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# Exploring the Conceptualizations and Utilizations of Learning Theories in Sport Settings

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## ABSTRACT

The purpose of this study was to identify how integrating learning theories into the design of a formal university course helps facilitate students' resources, goals, and orientations (Schoenfeld, 2011) of learning theories for their future career work in coaching, sport psychology consulting, or other sport-related professions. Sixteen students signed up for a fifteen-week fall semester course at a Mid-Atlantic university in America and were asked to annotate, create, and reflect upon examples of future work in their desired fields for their three major written assignments in the course. Students reflected on their learning experience through pre-and-post semi-structured interviews and most stated that they benefitted from the way the course was designed with learning theories in mind and that it helped their understanding and application of learning theories. Results showed large increases in resources associated with learning theories, changes in goals from being ego-centric to learner-centric and shifts in orientations to recognize how helpful learning theories could be to participants' future careers. Future directions include increasing the number of face-to-face meetings each week, making this course available for Master's level students, and improving clarity around the definition of orientations shared with participants from Schoenfeld's (2011) framework. Practical implications include adding learning theories courses to sport-related programs which could increase the quality of the work that coaches, sport psychology consultants, and other sport-related professionals will engage in with their athletes after taking a learning theories course.

Keywords:

Learning theories, sport psychology, coaching, education

## 1. Introduction

Learning is often at the core of many daily activities and largely goes unnoticed or done without awareness or intention (Rumelhart, 1980). Most current research on learning theories resides within the field of education and is used to guide actions related to how individuals acquire new skills, knowledge, and attitudes (Wang, 2012, p. 5). Drawing from the field of education, learning theories became more prevalently researched after the turn of the 21<sup>st</sup> century in the fields of sport coaching (Cushion et al., 2010) and sport psychology (Barker-Ruchti et al., 2016). Aspiring sport-related professionals can utilize learning theories when developing practices, training sessions, or mental skills sessions by focusing beyond the content of the sport or mental skill, and more on how the concept is introduced and transferred to usable knowledge for the athlete. This relates to Shulman's (1986) work of identifying the differences between content knowledge (what one knows)

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and pedagogical knowledge (how to teach that knowledge) and may differ depending on one's previous experience, education, or role. Implementing learning theories from educational psychology can help sport-related professionals develop pedagogical skills to help athletes learn (Barker-Ruchti et al., 2016).

### **1.1 Learning Theories in Sport-Related Professions**

At their core, learning theories can be helpful tools to enhance the quality of communication and interaction between sport-related professionals and their athletes. Learning theories can be used by instructors to focus their attention on how their athletes learn in an attempt to better convey information in a manner that is most likely to result in learning and skill improvement. In the professions of sport coaching and sport psychology, learning theories have received differing amounts of attention. For sport coaching, as demands on sport coaches increase, so have the number of coaches who have made coaching their full-time profession. To help coaches draw upon more than just their own personal experience (Lou et al., 2023), learning theories could help coaches provide the best learning environments for their athletes and enhance their training.

In previous literature, researchers have explored which learning theories would be useful in the coaching realm. Bowes and Jones (2006) discussed scaffolding, first introduced as an educational concept by Vygotsky (1978), as one theory that could benefit coaches in their work as reflective facilitators to make sense of their own and other's actions. Learning theories help provide a theoretical basis to help facilitate information and learning for athletes. Although some current research on learning theories in coaching exists, researchers contend that coach learning research is insubstantial and coach education could be bettered by incorporating more learning theories into formal coursework.

In contrast, the field of sport psychology has few studies that examine the application of learning theories to sport psychology instruction. Current collegiate sport psychology courses typically specialize in teaching students specific sport psychology theories which include theories focusing on motivation, self-confidence, anxiety and arousal, attribution theory, anxiety, goal setting, attentional focus, relaxation, imagery, routines, and others. One notable example is Gilbert (2007), who recommended using a 12-week sport psychology curriculum called UNIFORM which emphasized goal setting, imagery, relaxation, and routines. The course was developed in a regimented way to teach sport psychology theories and the researcher recommended a game-plan format that helped make sport psychology concepts more applicable for coaches to use when working with teams. Similar courses designed to teach educational learning theories to aspiring applied sport psychology professionals would be a recommended ideal next step.

In another sport psychology course, Kraft and colleagues (2021) asked participants through semi-structured interviews to reflect upon what was helpful to their learning experience. The researchers found that reflection and experiential learning theory were most helpful to the overall graduate sport psychology program experience. Outside of a few research studies, future recommendations have emphasized the importance of continued research in mental skills instruction that incorporates the use of learning theories (Barker-Ruchti et al., 2016). Across the sport psychology and sport coaching fields, some initial research has been conducted, however, more research is needed to identify the impact of using learning theories in practice. Such information would help to design formal coursework to effectively train aspiring professionals in these fields.

