

## Article

# The Lived Experience of Mindfulness in Adventure-Based Learning

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**Abstract:** Adventure-based learning (ABL) is an innovative K-12 instructional model that continues to be used in physical education to promote intrapersonal and interpersonal relationship skills. ABL incorporates low initiatives/cooperative activities coupled with periods of reflection to help enhance the likelihood of transferring intrapersonal and interpersonal relationship skills to other areas of K-12 student life. Mindfulness is a way of consciously and nonjudgmentally being aware of the present moment. Mindfulness practices (MPs) hold tremendous potential as a pedagogical tool in helping physical educators generate greater attention, equanimity, and compassion for themselves and their students. To further explore the impact of MPs for students, this study focused on undergraduate perception with regard to comprehension, practice, and demonstration of the possible benefits of MPs in three separate 16-week ABL teacher education courses. Specifically, we wanted to explore how students in the teacher education course conceptualized mindfulness as a phenomenon and how MPs played a part of their lived experience. Three themes were discovered: conceptualizing mindfulness, student interest with mindfulness, and perceived outcomes from mindfulness practices. The findings provide a deeper understanding of the participants' meaning making of mindfulness, their overall buy-in and openness in using MPs, and the perceived benefits in using these contemplative practices.

**Keywords:** adventure-based learning; mindfulness; physical education; kinesiology; cooperative learning; relationship skills; contemplative pedagogy



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## 1. Introduction

Adventure-based learning (ABL) is a pedagogical model used in K-12 physical education that utilizes sequenced physical activities and experiential challenges to create space for the development and strengthening of intrapersonal and interpersonal relationship skills [1]. ABL includes a series of novel, yet challenging social icebreakers/cooperative activities, followed by shared-group reflection (i.e., debriefs) that have been shown to produce transfer of intrapersonal and interpersonal relationship skills in student lives [2]. The literature in physical education positions ABL as a valid model-based practice (MBP) for social and emotional learning in K-12 physical education [3]. Based on this assertion, a properly conducted ABL curriculum is a well-founded and plausible way to promote a variety of desired social and emotional health outcomes for students [4,5].

We have positioned ABL as a placed-based (K-12 school setting), evidence-based [2,3] and standards-based (CA Department of Education Physical Education Model Content Standards) curriculum model used in K-12 physical education and taught in college teacher education courses. Based upon this frame, there appears to be a large gap in K-12 physical education literature involving the use of mindfulness practices with ABL [2,3]. There has yet to be a K-12 physical education study involving a mindfulness intervention within an ABL teacher education college course.

Mindfulness, in essence, is being consciously and nonjudgmentally aware of the present moment. Mindfulness practices (MPs) are mental health exercises or activities that

one can perform in isolation or in a group setting that hold tremendous potential as a pedagogical tool to help generate heightened focus/attention, equanimity, and compassion [6,7]. MPs are used to help individuals cultivate a stronger ability to pay attention in a systematic way (i.e., consistently, logically, and efficiently) on the here-and-now. Mindfulness literature has produced some promising findings linking MPs to a wide array of benefits, including the promotion of social, emotional, and academic outcomes [8–10].

There seems to be plausible evidence that group processing or reflection in ABL is the precursor to transferring intrapersonal and interpersonal relationship skills to contexts beyond the classroom walls [2,5,11,12]. MPs could be utilized as a possible anticipatory set in helping to produce greater awareness of health-enhancing social and emotional attributes (e.g., focused-attention, emotional balance, compassion) during an ABL curriculum for students. Helping students develop and/or refine emotional well-being traits (e.g., emotion-regulation skills, strong intrapersonal and interpersonal relationship skills, positive emotionality) through the coupling of ABL and MPs seems like a promising endeavor for educators looking to create a more conducive and caring learning environment. This study sought to explore undergraduate student perception with regard to conceptual representation of mindfulness in three, 16-week college ABL courses. We wanted to explore two primary questions: How did students conceptualize mindfulness as a phenomenon? How did MPs impact the lived experience, specifically within the ABL course?

### *Significance of the Study*

There is currently a research gap and a paucity of literature involving the use of an ABL model with the college student population specifically, with individuals learning how to teach ABL in a K-12 setting [2,3,13]. Inquiry on how best to help preservice teachers structure/facilitate the debrief to students in k-12 settings is less known [2]. However, based upon the limited empirical evidence to date, investigation involving ABL has suggested that the Sunday Afternoon Drive Debrief Model (SADDM) can be used as a framework in providing opportunity for college students to develop intrapersonal and interpersonal relationship skills and social and emotional learning [11,14,15]. Furthermore, with the growing trend in social and emotional learning within the Society for Health and Physical Educators (SHAPE America) and community partners, it behooves researchers within the field to continue to explore how best to structure K-12 learning environments that incorporate content (such as ABL) and instructional activities (such as MPs) that promote such interests.

## **2. Conceptual Framework**

Literature involving social and emotional learning, mindfulness, and ABL group processing were used to frame this qualitative inquiry. Viewed as a whole, we conceptually framed our study on exploring the use of MPs during the ABL course and the social and emotional learning outcomes perceived by the participants. To this aim, the centrality of this study was to discover the lived experience of the participants as it related to their engagement with mindfulness, toward expanding social and emotional growth during portions of the ABL sessions. We assert that “mindfulness opens the mind and gives space for new understanding . . . ” [6] (p. 98). To promote potential benefits of this method we wanted to pedagogically place the MPs just prior to group processing to support attention, equanimity, and compassion during the reflective discussions that took place during the ABL debrief.

### *2.1. Mindfulness*

Mindfulness is a contemplative practice in which awareness “emerges from paying attention, on purpose, in the present moment, non-judgmentally” [16] (p. 2). Mindfulness is conscious living and the ability to consistently cultivate and demonstrate compassion and gratitude during life [16]. There are a variety of ways to practice mindfulness, such as focused attention on breath, sensation, or sound; gratitude practices; loving-kindness

or compassion practices; even mindful movements such as yoga, Pilates, walking, or tai chi [17]. Mindfulness practices (MPs) are activities that bring the individual into the present moment. The human mind naturally wanders to various thoughts, sounds, or sensations. Thus, during a MP, when the mind drifts off or wanders, it is important to be gentle with oneself and to simply acknowledge that the mind has wandered and bring the awareness back to the focus or practice. The goal of mindfulness is not to judge or react to these spontaneous thoughts, but instead, become aware of them with a kind curiosity and gentle acceptance, before bringing your attention back to the focus or practice [17]. With MPs, an individual may notice that they can more easily move through life with a calmer and more non-reactive demeanor.

MPs have the potential to provide many benefits to both teachers and students such as improved engagement in the classroom, stress management, enhanced intrapersonal and interpersonal relationship skills, and increased focus [18]. Students that participated in MPs have been found to increase self-control, participation and attention levels, problem-solving skills, and respect for others [18]. MPs reduce stress that lead to anxiety, anger, bullying, and self-doubt [19]. Therefore, practicing mindfulness in the classroom will likely lead to a more compassionate and cohesive environment. MPs also increase compassion which allows students to feel more connected and accepting of themselves and others, as well as enhancing intrapersonal and interpersonal relationship skills [9,10]. After a 10-week yoga program implementation with high schoolers, students reported improved self-confidence, purpose, and personal satisfaction [20]. MPs are also associated with improved focus, attention, and cognitive performance which leads to academic success [17].

Research has found additional psychological and physiological benefits associated with using MPs along with physical activity. Specifically, MPs have been shown to improve cardiorespiratory and metabolic functioning as well as reduce risk factors for coronary heart disease [21,22]. More positive effects include increased neuroendocrine and immune system function and decreased risk of diabetes and hypertension [22,23]. This further highlights the potential possibilities for using MPs in the physical education classroom. In the context of this study, MPs before an ABL group processing are likely to prepare students to enter the discussion with calm, collaborative, and focused minds. MPs have been touted as being influential in helping with the process of reflection [24]. In turn, reflection, more specifically group processing, has been shown to be a key variable in promoting transfer of various intrapersonal and interpersonal relationships [4,5]. The amalgamation of MPs and group processing seems to plausibly strengthen the claims that ABL can help assist students in the transfer intrapersonal and interpersonal relationship skills toward situations that occur outside the classroom.

