

# Peer Coaching in American Intercollegiate Athletics: An investigation of team dynamics, confidence and student-athlete learning

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## Abstract

Peer coaching is a peer mediated strategy that places the onus on the student-athlete to serve as both a player coach and a coached player. This exploratory study examined the effects of peer coaching among 18 student-athletes within a NCAA Division III institution located in the United States. To the author's knowledge, this is the first peer coaching study ever conducted in intercollegiate athletics. Findings suggest that peer coaching is an effective learning tool that positively contributes to the student-athletes experience. The initiative improved team dynamics, encouraged reflective ideas, built confidence and enhanced the student-athletes learning. Implications are discussed.

**Keywords:** Peer coaching, student-athletes, NCAA, athletic coaching

## Introduction

Intercollegiate athletic participants face a unique set of challenges and circumstances as they transition to and navigate an institution of higher education. Student-athletes, as they have been classified since the 1950's (Branch, 2011), are a subgroup of the general student body who at times experience the neologism "athletication" while attending their chosen institution. Athletication as defined by Snyder (2009) is the education that a student-athlete receives while attending an institution of higher learning which is unquestionably different from a non-student-athlete's education (these differences could be viewed negatively or positively). For example, many student-athletes are provided additional resources through educational services, health services, financial opportunities, and personal development programming (NCAA, 2015). Student-athletes differ in that they balance athletic and academic workloads that often times rivals that of a fulltime worker who is also a fulltime student (Gaston, Gayles & Hu, 2009). Other potential disadvantages of being a student-athlete may include: sport injuries, increased time commitment, pressure to perform on the field and in the classroom, class time missed, and limitations regarding obtaining and maintaining external employment opportunities while participating in intercollegiate sport (Calhoun, 2012) (see NCAA Bylaw 12.4.1 for further elucidation).

Recently, the disadvantages of being a student-athlete have been highlighted by major media outlets in the United States. In January of 2014 the College Athletes Players Association (CAPA) petitioned the National

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Labor Relationship Board (NLRB) on behalf of football student-athletes at Northwestern University. Revenue generation, time commitments, special rules and academic experiences were listed as complaints by CAPA (Northwestern, 2014). In August of 2014, the *O'Bannon v NCAA* case further substantiated claims by student-athletes that their academic and athletic experiences could be augmented (Solomon, 2014). Given these recent student-athlete actions, the authors of this study, in conjunction with a current NCAA Division III athletic coach developed and implemented a coaching model that could potentially improve the student-athlete's educational and athletic experiences. The result was the creation of a peer coaching model that recognizes the importance of peer-assisted learning (Boyle, Mattern, Lassiter & Ritzler, 2011; Catanzarite & Robinson, 2013; Newton & Ender, 2010; Shiner, 1999; Toppings, 2008) and is defined as a peer mediated coaching strategy that involves student-athletes serving as both a player coach and a coached player.

The peer coaching model (See Figure 1) evolved from peer education research that has been empirically supported to improve academic performance amongst the general student body (Bowman-Perrott, et al. 2013; Cloward, 1967; Cohen, Kulik and Kulik, 1982; Mastropieri, Spencer, Scruggs & Talbott, 2001). However, it should be noted that distinctions exist between the proposed model and previous peer education models. The first distinction is that peer education focuses on academic tasks while peer coaching focuses on athletic tasks. According to Bergmann-Drewe (2000) this distinction is evident when reviewing academic sports journals where coaches are always referred to as "the coach" and never as a teacher or educator. As such, peer education allows individuals to support the growth of those who are less skilled by educating those individuals regarding ways to master academic content (i.e. human anatomy, math, etc.). Peer coaching on the contrary can be understood as a developmental exercise in which individual student-athletes work to "coach" their teammates regarding ways to improve their athletic performance. The coach in essence, designs the exercises for the athletes but does not necessarily teach the exercises (i.e. require endurance activities, conduct throwing drills, etc.). The coach is also not superior at the exercise which is often the case when referring to someone as an educator.

A second distinction between the peer coaching and peer education research is the reciprocal nature of the model. As adopted from the work of Zwart, Wubbels, Bergen and Bolhious (2007), the peer coaching initiative required the student-athletes to take turns as the player coach and coached player. This reciprocal peer coaching technique was found to be successful when utilized in teacher training environments (Ackland, 1991; Joyce & Showers, 2002).

The third distinction between peer education and peer coaching is the hierarchical status of the individuals involved. Peer education models often-times adopt "big brother/big sister" approaches where an individual with *more* experience tutors a less advanced individual. Peer coaching, on the other hand, allows student-athletes regardless of college classification, age, or leadership position to coach their teammates. College student-athletes have advanced athletic skills; many are in the 95<sup>th</sup> percentile among their high school athletic peers (NCAA, 2013). Hence, the proposed peer coaching model allows freshman athletes to coach seniors and vice versa.

Finally, peer coaching allows the student-athlete to coach the entire team rather than one teammate. This is an additional difference between much of the peer education literature because often individual academic sessions are conducted (Boyle, Mattern, Lassiter & Ritzler, 2011; Catanzarite & Robinson, 2013; Newton & Ender, 2010; Shiner, 1999). The thought behind the development of the model is fourfold: (a) peer education is said to improve academic performance, hence, peer coaching may improve athletic performance, (b) the use of peer coaching requires formal contact with fellow teammates and may improve team dynamics, (c) peer

coaching subjects the student-athlete into a leadership role, therefore their confidence level may increase, (d) peer coaching may provide student-athletes with a valuable learning experience.



