

Utah State University

DigitalCommons@USU

---

Psychology Faculty Publications

Psychology

---

2024

## Reach, Adoption, and Maintenance of Online Acceptance and Commitment Therapy at a University: An Implementation Case Study

Carter H. Davis  
*Utah State University*

Korena Klimczak  
*Utah State University*

Ty B. Aller  
*Utah State University*

Michael P. Twohig  
*Utah State University*

Michael E. Levin  
*Utah State University*

Follow this and additional works at: [https://digitalcommons.usu.edu/psych\\_facpub](https://digitalcommons.usu.edu/psych_facpub)

 Part of the [Educational Psychology Commons](#)

---

### Recommended Citation

Davis, C. H., Klimczak, K., Aller, T. B., Twohig, M. P., & Levin, M. E. (2024). Reach, adoption, and maintenance of online acceptance and commitment therapy at a university: An implementation case study. *Psychological Services*. Advance online publication. <https://doi.org/10.1037/ser0000834>

This Article is brought to you for free and open access by the Psychology at DigitalCommons@USU. It has been accepted for inclusion in Psychology Faculty Publications by an authorized administrator of DigitalCommons@USU. For more information, please contact [digitalcommons@usu.edu](mailto:digitalcommons@usu.edu).



Reach, adoption, and maintenance of online acceptance and commitment therapy at a university:

An implementation case study

### **Abstract**

College students are undergoing a mental health crisis and existing clinical resources at universities may be inadequate to meet their needs. One solution to this problem could be the use of self-guided, online programs for mental health that can be easily distributed to students. A persistent issue, however, is the transition from program development to implementation of a self-guided program at campus-wide scale. We describe, in a self-narrative format, the steps taken to translate an online program we developed based in Acceptance and Commitment Therapy (ACT), called ACT Guide, from a research context to a campus-wide service at our university. We also present demographic, previous treatment, and referral data of over 1,500 student sign-ups to describe the reach of our program, how it was adopted into existing university services and systems, and how we maintained the program long term. Findings from these implementation efforts are discussed in the context of suggestions for using self-guided programs for students to fill gaps in mental health service provision in university settings.

### **Impact Statement**

This project involved implementing an online mental health program at a statewide, land-grant university. We describe the methods we used to translate an online evidence-based intervention from a research context to large-scale public adoption. We found that it was feasible to distribute our program to a large number of college students by combining several outreach strategies and collaborating with key university stakeholders.

**Keywords:** acceptance and commitment therapy; student mental health; dissemination and implementation; online programs; self-help

Reach, adoption, and maintenance of online acceptance and commitment therapy at a university:

An implementation case study

### **Introduction**

College students constitute a unique population in which mental health concerns are rampant, with a third of students in the United States meeting criteria for an anxiety disorder and a fifth meeting criteria for a depressive disorder [American College Health Association (ACHA), 2021]. Given these challenges, it is essential to develop transdiagnostic interventions that can improve mental health among students. College counseling centers often lack the capacity to treat every student needing services (ACHA, 2021). A potential way to increase the accessibility of services is the use of low-intensity, self-guided mental health interventions (Ebert et al., 2018). In our research laboratory, we developed a self-guided online program for college students called ACT Guide (Utah State University, 2023), following over a decade of evaluating similar programs in a research context (e.g., Levin et al., 2014; 2017; 2020). Our program is based in acceptance and commitment therapy (ACT; Hayes et al., 2011), which has been found effective for treating a wide range of mental health concerns (ACBS, 2022; Gloster et al., 2020) and has strong empirical support with college students specifically (Howell & Passmore, 2019).

Translating self-guided interventions from a research context to being deployed as a service in naturalistic settings such as universities involves many unique challenges, such as non-adoption, abandonment, challenges to scale-up, spread, and sustainability (Greenhalgh & Abimbola, 2019). Although there is a large evidence-base of RCTs supporting online mental health programs with college students (Lattie et al., 2019), there is a critical lack of research on the naturalistic dissemination and implementation of such programs in university settings outside of research trials. A previous study evaluated the implementation of an online eating disorders

intervention within a statewide university system in the U.S. (Fitzsimmons-Craft et al., 2018), and another described the implementation of a CBT-based online program for academic stress for students at a German university (Lutz-Kopp et al., 2021). These studies suggest the feasibility of implementing online self-help across entire university systems, though there is little precedent for implementing broad, transdiagnostic mental health interventions in this context (i.e., outside of specific psychological disorders or academic-related stressors).