## *2.2. Social and Emotional Learning*

Social and emotional learning is grounded in the ideology that learning is constructed and nurtured in supportive environments where the instructional tasks or experiences are challenging, engaging, and meaningful to the participants [25]. ABL has been shown to create space for enhanced participant promotion of intrapersonal and interpersonal relationship skills (i.e., social and emotional learning) in school settings [5,11,12]. The growing body of evidence that ABL can produce desired outcomes associated with intrapersonal and interpersonal relationship skills in school environments provided rationale to use social and emotional learning as a lens through which to conduct this inquiry. There are several key features that link ABL to an social and emotional learning framework. These features include: the interdependence of the sequenced activities linked to purposeful intrapersonal and interpersonal relationship skills, the high emphasis on experiential learning through the implementation of the structured debrief sessions, and the ability to help participants see how transfer of the intrapersonal and interpersonal relationship skills is possible in their personal lives [26].

### 2.3. ABL Group Processing

Group processing is an essential part of Cooperative Learning [27]. Similar to the reflective approach in Cooperative Learning, ABL group processing represents “a student-centered approach, encompassing a form of adventure, where the educative purpose of the experience is emphasized, and students reflect on their personal and social developments through a debrief process” [2] (p. 308). Specifically, the primary aim of group processing in ABL is to encourage the continued growth of intrapersonal and interpersonal relationship skills [28]. There has been growing empirical evidence to suggest that group processing is the primary means to promote intrapersonal and interpersonal relationship skills in an ABL instructional model [5,11,12,29].

Despite its various benefits and immense importance in the ABL model, group processing is often the first to be excluded during cooperative learning lessons in the classroom [30]. Omitting opportunities to reflect during class is most likely due to time constraints in a typical PE classroom. There is a false assumption that student reflection occurs simply by engaging in activities [12]. Furthermore, other evidence suggests the lack of knowledge by teachers on how to facilitate group processing properly and effectively as a reason for why this important instructional pedagogy is left out of the curriculum [31]. The lack of consistent use of formalized reflection in the classroom during cooperative and ABL units of instruction emphasizes the importance of having a model or framework for facilitators to follow. The SADDM was created to promote effective, student-centered, group processing sessions and create opportunities for students to reflect on ways they could transfer intrapersonal and interpersonal relationship skills to situations beyond the classroom (i.e., transfer of learning).

The SADDM is a student-centered reflection process or framework that provides teachers with necessary tools to facilitate the development and transfer of student knowledge beyond the classroom [11,32]. The SADDM is a modified version of Kolb’s Experiential Learning Cycle (ELC), a theory that knowledge is actively created through social, hands-on learning rather than passively through watching, listening, or reading [33]. The SADDM encompasses the ELC philosophy by creating an environment in which students are actively engaged in both the learning process and with one another to promote transfer of the intrapersonal and interpersonal relationship skills.

The SADDM is comprised of 9 components: (1) frontloading (2) facilitator as co-pilot, (3) choice of vehicle, (4) who sits where, (5) start the car, (6) follow the road, (7) GPS recalculating, (8) nearing final destination, and (9) final destination—are we there yet? Table 1 provides a list and the function of the nine components of the SADDM [11,32]. For more specific information on this model please see [11,32].

**Table 1.** Components of the Sunday Afternoon Drive Debrief Model Scripted (adapted) [32].

Component	Function
Frontloading	The initial hook that provides the social and emotional focus for the ABL lesson.
Co-Pilot	Provides the opportunity for ABL participants to share their insight and experiences during group processing (i.e., student empowered dialogue).
Choice of Vehicle	Allows the facilitator to choose multiple grouping strategies in conducting group processing. The students can reflect as individuals (motorcycles), pairs or small groups (cars), or large groups (buses). We recommend starting with a car to ensure a comfortable environment and strong conversation before moving to a bus.
Who Sits Where	Participants sit closely together in a circle. Promotes student engagement, active listening, eye-contact, and is a non-verbal representation of a community.
Start the Car	This is the strategy used to start the conversation, or the engine, that sets the tone for the debrief. Please see Cain, Cummings, and Stanchfield (2005) and Stanchfield (2007) for more examples.

Table 1. Cont.

Component	Function
Follow the Road	The facilitator guides the discussion by choosing an initial topic, or road, that focuses on lesson outcomes or a critical incident from the lesson. See Stuhr et al., (2018) for more <i>Follow the Road</i> strategies.
GPS Recalculating	Recalculating occurs when discussion ceases, potentially because participants are tired of the topic or have nothing else to say. It is the facilitator's job to reassess the direction of the conversation or route based on student responses in the <i>Start the Car</i> activity, and should it be needed, bring up a new topic to continue the discussion in a different direction.
Nearing Final Destination	Summation of key points or topics of the reflective conversation, specifying what helped and/or hindered group success in the ABL activities. This component of the SADDM allows for participants to come up with their own "take home message" based upon their experience in the activities and or group processing session.
Final Destination	Group reflects on the take home message from the <i>Nearing Final Destination</i> phase and applies this to their lives outside of the classroom and the ABL lesson.

In the SADDM, the facilitator has the overarching intrapersonal and interpersonal relationship skills theme (i.e., the destination for the drive), but allows the students to choose the route in which they take to get there (i.e., personal thoughts, opinions, or examples connected to the intrapersonal and interpersonal relationship skills). The facilitator "follows the various rhythms, feelings, power, and aesthetics of the road (i.e., the group) as they negotiate the journey" [32] (p. 6). Group processing is a student-centered process, meaning the facilitator will take a more back seat approach when appropriate to allow the students to navigate the road on their own. The teacher will be there to help guide the conversation, when necessary, in order to thoroughly debrief the ABL lesson.

### 3. Methods

The purpose of this study was to consider the perceptions of college students' lived experience using MPs in a social and emotional health Kinesiology course. A model-based practice called ABL anchored the course content (i.e., ABL was the curriculum model used to reach the course student learning outcomes). The principal investigator wanted to determine how students conceptualized mindfulness and whether use of MPs prior to entering group processing of the ABL activities would be perceived as a useful pedagogical tool in helping participants with their reflective discussion. The design and delivery of a qualitative case study (across three cases) was an appropriate way to explore the primary aims of this inquiry [34]. The use of *collective* case study design allowed us to identify, understand, and refine how the participants (college students) experienced the construct and techniques associated with mindfulness [35]. Collective case study allowed for data to be discovered, inductively, surrounding the representation of mindfulness as experienced and perceived by the participants in three separate course sections.

#### 3.1. Settings and Participants

This collective case study took place at a mid-size public four-year university in the Southwest portion of the US. In 2019, there were 16,053 students enrolled at the university as full-time students, 1359 degrees awarded to men and 2735 degrees awarded to women. The enrolled student population at the time of this study was 45.5% Hispanic or Latino, 26.9% White, 9.27% Asian, 5.19% Two or More Races, 3.02% Black or African American, 0.28% American Indian or Alaska Native, and 0.237% Native Hawaiian or Other Pacific Islanders. Three course (KINE 310) sections housed within the kinesiology department were specially targeted due to the use of ABL used as the curriculum. At the time of this study the kinesiology department had approximately 800 undergraduate students enrolled.

A total of 96 undergraduate students (68 female and 28 male) participated in this inquiry. There were 32 students in each of three separate course sections. Each course was

a semester in length (16 weeks long) and was delivered over two different semesters (1 year). The students enrolled in each section came from two departments (Liberal Studies and Kinesiology). All participants were enrolled in one of three sections of KINE 310. This course meets a graduation requirement for both degree programs (Kinesiology and the Liberal Studies department). There was a total of 63 Liberal Studies students and 33 Kinesiology students enrolled in these three KINE 310 sections. The primary career trajectory of the Liberal Studies students was that of an elementary school teacher, while most of the kinesiology students polled for this study were aiming to go into allied health professions such as physical or occupational therapy and careers affiliated with health science. Of the 96 participants only seven had ever formally practiced any type of contemplative practice (including mindful meditation).