**Figure 1: Peer Coaching Model**

***Statement of Purpose***

The purpose of this convergent parallel mixed method study is to investigate the NCAA Division III student-athletes’ perceptions of peer coaching. It is the intent of the study to understand if peer coaching affects team dynamics, confidence levels, and the athlete’s overall learning experience. The knowledge gained from this study can provide the NCAA, athletic departments, coaches, and athletic administrators with valuable information pertaining to the use of the peer coaching technique and the student-athletes’ perceptions of peer coaching.

***Research Questions***

At the outset of the study the researchers’ objective was to determine whether the peer coaching model provided additional benefits to the student-athletes’ beyond the traditional athletic experience. To study the effects of instituting a peer coaching model during an athletic season, our research was guided by the following research questions which were previously investigated among various populations and within different environments (Andrews, Clark, & Davies, 2011; Boyle, Mattern, Lassiter & Ritzler, 2011; Catanzarite, J. A., &

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Robinson, 2013; Newton & Ender, 2010; van Nieuwerburgh and Tong, 2013; Sommers, 2013; Wawrzynski, LoConte, and Straker, 2011). The first general question includes three sub-questions in order to further disaggregate the effects of peer coaching:

1. What were the student-athletes' perceptions of the peer coaching experience?
  - 1a. As a result of the student-athlete coaching experience, do student-athletes build a closer relationship with teammates?
  - 1b. As a result of the student-athlete peer coaching experience, do student-athletes confidence levels increase?
  - 1c. Was participation in the peer coaching experience a valuable learning experience for the student-athletes?

### ***Nexus between Intercollegiate Athletic History and Peer Coaching***

It is important to acknowledge the evolution of collegiate athletic coaching because it provides support that students within institutions of higher education at one time were, in fact, capable and able to coach each other. The idea of peer coaching, led by student-athletes, at these institutions has since diminished with the continued struggle to discover the perfect governance model for intercollegiate athletics (Savage, Bentley, McGovern, & Smiley; 1929). The initial formula, which placed the onus on the student to organize training, schedule events, and raise support, has evolved from alumni control, to faculty control, to current day coaching control. Seemingly, the conviction has been that student control of intercollegiate athletics was inappropriate and continues to remain far from re-occurring within intercollegiate sport.

The first peer coaching initiatives in intercollegiate athletics appeared on the campuses of Oxford and Cambridge. According to Smith (1988), a rowing competition occurred in 1829, organized, scheduled, and coached by Charles Wordsworth of Oxford, and Charles Merivale of Cambridge. Both individuals were students who inevitably trained their fellow students for competition (Smith, 1988).

In perhaps the earliest example of peer coaching in American higher education, Harvard and Yale student rowing crews trained for the first athletic event on Lake Winnepesaukee (Smith, 1988). The history of this event, which occurred in 1852, includes no mention of "coaches," townsmen, or faculty liaisons to oversee the students. In fact, the only mention of support for the students was that of the railroad tycoon James Elkin who funded and helped organize the entire eight-day jaunt (Smith, 1988). Given the success of the event, the passion to participate in sport continued to grow among the student population for more than a decade before the first peer coaching initiatives concluded in American higher education. In 1864, Yale is credited with hiring the first professional coach to train their rowing team. William Wood, who studied gymnastics and physical education, would start a trend that continues to exist in collegiate sport today, that of the full-time coach who has the authority to train the athletic team in ways that they deem appropriate (Smith, 1988).

### ***Peer Education***

Peer educating programs are widely represented within academic support service programs at universities throughout the United States. The literature contains several variations of peer education including international peer education practices, peer education for students with learning disabilities, and peer education for students who are "at-risk" in postsecondary education (Munley, Garvey & McConnell, 2010). Within the higher education literature, strong evidence exists regarding the positive impact that college peers have on each other

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(Astin, 1993; Boyle, Mattern, Lassiter & Ritzler, 2011; Catanzarite & Robinson, 2013; Lockspeiser, O'Sullivan, Teherani, & Muller, 2008; Newton & Ender, 2010; Pascarella and Terenzini, 2005; Shiner, 1999). Numerous studies have found that undergraduate peers are the greatest source of influence on undergraduate student growth and development during college (Astin, 1993; Kuh, 1993; Whitt, Edison, Pascarella, Nora, and Terenzini, 1999). It is argued that peer educators can communicate with students in ways that faculty and administration cannot (Wawrzynski, LoConte & Straker, 2011; Lockspeiser, O'Sullivan, Teherani, & Muller, 2008). In a study of over 1,700 peer educators from over 200 institutions, Wawrzynski, LoConte, and Straker (2011) found participating as a peer educator contributed to developing a students' ability to teach, engage in public speaking, conduct research, and increased self-confidence. In sum, peer education within the traditional academic setting is effective due to the connection that exists between peer college students.