This implementation case study describes our deployment of ACT Guide at Utah State University (USU) and our perceptions of which outreach steps were most successful. Components of the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance; Glasgow et al., 1999) were used to frame our case study, including Reach (the number and diversity of individuals who use an intervention), Adoption (how well an intervention is integrated into broader systems, e.g., a university), and Maintenance (the sustainability of an intervention within a system long-term). Assessing these aims through our observations and naturalistic data from our deployment of ACT Guide can provide valuable insights for other such efforts.

## **Methods**

### **Participants and Procedures**

We used notes of implementation steps to construct a self-narrative of the deployment of ACT Guide at USU, which is a public, land-grant university with campuses across the state of Utah as well as an online program that serves students in and outside of Utah. Additionally, we analyzed de-identified user data including demographics, previous treatment information, and signup rates collected naturalistically through the deployment of ACT Guide. Ethical approval

was provided by the USU Institutional Review Board for using the existing program data. Data is reported from December 1<sup>st</sup> 2019, when ACT Guide was first launched, until April 27<sup>th</sup> 2022, when the spring 2022 semester completed. A total of 1,594 USU students who registered for ACT Guide between December 2019 and April 2022 were included in the analyses. Student data was included if they completed the registration process and partially completed registration data was excluded.

### **ACT Guide**

ACT Guide is comprised of 12 modules, each one targeting a particular ACT skill. A full description of the contents of each module along with example exercises is provided in Table 1. ACT promotes mental wellbeing by improving psychological flexibility, or the ability to persist in meaningful life pursuits while observing aversive internal experiences from a mindful, nonjudgmental stance (Hayes et al., 2011). The practice of specific skills contributes to overall psychological flexibility, including acceptance (practicing an open and non-reactive stance towards whatever internal experiences are present), cognitive defusion (reducing unhelpful literal and evaluative functions of thoughts, i.e., recognizing thoughts as thoughts), valued living (clarifying sources of meaning, or personally chosen intrinsic motivators, in one's life and linking these to concrete behaviors), and behavioral commitment (helping individuals set and meet goals in line with one's values as well as build and maintain larger patterns of valued living over time.) Exercises addressing present-moment awareness (the ability to flexibly shift one's attention such as through guided meditation practices) and self-as-context (the ability to observe experiences through a grounded, neutral perspective such as viewing thoughts and feelings like

leaves floating by on a stream) are also included throughout ACT Guide but are not a central component of the program content.

ACT Guide was developed and delivered through Qualtrics, a sophisticated online research platform most often used for assessment, but that we have successfully adapted to deliver self-help programs in several studies (e.g., Arch et al., 2022; Fauth et al., 2022; Levin et al., 2017; 2020). The tools provided in Qualtrics provide an ideal format for delivering highly interactive online learning sessions with a heavy degree of tailoring based on user responses (e.g., response piping, display logic). Each session was designed to be completed in 20-30 minutes with content delivered through a combination of text, expandable examples, audio-guided exercises, interactive exercises, and tailored content.

## **Results**

### **Reach**

To assess the reach of ACT Guide, we examined how many students enrolled as well as their characteristics. Overall, 1,594 students signed up for ACT Guide from our initial launch in September 2019 through April 2022. Complete demographics and how they compare to the overall student population are presented in Table 2. The user base was largely female (73.4%) and non-Hispanic white (88.5%), with an age range of 18 to 66. Graduate students represented 21.2% of all sign-ups. The majority of users were students taking classes at the main residential campus (76.6%), with a further 9.8% enrolled at a regional campus and 13.6% only taking classes online. Of our entire user base, 11.5% identified as first-generation college students. Regarding chronicity of mental health concerns, 60% of students reported struggling with a concern for “years,” and a further 14% reported struggling for “months.”

**Adoption**

Our goals for the adoption of ACT Guide at USU were to enroll as many students as possible, as we designed ACT Guide as a preventative program in addition to one for students currently experiencing mental health concerns; to reach a diversity of students in regards to demographics, class year, type of student (traditional or distance), and geographic location; and to integrate ACT Guide within existing support systems at USU (e.g., counseling center, disability resource center, academic advising, athletics).

We developed specific objectives for meeting these goals. First, we would utilize university marketing resources to advertise ACT Guide broadly to both undergraduate and graduate students. Second, we would target specific groups of students who would benefit most from our program such as those waiting to receive therapy services or those struggling academically. Third, we would build relationships with various campus stakeholders to promote ACT Guide as a sustainable mental health resource that students are referred to over time.