### 3.2. Social and Emotional Health Course

This study took place in a university kinesiology (teacher education) course which focused on social and emotional learning. Specifically, the course used a model-based practice called ABL as a content through which social and emotional learning has been shown to emerge [4,5]. As previously noted, ABL is the deliberate use of sequenced experiential and physical activities that promote social skills through the implementation of group processing or class reflection. The course met two times per week for 1.25 h over 16 weeks. Each week students attended one lecture session and one lab session. The delivery and practice of ABL occurred in the lab sessions. The MPs occurred in both the lecture and lab sessions and each MP took ~5 to 10 min to complete. In lecture the MP occurred at the start of class, whereas in lab the practice occurred immediately following the ABL activities and right before the group processing session. The same instructor taught all three sections of the Kinesiology course. The instructor had 17 years of experience facilitating ABL, five years delivering MPs, and over 13 years teaching at the university level.

#### 3.2.1. Lab Delivery (Structure of Instruction)

In delivering the ABL labs the instructor utilized the adventure wave for structure with the sequence, flow, and pacing of the content [36]. The adventure wave includes three components: brief, activities, and group processing. The first 5 to 7 min were allotted for the brief (i.e., an anticipatory set or introduction to the relationship theme or topic to be experienced in the activities), followed by 2–3 ABL activities that ranged from ~10–20 min each. Once all the ABL activities were complete, the instructor would ask students to be seated in a circle to begin the MP prior to starting the group processing session. Group processing is sometimes referred to as the debrief. In group processing the students were given an opportunity to discuss what they experienced during the ABL activities, the impact the activities had on them, and how they could envision transferring social and/or emotional outcomes to other areas of their lives. Students were instructed on and provided with the opportunity to conduct the group processing session using a reflection model called the Sunday Afternoon Drive Debrief Model [11,32]. A total of 33 ABL activities were planned and taught during the Kinesiology course. The activities followed a sequential order and were aligned to different relationship skills (e.g., communication, cooperation, emotional trust, physical trust, problem solving). Some of the ABL activities included: Pipeline, Goal Toss, Marshmallows, and Turnstile. The ABL activities used in this course were modified from two sources: Journey toward the caring classroom: Using adventure to create community in the classroom and Adventure curriculum for PE middle school [37,38]. These ABL activities have been used in the past to help promote intrapersonal and interpersonal relationship skills with students [5,11,29,32].

#### 3.2.2. Mindfulness Practices

Incorporating Mindfulness Practices (MPs) within higher education classrooms presents an opportunity for students to focus their attention, calmly, on the present moment. MPs

promote being aware of thoughts and emotions as they occur moment-by-moment [39]. MPs hold tremendous promise as pedagogy within physical education teacher education (PETE). There are dozens of MPs that PETE instructors can choose to use in the classroom during an introduction and/or closure of a lesson, which take a minimal amount of time to implement (e.g., 1–10 min). For the purpose of this study, we selected 12 MPs and used one practice per week in the ABL course. The practices were used at the start of each lecture, and at the beginning of each debrief in the laboratory. Each MP session lasted no more than 10 min. Some of the MPs included: Body Scan, Harnessing the Four Elements, Just Like Me, and Leaves on a Stream. Each MP used four facilitation tips: guiding students to sit in a comfortable position with upright body posture, close their eyes or use an unfocused gaze, take 2–3 deep breaths, and attempt to stay alert yet relaxed.

### 3.3. Data Collection

Prior to data collection each of the study participants volunteered and gave informed consent that followed the Institutional Review Board (IRB) at the University. Data were collected through individual and small group (3–4 students) interviews, written journaling, and modified photo voice journals. Provenances were created and used to identify source location (i.e., keep track of where each datum came from in the data collection process) and to strengthen the audit trail of this study. The following provenances were used: individual interview (II), group interview (GI), written journal (WJ), and photovoice journal (PJ). The Fall (F) and Spring (SP) semesters and each specific course section (SEC) was also tracked and documented. An example of a listed provenance in this study might look like the following: (F, SEC1, W12, PJ), which would represent data collected from a photo journal during week 12 of the Fall semester in Section 1. Whereas SP, SEC1, II would represent an individual interview that occurred in the Spring of Section 1.

#### 3.3.1. Interviews

During weeks 12 through 16 of the semester all participants were interviewed in small groups of four and six students for ~30 min. A total of eight students also volunteered to be interviewed individually. The individual and small group interviews were used to collect data in regard to the participants' comprehension and use of the MPs that were taught, practiced, and reflected upon during the course. The interviews were face-to-face, semi-structured, and allowed for pre-determined questions to be asked, with opportunity to explore the participants' responses further (if needed). The 30 min interviews included questions that provided an opportunity for the participants to share their lived experience of mindfulness from the kinesiology course. Sample interview questions included: What was the purpose behind using contemplative practices during this course? Did you find that the contemplative practices added to your overall learning in this course and why? What did you find most compelling about participating in the contemplative practices and why? What did you gain from using the contemplative practices within this course?

#### 3.3.2. Written Journal

The kinesiology course instructor asked participants to answer journal prompts five times throughout the semester. The journaling occurred at the end of weeks 3, 6, 8, 12, and 15. The totality of these writing sessions became the writing journals that were used as a portion of data analysis. The instructor provided the participants with the specific prompts related to the topic of mindfulness. Here, are example prompts given to participants: After participating in the contemplative practices (i.e., mindfulness) thus far, what are your thoughts on doing this/these activities in class? What did you find most compelling about participating in the contemplative practices so far and why? What are your thoughts on whether this/these practice(s) helped you focus on the brief/debrief? Did it help with lowering your stress, or increase your concentration during class, or help you to think more deeply about the material covered in class?

### 3.3.3. Photovoice Journal

Photovoice utilizes photographs, reflection, and written narrative to discover and express thoughts and feelings involving a specific construct, theme, or phenomenon. This technique can be used as a data collection method to provide space for participants to become co-researchers and reflect on their lives regarding a specific topic through images coupled with written narrative [40]. A photo journal is a modified version of photovoice. The aim of a photo journal is for participants to create images (photos or drawings) that become visual representations of concepts covered and discussed in class and reflect on how these concepts extend to their lives beyond the classroom [41]. The method of using photo journals empowers participants to think creatively, explore and express class concepts in relation to lives beyond the classroom, and can provide an authentic means for assessing understanding of class concepts. Participants in this study were asked to complete a photo journal on the concept of mindfulness. Each participant was asked to follow six steps (i.e., prompts) in completing their photo journal. See Table 2 for photo journal steps that participants were asked to complete.

**Table 2.** Photo Journal Steps.

Step 1: Write an assertion for mindfulness. 1–3 sentences max. An assertion is a confident and forceful statement of fact or belief about mindfulness.
Step 2: Locate and include a powerful quote that aligns with mindfulness and your assertion. Then, write 1–2 sentences describing how your quote aligns.
Step 3: Take, find, or draw a photo or image that represents mindfulness and your assertion.
Step 4: Write a description of the photo or image in relation to mindfulness and your assertion.
Step 5: Write a detailed and in-depth explanation of how your intrapersonal and interpersonal relationship skills relates to the concepts of our course.
Step 6: Write what you have come to understand about mindfulness, and how this phenomenon is applicable to your life.

### 3.4. Data Analysis

This qualitative collective case study utilized a grounded theory approach using existing contemplative practice literature that helped guide and shape the collection and analysis of the data. Open and selective coding provided the means through which the data corpus was analyzed [42]. After the data were collected the Principal Investigator (PI) read and re-read the transcripts and started to label portions of the data with a code to organize the corpus. A codebook emerged and was used through the entire data analysis process. Constant comparison method allowed for the different sources of the data to be analyzed throughout the collection process [43]. The combination of the coding and constant comparison produced the opportunity to discover emerging themes and start making initial assertions.

### 3.5. Trustworthiness

Trustworthiness from this exploration involved methods of prolonged engagement, member checking, and peer debriefing [44]. Prolonged engagement included the delivery of instruction (KINE 310) and data collection that occurred over a period of one year. Data collection occurred during two semesters with three university course sections (two of the sections occurred during the same semester). The four means of collecting data (i.e., individual, and small group interviews, written journal responses, and photo voice journals) and the three separate cases (i.e., three different ABL classes) provided means for establishing data triangulation. The photo voice journals acquired presented an opportunity to establish confirmability when compared with the data collected from the interviews. A small group follow-up interview occurred at the end of the semester for each course. These three interviews (one per semester) were used specifically to help with the member

checking process. The participants were shown developing themes that came from the transcribed data corpus and asked for confirmation regarding the assertions associated with each theme. The member checking process also occurred through reading the written journals, as this data helped with the credibility of the themes that were discovered. The PI conducted three peer debrief sessions with another faculty member who had a background in mindfulness. This peer debrief method occurred by sending a modified version of some of the transcripts to determine alignment with the developing themes. Peer debriefing was a useful strategy to determine a degree of confidence about the data corpus and the developing themes.

