

# **Integrating Mindfulness into Distance Learning Adult Education**

**Dr. Steven C. Dunn, Professor, University of Wisconsin Oshkosh, USA**

**Dr. Dale W. Jasinski, Associate Professor, Quinnipiac University, USA**

**Ms. Sandra Schrock, doctoral candidate, Grand Canyon University, USA**

## **ABSTRACT**

*The purpose of this paper is to assess the effectiveness of a mindfulness-based digital solution as a classroom tool for improving stress, classroom engagement, and increasing focus and attention in adult learners in a distance education environment. The exploratory study involves MBA students enrolled in an online course at a large US Midwestern university. Qualitative data was collected during and after the course. Results indicate a positive reaction by students and improvements in their mindfulness, perceived stress, and engagement in their learning.*

## **INTRODUCTION**

The National Center for Education Statistics (NCES) projects by 2021 an estimated 20.6 million students will be enrolled in degree granting post-secondary institutions. A concerning trend among these students is that depression, anxiety, and panic attacks have increased in recent years (Ledger et al., 2017). The implication of this concerning trend is that it has important implications on student academic achievement and retention (Andrews et al., 2004). A recent review showed that depression prevalence in college samples range from 10% to 85%, with a weighted mean average of 30.6% (Ibrahim et al., 2013). Another study indicated that stress is becoming more prevalent among college students indicating that 38% of students acknowledged feeling stressed, 40% feeling anxious, and 33% feeling depressed (Beitner et al., 2015; Ko et al., 2018). In the most recent report of the American College Health Association's National College Health Assessment, 34.4% of students reported stress, 26.5% reported anxiety, and 16.4% reported depression as interfering with their academic performance (American College Health Association, 2016).

Over the last 10 years, many colleges and universities have implemented mindfulness-based stress management initiatives (Byrne, Bond & London, 2013; Greeson, Jeberg, Maytan James, & Rogers, 2014). Such programs promote positive adaptive skills, stress resilience, and social and emotional skills. In fact, several institutions have incorporated mindfulness practices within the student affairs services such as student health services, regular course offerings, counseling services, and/or training programs (Mahfouz et al., 2018). Simultaneously, Online education has provided access to college courses at an unparalleled rate in the past 10 years, growing from a few institutions and programs to most undergraduate and graduate programs.

We are unaware, however, of any studies that describe the intentional integration of a mindfulness digital application (app) into a specific online course. Thus, this research is exploring the effectiveness of such an approach.

## OVERVIEW OF THE MINDFULNESS APPLICATION - LEVELHEAD

Levelhead is a digital engagement program designed to improve overall well-being and employee engagement in the workplace and classroom. Its unique combination of bite-sized, mindfulness-based practices can be done anytime, anywhere. Utilizing the latest digital engagement tools such as badges, stickers, and a leaderboard, teams within an organization or classroom can encourage each other as they practice and move toward a healthier, happier life. The program includes a robust administrative portal, measurement tools, and ongoing education via blogs and mini-podcasts making the Levelhead program more than just another mindfulness app.

Levelhead provides a series of self-directed exercises users can fit into daily activities, like brushing their teeth and driving to work or school. Using the platform, users have the ability to engage, share and celebrate milestones which strengthen team bonds in the classroom. Figure 1 gives an example of what students were expected to do in the first week of using the Levelhead application.