### **1.2 Learning Theories in Formal Sport-Related Course Settings**

Although some initial studies have explored the use of learning theories in sport-related course design, coach education remains inconsistent. Coaches typically gain knowledge through formal (courses, certifications), informal (personal experience, social interactions), and semi-formal (clinics, seminars) settings. However, in the U.S., only one in three youth sport coaches receive training in sport skills or tactics, and fewer than one in five are trained in effective communication (Fawver et al., 2020). Most coaching roles do not require specific education or certification, and mandated training, when present, is usually limited to safety protocols, varying by state and league. Cushion et al. (2010) noted that formal learning often overwhelms coaches and lacks practical relevance, with few studies examining how formal education influences coach development. These gaps highlight the need for structured learning theory courses focused on how people learn within sport-related academic programs.

Sport psychology researchers have recommended that more focus be placed upon learning theories in the sport performance literature and that formal course settings could be improved by offering opportunities to

directly apply the theories learned (Barker-Ruchti et al., 2016). Sato and Laughlin (2018) implemented Kolb's experiential learning theory to teach sport psychology theories to nine students using weekly golf-putting tournaments to create sport psychology-based learning situations throughout the course. After the 15-week course, the authors found that experiential learning was helpful in teaching students about sport psychology theories like goal setting and imagery. The researchers recommended instructors be more flexible by including more learning theories when teaching sport psychology. Other research has looked at structuring weekly coursework to teach in a formal setting as well. One such study utilized the implementation of a 15-week course focused on sport psychology theories (Aoyagi, 2013). The instructor recommended future courses focus on just one theory a week instead of trying to fit many theories in at a time. However, no other studies have focused on learning theories being implemented both into the course design while also being the main course content to improve athlete learning. Due to the benefits of implementing learning theories into the classroom on learning and application seen in other fields, it would be beneficial for sport coaching and sport psychology research to explore how learning theories related coursework could help improve the training of future professionals and move the fields forward. To address these gaps in the literature, this study provided aspiring sport professionals with a formal university introductory course designed by learning theories to help novice practitioners use learning theories in their future work with athletes.

### 1.3 Essential Framework for Study

Two studies from the field of education were used to frame the current study. The first study, conducted by Schoenfeld (2011), researched teachers' abilities to make decisions while teaching in the classroom. Through this study, Schoenfeld identified that teachers relied on their resources, goals, and orientations while teaching. When referring to resources, Schoenfeld defined resources as, "his or her knowledge, but also the social and material resources that are available to him or her" (p. 459). This also includes the "knowledge inventory that he or she can potentially bring to bear in a teaching situation" (p. 459). Goals are defined as "things that people consciously or unconsciously set out to achieve" and help the decision-making process as "decision making can be seen as the selection of goals consistent with the teacher's resources and orientations." Schoenfeld defines orientations as "beliefs, values, preferences, and tastes" (Schoenfeld, 2011, p. 460). These three categories help provide a framework through which students' learning will be assessed in this study. Bloom's (1956) taxonomy is the second framework being used to frame the current study. Within this framework, the stages of learning are described as remembering, understanding, applying, analyzing, evaluating, and creating. This is a very commonly used framework for understanding learning in educational settings and this framework was used in this study to identify how learning could be measured with aspiring sport professionals.

### 1.4 Research Questions

The purpose of the current study is to identify how learning theories utilized in the design of a formal course impacts students' resources, orientations, and goals for their future career work in sport-related professions. To be clear, the aim of this study is not to identify or prescribe particular learning theories to use over others, but to provide sport-related professionals with an understanding of how people learn and implement learning theories into practice. This study will aim to answer the following research questions: 1) How did students' resources change over the span of the course for engaging in their work? 2) How did students' goals change over the span of the course for engaging in their work? 3) How did the students' orientations change over the span of the course for engaging in their work?

## 2. Methods

### 2.1 Design

This qualitative study utilized a descriptive single case study design (Baxter & Jack, 2008). The single case in this study focused on a learning theories course offered for fifteen weeks at a kinesiology-based Mid-Atlantic university during the fall semester of 2022. The case study approach offered the ability to chronicle the instructional design of the course, pedagogical decisions made throughout the course, and the students' learning experience within the course. The descriptive case study design also lent itself to answering "how" questions and being able to describe the intervention in the real-life context in which it occurred (Baxter & Jack, 2008).