#### 4. Findings

This qualitative case study investigated the use of mindfulness with 96 university students during their journey with an ABL curriculum. The study sought to explore how the university students experienced and represented the various MPs that were taught, practiced, and assessed during their university course. By examining the students' perception of the MPs, the hope was to additionally determine the fidelity and justification for using these practices as part of an ABL unit of instruction. Prior to the start of data collection, the researchers asserted that the MPs might be a credible and pragmatic tool to help students gain deeper meta-cognition during their experience with the ABL adventure wave structure utilized for the course.

##### 4.1. Mindfulness in Adventure-Based Learning

Three themes were discovered through the data analysis process: (a) conceptualizing mindfulness (creating the idea of mindfulness personally and pedagogically within ABL), (b) student interest with mindfulness (student buy-in and openness to the MPs), and (c) perceived outcomes from mindfulness practices (perceived benefits of mindfulness—three sub-themes: heightened focus, emotional balance, and self-compassion).

##### 4.1.1. Conceptualizing Mindfulness

The data that emerged from this theme involved how the students defined and represented mindfulness regarding two questions, “what is it?” and “why use it in class?”. From a personal perspective the students perceived the MPs as an authentic way to center themselves, become calm, and be more present, moment-to-moment.

Mindfulness is the start of internal healing and empowerment. It provides appreciation for the smallest detail in our days to become instinctive. Being mindful is living in the moment, one step at a time, with complete appreciation, love and forgiveness towards yourself and others. (F16 SEC1, PJ, W12)

This participant highlighted several traits affiliated with mindfulness. They indicated that mindfulness can be used to be more aware of the here and now in daily life tasks, to obtain a greater sense of gratitude, and to be more self-compassionate with oneself. Being aware and recognizing the here and now was a common realization from the participants. As another individual noted:

Being mindful is the ability to be present in any given moment in time. You're aware, attentive, and observant. You not only notice the small details of your thoughts, but you are also aware of the small details around you—the chirp of a bird, the vibrancy of colors in our world or a child laughing in the distance. Being mindful is the absence of allowing your life to flow on autopilot. (F16 SEC2, PJ, W12)

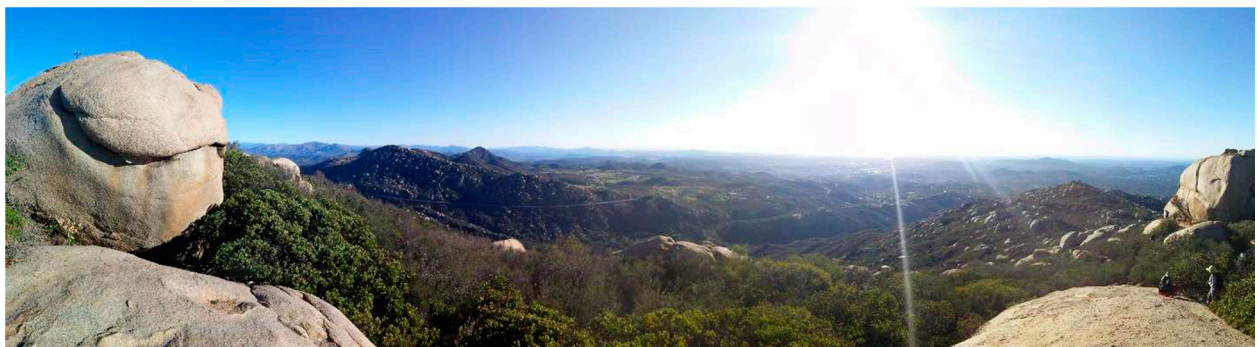
One participant recognized that mindfulness allowed them to be more in tune with their surroundings during “any given moment in time” (F16 SEC2, PJ, W12). In their photo journal this participant provided a visual image of the importance of being grounded in the present moment. In the photo journal is a picture of three signs that read yesterday, now, and tomorrow. This participant elaborated on this image by stating:

This photo serves as my vivid depiction of mindfulness. It depicts a directional sign with “now” being the most prevalent in the picture, it draws your attention away from “yesterday” and “tomorrow”, but we still have to acknowledge that “yesterday” and “tomorrow” occur. In reference to the functionality of our minds we readily have thoughts of what happened yesterday or what’s going to happen tomorrow; with the present moment being what we are currently living in it should encompass the big picture, but most of the time it doesn’t. Our minds wander and fixate on many different ideas and aspects in pertinence to the scope of our lives. With the invocation of mindfulness we hope to bring back a centric focus onto the present moment, the “now”. Mindfulness brings about an appreciation of the present moment and a realization as to what is currently happening. Used in everyday life it brings about a more attentive approach to any task you may be doing. In being more attentive, it allows one to be more intellectual and be more keen on integrating that moment into memory. (F16 SEC2, PJ, W12)

This individual acknowledged that the mind does wander and sometimes our thoughts fixate on the past or the future. Mindfulness helps to remind us that life is experienced in the present moment. MPs can help us accomplish this by training us to focus our attention back gently, consciously to the now. The image frames the word “now” in a bigger font to represent the importance of the events that present directly in front of us in the current moment.

Similarly, another study participant highlighted the importance of recognizing the present moment. This individual stated:

This picture [Figure 1] is a view that can be seen from Sunrise Highway in Cleveland National Forest overlooking Anza-Borrego desert. During this past summer, my wife and I went camping at Laguna Mountain. Mindfulness, like camping, is about accepting what is and can be. Mindfulness is a practice that a person intentionally uses to bring attention to thoughts and events that occur in the present time. Bearing witness to thoughts and feelings as they occur and accepting them without judgment. (F16, SEC2, PJ, W12)



**Figure 1.** Image from KINE 310 Student Photo Journal.

For another student, mindfulness was represented with an image of an individual sitting with legs crossed, peering out over the ocean. The picture was a visual representation of peace and serenity, an acknowledgement that mindfulness can represent a safe space or opportunity to remove oneself from the chaos and stress of everyday life. As they wrote:

This picture is very symbolic to me of mindfulness. The young girl rests in a state of peace and serenity leaving the chaos and stress of life to float out of her mind. In a sense, the chaos could be seen as nonexistent, yet it is so common that we choose to let our mind dwell on stress. As she sits in relaxation, she calms her mind to forget her physical pain and emotional stress. She asks her mind to release these distractions into the air by the exhaling her breaths. She is free of

worldly problems. This woman does not dwell on past regrets or wish for her future dreams. She is living life as it is through her peace in mind. She is focusing her goal and how she may overcome obstacles standing in her way. (F16, SEC2, PJ, W12)

This student shares an image demonstrating how one might feel experiencing mindfulness: relaxed and free of worldly problems. In another photo journal, a student presents an example image of a small child enjoying the present moment by smelling a large flower.

The following example used the image of a child to represent mindfulness as being present without concern, as they indicated:

This photo, in which a small child completely devotes herself to the present without concern for anything but her experience of the moment itself, perfectly illustrates the concept of mindfulness. The young girl, with healthy glowing skin, rosy cheeks and tousled hair framing her face, is shown eyes closed and unassuming, as she smells a flower. She is seemingly unaware of anything aside from her enjoyment of the moment and the sweet smell of her little yellow daisy. (S16, PJ, W12)

In sum, students in KINE 310 acknowledged that mindfulness is about being aware of the here and now in any given moment. The participants perceived mindfulness as entering emotional equanimity and discovering serenity, by allowing oneself to let go of concern and stress.

Pedagogically, the students indicated a need for MPs to be used in class. The participants viewed the MPs as a teaching tool that could help provide deeper awareness to the discourse occurring in the class.