### 7-Day Challenge Track

	Exercise 1	Exercise 2	Exercise 3
	<b>Morning Stretch</b> Prepare your mind & body for the day with a gentle stretch. (1:46)	<b>Tension Release</b> Take a moment to release tension without ever leaving your chair. (2:16)	<b>Leave Your Thoughts Behind</b> Give yourself a fresh perspective as you begin new activities or tasks. (2:48)
	<b>Energize Your Morning</b> Begin your day on the bright side with this simple breathing exercise. (1:32)	<b>Give Yourself a Time Out</b> Be more focused and present by taking a "time out" from your devices. (3:20)	<b>Relax and Refresh</b> Discover a quick way to recover from a long day. (5:13)
	<b>Jar of Gratitude</b> Incorporate gratitude into your day with this simple idea. (1:19)	<b>Take Five</b> Take five to release the mounting tension and stress from your day. (3:51)	<b>Woodland Walk</b> Enter your private sanctuary and emerge refreshed. (5:58)
	<b>Be the Architect of Today</b> Set a positive course by consciously determining your intention for today. (2:22)	<b>It's Time to Declutter</b> Clear the distractions and you'll create more space. (2:34)	<b>Sweet Dreams</b> Get ready for sweet dreams as you power down from the day. (5:22)
	<b>Make Your Dentist Proud</b> Practice being present by brushing your teeth with all of your senses. (2:17)	<b>Silence the Self-Critic</b> Be kind to yourself by silencing your inner critic. (2:54)	<b>Take a Mental Holiday</b> Relax your mind and body by going on a holiday, without ever having to pack. (2:37)
	<b>Mindful Breakfast</b> Start your day off right by engaging your senses during breakfast. (1:52)	<b>Infuse Kindness at Work</b> Leverage kindness to create an environment filled with joy and compassion. (2:30)	<b>Immerse Yourself in Music</b> Unwind by tuning in to subtle variations of sound. (4:50)
	<b>Your Commute</b> Turn your commute into a peaceful and reflective opportunity. (3:46)	<b>What Brings You Joy?</b> Discover what brings you joy and use it to fuel you forward. (2:58)	<b>Self-Reflection</b> Gain a deeper understanding of who you are. (3:51)

Times are in (minutes:seconds).

**Figure 1: First week of Mindfulness Exercises**

## OVERVIEW OF THE COURSE INTEGRATION

The university that is used in this study is an AACSB accredited undergraduate and MBA programs that has grown to include 100% online degree granting programs in most of its areas of concentration. At the graduate level, the university offers online courses developed by their own faculty, and are also part of a larger collaborative MBA program that involves several sister universities. The students in the MBA programs are typically adults in their late 20's to late 30's, and most are employed full-time by companies in the Northeast region of Wisconsin known as the Fox Valley. The Fox Valley is a heavy manufacturing region and also home to a number of well-known healthcare and insurance firms. Companies such as Kimberly Clarke, Plexus, Oshkosh Corporation, Bemis Corporation, Menasha Corporation, Essity, Thrivent, Mercury Marine, VF, Ascension, Aurora Advocate healthcare and others populate the region and send many students to the MBA program.

Students in the MBA program are typically achievers, often with young families and various outside commitments ranging from sports to hunting, fishing and camping for which the region is known. As such, they are often running at maximum overload when they come into the classroom. Online classes, although they provide the advantage of participating from anywhere at anytime, can often be more stressful than in-class counterparts. The reasons for this vary, but include the lack of face to face interaction with the instructor, ease of use of the classroom management system being utilized for the course (D2L in this case), quality of the instructions, level of participation from other classmates, etc.

One of the co-authors teaches the MBA Law, Ethics and Sustainability course, which is a seven-week, 1.5 credit elective course. Seven-week courses require a healthy pace, whether in class or online, with a large amount of material digested in a short time-span. Assignments such as papers come with regularity, and in the online course, discussions are weekly. This particular class was chosen to serve as a beta test for a mindfulness program application, Levelhead. The reason the instructor chose to use this app was to see if some of the stress levels, so common in MBA students, could be mitigated, even in a small way. There were 28 students in the class, and all were required to load the application to their cell phones as part of the course materials.

## DATA AND METHODOLOGY

As a required portion of the course, students were asked to keep a weekly journal about their mindfulness practice on the Levelhead app. This was designed to be an open-ended reaction to their interaction to the app sessions that they had utilized each of the seven weeks. They were also asked to comment at the end of the journal on its overall impact on them, if any. The journal was turned in on the last day of class. For grading purposes, it was weighted as 5% of the final grade, with the rubric being that they either attempted to participate or did not. The quantity and depth of the comments were not a factor, as long as an attempt was made. Several students were honest about not liking the whole exercise, which was fine, as long as they made the attempt.