## **2.2 Positionality of the Research Team**

The lead author served as both the course instructor and primary researcher. This dual role presents opportunities for deep insight, but also risks related to bias and overidentification with participants' perspectives. As the main instructor and researcher of this study, the lead researcher accounted for his insider positionality by engaging in reflexive journaling to establish transparency and trustworthiness. A single-blind consenting process was also utilized to help eliminate any knowledge of which participants were involved in the research study from the instructor so as not to have an impact upon grading. Multiple sources of data were used for triangulation, including student reflections, interview transcripts, and course artifacts. Additionally, to mitigate potential biases, data analysis was conducted independently by co-researchers who were not involved in course instruction. The second author was a fourth-year Ph.D. student in educational theory and practice who served as a critical friend in the data analyses, bringing perspectives that were distinct from the other researchers. The third author was a senior undergraduate student who helped transcribe interviews and provided support as a critical friend during data analysis. The fourth author is an associate professor in the School of Education who served as a critical friend and mentor of the qualitative framing of the study.

## **2.3 Setting and Procedures**

The course ran once a week for 15 weeks in a hybrid format where readings, interviews, and assignments were distributed and completed online while lectures were conducted in person weekly. Participants were recruited via convenience sampling and were provided with all information about the course and its requirements in a syllabus and students were given an opportunity to opt out of the study or drop the course on the first day. The in-person class lasted two hours weekly and allowed students to engage with the material and provided students with an opportunity to share with one another and how they foresaw using learning theories in their work. The course was adapted from a previously taught Educational Psychology course that was used to teach learning theories to aspiring undergraduate teacher candidates in an education program.

## **2.4 Participants**

There were sixteen undergraduate students in the course, with each of the students majoring or minoring in sport and exercise psychology. Of the sixteen students, one's future professional aspirations included being a university professor and another a physical therapist. These students were treated as outliers. Two other students did not complete all the work necessary and were left out of the final participant group of twelve. In total, six students with aspirations of working in coaching and six students with aspirations of working in sport psychology were included in the study (Table 1). To participate in this study, participants needed to: (1) be enrolled in this special topic course, (2) have interest in working in either the coaching or sport psychology profession, (3) be at least 18 years old, and (4) have completed all work required in the course. Screening for the course occurred during the enrollment process as students expressed interest, demonstrated they met the criteria, and understood the goals of the class.

## **2.5 Data Collection Instruments**

The main three assessments from the course occurred throughout the semester. The three assessments included 1) an annotation of an example utilized within their aspiring profession that uses learning theories, 2) a created artifact implemented with a group of athletes or with other students as athletes during class, and 3) a reflection of participants' resources, goals, and orientations of learning theories while implementing their created artifact using learning theories. These written summative assessments were graded according to a rubric that assessed the participants' abilities to identify or use learning theories, its disciplinary authenticity, responsiveness to athletes, ability to be athlete-focused, and amount of detail.

## **2.6 Individual Interviews**

Two semi-structured interviews were conducted with each student, one at the beginning and another at the end of the course, to provide the most efficient use of time. The semi-structured interviews asked questions flexibly while gathering specific data for previously prepared questions but did not have a predetermined order (Merriam & Tisdell, 2016). Due to the nature of developed relationships over the course of the semester and insider orientation as the instructor, the inclusion of a research team and critical friends with varying backgrounds helped build trustworthiness in the process. The initial semi-structured interview served to

understand the participant's history, collect demographic information, student's aspiring career goals, and their experiences working with athletes. This initial interview helped build rapport with students as these interviews occurred over the first week of class. The second interview occurred during the last week of the course and operated as an evaluation of students' overall learning in the course. The semi-structured interview recounted students' experiences within the course, identified which learning theories they found most applicable to their future career, and identified future settings where they may use learning theories.

## 2.7 Quantitative objective self-report scales in interviews

Additionally, as a part of this case study, participants were asked to create objective self-reports in both the beginning interview and end of class interview. Participants were asked to assess their understanding of learning theories on a scale of 1-10 at the time. During the second interview participants watched a 3-minute video clip of how they answered the same question during their first interview prior to answering this question. Answers were included in Table 1.