In Adventure Based Learning (ABL) being mindful is imperative to being able to see the full picture of the activities, themes, and debrief. To get a full sense of understanding for the events in class. Coming into a state of awareness through purposely paying attention helps an individual connect to their deeper sense of self and in return they are entirely able to construct a new understanding of their experience. (F16 SEC 1, PJ, W12)

Here, this student makes a clear argument that the MPs were beneficial to the instructional tasks of the class. Further, they noted that being aware and, in the moment, added to their comprehension of material experienced during the class. In addition, the following participant credited mindfulness with the creation of a more pleasant and productive learning environment:

... In my opinion I think that if every teacher applied mindfulness into their classroom teachers wouldn't have to deal with the misbehaviors of students because their overall mood will be better, therefore this will allow for the flow and energy of the classroom to be more productive and students to be more involved ... . (S16, PJ, W12)

Several students in each section noted the impact the MPs had on their experience with the ABL debrief (i.e., group processing after the experiential activities were complete). For example, one student wrote:

I believe that the mindfulness practices have greatly improved my focus during the debrief. I feel that this is one of the greatest benefits that one can gain from the mindfulness exercises. [The MPs] actually really worked. I also believe that the improved focus right after completing the contemplative practice made me feel [the debrief] was actually something of value. (SP16, JE, W12)

This student's journal entry was a common sentiment expressed by several students. Pedagogically, the students found the MPs to be quite beneficial to their engagement during the group processing sessions at the end of the lab classes.

On a related note, the following participant believed that the MPs helped create a greater sense of community through inclusivity. “If we’re trying to focus on improving interpersonal relationships in our class, trying to focus on creating a sense of community then mindfulness helps . . . . the mindfulness practices help create a more emotionally inclusive environment” (F16 SEC2, II1, W11). This student’s explanation illustrates how interconnected the outcomes of ABL are to those of practicing mindfulness. An argument can be made that ABL in conjunction with MPs created a pedagogical pathway for these students to attain greater interpersonal connection with their peers in the classroom. The MPs created a conscious and collective effervescence.

In summary, the participants in this study clearly perceived the MPs as (a) a means to focus on the present moment without concern for the future or past and (b) a tool to be used during class to gain a deeper focus during discussion, higher engagement, and overall comprehension of material presented.

#### 4.1.2. Student Interest with Mindfulness

This theme represents how students responded to the MPs. Specifically, this theme illustrates whether participants were interested or “bought in” to mindfulness, if it was socially acceptable to be excited about MPs, and whether the students perceived the practices as something that benefited their lives. From the data, there is clear evidence that students had affinity and enthusiasm for the MPs, a positive rapport between classmates, and found mindfulness to enhance their lives both in and outside of the classroom.

Although most students were unfamiliar with mindfulness going into KINE 310, students were open to trying and using the MPs in class.

I didn’t even know what mindfulness was, I mean I just thought that it was part of monk stuff and only monks could do this stuff. I never thought of doing it. Nobody ever told me about it before, so I’ve never knew what these practices were. Now I think that mindfulness gets you more engaged into your learning. (SP 16, II6)

Aside from potential stereotypes or misconceptions about mindfulness, students exhibited enthusiasm for the MPs. One student commented that most of the students they interacted with were enjoying MPs and found them to be extremely beneficial in developing a positive classroom environment:

I want to comment on how pleased I am to see and hear the majority of the class genuinely interested in mindfulness and our contemplative practices. From side conversations and several interactions that I have had with classmates it really seems people are enjoying it and find it extremely beneficial. It also seems that many people are trying to incorporate it into their own daily lives. . . . initially I thought much of the class would not want to participate. Our class’s enthusiasm for these practices is amazing! (SP16, JE, W6)

Although this student expected classmates to not want to engage in mindfulness, they were pleasantly surprised that MPs were received so well. Not only did the class enjoy the MPs, but another student also found that MPs helped them connect and work more easily with others:

I will admit; mindfulness had not been something used in my life. This has definitely changed. I have discovered that mindfulness is so important in our class and in everyday life, as it affects both our intrapersonal and interpersonal relationships. (F16 SEC1, PJ, W12)

In addition to improving interpersonal relationships within class, students perceived mindfulness to be beneficial in enhancing their intrapersonal relationship skills outside of the classroom. Students saw the value of practicing mindfulness and making it part of their lifestyle. One student shared how they utilize MPs in their daily life:

... this was the first image [Figure 2] I took when I started to apply mindfulness into my daily life. Before the semester started, I didn't know anything about mindfulness. I would just go up this trail with my headphones on ... but ever since I started kine 310 and I learned about all the amazing benefits that mindfulness has to offer I decided to incorporate it into my daily life because I wanted to improve my overall lifestyle. (S16, PJ, W12)



**Figure 2.** Image from KINE 310 Student Photo Journal.

The same student further explains how MPs has changed the way others perceive them:

... The amazing thing about this is that students will not only be this way in school but also in their everyday lives ... I say this because my siblings have told me you are different, what happened to you, and I told them that ever since I began to do Mindfulness I feel like a whole new person. (S16, PJ, W12)

Overall, this theme focused on how students responded to mindfulness and the MPs in the classroom setting (i.e., student buy-in). The data indicate that students embraced the MPs with warmth and enthusiasm. Additionally, the participants acknowledged the positive benefits of the MPs. These students were eager to share how mindfulness improved their academic focus, put them at ease, and helped them better connect with themselves and others. In sum, the students perceived the MPs to be a critical component toward overall social and emotional health and were receptive to the use of the practices during class. Most of the students indicated that the use of MPs during class was not only appropriate but highly welcomed.

#### 4.1.3. Perceived Outcomes from Mindfulness Practices

The MPs had a profound impact on the students' lives, both in and outside of the Kinesiology course. The data that emerged from this theme were based on student perception of the outcomes associated with using the MPs practiced from class. Three sub-themes were discovered, framed from the students' belief that the MPs helped foster heightened focus, emotional balance, and self-compassion.

##### Heightened Focus

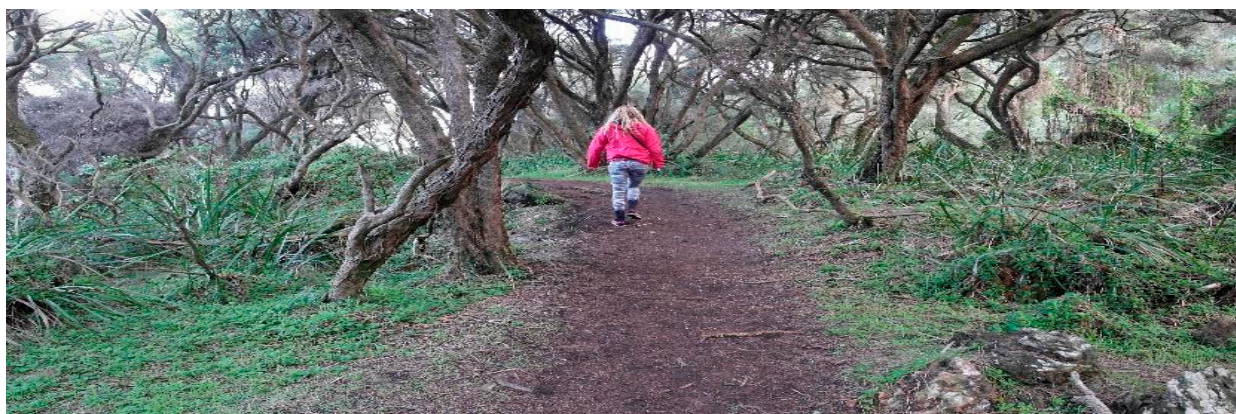
To be mindful is to be consciously aware of the here and now. Mindfulness is focusing attention to the events that unfold in the present moment. As one student noted, "Mindfulness is the practice of focusing one's attention on the present moment. It is acknowledging how one feels and what one is thinking at that certain moment and accepting that without judgment" (F16, SEC 1, PJ, W12). The acknowledgement that the MPs were a tool or technique that could be employed to find a heightened focus was discovered from the data

corpus. The following student elaborated on how the MPs helped them pay attention, “The [mindfulness] practices bring you back into focusing on the current moment. Your mind wants to wander no matter what, and with mindfulness, it gave me a tool to pay attention to focus on what was happening moment-by-moment” (SP16, II3, W11). Other students reported similar sentiment with regard to the benefits of practicing mindfulness:

Mindfulness practices allow me to refocus my thoughts, allow any distractions to disappear, and allow me to engage better within lecture, as well as in the lab with my peers. Helped me to focus on what I am doing in the moment rather than jumping from thought to thought. (SP16, JE, W3)

The emphasis of being mindful is to be aware of conscious living. To focus intently on the task or experience at hand was perceived by one student to invite happiness into their life:

This picture (Figure 3) was taken of me exploring the Enchanted Forest in Australia. My group leader was very involved in mindfulness practices, and she helped my fellow group members and I utilize these techniques. I was the happiest I’ve ever been. Living in the moment and feeling the present is so important and with our busy lives, we often forget to focus on the present because we are always looking ahead, but true happiness will not be attained until we learn to be aware of every opportunity that presents itself. (F16, SEC 1, PJ, W12)



**Figure 3.** Image from KINE 310 Student Photo Journal.

In this vignette and illustrated in Figure 3, the student is referring to being focused on the present moment as a pathway or opportunity toward personal contentment and happiness.