A total of 112 comments from student experience weekly journals were analyzed. These comments were categorized into one of three categories:

1. "Positive" – Favorite exercises and observed personal/workplace benefits.
2. "Negative" – Comments related to a lack of perceived value for the student personally, or they could not see the relevance to their educational experience, or had another reflective practice that worked for them.
3. "Neutral/Recommendations" – Ideas and suggestions to improve the usability of the program, more effectively position the program, or incorporate the Levelhead topics into the content of the course.

**Table 1: Summary of the High-Level Concept Coding Scheme**

Category	Description
Positive	Comments fitting the criteria for this category <ul style="list-style-type: none"> <li>• Included personal insights gained through the various practices.</li> <li>• Shared how they applied what they learned at home/at school.</li> <li>• Related to the benefit of the exercises/program</li> </ul>
Negative	Comments meeting the criteria for this category <ul style="list-style-type: none"> <li>• Related to their schedule and difficult in finding time</li> <li>• Felt stress because the exercises were tied to grade</li> <li>• Didn't see the relevance to the class</li> <li>• Exercises didn't work for them</li> </ul>
Neutral/Recommendations	Comments meeting the criteria for this category <ul style="list-style-type: none"> <li>• Insights on when is the best time to practice</li> <li>• Ideas on changes for the program/app</li> <li>• Comments about recommendations for future use</li> </ul>

Examples of positive comments include:

- I think practicing mindfulness is a great idea for most people and has been beneficial for me in both my work and personal lives. I have seen great improvements in my work/life balance and have seen improvement in both my homework and studying for my classes. The only thing I wish I could do different is go back to a few years ago and start practicing earlier than I did.
- This week, I've found some good value in the Levelhead app's activities around device/digital time management. This is something that I've struggled with in the past and that I feel has had a negative impact on my work performance. As a software engineer, deep thought on technical issues is common. Navigating problems that require this is very difficult when I'm constantly viewing emails or checking notifications on my phone. I feel that even in the few days that I've been practicing the techniques that the app mentioned I've gotten much better in this realm.
- Over halfway! I am into the positive practices track and am liking these exercises a bit more. I work with engineers and to be honest, engineers are curmudgeons. I am working to try and be more positive and apply gratitude and empathy to those I work with and overall, it's been helpful. Most of my co-workers respond positively to gratitude and I find that they tend to reciprocate. It's amazing how gratitude can be contagious.
- For empathy, I am working with a customer that is extremely time pressed for their portion of the project. I have been aware of the demands on their time and looking for ways for us to be more flexible in terms of meetings and messaging pressing for their inputs. I am trying to have our team do the same as too often our teams are in the fray and not seeing the bigger picture for the project and life in general.
- While the meditation piece was not a fit for me, I did find many different perspectives in how I see the world from the exercises. I do not know what the licensing is for the tool and if I will lose access once the semester ends, but if I am able, I will continue to work through the exercises. It is good to have content in an MBA program that allows us to take a step back and think about our personal needs and to de-stress. Life as a professional business person is stressful and that stress can eat a person alive.
- I enjoyed the Levelhead exercises and have found myself getting in the habit of doing them right away in the mornings. I have a 50-minute ride into work, so I also found myself listening to them during my morning commute. I think I had 33 days in a row!
- One of the skills I really like about this app is acknowledging distractions. Often times my mind wanders and it can kill my focus. However, Levelhead advises me not to not think about it, which by

the way only makes me think about more things, but rather to acknowledge it and push it away. Now I feel better about my mind wandering. It's natural. This really helps me to maintain my focus when meditating and get back into a rhythm faster and more naturally.