**Table 1.** *Participant Demographics*

| Participant "Name" | Year | Gender | Group | Ideal Future Career Goals                                 | Majors                            | Minors?                                                        | Knowledge Change |
|--------------------|------|--------|-------|-----------------------------------------------------------|-----------------------------------|----------------------------------------------------------------|------------------|
| P3 (Nina)          | S    | F      | SP    | CMPC & Master's in Counseling (University Sport Setting)  | Sport Psych                       | Scholastic Coaching, Human Services & Counseling (2)           | 0 – 6            |
| P6 (Cathy)         | S    | F      | SP    | Mental Health Counseling for Clients in Pageants          | Sport Psych & Exercise Physiology | None                                                           | 4 – 8.5          |
| P7 (Neil)          | S    | M      | SP    | Applied Sport Psychology Consultant (Cycling)             | Sport Psych                       | Leadership Studies, Professional Sales (2)                     | 3.5 – 7.5        |
| P13 (Elaine)       | S    | F      | SP    | Applied Sport Psychology Consultant (Olympics)            | Sport Psych                       | Nutrition & Food Studies                                       | 0 – 8.5          |
| P15 (Bella)        | S    | F      | SP    | Applied Sport Psychology Consultant (Professional Sport)  | Sport Psych                       | Human Services, Sport Communication, Communication Studies (3) | 2 – 9            |
| P16 (Carlos)       | S    | M      | SP    | Applied Sport Psychology Consultant (Professional Sport)  | Sport Psych                       | None                                                           | 1 – 7.5          |
| P4 (Joe)           | S    | M      | C     | Collegiate College Basketball Coach                       | Athletic Coaching Education       | Strength & Conditioning, Sport Psych, Sport Communication (3)  | 5.5 – 8.5        |
| P5 (Zane)          | S    | M      | C     | Division I Power 5 Football Coach                         | Coaching Performance Sciences     | Strength & Conditioning, Sport Psych (2)                       | 1.5 – 7.5        |
| P8 (Elena)         | S    | F      | C     | Personal Training & Professor                             | Sport Psych                       | Personal Training                                              | 4 – 8            |
| P9 (Eliza)         | S    | F      | C     | Professor & Applied Work with Twirlers                    | Sport Psych                       | Human Services and Addiction Studies                           | 0 – 7            |
| P10 (Trent)        | S    | M      | C     | Director of Player Personnel & Recruiting for DI Football | Athletic Coaching Education       | Sport Psych & Sport Communication (2)                          | 2.5 – 9          |
| P11 (Cade)         | J    | M      | C     | Football Coach (Professional)                             | Sport Psych                       | Sport Coaching, Sport Communication (2)                        | 3.5 – 8.5        |

S = Senior, J = Junior, M = Male, F = Female, SP = Sport Psych, C=Coaching

## 2.8 Data Analyses

Qualitatively, a document analysis process was used to illuminate the experiences of participants shared in the semi-structured interviews and written assignments (Bowen, 2009). The document analysis combed over the instructor logs, semi-structured interviews, and the three major assessments student completed as a part of the course. The main researcher and two critical friends utilized an iterative three-step process for document analysis: skimming, reading, and interpretation, combining elements of both content and thematic analysis (Bowen, 2009).

The analysis of the transcripts and the students' interviews used a three-step process: 1) gaining familiarity, 2) selecting and focusing, and 3) interpreting. After interviews were transcribed verbatim from Zoom, the first step of gaining familiarity included the main researcher and critical friends taking time to read over all transcripts and assignments from each participant. The second step of the analysis included the research team selecting and focusing on parts of the interviews and assignments that were meaningful. Using an inductive approach, the research team read over all the data and then utilized an open coding process to answer the analytic questions. As each interview was coded to address the three research questions of resources, goals, and orientations, there were certain themes that provided meaningful moments of information (Merriam & Tisdell, 2016). The third step included joint interpretation meetings that met weekly to discuss codes and themes gained from step two. Elements of the interview gleaned multiple themes that were tracked and discussed within the research team. The data were analyzed to see how conceptions of learning theories changed over the course of the semester. Using this inductive approach, meaningful units were identified through an interpretive approach.

## 3. Results

To explore the research questions, Schoenfeld's framework of decision making (resources, goals, and orientations; Schoenfeld, 2011) and Bloom's Taxonomy were used to identify the different levels of learning that participants in the course engaged with. Students from the course identified their stage through their responses in an interview or through their written work on their three major assignments.

### 3.1 Increases in Resources

To answer the first research question, the findings indicate a large increase in students' resources or knowledge about learning theories from when they started the course. The findings of the current study suggest that students' ability to interplay with learning theories increased from just being able to remember learning theories to being able to evaluate and create plans as they moved through the course. Three themes that were discovered about students' resources include: (1) students' resources changing from remembering to creating using learning theories; (2) students' increased resources helping provide confidence as a future professional and (3) improved resources helped identify learning theories from other theories.