### ***Peer to Peer Coaching***

Showers and Joyce (1996) can be credited with creating the first peer to peer coaching model. The model differentiated from the traditional unidirectional coaching model where the coach is seen as an authoritative figure with power over the coachee. Showers and Joyces' (1996) peer coaching model removed the authoritative differentiation by engaging peers in the corporate setting to coach one another. Because of the absence of the power dynamic during the peer coaching sessions, partnerships evolve and learning became based on trust and respect for one another (Ladyshevsky, Baker, & Jones, 2001; Ladyshevsky & Varey, 2005; Zeus & Skiffington, 2000). Conversations amongst peers helped surface individuals' thoughts and reasoning into an open forum that allowed for discussion and restructuring of knowledge. van Nieuwerburgh and Tong (2013) made a significant impact to the peer to peer coaching literature by (1) implementing the model into an education setting and (2) accessing the outcomes of the coach, which is contrary to previous studies which focused on the results of the coached students. As a result of peer coaching in an education setting, the student coaches reported a number of positive outcomes as a result of their coaching experience including improved self-confidence, communication skills, and relationships with peers and teachers. While the benefits of this type of peer coaching model are documented in the corporate, education, and healthcare environments (Sommers, 2013) to the researcher's knowledge no empirical research exists that investigates the effect of peer coaching, as defined in this study, among the student-athlete population.

### ***Student-Athletes in Higher Education***

The existing literature has provided a great deal of information about the experiences of student-athletes in higher education (Adler & Adler, 1985, 1987, 1991; Pascarella & Smart, 1991). Some authors have tried to isolate the disconnect in student-athlete academic success by analyzing variations of demographics, precollege, and social factors (Bowen & Levin, 2003; Pascarella, Edison, Hagedorn, Nora, & Terenzini, 1996; Ryan, 1989; Sellers, 1992; Shulman & Bowen, 2001). Others have considered non-cognitive variables (Gaston-Gayles, 2004; Parham, 1993; Petrie & Russell, 1995; Simons, Van Rheenen, & Covington, 1999) in addition to characteristics of the college environment (Comeaux, 2005; Gaston-Gayles & Hu, 2009; Pascarella et al., 1999; Stone & Strange, 1989; Umbach, Palmer, Kuh, & Hannah, 2006). A study by Comeaux & Harrison (2011) found student-athletes' goals are not singularly focused on academics. Instead, they are faced with, at a minimum, balancing academics and athletics. Academically the student-athlete must maintain NCAA eligibility, while athletically they are challenged by their coaching staff to perform at their optimal levels (Comeaux & Harrison, 2011). The intensity and focus on academics and athletics can vary by institution, division of NCAA competition, and by coaching and athletic department staff.

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## **Methodology**

This ex-post-facto convergent mixed method exploratory study was designed to investigate student-athlete perceptions of a peer coaching experience and the effects of the experience on team dynamics, confidence level, and the student-athletes learning experience. In this study, the definition of mixed-methods research is “the type of research in which a researcher or team of researchers combines elements of quantitative and qualitative research approaches (e.g., use of quantitative and qualitative viewpoints, data collection, analysis) for the broad purposes of breadth and depth of understanding and corroboration” (Johnson, Onwuegbuzie, and Turner, 2007, p.123). The data was collected concurrently with both the quantitative and qualitative data being collected at the same time (Jones, Torres, and Arminio, 2006). Data was gathered from the survey instrument and included both close-ended and open-ended questions. The survey was administered in April 2014.

### ***Design of the Study***

The peer coaching initiative requires a head coach to allocate a portion of their fixed, NCAA controlled (see NCAA Division III Handbook, Bylaw 17) practice time to their players. Given the virtue of peer coaching, head coaches must be willing to allow their players to engage in leadership roles during practice, and thus challenges the traditional power dynamic of coaches and players. At the onset of this unique study, the researchers and the coach were not certain if the outcome would be negative or positive for the student-athletes.

Over the course of the spring 2014 semester, the coach allowed each student-athlete to run a practice session. During this time, the researchers had no interaction with the coach or the student-athletes. Upon completion of the final peer coaching practice, the researchers were invited to the institution and provided access to the student-athletes in order to collect data regarding the student-athletes’ perceptions of the peer coaching initiative.

Descriptive data were collected from the Peer Coaching Survey Items which was adopted from the Peer Mentoring Evaluation Toolkit Survey (Andrews, Clark, & Davies, 2011). The findings were described using measures of central tendency and dispersion. Additional information was collected using a qualitative approach in order to investigate if any meaningful variations existed.

The format of data collection was face to face. Face to face data collection allowed the researchers the opportunity to clarify any confusing questions and gather additional elaborations from respondents (Berends, 2006). Upon Institutional Review Board (IRB) approval, the student-athletes were approached by the researchers. The IRB consent form along with the survey was distributed. The cover page included the purpose of the study along with a signature box to consent to participate.

### ***Participants/Sampling Procedure***

For this particular study, a purposive sampling was used (Patton, 2001). An expansive peer coaching study was nearly impossible because (a) it was an exploratory study with unknown outcomes, (b) Coaches would not participate in the study because it takes away practice time from them, and (c) it changes the traditional power dynamic of the coach and athlete. Therefore, the participants for this study were recruited from one athletic team at a small Division III liberal arts institution located in the United States. Twenty-one NCAA Division III student-athletes who participated in the peer coaching initiative were invited to participate in this study. Of the 21 initial participants, 18 completed the survey, including the open-ended questions resulting in an 85.7 percent

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response rate. The 85.7 percent response rate is an acceptable rate for this study because the researchers were gaining insight, not generalizing the findings to all NCAA student-athletes (Nardi, 2006). The student-athletes were at least 18 years of age, a condition required for participation.