- Don't be too hard on yourself. This is just information. Try not to judge yourself or your thoughts. I think this is the thing I need to be most reminded of. I like that they end some of the activities with "Don't be too hard on yourself." I sometimes think more on my failures, or things I can do better. However, I need to remember how far I've come. I'm not perfect, but that's okay. I will continue to do better. The goal is to be better today than I was yesterday. This is just information. Try not to judge yourself.
- The sending stickers seems a little strange and I felt awkward doing that. Although, when I received one, I thought that was cool and it made me feel worthwhile. It made me appreciate someone taking time out of their day to send it.
- It made me see more clearly how easily distracted we really are. Finding some time to relax more and take care of myself will make me a better person. I find that exercise is an important part of my life. I miss it when I don't go. I also feel much more mentally stable after I go. It helps me to clear my mind.
- The practice that I found had the most positive impact was the transition from work to home. In the past, I have been one to bring my work stressors home with me for the day. I found that making a mental effort to utilize the app's transition practices from work to home really help with improving my relationships at home.
- I've probably used the App between once and three times each day this week since I installed the App. I enjoy using the app, and focusing specifically on "being mindful" or on the meditation piece. I utilized a couple of the "Basics" and Meditation exercises before bed, I think they helped me go to sleep right away. They calmed my racing mind about all the things that I needed to do the next day, and helped me focus on the present. I also find myself being more "mindful" at random times after doing some of the exercises – for example. Normally I brush my teeth first thing in the morning, and I just sit there and brush for 5 minutes without thinking about it, but a couple times I really focused on what I was specifically doing, and I think it made it a much more efficient, and even..... "enjoyable?" experience for me.
- I continued working on my wandering mind. I've noticed that when I'm practicing these things I'm not thinking about useless things I'm just in the present, more relaxed and in a happy place. I'm starting to know how in control of my emotions and thoughts that I am. Before I had never really given "control of my thoughts" much thought.

Examples of negative comments include:

- In all honesty, I have very little personal interest in the app. Its use has turned into little more than work for me. As someone who already practices some forms of meditation (admittedly at a simpler level than the depth that the app teaches), I find the exercises to be somewhat redundant. At this point, I'm only a few days through the initial 7-Day challenge.
- I continue to struggle with fully engaging with the majority of the exercises. It sounds like an unfair criticism for a tool meant to improve one's soft skills, but the app itself is too soft for my liking. My mind may be wired a bit differently than others, but I prefer to have less ambiguity in the tasks that I engage in. Indeed, having ambiguity or loss of direction tends to put me at dis-ease.
- I found the exercises to be a non-value add for me in my personal life. Learning about breathing techniques and becoming aware of how my toes feel in the morning when I wake up, does not help me manage stress, work life balance, or become more aware of my behavior and attitudes. I also did not

find value in focusing on how my food felt or tasted when consumed for breakfast lunch or dinner. The music selected to help end my day and self-reflection was unnecessary. My commute is already part of my routine for getting ready for my work day and also preparing to come home and separate work and family. Breathing exercising while driving or finding different route to get home are not helpful and inefficient. At one Point I felt like George Costanza yelling “Serenity Now”.

- I understand that as managers we need to be mindful of how we feel since we will portray this to our peers and reports. Having a meaningful way to balance stress from work, family and other elements of our lives is important. Levelhead did not help me with this, but unfortunately added to it this semester.
- I am still struggling to consistently use the app and I have decided to reflect on some of the reasons for why I have struggled to this point to use it. I believe it is tied to two main reasons.
- I am not a heavy user of apps to begin with, so it feels unnatural for me rely on my phone for an activity like this. An app makes sense, but it does not fit my current lifestyle.
- The exercises that I have used so far do not fit how I have traditionally de-stressed myself. Traditionally I like to make lists when I feel overwhelmed. Lists allow me to put the tasks rolling around my head in perspective and allow me prioritize. I like exercising as well as silently reflecting on my day or life, but those are most enjoyed when I have time and not when I “make time”. So far, the stress exercises have felt more like work.