### 3.2 Remembering to Creating: Changes in Resources through Bloom's Taxonomy

Nina, a senior sport psychology student, who had previous experience with many sport psychology courses, was able to name the sport psychology theory of the inverted U when asked about learning theories. However, during her second interview at the end of the semester, she stated:

*I don't think I learned a learning theory until this class, like [...] I've heard of like schema [...] but I didn't know it was a theory. And, yeah, I know the difference between sports psychology theory and learning theory now.*

This quote demonstrates that after completing the course, Nina was much better able to tell and evaluate the difference between a learning theory and a sport psychology theory. Similarly, Neil, another sport psychology student, also conveyed an increase in resources. When asked about this during his second interview, Neil responded, "being able to see the theories in action. Before that, I had a very academic understanding, and I could probably regurgitate an academic example, but actually getting to see where they would be used in daily life was huge." Neil's understanding changed from a regurgitation, which is oftentimes how college students are evaluated through multiple choice tests, to being able to use his increased understanding of learning theories to create and teach imagery to swimmers whom he conducted his second annotated assignment with.

These increases in resources were conveyed not only during interviews, but also through student writing assignments that asked students to annotate, create, and analyze an artifact in their future career field. In an annotation associated with her created artifact, Bella wrote:

*A major part of pedagogical knowledge is knowing students' zone of proximal development, which is where individual students fall on a learning continuum for a particular task. My students are in the zone of proximal development throughout the entire lesson [...]. Different levels of scaffolding are shown throughout the lesson, as I teach the students what attentional focus is and guide them to improve and induce attentional focus. They are not out of the zone of proximal development until learners elicit articulation [and] their understanding.*

This quote demonstrated that Bella not only understood various learning theories gained from the course but was able to apply what she had learned to a sport psychology session on attentional focus. With this understanding and awareness of her learners' zones of proximal development, Bella was able to do a better job of creating and implementing a plan that actively bolstered her athletes' learning.

### 3.3 Changes in Resources Helped Improve Confidence as a Future Professional

Students came into the course with different levels of previous knowledge, which was important for the course design to be responsive to. Bella, a sport-psychology student, shared how she used behaviorism while working at a daycare where they would reward children based on their behavior. Naturally, with younger children, behaviorism can be a default learning theory to use. As a result of the course, Bella gained self-efficacy and confidence in her ability to work in the sport psychology field as she described that she now knows how to explain theories to others. Specifically, she explained her increased confidence compared to the start of the semester when she only had subject matter knowledge. After this course, she believed she had the ability to teach, present, or explain what she knows to athletes better than before.

Joe, a coaching student, seemed to have come in with more initial resources. In the initial interview, Joe succinctly described the concept of scaffolding as something that he did in his coaching:

*One thing I've always loved to do in my practice plans when you're doing a drill is a progression model. I think if you just start with the basic form, you can get more complex as time goes on. So basically, just starting where it's easy and where everybody can understand it, and then moving on to making it more complex. If you're doing a dribbling drill, start out with the simple form of it and then start to add more combinations to it.*

It is evident that Joe entered the course with some baseline knowledge about learning theories even though he did not explicitly name scaffolding as a theory he knew. As he self-reported in his first interview, on a scale of 1-10, Joe felt like he came in with a quantified knowledge base of 5.5. As he moved through the course, he was able to improve his knowledge base to 8.5 which is evidenced by his response in his third assignment where students were asked to reflect on their created coaching plan:

*For my plan, there was a group of athletes that was struggling with the second portion of the drill in terms of how to move around the cones. The first level of support I offered was demonstration of the actions. The athletes still struggled after this instruction, so the second level of support was slowing down the action. After this, the group athletes showed improvement and could complete the drill successfully without me. Finding the zone in which these athletes felt the most comfortable was paramount to their success in the drill.*

Joe accumulated an understanding of Zone of Proximal Development to add to his incoming knowledge of scaffolding and combined these concepts to change goals while executing his coaching plan. This level of awareness and thoughtfulness during his coaching is an ideal outcome of Joe's understanding of how learning theories could be beneficial and increased his confidence to apply this in future settings.

### 3.4 Changes in Resources Improved Understanding of Learning Theories from other Theories

Eliza, a sport psychology student who had coaching interests, was able to name Self-Determination theory that is commonly used in motivational research but mistook it for a learning theory in her first interview. Through her learning during the course, Eliza articulated in her second interview how she has a changed understanding of learning theories because of the course. Eliza summarizes her change in understanding from going from not even being able to remember the learning theories to now being able to understand how multiple learning theories work together. She had characterized her own self-reported knowledge as

a 0 initially but at the end of the course Eliza perceived that her knowledge had grown to a 7 on a scale of 1-10.