### ***Survey Instrumentation***

The peer coaching survey instrument was adapted from the Peer Mentoring Evaluation Toolkit Survey (Andrews, Clark, & Davies, 2011). The survey is comprised of three sections including: (1) demographic questions, (2) close-ended peer coaching questions, and (3) open-ended peer coaching questions.

Given the small sample size (N=18), reliability and validity measures through item response theory (IRT), Rasch modeling, or classical test theory (CTT) would prove to be uninterpretable. In addition, the survey was not viewed as a scale but rather as individual items that represented the student-athletes perceptions. The researchers took the following steps to establish validity. Face validity was accomplished through a focus group (N = 8). Accordingly, the focus group reported that the survey did pose appropriate questions that investigated team dynamics, confidence levels, or learning experiences.

Moreover, it was appropriate to establish content validity. Content validity can be established by allowing a group of individuals with expertise in the subject matter to do a “review for relevance” of the survey questions (Lacy, 2011). In order to establish content validity, items representing each of the themes were randomized into a 22 question list. The list was then distributed to graduate students whose research involved intercollegiate athletics and academic support services (N=2). The individuals were asked to sort the items into team dynamics, confidence level, and learning experience. Items were considered appropriate if both raters linked them with the specific content area. In this instance, no items were removed from the instrument.

### ***Data Analysis***

Microsoft Excel was used to create the bar charts. IBM SPSS statistics, version 21.0 was used to calculate the descriptive statistics. Descriptive statistics from the survey instrument were presented in tables. Median and mode were the best measures of central tendency and variability because the survey questions were viewed at the individual item level. The qualitative portions were reviewed by the researchers to classify the relevant responses into a list using simple descriptive qualitative survey methodology.

### ***Findings***

The demographic profiles of the participants can be viewed in Table 1. In addition to collecting the participants’ demographic information, the student-athletes were asked if they had ever served as a coach. Fourteen of the student-athletes reported having prior coaching experience while three had no coaching experience. One student-athlete did not answer this question.

The following discussion will present the findings in relation to the research question; what were the student-athletes’ perceptions of the peer coaching experience? In particular, each section will discuss the findings specific to the three embedded research questions.

Frequency			
Population	18	College Classification	
Age		Freshman	8
18	8	Sophomore	5
19	3	Junior	2
20	3	Senior	3
21	3	Post Baccalaureate	----
22	1		
Race		Transfer	
White/Caucasian	14	Started Here	18
African American	2	Started Elsewhere	----
Asian	----		
Hispanic	----	Cumulative GPA	
Pacific Islander	----	4.0-3.5	5
Native American	----	3.49-3.0	9
Other	2	2.99-2.5	3
		2.49-2.0	1
Major		1.99-1.5	----
Athletic Training	3	1.49-1.0	----
Biotechnology	1	Below .99	----
Business Admin.	1		
Education	5		
Physiology & Health Sci.	3		
Healthcare Admin.	1		
Political Science	1		
Psychology	2		
Spanish & Psychology	1		

**Table 1: Student-Athlete Demographic Profiles**

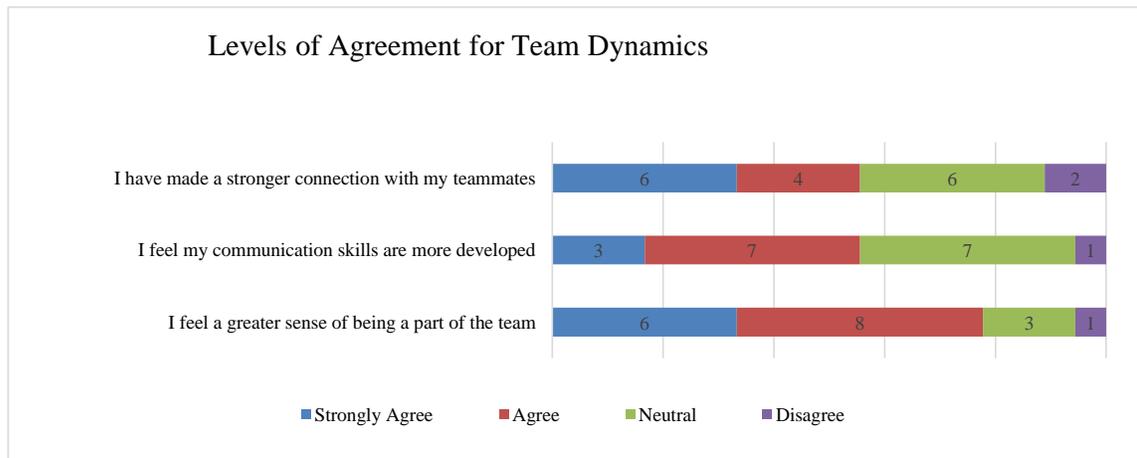
The study set out to determine, as a result of the peer coaching experience: do student-athletes build a closer relationship with teammates? In order to answer the first research question, descriptive statistics were run on the team dynamics portion of the research instrument. Scores ranged from 1 (indicating *strongly agree*) to 5 (indicating *strongly disagree*). The mode and median of each item can be found in Table 2. The mean score of this scale was not produced because the researchers analyzed the individual items.