Examples of neutral or recommendation comments include:

- It’d be ideal if there was a bit more customization to the app. There were certain exercises that I had legitimately no connection to. If there were a Pandora-esque thumbs-up/ thumbs-down system that would allow you to avoid similar exercises in the future, I think it would have added quite a bit of value to me.
- Related to this being part of the class, I think it would be beneficial to further integrate this into the curriculum, maybe even periodically touched on in the weekly discussions. After spending some time with the material, I see a clear benefit. With a lot of competing items in life right now, I spent more time on the other parts of the class because they were the primary ones getting measured. My approach was to look at the assignments and due dates and back into the necessary work. I could have benefited from including the Levelhead material earlier. That being said, I clearly could have prioritized this myself. I understand that the primary responsibility related to my MBA education is my own and I should have increased my effort earlier.
- Levelhead is great, but it might be good to outline specific exercises you would like to be done before the end of the semester to give a range of experiences using the tool. Looking back at the comments in week 4 in the discussions, it may help to show the broad range the Levelhead tool covers and may pique the interests of meditation naysayers. Certainly, let the students pick and choose and do as many as they like, but provide some base level of exercises they should complete.
- Overall, I would only recommend continuing the usage of this app for the class if you took something else off the plate and tied it to the course work. The goals of mindfulness and destressing could easily be integrated into the ethics discussions and journal questions.

The first pass of analysis yields some interesting results. In terms of positive comments, we observed the following:

- About half of the participants had only positive comments.
- Most were about specific exercises that they found helpful.
- Included personal insights gained through the various practices.

- Shared how they applied what they learned at home/at work.

In terms of the comments coded negative, they generally fit into the following categories:

- Didn't see the value of the program.
- Exercises helped their issues, but they already have a practice that worked for them.
- Too busy to use.
- Irritated because they couldn't see the relevance.

It is important to note however that about half of these comments came from two participants. The remaining comments came from participants who also had either an equal number of positive or more positive than negative comments.

For the comments that were coded Neutral/Recommendations, they generally fit into the following categories:

- Ideas to better pre-position the rationale for how Levelhead fit into the class topic.
- Suggestions related to the exercises.
- Suggestions on enhancements to the Levelhead application.

## RESULTS

After the initial high-level concept coding presented in Table 1 was completed, we then examined the data to determine the frequency of these comments. Those results are presented in Table 2:

**Table 2: Summary of Comment Frequency by Category**

Participant	#Rec	Rec as % of total comments	# Positive	Positive as a % of Total Comments	#Negative	Negative as a % of total comments	Trend over the course
1		n/a	5	83%	1	17%	Trend UP
2		n/a	3	43%	4	57%	Trend Up
3		n/a	5	83%	1	17%	No trend
4		n/a	5	56%	4	44%	Trend Up
5	2	50%	2	50%		n/a	No trend
6	1	25%	2	50%	1	25%	No trend
7	2	22%	7	78%		n/a	No trend
8	1	14%	7	86%		n/a	No trend
9	1	50%	1	50%		n/a	No trend
10			8	100%		n/a	No trend
11			5	80%	1	20%	No trend
12			2	100%		n/a	No trend
13			2	100%		n/a	No trend
14			7	100%		n/a	No trend
15			6	100%		n/a	No Trend
16	1	17%	5	83%		n/a	No Trend
17	1	20%	2	40%	2	40%	Trend Up
18			1	33%	2	67%	Trend up
19	1		3			n/a	No trend
20			1		1	50%	No trend
21			9			n/a	No trend
22					2	100%	No trend
23			5			n/a	No trend
<b>Total</b>	<b>10</b>		<b>83</b>		<b>19</b>		

In reviewing this data, several observations can be made:

- 56% of participants had only positively categorized comments.
- Only one participant had only a negative comment.
- An average 3.6 positive comments per participant.
- An average of .8 negative comments per participant.
- Average of .43 neutral/recommendation comments per participant.
- Negative comment analysis- Total 19 Thumbs Down Comments.
- 42% of the negative comments came from two participants. However, those two participants *they had as many if not more positive comments.*
- Only one of the participants had only negative comments.
- The remaining participants with “negative” comments had both negative and positive comments.