Lastly, in Cade's final written assignment for the course where students were asked to reflect on their changes in learning theories, Cade was able to articulate:

*When designing my plan, the biggest resources that I drew upon were [...] scaffold[ing] the information so that the learners could gradually learn and understand the skill from its very basic to its complex form in a game situation. I found this important, as many of the learners could be from varying skill levels of the sport as a whole, and by starting at its basic and scaffolding towards the more complex concept, it allows for growth as a group regardless of the past understanding and skill level of the sport or concept of this particular skill.*

Cade's description of his growth of understanding of learning theories was evident as he weaved the various learning theories from the class in his description of what helped him when implementing his coaching plan. Additionally, Cade was able to articulate in his second interview:

*I think I had an idea about those concepts, but not the specifics of them, or how to apply them. Specifically, for scaffolding I understood, how the building on top of knowledge, but I didn't understand how to actually make that effective, and what information to utilize when that was kind of important for me to learn and how I can potentially even use that in my future field now.*

Cade articulated the difference between understanding the basics of the concepts of learning theories and being able to apply them and utilize them in the work he wanted to do in his future field. The changes in resources that students experienced also helped shape the goals for learning with athletes.

### 3.5 Goals Changed from Egocentric to Learner-Centric

To answer the second research question, the findings indicated that students were able to change from focusing on what they, as the instructor, were doing (egocentric) compared to what their students were learning or experiencing (learner-centric). As a theme, it was found that students tended to change from worrying about what they were doing or trying to achieve to what the learner was going to be able to take away from either the sport psychology or coaching session. Students' previous experiences and the course helped build their existing content knowledge while the course also helped students increase their pedagogical knowledge (Shulman, 1986) to fit the goals of their future ideal role.

### 3.6 Sport Psychology Group

As Elaine, a sport psychology student, was creating a session plan to help gymnasts work through mental blocks while doing a beam routine, she did a wonderful job of articulating her goals for how the learning theory would impact how she was designing her session plan. Elaine says:

*I wanted to scaffold it up as much as possible because I feel if you start from learning the skill from the basics and get comfortable it will help the athlete feel more comfortable. In my plan I had it organized in levels. As the levels went up, the difficulty did as well. I feel this helped the athlete feel more comfortable doing cartwheels so when they were on the high beam, they would have confidence in their abilities to do a cartwheel. I used scaffolding at the meso-level. Having the plan athlete-focused was my main goal while still asking questions so I could better improve their learning and their abilities to complete the skill.*

When Elaine came into the course, she was only thinking about what to do as the instructor but now, as evidenced by the quote, Elaine was able to explicitly explain how she used scaffolding as a learning theory to help her athletes as they worked through mental blocks.

Similarly, Bella also stated her change in goals for her session plan when creating an attentional focus plan for athletes with physical disabilities. In her third written assignment, she wrote:

*My goal was to prime students with ideas surrounding attentional focus and initiate thoughts on their focus-abilities. The change in my goal, benefitted my lesson and the students because I was able to add more real-life examples outside of sports, which allowed for an easier understanding of attentional focus and created more opportunities for transfer. The theory I structured my lesson plan around was Vygotsky's Scaffolding Theory.*

Furthermore, Bella also talked about how her increased resources in learning theories helped her goals:

*I was able to accomplish this through pedagogical knowledge I gathered on the students before and during the lesson. While implementing the relation to hobbies/interests activity, I thought of Schulman's types of knowledge and the importance of my own pedagogical knowledge. I used it in the moment by asking the bowlers to share their experience with attentional focus while bowling. I then thought of Jonassan's ideas of problem-solving while implementing my plan. I used her theory in the moment by setting up a problem of being unfocused. They then solved the problem through the breathing activity and came to this conclusion through the questions I asked, initiating procedural facilitation.*

In a similar way to how Schoenfeld (2011) described how math teachers make decisions during their teaching to help meet the goals they have set out for a lesson plan, Bella is able to explicitly identify which learning theories she is aware of or is considering when making decisions during her session plan. In Bella's initial interview, she was able to name some overlying categories of learning theories due to the first day of class coming the day beforehand. However, throughout the span of the course, it is evident that Bella was able to internalize her understanding of the theories and think of them in the moment when making decisions about her session plan.