	<i>N</i>	Mode	Median
Team Dynamics	18	---	---
As a result of my peer coaching experience:			
I have made a stronger connection with my teammates.	18	1a	2
I feel my communication skills are more developed.	18	2a	2
I feel a greater sense of being a part of the team.	18	2	2

*Note: a = multiple modes exist, the smallest value is shown*

**Table 2: Student-Athlete Summary Statistics for Team Dynamics**

The peer mentoring initiative positively contributed to team dynamics. Participants most often reported agreeing that peer coaching helped them feel a greater sense of being a part of the team, developed their communication skills, and contributed to developing a stronger connection with their teammates (see figure 2). Six student-athletes strongly agreed and four agreed, respectively, that their peer coaching experience helped to develop a stronger connection with their teammates, representing the greatest level of agreement of the respondents to peer coaching’s contribution to team dynamics.



**Figure 2: Levels of agreement for team dynamics**

Through open-ended survey query, the student-athletes were asked how they prepared for their peer coaching session. At the outset of the planning stages, the participants commonly (11 of 18) reported discussing with their co-facilitator (teammates) aspects of the team’s performance that needed improvement, for instance:

*I talked with my fellow peers about what the team needed to work on and what drills would help improve skills that needed work.*

Once weaknesses were identified, the respondents reported developing a peer coaching session with drills to facilitate development in their self-diagnosed team weaknesses. The participants' responses suggested peer coaching engaged athletes to conduct realistic self-appraisal. Realistic self-appraisal is the ability to assess one's strengths and weaknesses, allowing for self-development (Sedlacek, 2004). Sedlacek's (2004) extensive research on non-cognitive variables, suggests engaging in realistic self-appraisal is a predictor of success. The results suggested the peer coaching initiative created an opportunity for student-athletes to engage in developmental practices associated with successful outcomes. Engaging in self-appraisal practices with their peers through the coaching initiative provided an outlet for self-appraisal from not only an individual standpoint, but also from a team standpoint. The results suggested these practices, and thus peer coaching, can contribute to greater team dynamics. In particular, the majority of respondents, 14 of 18, reported a greater sense of being part of a team as a result of peer coaching.

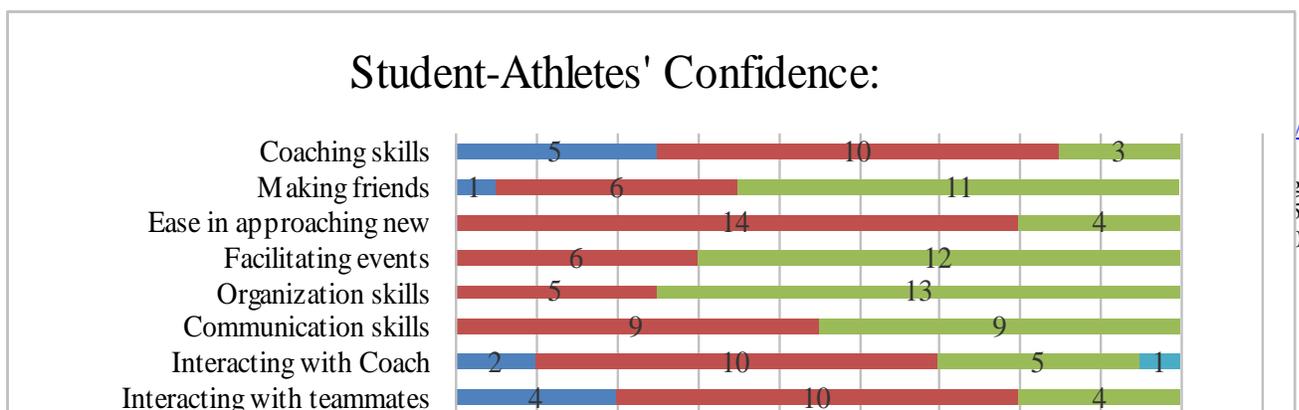
The second embedded research question examined whether student-athletes' confidence levels increased as a result of the peer coaching experience. Again, descriptive statistics were run on the confidence level portion of the questionnaire. Scores ranged from 1 (*significantly increased*) to 5 (*significantly decreased*) indicating the respondents' level of confidence. The mode and median of each item can be found in Table 3.

	N	Mode	Median
Confidence Level	18	---	---
Coaching Skills	18	2	2
Making Friends	18	3	3
Ease in Approaching New Situations	18	2	2
Facilitating Events	18	3	3
Organizational Skills	18	3	3
Communication Skills	18	2a	2.5
My confidence in interacting with my coach has..	18	2	2
My confidence in interacting with my teammates has..	18	2	2
My confidence about my lacrosse skills has.....	18	3	3
My confidence about my lacrosse knowledge has...	18	2	2

Note: a = multiple modes exist, the smallest value is shown

**Table 3: Student-Athlete Summary Statistics for Confidence Items**

The respondents reported increased levels of confidence as a result of being a peer coach for five of the ten survey questions pertaining to confidence levels. The participants most often reported increased levels of confidence regarding their coaching skills, ease in approaching new situations, lacrosse knowledge, interacting with their teammates, and interacting with their coaches (see figure 3). The majority of participants were "neutral" regarding their confidence level when responding to the following questions: making friends, facilitating events, organizational skills, and lacrosse skills. Interestingly, one participant's confidence level regarding their confidence in interacting with a coach significantly decreased.