The participants in this study acknowledged that the MPs conducted in the KINE course presented an opportunity to be more present during class and the tasks presented by the instructor. As one student pointed out, “When I practice the [MPs] it helps me connect with what’s going on in class” (F16, SEC2, GI1). Another student commented, “The MPs really help me to think deeper and more clearly about what’s going on in class” (F16, SEC1, GI2). There was also acknowledgment that being mindful was about having conscious awareness of the task at hand, “[MPs] are there to help us understand, try to understand the material [in class] and what we are trying to learn at that moment in time” (F16, SEC1, GI1). There was one student who made the connection between being mindful and paying closer attention to class details:

With mindfulness it’s like everything outside of class just kind of stops and we pay attention to one thing, and we are able to understand more details of what is being said in class, which just gives us a better understanding. (F16, SEC1, GI3)

These students, in turn, perceived heightened focus and self-awareness from the MPs to experience a deeper and clearer understanding of the present moment. As one student

noted, “I have found myself using mindfulness outside of class to focus on certain activities. When times get difficult, I have found myself using mindfulness to focus on the task at hand, and it works” (S16, PJ, W12). Not only did the MPs create more opportunity to focus on tasks, but they were also perceived to foster deeper thinking about content and heightened social connections with others:

You come to class with a different mentality, maybe your stressed out. Then we do the mindfulness, and then it’s Okay, now I’m here in class I can focus on this class. I feel like I’m more engaged and more in tune with the class content and I’m more prepared to answer questions or work with others more openly. Mindfulness kind of like calms me and really makes me think and focus on single events and think deeper on class topics. (SP 16, II6)

Students commented on the benefits of the MPs for stress management, leading to a feeling of calm as well as increased focus in the classroom. Specifically, this student recalled feeling “in tune” in class after MPs were performed. This allowed for more engagement, thoughtfulness, and cohesion in the classroom with their peers. A similar sentiment was made by another student:

I come to class and do the MPs and I feel that rather than having superficial thoughts that come and go, I explore and dig deeper for each specific thought. I have a constant tendency to daydream, and mindfulness helps me to stay focused on what is going on in class. (F16, SEC1, GI1)

In sum, the MPs created an opportunity for heightened focus. Students in KINE 310 became more aware of their environment. The common theme among students was that the heightened focus brought on with the practicing of mindfulness invited richer and deeper opportunities with course content and with interpersonal relationships.

#### Emotional Balance

Students noticed that practicing mindfulness prompted emotional regulation. As stated in a previous sub-theme, mindfulness reminds you to live in the present. By completing MPs, students are essentially learning how to live in the *here* and *now*, stay calm, and respond to situations as they present in the moment. In addition to a sense of calm, students felt that MPs help alleviate feelings of worry and distress, further assisting with attainment of emotional balance. One participant noted, “the contemplative practices actually do calm my inner thoughts and I am amazed how much it reduces my stress” (SP16, JE, W9). Another student commented, “I feel a sense of balance with my thoughts when I practice mindfulness. Mindfulness allows for situational awareness and is especially helpful in calming myself down in times of distress” (S16, PJ, W12). Emotional regulation promotes situational awareness because with a calm mind, students can take in their surroundings and respond appropriately, with clarity and poise. Another student commented that when they practice mindfulness, “I feel a sense of clarity with my emotions. I am not rushed with thoughts but rather I am at peace and don’t let worry consume me” (F16, SEC2, GI1).

Students perceived MPs as pathway toward leading a more peaceful and patient life:

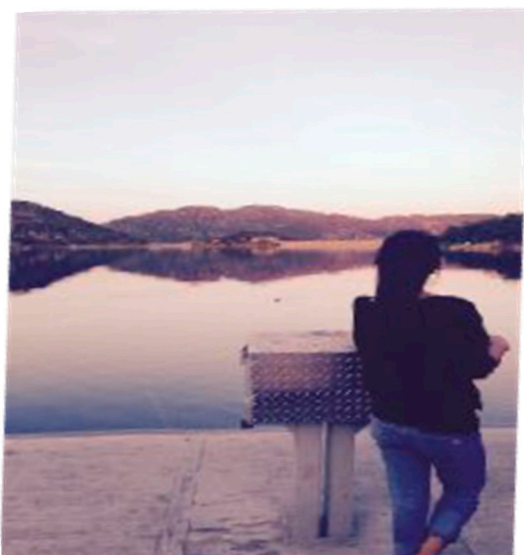
After doing mindfulness, I become a calmer person and it helps me become more patient. So, it helps calm and soothe my nerves, and I am able to make a clear choice of what I want instead of freaking out and stuff when something does not go my way. (SP16, II5, W11)

This student also speaks to the improvement in their decision-making process. In addition to responding with a calm, collected manner, students also noticed that mindfulness helped focus their mind so that they could make thoughtful decisions while staying emotionally balanced and non-reactive. One student commented that, “Yes, mindfulness helps me be at ease and non-reactive with my emotions. I am able to deal with stressful situations a lot better in terms of not overreacting but instead stay calm” (SP16, II2, W11). Learning to respond calmly during times of distress rather than react harshly is an important lesson in

emotional maturity. Responding with equanimity to a stressful event, rather than reacting without calm or ease, is in essence what is hoped to be achieved by practicing mindfulness.

One participant acknowledged that mindfulness was a way to find peace for herself. She believed mindfulness practices helped her to discover internal healing and emotional forgiveness towards herself and others:

This photo (Figure 4) is of me standing in front of a lake and appreciating the scenery of the beautiful place. I believe that it is moments like the one captured in the image that you can relax your thoughts. Taking time to experience mindfulness will give you a moment to relax and take life in whether the day was good or bad, in that moment you acknowledge peace. (F16, SEC 1, PJ, W12)



**Figure 4.** Image from KINE 310 Student Photo Journal.

This student represented the practice of mindfulness to discover emotional balance. MPs, such as being still and calm in nature, allow one to experience the totality of what life presents to them, the good, the bad, and the indifferent, while doing so with an even temperament.

Additionally, by practicing mindfulness, one can learn to regulate negative emotions such as anger and stress and allow space for calmness and mental clarity to guide thought and action. One student remarked that the MPs:

...help take on a disposition where you don't sweat the small stuff, as dwelling on things beyond your control creates aggravation and stress. Mindfulness is a tool toward a peaceful disposition or the removal of habitual negative chatter that can lead to feeling of being overwhelmed with emotions of regret. Mindfulness can lead toward calmness and allow for mental maturity during times of stress or when life doesn't go as planned. (F16, SEC 1, PJ, W12)

This datum references how the MPs were seen as a strategy to deal with rumination. This student also acknowledges the understanding that everything in life cannot be controlled, and that is ok. The participants in this study believed that the MPs were beneficial in helping to balance their mood toward greater emotional equanimity. One student commented on how the MPs helped with mood swings throughout their pregnancy.