### 3.7 Coaching Group

After Joe created a basketball practice plan, he reflected upon his goal for the session:

*The main idea and goal I had in mind when creating this plan was to effectively teach defensive technical concepts while steadily increasing the complexity of the task at hand. Increasing the complexity of the tasks allows me as a coach to scaffold my athletes' learning and tailor the practice plan to their levels of understanding. Once I, as the coach, am able to analyze and determine where my athletes are the most comfortable, skill wise, then I can start to help them improve. Putting the athletes in a comfortable environment gives them a sense of security.*

Joe talked about his own learning process in the initial interview when he was faced with a question asking about his goals for utilizing learning theories. But as he reflected upon his practice plan, it became clear that Joe was able to think about how his athletes were going to go through the lesson and conceptualize it in a way that was best for them.

Another coaching student, Zane, entered class with some baseline knowledge using a type of coaching method he referred to as the "EDGE method", which included explaining, demonstrating, guiding, and enabling his athletes while coaching them. Zane talked about how important it was for him to recognize a shift in how he was conceptualizing his goals about coaching:

*I think [the course] shifted my mindset from more of what I'm teaching to how I teach it. I just knew that athletes needed to know certain things and I talked about a lot at the beginning of the course, about EDGE. But I didn't think there were all these different learning theories that I could use, that could be applied in different settings that could enhance the athletes learning.*

Zane summarized his takeaways from the course well, shifting from content knowledge to pedagogical knowledge and stated that the course helped provide him with background and knowledge that he could use. Although Zane didn't talk about "in the moment goal shifts" as Bella did, it seems like his shift was more of a global change and outlook upon how learning theories could be better implemented in his future coaching work. Overall, there were large shifts in goals from the beginning of the course to the end for both groups. This demonstrates the change in some students being able to consider what is best for the goals of their students and how imbedding learning theories influenced their decisions and goals when implementing a session plan.

### 3.8 Shift in Orientations

To answer the third research question, the results indicate that students' beliefs, ideas, and attitudes about learning became more robust and more applicable to their future work, regardless of if they were a sport psychology or coaching student. For example, Carlos, a sport psychology student, talked about his beliefs and recognition of how helpful learning theories could be to his future work when he asked about how he would design a session plan after the course:

*Well, designing it now, before I would have, I guess ... put things that I would have thought would be helpful to the athletes and I wouldn't have thought about how they would be learning the things. I think I would have just*

*used my own reference before, but now I can use things like scaffolding, which I think is really helpful when working with athletes, especially youth athletes. I think that's super important, with the skill difference and their schemas, and even the transfer to like when working with youth athletes, the transfer to their like real-life skills.*

Carlos talked about how he used to think about learning and how he might have just relied upon his own experience to reference how to help his athletes. But after going through the course, Carlos recognized that he now has learning theories at his disposal to help him better structure and create an environment that best fits the athletes' learning experience.

Cade also talked about a change in his orientation that was similar to the themes from the goals section. When asked to describe his changes in beliefs about learning in the last interview, Cade shared:

*My beliefs have become more dependent on the learners themselves rather than on the information. I felt that the information was why learning theories were developed, but I changed my stance, and it is about the human interaction that allows information to be passed that learning theories are rooted into.*

Cade shared his change of beliefs in a way that demonstrated how he used to think about learning just about the information rather than being able to focus on the learners themselves. These shifts in orientations helped shape his beliefs, attitudes, and ideas about how useful learning theories could be to the work they do with future athletes as a result of going through the course.

#### **4. Discussion**

This study provided an exploration into the changes in resources, goals, and orientations of learning theories for twelve undergraduate students who completed a fifteen week learning theories course. The findings of this study suggest increased changes in each students' resources about learning theories, their goals about how to use learning theories when conducting their work and change in the usefulness of learning theories in their orientations/beliefs. These changes were seen through the framework of Bloom's taxonomy (1956) and through the explicit and implicit feedback that participants gave throughout the course. This study corroborates the ideas of resources, goals, and orientations as outlined by Schoenfeld (2011) and provides justification for conducting a course like this in other similar career aspiring university programs. Based on the results of this study and the experiences of the students and instructor, the authors believe this helped increase the pedagogical knowledge (Shulman, 1986) of our participants and improved their ability to help their future athletes learn. It is hoped that future learning theory courses for athletic professions could be designed to encourage the integration of learning theories for practitioners to better do their work with athletes.

