certified athletic trainers. J Athl Train. 2002;37(4 suppl):S-248-S-254.

7. Arnold B, Gansneder B, Van Lunen B, Szczerba J, Mattacola C, Perrin D. Importance of selected athletic trainer employment characteristics in collegiate, sports medicine clinic, and high school settings. J Athl Train. 1998;33(3):254-258.

8. Krueger R, Casey M. Focus Groups: A Practical Guide For Applied Research: Sage; 2008:67.

9. Kvale S, Brinkmann S. Interviews: Learning the Craft of Qualitative Research Interviewing: Sage; 2009:109-110.

10. Massie J, Strang A, Ward R. Employer perceptions of the academic preparation of entry-level certified athletic trainers. Athl Train Educ J. 2009:70-74.

11. Stiller-Ostrowski J, Ostrowski J. Recently certified athletic trainers' undergraduate educational preparation in psychosocial intervention and referral. J Athl Train. 2009 Jan-Feb; 44(1): 67–75.

12. Mensch J, Ennis C. Pedagogic strategies perceived to enhance student learning in athletic training education. J Athl Train. 2002;37(4 suppl):S-199-S-207.

13. Harrell PL, Kearl GW, Reed EL, Grigsby DG, Caudill TS. Medical students' confidence and the characteristics of their clinical experiences in a primary care clerkship. Academic Med: J Assoc Amer Med Colleges. 1993;68(7):577-579.

14. Resnik L, Jensen G. Using clinical outcomes to explore the theory of expert practice in physical therapy. Phys. Ther. 2003;83(12):1090-1106.

15. Stern D, Frohna A, Gruppen L. The prediction of professional behaviour. Med. Educ. 2005;39(1):75-82.

16. Fuller D. Critical thinking in undergraduate athletic training education. J Ath Train. 1997;32(3):242-247.

17. Kahanov L, Andrews L. A survey of athletic training employers' hiring criteria. J Athl Train. 2001;36(4):408-412.

18. Weidner T, Henning J. Importance and applicability of approved clinical instructor standards and criteria to certified athletic trainers in different clinical education settings. J Athl Train. 2005;40(4):326-332.

19. Weidner TG, Henning JM. Development of standards and criteria for the selection, training, and evaluation of athletic training approved clinical instructors. J Athl Train. 2004;39(4):335-343.

20. Weidner TG, Laurent T. Selection and evaluation guidelines for clinical education settings in athletic training. J Athl Train. 2001;36(1):62-67.

21. Laurent T, Weidner T. Clinical instructors' and student athletic trainers' perceptions of helpful clinical instructor characteristics. J Athl Train. 2001;36(1):58-61.

22. Curtis N, Helion J, Domsohn M. Student athletic trainer perceptions of clinical supervisor behaviors: a critical incident study. J Athl Train. 1998;33(3):249-253.