### Figure 3: Level of agreement with confidence items

Participants were asked in an open-ended format to discuss their concerns of coaching a practice session. The majority of respondents expressed no concerns emerged from engaging in a peer coaching session. One respondent reported:

*People were worried that their teammates wouldn't like their drills or that they would involve too much conditioning but I reassured them that it's their day to run things, so run it how you think is best.*

Fourteen of the 18 respondents explicitly stated “no worries” emerged as a result of conducting a peer coaching session. Further, the majority of the respondents, 13 of 18, reported feeling excited about the opportunity to engage in the peer coaching experience. Twelve of the 18 participants specifically included the word “excited” within their response. Beyond excitement for the opportunity to conduct a coaching session, the results suggested the student-athletes felt empowered to engage in such a leadership role, however, did express notions of nervousness.

When reflecting back on their peer coaching experience, the majority of respondents, 14 of 18, reported feeling a sense of empowerment when leading their session. The findings suggested the peer coaching initiative provided a leadership experience for the student-athletes. Depending on the athlete and their position within the leadership dynamics of the team, the initiative provided a dichotomous outcome experience. In one respect, peer coaching provided additional leadership opportunities for the leaders on the team. While for non-leaders, the experience offered a unique opportunity to lead.

When participants were asked to compare their expectations prior to conducting a peer coaching session to their lived experience of conducting the initiative, two-thirds of the respondents reported their experience from peer coaching met their expectations. The remaining one-third of the respondents suggested either their experience did not, or somewhat met their expectations. Overall, the findings suggested the majority of student-athletes regarded the initiative as non-intrusive, and positively contributed to their confidence levels.

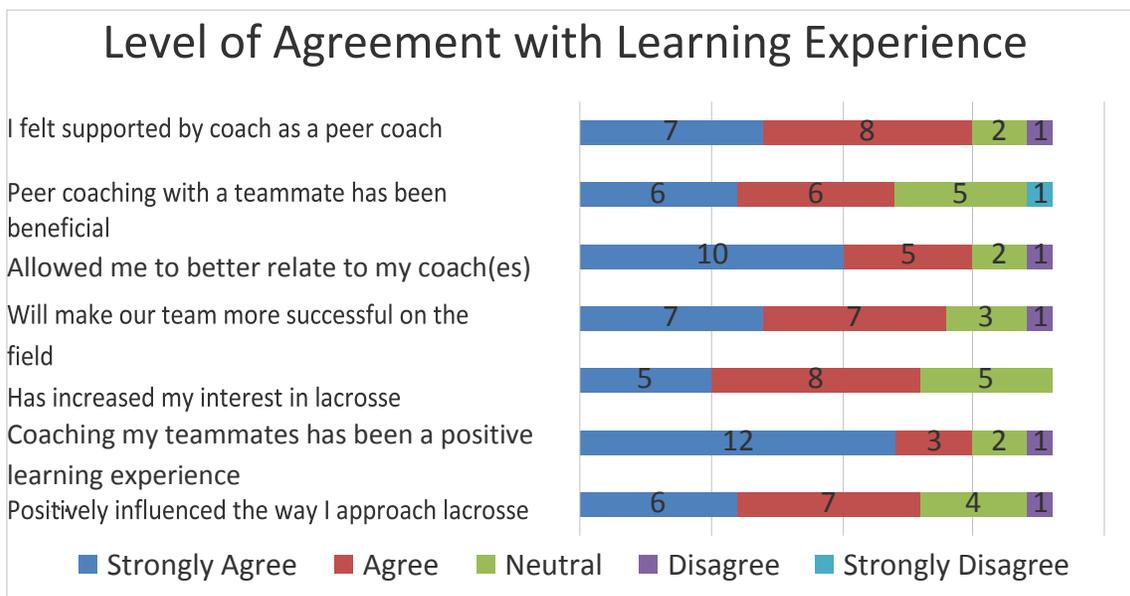
The third embedded research question was created to ascertain if participating in the peer coaching experience was a valuable learning experience? Descriptive statistics were run on the learning experience portion of the questionnaire. Scores ranged from 1 (indicating *strongly agree*) to 5 (indicating *strongly disagree*). The mode and median of each item can be found in Table 4.

	<i>N</i>	Mode	Median
Learning Experience	18	---	---
I felt supported by coach as a peer coach.	18	2	2.5
Peer coaching with a teammate has been beneficial	18	1a	2
Allows me to better relate to my coach (es)	18	1	1
Will make our team more successful on the field	18	1a	2
Has increased my interest in lacrosse	18	2	2
Coaching my teammates has been a positive learning experience	18	1	1
Positively influenced the way I approach lacrosse	18	2	2

*Note: a = multiple modes exist, the smallest value is shown*

**Table 4: Student-Athlete Summary Statistics for Learning Experience**

In aggregate, the results suggested the peer coaching initiative was a valuable learning experience. The participants most often reported strongly agree or agree to each of the seven learning experience survey questions (see figure 4). The student-athletes strongly agreed that coaching their teammates had been a positive learning experience and it allowed them to better relate to their coaches as a result of engaging in peer coaching.



**Figure 4: Level of agreement with learning experiences**

The student-athletes most often agreed that engaging in peer coaching positively influenced the way they approached lacrosse and increased their interest in lacrosse. Additionally, the respondents reported feeling supported by the head coach during their peer coaching session.