Guided by these objectives, we determined our intended audience of students and stakeholders that we would market to. These included students who followed university social media accounts, students who used a centralized online student portal, students participating in freshman orientation, and students who viewed local non-university media. We additionally targeted students who visited common areas by using flyers and screen advertisements. We also planned to market indirectly to various stakeholders who could promote ACT Guide to students they interfaced with. Lastly, we anticipated marketing at student outreach events.

We used specific tactics to market ACT Guide to these intended audiences. First, we used dedicated funding from the USU President to provide free access to ACT Guide for all USU students. We developed a graphical identity for ACT Guide which we used in a marketing

campaign consisting of print and digital advertisements, all of which included either a direct link to sign up (digital) or a QR code (print). We posted these advertisements on official USU social media accounts as well on an online student portal that both undergraduate and graduate students use. ACT Guide was also included in various resources provided to new students as part of a first-year orientation program. We also put out an official press release from USU describing the launch of ACT Guide, which was followed by local newspaper articles and one television news feature. Digital advertisements also ran on monitors in the student center, fitness center, clinic waiting rooms, and other shared spaces frequented by both undergraduate and graduate students.

Several university stakeholders helped disseminate ACT Guide to students. The Director of Student Affairs promoted ACT Guide via several email announcements that went out to all students as an example of psychological support that was accessible during the Covid-19 pandemic. Additionally, we contacted instructors who taught large undergraduate courses and asked them to distribute information on ACT Guide to their students. We also distributed advertising materials to sports coaches at USU to share with student-athletes as well as the disability resource office to share with students seeking accommodations. Academic advisors (for undergraduates) and graduate program coordinators were also sent information on ACT Guide to share with students in their department. We additionally shared marketing materials with mental health providers on campus to use with clients as an adjunctive resource to psychotherapy. We were also given a table at an annual wellness expo at the main USU campus, where we were offered flyers and demonstrations of ACT Guide to students. Similarly, USU student government also bolstered our outreach efforts by integrating ACT Guide into programming they created for an annual mental health awareness week.



We assessed the success of each of these marketing efforts by examining users' reports of how they learned about the program. The most common way that students reported learning of ACT Guide was through an announcement in class (34.4%), followed by receiving a referral from a therapist (16.1%), seeing an advertisement or flyer on campus (14.4%), clicking a digital ad on a university website (13.4%), seeing a social media post (10.4%), being told about the program by a friend (7.7%), seeing a news story (2.3%), or attending a campus event where it was promoted (1.7%). A further 12.4% of students reported another referral source such as receiving an email about ACT Guide or hearing it promoted at new student orientation.

We also asked students about their previous psychiatric treatment experience to assess how ACT Guide was adopted in relation to other mental health services. Approximately a third of students reported no previous mental health treatment (see Table 2). Additionally, 15.0% of ACT Guide users reported never seeking mental health services despite struggling with a mental health concern for years. ACT Guide was also integrated into other mental health services as indicated by 9.7% currently receiving treatment at USU and 10.8% currently receiving treatment outside of USU (i.e., using ACT Guide as an adjunctive mental health resource), 6.2% waiting to begin treatment and 2.6% recently terminating treatment (i.e., using ACT Guide to address service needs before and after therapy).

### **Maintenance**

In addition to relying on stakeholders who could continue to promote ACT Guide over time, we received funding support for a 20-hour per week graduate assistant to maintain the program through technical support and continued outreach to these collaborators.

With regards to maintaining enrollments over time, trends can be matched to key events and marketing efforts (see Figure 1 for cumulative signups). When ACT Guide was first

launched in early December 2019, sign up rates were low, which is consistent with the minimal marketing efforts that were made due to the semester ending. A significant uptick in enrollment can be observed at the beginning of the spring 2020 semester, when we pushed advertising to both student channels and stakeholders, including instructors who were beginning their classes.