The contemplative practices have been successful in calming my mind and emotions. I have noticed that the contemplative practices have also helped me through my pregnancy. When I get mood swings, for instance I sit, I close my eyes and I take deep breaths. I try to practice mindfulness as silently as possible, always bringing it back to my breathing and it has helped me stay in the moment and not

have the mood swings take control. The contemplative practices have resulted in helping improve my mental outlook and keep my mood swings tampered as much as possible. (F16, SEC1, GI4)

Similarly, MPs can be utilized in a variety of stressful situations in life to promote clarity, calmness, and inner peace. As one student wrote:

When I am stuck in traffic, and am angry with bad drivers, and worried that I am going to be running late, I take a step back. I focus on my breathing, the mountains in the distance, and the sounds of the other cars on the freeway. I remind myself that in the long run, it will not matter if I am late. (F16, SEC 2, PJ, W12)

In this example, the student is choosing to respond rather than react and be angry that there is traffic by utilizing mindfulness.

Students perceived MPs as a contemplative tool that was beneficial for staying calm, responding to situations rather than reacting, regulating negative emotions when they arise, and overall emotional balance and equanimity.

#### Self-Compassion/Kindness to Self

Students reflected that participating in MPs in the classroom enhanced self-compassion. Not only did students learn to be patient, nurturing, and kind to oneself, they, in turn, extended this compassion to others. MPs promoted an empathetic social environment in which students treat others with the same compassionate relationship they have developed with themselves.

Students perceived mindfulness as a tool to empower themselves to show kindness to oneself and others:

I strongly believe that contemplative practice can empower a person to hold themselves to a higher standard as a human being. I think this practice promotes kindness and respect to oneself, kindness, and respect to others, and overall, a sense of decorum that is hard to find in people that you come in contact with on a daily basis. (SP16, JE, W12)

Students believed that taking a moment to center themselves through use of the MPs would lead to a perspective shift, allowing them to show kindness to themselves and, in turn, others. One student reported that MPs boosted their self-esteem and determination: positive attributes for practicing self-compassion:

Doing mindfulness, I am able to handle difficult situations better. How taking a couple minutes to be kind to myself can boost my self-esteem and help keep my determination. By practicing mindfulness how I view myself has shifted, I am able to care for myself first without feeling guilty or selfish, which in turn helps me care for others better. (F16 SEC1, PJ, W12)

With the help of MPs, this student realized that by improving self-confidence and self-care, they could more easily reflect this kindness onto others. Additionally, the student contributor below found that MPs were an excellent way to gain awareness and practice compassion toward community building and creating a nurturing classroom:

In ABL, building a sense of community is important, not only for the students but for the facilitator. When there are people of different backgrounds in a community it can be hard to understand one another. Being aware of one's feelings can benefit the whole community. If a person is feeling upset, then it can throw the whole community out of balance causing a negative environment. With mindfulness as part of ABL, students can start appreciating themselves in order to appreciate others. (F16, SEC 1, PJ, W12)

In addition to self-awareness, students found MPs to lead to a more understanding social environment and help build a community in which students and teachers cared about one another.

The following narrative (and corresponding Figure 5) came from one of the participants who eloquently connected mindfulness with kindness and compassion. We see this participant clearly demonstrating an enduring understanding that mindfulness can create the capacity for profound emotions such as love, kindness, and compassion.



**Figure 5.** Image from KINE 310 Student Photo Journal.

The statues in this picture sit in silence and represent the unwavering peace we wish to achieve for ourselves. Looking at these statues one cannot help sense a stillness or calming effect being channeled outward. Viewing the statues your body, mind, and soul sync up and allow one to feel at peace. While the people off in the distance represent the individuals in our lives who are receiving this calming kindness, care, and compassion. They represent the lives of all those we encounter on a daily basis and the opportunities granted to be kind and affectionate. This image is a perfect representation of mindfulness because it illustrates an intimate experience of heartfelt love, for self and for other human beings. (SP16, PJ, W12)

To build a healthy, compassionate learning environment, one must first learn to be self-compassionate. Students believed that practicing mindfulness empowered them to treat themselves with kindness and, in turn, create more opportunity to want to be kind to others. As one student alluded to, “I have never been in a class before where I have felt such a sense of community” (SP16, JE, W12). It was clear that the participants believed the MPs contributed to their social integration and overall collective kindness as a class.

#### *4.2. Summary of Findings*

The data that were discovered from this study signified that the college undergraduate students were able to form an understanding of and appreciation for mindfulness, and structure the belief that MPs were beneficial in their everyday lives. Specifically, the data corpus represents a perceived fostering of heightened focus, emotional balance, and self-compassion for the participants in this study. The findings provide plausible evidence that the implementation of MPs in an ABL instructional unit is sound and justifiable pedagogy for undergraduate college students. Regarding theme one (conceptualizing mindfulness) students expressed that they understood what mindfulness was and the importance of MPs in and outside the classroom. For the second theme (student interest with mindfulness) students were collectively interested in mindfulness and there was an overall affinity toward the use of MPs in the classroom. Theme three (perceived outcomes from mindfulness practices) demonstrated that students believed the use of the MPs did enhance their

lives. Specifically, students emphasized three sub-themes including heightened focus, emotional balance, and self-compassion. The students believed developing mindfulness improved their overall awareness of the surroundings and focus on the classroom, their ability to respond calmly to situations and negative emotions, and help with promoting self-compassion and, in turn, transfer this construct into kindness toward others.

## 5. Discussion

This section will cover the positive impact of the MPs for the students, the re-imagining of the adventure wave model [36], and discussion of future research directions. First, the lived experience of the participants regarding their perceived social and emotional learning outcomes is discussed alongside the backdrop of some existing literature on mindfulness in the classroom. Next, we discuss a proposed reconceptualization of a popular adventure education framework. Finally, the discussion section ends with implications for ABL instructors and future research directions that should be considered.

### 5.1. Social and Emotional Learning Outcomes

One of the student learning outcomes of the ABL course (in addition to one of the primary philosophical tenets of ABL) is enhancement of intrapersonal and interpersonal relationship skills. The students clearly identified the instructional alignment between the use of the MPs and their intrapersonal and interpersonal relationship skills development. MPs are to ABL as butter is to popcorn—There was a perception from students that the MPs enhanced the quality of social-emotional experience in class. The students indicated on numerous occasions that they could not see how the course was taught previously without using the MPs. When students can engage in course material in a social and emotionally safe and supportive learning environment, then positive student behavior, engagement, and overall enjoyment are the most likely outcomes [45,46].

ABL is based on the development and transfer of SEL outcomes. Outcomes from participation in an ABL curriculum align with the Collaborative for Academic, Social, and Emotional Learning (CASEL) core competencies of self-awareness, self-management, social awareness, relationship skills, and responsible decision making [16]. Previous research has demonstrated that ABL can produce outcomes specifically related to the CASEL competencies of social awareness and relationship skills [4,5]. Practically speaking, practices that promote social and emotional learning prepare students to handle life's adversities, build concrete and lasting relationships, and allow them to succeed on their own and in a group environment [47].

According to CASEL, self-awareness relates to the labeling of one's feelings, connecting these feelings to behavior, and the accurate categorization of positive and negative emotions [16]. In this study, students described how the employment of MPs promoted a calmness and focus on which students were able to become aware of their feelings, label them, and take a moment of self-reflection before discussing these feelings with others. The enhancement of self-awareness made for a more perceived cohesive group learning environment during the ABL activities and group processing sessions. Recent, systematic literature reviews have indicated a strong relationship between the practice of mindfulness and developing positive changes toward self-awareness and emotional regulation or self-management [48].

Self-management is similar to self-awareness in that one must reflect inward and learn to take control by regulating one's emotions [16]. By doing this, an individual can succeed in setting and achieving goals [16]. In this study, students voiced belief that they felt more emotionally balanced by learning to live life in the present moment. Slowing down and reassessing how they felt allowed students to practice self-control and set up their next steps with a calmer demeanor. Learning to set goals and carry them to fruition is an important aspect of self-management that students can develop by learning to mindfully take control of one's emotions [49]. There has been evidence reported that mindfulness can

lead to enhanced positive emotional responses and greater ability to regulate emotional thoughts [49].

Social awareness practices gaining perspective, empathy, respecting diversity, and understanding social norms [16]. As students became connected with themselves through class MPs, they perceived greater communication and cooperation skills that they believed contributed to their ability to be compassionate and empathetic towards others in a social environment. Students commented that remembering to take a step back and acquire perspective on a situation is important to social awareness and to making others feel comfortable. With this new knowledge and awareness, students reflected that they were more empathetic and compassionate to their peers. Mindfulness has been shown to lead to cooperative orientation [50], enhanced self-compassion, and empathy for others [51].