Two of the questions resulted in multiple modes of *strongly agree* and *agree*. Although there existed multiple modes both resulted in positive outcomes. Participants most often strongly agreed or agreed that peer coaching has made their team more successful on the field and peer coaching with a teammate was beneficial. Transcription of the open-ended questions revealed the respondents strong recommendation to use peer coaching in the future. One student-athlete stated:

*You get a much greater respect for your coach and you get a much better idea of what your team lacks and is good at.*

An additional comment from a second student-athlete was:

*I think it allowed for us to grow and when we coached, we were able to see things we normally wouldn't on the field playing.*

This suggests the peer coaching initiative provided a new perspective for the players. The initiative positively contributed to players' understanding of practice from the coach's standpoint, allowed non-leaders amongst the team to act in leadership roles, and closed the gap between their coaches' and their own perception of the team's strengths and weaknesses.

The student-athletes were asked whether there was anything that wasn't included in the peer coaching session that they felt would have benefited their team. Thirteen of the 18 respondents reported there wasn't anything omitted from the peer coaching sessions which should have been added to benefit the team. However, the results suggested the respondents would change the time allocation of their peer coaching session. The student-athletes would alter the time management of their sessions had they conducted the coaching session again. Overall, from the closed and open-ended questions, the results suggested peer coaching provided a positive learning experience for the student-athletes.

## **Discussion and Implications**

The intent of this exploratory study was to develop a line of research seeking to understand the contributions of engaging student-athletes in a peer coaching initiative. The paper makes three distinct contributions to the existing knowledge of peer coaching. First, we implemented a peer coaching model to a population of subjects who have not been previously studied according to the existing literature (i.e., NCAA participating student-athletes). Second, we introduced the peer coaching model within the collegiate athletic environment which has not been studied prior. Third, the findings suggest peer coaching can be successful across groups and within various environmental contexts.

Specifically, peer coaching positively contributed to team dynamics, increased the student-athletes confidence levels, and was a valuable learning experience. These findings closely paralleled existing peer coaching research (Ackland, 1991; Joyce & Showers, 2002; Ladyshevsky, Baker, & Jones, 2001; Ladyshevsky & Varey, 2005; van Nieuwerburgh & Tong, 2013; Zeus & Skiffington, 2000). However, our findings suggest peer coaching can provide positive impacts in a collegiate athletic setting, which expands beyond the educational, corporate, and healthcare environments.

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## ***Team Dynamics***

Coaches can engage their athletes in a wide array of activities to foster a sense of community within their team. The findings of our research suggest peer coaching can serve as an impactful initiative for developing better team relationships. Peer coaching can contribute to developing a stronger connection between teammates and can create a greater sense of belonging to the team. The findings could be particularly helpful for coaches and athletic administrators seeking to develop a greater sense of their athletes' ownership and "buy-in" to the program.

Unlike other peer education research (Lockspeiser, O'Sullivan, Teherani, & Muller, 2008; Munley, Garvey & McConnell, 2010; Wawrzynski, LoConte, & Straker, 2011), our findings are unique, in that, each athlete participated in the initiative, regardless of age, class-level, or leadership position on the team. The findings support research that found college peers can have a positive impact on each other (Astin, 1993; Kuh, 1993; Boyle, Mattern, Lassiter & Ritzler, 2011; Catanzarite & Robinson, 2013; Lockspeiser, O'Sullivan, Teherani, & Muller, 2008; Newton & Ender, 2010; Pascarella and Terenzini, 2005; van Nieuwerburgh & Tong, 2013; Whitt, Edison, Pascarella, Nora, & Terenzini, 1999). As coaches consider implementing this model, they should realize that peer coaching could serve as an instrument to diminish barriers that traditionally may hinder team bonding such as age and college classification (freshman, sophomore, junior, senior, post graduate). Additionally, peer coaching can result in the student-athlete conducting realistic self-appraisal of self and team that which parallels findings from the peer coaching literature (Showers & Joyce, 1996; Ladyshevsky, Baker, & Jones, 2001; Ladyshevsky & Varey, 2005; van Nieuwerburgh and Tong, 2013; Zeus & Skiffington, 2000). Research investigating self-appraisal has also been found to be an excellent non-cognitive predictor of success within higher education literature (Sedlecek, 2004).

## ***Confidence***

Beyond the positive contributions to team dynamics, peer coaching increased the confidence levels of the student-athletes. Green, Grant, & Rynsaardt (2007) found similar benefits to coaching high school seniors in the educational setting. Our findings suggest there are positive benefits from peer coaching beyond the secondary educational level by expanding to a postsecondary athletic setting. It was found that engaging in a peer coaching initiative positively contributed to the student-athletes' confidence in their coaching skills, their ability to interact with their coaching staff, their ability to interact with their teammates, and their sport knowledge. Outside the athletic realm, a small percentage of the student-athletes reported an increase in confidence levels in the following areas: making friends, facilitating events, and organization skills. This finding suggests the confidence level increases were particularly relevant within the athletic environment. However, it should be noted that positive responses to increases in confidence existed for the measure of *ease in approaching new situations*.

It is not surprising that the student-athletes indicated their confidence levels increased from participation in the peer coaching initiative. This finding is in agreement with van Nieuwerburgh & Tong (2013) study which reported increased confidence levels for student coaches within an academic setting. Wawrzynski, LoConte, and Straker (2011) study found similar outcomes when investigating the impact of peer education on self-confidence. Sommers (2013) also found self-confidence increased by participating as a peer coaching facilitator in an initiative for undergraduate students coaching their peers through mental health issues. Coaches and athletic administrators should recognize the positive impact of the peer coaching initiative on confidence levels and consider adopting use of the model in intercollegiate athletics.