Student journal entries were then analyzed for key word association, and results indicate that the largest positive gain was in the category of understanding myself better, a key attribute of adopting a mindfulness perspective. More than half of the students commented about how they were able to step back, see things as they were and essentially, able to be more present in their daily activities. Journal key word tallies are listed in Table 3 below:

**Table 3: Summary of Positive Comments Frequency by Category**

<b>Positive Category</b>	<b>Number of comments</b>
Understand myself better	29
Little amount of time	16
Improve focus on tasks	11
Increased control of life	10
Made me a better person	7
Decreased stress	7
Improves mental well-being	7
More relaxed	6
Improved mindfulness	5
Increased motivation	5
Increased positivity	4
More responsible in life	4
Increased concentration	3
Improved sleep	2
Decreased anxiety	2

The second largest category listed comments relating to how busy their daily lives are, and how there is little time to stop, take a deep breath and reflect during the day. When taken together, the positive reactions to using the mindfulness application all link to slowing down the pace, stepping back and taking a deep breath before continuing with your daily activity.

There were also a number of negative factors that resulted from being required to try the mindfulness application:



**Table 4: Summary of Negative Comments Frequency by Category**

<b>Negative Category</b>	<b>Number of comments</b>
Increased stress caused by the app	5
Relevance to the course not understood	5
Already use alternative methods for this	4
Difficult to get started on this	2
Increased the course workload	2

Students were also asked to comment on other aspects of the Levelhead application, particularly whether or not this should be an ongoing part of the course:

**Table 5: Summary of Recommendations Comments Frequency by Category**

<b>Suggestions</b>	<b>Number of comments</b>
Breathing exercises helpful	14
Needs to be a routine in your life	13
The app helps it become a routine	12
The stickers increased motivation	2

## SUMMARY

In summary, the journal findings indicate that for the majority of the students, the insertion of a weekly activity that is far different from what they normally expect in an MBA class of this nature, was generally a positive experience. A number of students requested to continue to be able to use the application after completion of the course.

Practicing mindfulness was a new experience for most students. Since this was a new experience, it took a little time for them to figure out how to incorporate the practices into their lives. Students were very open about the obstacles and challenges they have in practicing mindfulness and in using the Levelhead application. Students also expressed a variety of benefits to practicing, such as reduced stress and anxiety, improved sleep quality, enhanced relationships, improved focus and attention, reduction in multitasking, and the ability to put events into perspective. Some students also had a difficult time in making the connection as to how this program was relevant to the course curriculum.

There were a number of lessons learned from the instructional side as well. Minimal introduction and supervision for this exercise were provided as it seemed intuitive to the instructor about what was required. In the future, a much more detailed guidebook will be provided, not only to assist students with understanding why the topic is included in the course, but also to help them get started in the whole process of mindfulness. Another challenge was that there were over 200 possible sessions available to choose from when picking a mindfulness exercise. Next time a specific plan which uses exercises designed to fit more closely with the classroom topics each week would make a lot of sense. Students, even MBA ones, far prefer more guidance as opposed to less.

We view this attempt to integrate a mindfulness application into a course a success given the level of participation by week, and the journal comments received. As noted, we jumped into this opportunity to try something radically different, that we thought would help address a major student issue, stress. With more detailed preparation and provision of stronger guidelines, the use of this type of mindfulness app could really provide an impact on student success, if not in the immediate classroom, then in their overall life as noted in the comments. There is a strong indication that a digitally delivered program like

Levelhead may be an effective solution to help students learn to manage stress and anxiety, engage in the educational experience, and build “soft skills” associated with emotional regulation and self-awareness.

To improve the effectiveness of the program for the students, we intend to explore the following:

- Expand customized content tailored to the needs of university and college students.
- Organize student tracks to follow a course structure, with topics and practices that will make it easy to incorporate into a class syllabus.
- Develop an Instructor Guide with ideas of how to incorporate into the course content.

The most important thing to consider in the future is how to integrate this type of activity into any course. The students will want to know why they are being asked to do it, and how is doing something such as mindfulness applies to the specific course content. This will entail educating them on the latest research and trends regarding stress, and how applications such as this can help alleviate that stress, in the process improving their own life. Future studies could investigate the pattern of student involvement with the application, the level of instructor intervention, and the utilization of the application in undergraduate classes or as part of the student onboarding process.

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