A plausible argument can be made that improved social relationship skills in a classroom can lead to stronger learning environments and a greater ability for students to work as a team [5]. Throughout each of the three, 16-week ABL courses, students felt the MPs were beneficial in helping to promote interpersonal (personal) and intrapersonal (social) relationship skills (e.g., listening, being trusting and supportive of peers, taking turns, and exhibiting care). Students came to appreciate the importance of learned relationship skills and spoke about how they believed they were able to transfer them to improve their intrapersonal and interpersonal relationship skills outside of the classroom. There is also evidence that mindfulness training can help students feel less lonely and increase their social interaction with others [52]. This finding aligns with the ABL literature suggesting that the experiencing of the cooperative activities used in this curriculum provides vast opportunities to cooperate, trust one another, and develop collective effervescence [2].

Lastly, responsible decision making involves identifying problems and creating solutions, purposeful and safe choice, and ethical responsibility [16]. ABL creates space to improve decision-making skills. The activities help students foster trust, leadership skills, conflict resolution, and safety of others [16]. By building a more cohesive, understanding environment, students can feel comfortable and empowered to make decisions, both individually and as a group. If students trust themselves and one another, they can share a sense of responsibility in the decision-making process and be confident in their choice. Mindfulness becomes a powerful tool in the amalgam with ABL toward a greater possibility for students to problem solve in a socially and emotionally safe learning environment. Being present in the here and now creates opportunity for clarity during situations that require decision making. There is evidence that highlights the use of mindfulness as a means to promote problem solving [53]. One might argue that MPs create more focus and alertness, hence the heightened ability to be able to make sound decisions and solve problems in various situations.

### 5.2. *Re-Imagining the Adventure Wave*

One prominent outcome from this investigation was reconceptualizing a popular experiential learning model to include MPs as a pedagogical “bridge” between the experience (hands-on activity) and debrief (group processing) during the ABL content. The Adventure Wave model consists of three primary instructional activities: brief, experience, and the debrief [36]. Each of these three components create a powerful learning opportunity for participants. We positioned the MPs to take place immediately following the experience and prior to the debrief session with the participants. Figure 6 illustrates a modified adventure wave that includes the MPs. We claim that the MPs helped the learner expeditiously transition from high-energy, hands-on activity to a calmer, more focused state. Thus, the participants were primed and ready to enter the group processing session of the debrief. The MPs had a plausible impact on course pedagogy, helping students to perceive greater focus/attention and equanimity or emotional balance regarding their overall disposition. This assertion aligns with previous research suggesting that MPs can influence emotional well-being, including more focused compassion among student populations [54].



Figure 6. A Modified Adventure Wave.

Group processing is a key component in helping students transfer their experiences to real-life situations beyond the classroom [15]. Furthermore, conducting an ABL debrief provides an opportunity for students to process intrapersonal and interpersonal relationship skills as a cohort. Thus, implementing tools such as MPs presents a unique opportunity for students to find equanimity prior to group processing, in order to further develop understanding of intrapersonal and interpersonal relationship skills. Since MPs can be conducted in a relatively short period of time (i.e., 1–5 min), ABL facilitators should consider using these practices as an anticipatory foundation prior to the actual processing of the ABL experience.

Additionally, during this study we determined from the participants that the name (i.e., The Sunday Afternoon Drive Debrief Model) and acronym (SADDM) for the group processing model used was too long and the metaphor difficult to understand for most of the participants (i.e., many of the participants did not know the definition of a Sunday Afternoon Drive). Or in other words, the “Sunday” portion of the name did not connect and was not relatable to the university students. The name of the model was not personally nor culturally valid to their understanding of the concept. Thus, we recommend a name change for this model. We believe the Afternoon Drive Debrief Model is more culturally accurate and easier to remember.

### 5.3. Limitations and Future Research Directions

This section covers the study limitations and the potential directions for future research based upon the findings from this study. As seen with previous ABL research, this study adds to the plausibility of intrapersonal and interpersonal relationship skills transfer for participants [2]. Additionally, this inquiry opens the possibility for and demonstration of MPs as a pedagogical tool in creating further opportunity to develop intrapersonal and interpersonal relationship skills toward stronger social and emotional learning in the classroom during ABL instruction.

As a qualitative inquiry, we do caution the extent to which these findings can be extrapolated beyond this case and population (i.e., college students taking a teacher education course in ABL). The authors make no claim of a causal relationship between the inclusion of MPs and certain social and emotional outcomes. The type and delivery of the MPs and ABL activities further limit the outcomes of this study, as the facilitator had fifteen years and extensive training/expertise teaching ABL, however had five years teaching MPs. We recommend further replicate studies that collect data from multiple instructors with various levels of experience in facilitating the MPs. Or at the very least, a follow-up study with an instructor with more extensive expertise and content knowledge teaching MPs.

Informally most students claimed that they had never heard about mindfulness. However, the level of student experience with the MPs was not formally identified.

Future research combining ABL with MPs could further the evidence that together, this model-based practice may be quite advantageous for college student populations in advancing both social and emotional outcomes. In echoing Dyson, the majority of ABL research is interpretive and a call for more quantitative measures is warranted for future inquiries [5]. Additionally, studies specific to ABL have been conducted at the elementary, middle, and collegiate levels. Future studies should be focused on the high school (9–12 grade) level. This current case study was conducted with three groups of students who took a 16-week course. Longitudinal studies that occur over a full academic school year might be a future direction to head in (i.e., large scale studies that occur over a longer timeframe). We recommend more variety of school contexts and demographics for future studies as well, to create greater transferability with the literature. We recommend the works of Stuhr et al., [4,5,14] and Sutherland et al., [29] as starting points for future replication studies or as guides for future research.

## 6. Final Thoughts

The findings from this study add to the current literature by suggesting that the inclusion of ABL in a college-aged population is beneficial in promoting both social and emotional health as well as relationship skills or intrapersonal and interpersonal relationship skills. The incorporation of MPs within the ABL framework provided a positive influence on the brief and debrief portions of the curriculum model, as well as the development and transfer of intrapersonal and interpersonal relationship skills. Specifically, students perceived MPs to foster heightened focus, emotional balance, and self-compassion which contributed to their overall success in the classroom by improving their ability to calmly and collectively be present while exhibiting kindness to themselves and others.

Additionally, participants perceived that the skills learned through MPs were transferable to life outside of the classroom. The inclusion of MPs to the adventure wave model enhanced the learning achieved in ABL lessons. By adding MPs, students were able to be more present, calm, and thoughtful in the group processing portion of the activities and therefore strengthen their development and transfer of learned skills. Thus, inquiry testing the newly re-conceptualized adventure wave approach with the addition of MPs is suggested for future ABL studies. Furthermore, the re-conceptualized ADD Model was found to be a credible framework within the larger scope of the ABL curriculum.

In the context of this study, students were able to not only gain an understanding and appreciation of mindfulness, but they were also able to conclude that MPs were important tools in their everyday lives to promote enhanced well-being both in and outside of the classroom. Research indicates that helping students develop traits associated with emotional well-being (e.g., positive emotions, emotion-regulation skills, and interpersonal relationships) holds tremendous potential in promoting learning within the classroom [55,56]. To flourish emotionally (i.e., experience happiness and well-being) one needs to be provided with opportunities to develop positive emotions (feeling happy), engagement (self-regulation), relationships (being socially connected to others), meaning (sense of purpose), and achievement (perceived accomplishment) [57]. The MPs embedded within these ABL courses accomplished this mission by providing the opportunity to enhance intrapersonal and interpersonal relationship skills, and the perception of reduced anxiety, improved focus, and a higher sense of well-being.

In conclusion, this study demonstrates the necessity and place for MPs in the classroom as a vital part of this kinesiology course, and to help with the transfer of knowledge involving various social and emotional skills. Mindfulness is an incredible tool that should be introduced in higher education, so that students can access and potentially benefit from using it as a practice. By learning to be mindful through the practice of mindfulness, we can hope to promote a more positive, inclusive, thoughtful, kind, and conscientious environment for us all to live in.

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