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## ***Learning Experience***

Freire (1970) discusses the “banking concept” in education in which a teacher and/or professor deposits information into students as if they were “empty accounts” hungry for growth. Utilizing this peer coaching model, one could simply replace the teacher/faculty member with a head coach, and the student, with a student-athlete. Freire (1970) was opposed to the banking concept and felt that this type of instruction could lead to “dehumanization of students and teachers” which in return could inhibit learning. Hence, this argument may transfer into traditional coaching strategies where the dehumanization of the student-athlete and the coach can occur.

In response to Freire’s critique, it is suggested that coaches seek a more mutual approach to learning in which students and coaches seek to understand each other (Freire, 1970). The results from our study suggest peer coaching provides an avenue for student-athletes to engage in a mutual approach to developing their athletic skill-set and preparing for athletic competition. While traditional university classrooms do not often lend themselves to this type of learning, athletic competition and practice could be an excellent way to exchange information by which both the student-athlete and the coach could benefit. In order for this type of practice to occur, dialogue between the student-athlete and the coach must exist. More often than not, the coach will need to initiate this type of dialogue. As the findings indicate, the peer coaching model requires communication between student-athlete and coach prior to completing the session. This creates an environment in which dialogic encounters in the future are more than likely to occur amongst students-athletes and coaches which in return may create positive learning experiences.

The peer coaching model provides a framework for student-athletes to engage in role differentiation within their team. The initiative was a positive learning experience that allowed the athletes to better relate to their coaches, develop their sport knowledge, increase interaction with teammates and develop a greater confidence to approaching new situations. The model engages athletes in both leadership and followership roles. This is contrary to the traditional coaching model where authority is unidirectional from the coach to the players such that the players traditionally only are engaging in followership roles. Our results suggest that by engaging in dichotomous levels of authority, that of both coach and player, the student-athlete is provided the opportunity to experience their sport and teammates from new perspectives. The differentiated perspectives provided learning and team bonding opportunities and increased levels of self-confidence beyond what the traditional coaching model offers to its athletes. It was consistent with van Nieuwerburgh & Tong (2013) reported results that indicated student perspective-taking skills had improved because of a peer coaching initiative.

The peer coaching framework created an opportunity for the student-athletes to better relate to their coaching staff. As an exploratory study, our results cannot decipher the specific benefits that derived from an athlete’s ability to better relate to their coaches. However, the findings suggest the model is providing an experience that differs from the traditional coaching model. By engaging in peer coaching, the student-athlete is provided the opportunity to engage in an experiential opportunity that contributed to a mutual understanding of the coaches’ perspective. This framework is congruent with Freire’s call for a shared learning experience by the coach and the coached.

## **Conclusion**

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Peer coaching in collegiate athletics can positively contribute to a student-athlete's experience by providing student-athletes benefits beyond the traditional athletic experience. The initiative provided personal development benefits, increased player-to-player and player-to-coach interactions, encouraged reflective ideas and increased self-confidence. The benefits gained from peer coaching suggest the experience positively contributed to the student-athletes' athletic experience and thus, positively contributed to their collegiate experience. The overall benefits reported by the participants suggested the initiative could have adaptive potential in other athletic programs. These findings have broad implications for the following reasons: (1) the proposed peer coaching model was unique and found to be successful in an athletic setting; (2) the findings support previous peer coaching research that was found to be successful among different populations and within different environments; (3) the model is student-centered which allowed the researcher to build off of previous peer education work that explores the benefits of coaching.

## **Limitations**

This study was limited to the student-athletes within a single institution. The authors realize that surveying members of one athletic team clusters the results by region, institution type, and NCAA athletic division, which can add to measurement error. The uniqueness of the institution does not allow the study to be representative of all NCAA Division III student-athlete perceptions. The study's participants were representative of one sanctioned NCAA sport and represents only female perceptions of a peer coaching experience. Results could vary depending on the sport and gender for which the intervention is administered. Care must be exercised in interpreting the results and adopting the peer coaching strategy at other institutions.

An additional limitation is the response bias in survey research. Voluntary participation can lead to extreme responses that may not reflect the student-athlete's actual perception. Due to the limited sample size, the authors were not able to run the appropriate statistical techniques used to analyze the validity and reliability of the survey instrument (i.e., using item response or classical test theory). The responses to the open-ended and closed-ended questions were self-reported and therefore it is possible for the student to provide false information. Given the variation in previous coaching experiences (i.e., three student-athletes reported no previous experience) the scope of our study failed to measure the type of training received and the quality of coaching that took place prior to engaging in the peer coaching initiative. Finally, it should be noted that this study was exploratory in nature and the survey should not be treated as a scale.

## **Future Research**

As an exploratory study, we have introduced a concept adopted from the educational and corporate worlds. Given that the peer coaching initiative aligns with research that student peer groups are the single most influential source of growth for undergraduate students, further research needs to be conducted on peer coaching. Future research should include implementing the initiative for sports beyond lacrosse and include male athletes. The research should focus on individual components of peer coaching. Such an analysis would begin to develop an understanding with greater depth of the components of peer coaching that are most beneficial to the student-athletes' development. Future research could investigate the traditional coaches' perception of the peer coaching initiative.

It was our intent to begin a line of inquiry that not only contributes to the experience of collegiate athletes, but also to the overall experience and success of undergraduate students. We hope our line of inquiry will be

further researched within the athletic realm, but also implemented into the academic sector of higher education.

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