##### **4.1 Corroborating Previous Research**

This course aimed to introduce students to learning theories, a topic often absent from their other coursework, and to shape how they apply these theories in future practice. The study supports findings from previous 15-week courses in sport-related fields (Mensch & Ennis, 2002) and responds to calls for more research on learning theories in sport coaching (Cushion et al., 2010). It also aligns with prior studies that implemented Kolb's experiential learning theory (Sato & Laughlin, 2018; Aoyagi, 2013), further validating the effectiveness of such courses. Following Aoyagi's (2013) recommendation to cover one theory per week proved beneficial for student learning and course organization. This study contributes to the growing justification for integrating learning theory courses into sport-related university programs, and student feedback affirmed its value for future implementation.

##### **4.2 Parts of the Course that Helped Change Resources, Goals, and Orientations**

This research study helped reinforce the framework presented by Schoenfeld (2011) to inform how teachers or instructors use their resources, goals, and orientations of learning theories when working with learners. This is important for future researchers who may be interested in utilizing Schoenfeld's resources, goals, and orientations framework in their research studies. As for how the students in the course showed or developed such a large increase in their resources (RQ1), goals (RQ2), and orientations (RQ3), students were asked to reflect on their learning during the second interview and provided their feedback on what from the course was most helpful to their learning experience.

Engagement and identity was one of the learning theory research papers provided as reading material for students in the course (Nasir & Hand, 2008) and was a thoughtful part of the instructional design that students reflected was helpful in their increase in resources, goals, and orientations of learning theories. Helping facilitate students' access to the domain of learning theories was an intentional design of the course itself, and students applied their knowledge to their assignments and their future work as professionals. Access to the domain is another key element of Nasir and Hand's (2008) identity and engagement article and was a thoughtful part of the instructional plan. This was accomplished by providing the students with scientific journal articles that could be found in the educational learning literature and although for some it may have been a challenge, it was helpful to provide students with the full opportunity to learn about these theories.

Students, such as Joe, Bella, Cade, Elaine, and Carlos, all recognized how important scaffolding was as a part of the course design to have them move through the different levels of Bloom's taxonomy (1956) and in their own created plan. Scaffolding (Vygotsky, 1978) was also a learning theory that was given as a weekly reading for students to see how it applied to their respective fields. Students were provided two research papers on coaching as a scaffolded practice (Jones & Thomas, 2015) and scaffolding was the most commonly referenced learning theory in students' assignments which corroborates previous research by Bowes and Jones (2006). By analyzing a plan, creating a plan, and implementing it, students were encouraged to fully understand the learning theories and how they could be used with athletes. These opportunities to create and implement their plans with learning theories in mind were occasions for students to crystallize their understandings of learning theories and students reflected upon this process in their end of the semester assignment and second interview. This was an intentional part of the course design based on the learning theory of scaffolding by Vygotsky (1978). Students were able to identify how the course was an example of using learning theories using Bloom's taxonomy levels scaffolded throughout.

## **5. Conclusion, Limitations and Future Directions**

Some limitations of the study included convenience sampling, the logistics of the course, and the difficulty in being able to provide students with more in-person opportunities throughout the week. Convenience sampling was used to help recruit as there was a minimum number of students that were needed to be enrolled in the course, otherwise the course would not have been allowed to continue. Students were recruited through their known previous interests and students had to self-select to be in the course which could lead to a sample that is more prone or willing to sit in a sixteen week course on learning theories. Secondly, the logistics of the course were a limitation as the students in this course were juniors and seniors who were already in placements and other time-consuming opportunities and it was difficult to find a communal time for all students to meet. The generalizability of these findings may be difficult given these specific challenges for these individuals but we hope it will lead to more studies or programs creating similar courses for Master's programs. In the future it might be best to create this course for first-year master's level students who may already have access to athletes through a practicum or placement and better able to actually implement their created plan with those athletes and it may be difficult to scale this model to larger cohorts for this reason. A Master's-level course may be more effective, as these students likely possess greater content knowledge from their undergraduate studies, making the pedagogical material more tangible and applicable to their work with athletes (Shulman, 1986). For future implementation, offering the course with multiple face-to-face sessions is recommended to enhance engagement. Additionally, following Aoyagi's (2013) guidance to focus on one theory per week can help manage cognitive load and deepen students' understanding. This study offers a template for incorporating learning theories into athletic professional programs, particularly as a first-year Master's-level course. While not intended as a prescriptive model, the course provides ideas and guidelines that others may adapt. Practical implications extend beyond university settings. Specifically, learning theory instruction can benefit coaches and practitioners who lack access to formal coursework by helping them adopt more learner-centered approaches. Based on our findings, we recommend that future practitioners receive training in learning theories to enhance self-efficacy, instructional effectiveness, and overall professional practice. We encourage sport-related programs to more intentionally integrate learning theory into their curricula to improve the quality of athlete learning and development.

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