This initial uptick leveled off around early March 2020, the time at which Covid-related lockdowns took effect at USU. Enrollment rates steadily increased soon after, however, which corresponded with a campus-wide email from the Director of Student Affairs and increased referrals from therapists as services were moved online due to Covid-19. After this time, cumulative signups for ACT Guide increased at a relatively steady rate. We attribute this trend to ongoing efforts to reach potential new users, such as by asking nearly 100 instructors to advertise the program in Spring and Fall 2021, significantly increasing our digital signage in Fall 2021, providing demo accounts to all therapists at the student counseling center in Fall 2021 and Spring 2022, and being featured at a student mental health week in Spring 2022, and maintaining a consistent social media presence throughout this entire period. Enrollment trends also appeared to correspond with the cycle of the academic year, such as “plateaus” during summers and upticks at the beginning of every academic semester (i.e., the months of September and January).

### **Discussion**

Our observations and limited naturalistic data indicate the feasibility of implementing a transdiagnostic online self-help program for college students. We were able to enroll nearly 1,600 students distributed across class years and comprising a wide range of ages, suggesting that we reached traditional and non-traditional students. Furthermore, we reached a sizable group of distance and online students, who are often left out of mental health services (Lister et al.,

2021). We were also able to reach a meaningful number of first-generation students, who are similarly less likely to use counseling centers (Stebbleton et al., 2014). Over half of our user base reported struggling with a mental health concern for years, and we were also able to reach a large number of students with no treatment history. Ideally, programs such as ACT Guide, in addition to teaching effective skills for better mental health on their own, could also serve as a doorway for students to initiate more formalized care if needed. Despite our ability to enroll many students, the demographics of our user base reflect ongoing disparities in treatment utilization. Nearly three-quarters of our users were women and the racial diversity of users was low. Future implementation efforts could more specifically target students who are historically marginalized in systems of care (Smith et al., 2014).

The diversity of ways that students heard about our program reflect the need to take a multipronged approach to outreach in such a large and complex setting as a statewide university. In terms of number of enrollments, no-cost marketing tactics from instructor and therapist referrals outperformed those dependent on institutional funding such as branded online ads. However, widespread marketing may have contributed to familiarity of the program generally, supporting other outreach efforts indirectly.

There were barriers to maintaining ACT Guide as a sustainable mental health resource over time. Primarily, the university-wide marketing campaigns to support the initial launch and which led to a burst of sign ups were eventually discontinued. Our use of in-house marketing tactics such as reaching out to individual offices, clinicians, and instructors was both more time consuming and less effective in generating large waves of sign ups later on. Also, in our initial launch of ACT Guide, we did not provide students with any supports to promote engagement with the program. We recently conducted a study evaluating the effects of adding peer coaching

to ACT Guide, which indicated such support can increase program engagement (Klimczak et al., 2023).

A central limitation of our implementation case study is our reliance on self-narrative in describing the deployment of ACT Guide as opposed to structured qualitative assessments such as interviewing users and stakeholders. While we did collect demographic and signup data from our user base, in the absence of information on students' qualitative perceptions of the program or stakeholders' perspectives on barriers and facilitators to implementation, our interpretation of this data is limited. Using only our own interpretations of implementation efforts additionally limits the objectivity of this report. Furthermore, we did not collect adequate data that could speak to the Effectiveness (the extent to which users benefit from an intervention). Future work will assess how students use ACT Guide and its effect on psychological symptoms.

In conclusion, this report adds to the literature on online mental health interventions for college students, which largely consists of controlled clinical trials evaluating these programs, by providing a case study and preliminary data on the reach, adoption, and maintenance of ACT Guide at a university. Ongoing challenges for dissemination and implementation were identified including the need to increase reach to male and minoritized students. Positive findings were also presented including the number and variety of students that can be successfully reached, including distance education students with limited access to treatment resources and those who have not previously sought treatment. Overall, these results indicate that online mental health programs found efficacious in clinical trials can be successfully deployed as ongoing services for students, particularly with a multi-pronged marketing approach, support from key stakeholders, and necessary resources to deliver and maintain these programs.

Acknowledgements: We wish to thank the many individuals from Utah State University who supported our program and our efforts to make it a sustainable resource for mental wellbeing among students, especially President Noelle Cockett, Gretchen Peacock, Beth Foley, Scott Bates, James Morales, Scott DeBerard, Eri Bentley, and Jennifer Grewe.

### References

- American College Health Association. (2021). Publications and reports: ACHA-NCHA  
*III. American College Health Association–National College Health Assessment.*  
[https://www.acha.org/documents/ncha/NCHA-III\\_FALL\\_2021\\_REFERENCE\\_GROUP\\_EXECUTIVE\\_SUMMARY.pdf](https://www.acha.org/documents/ncha/NCHA-III_FALL_2021_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf)
- Arch, J.J., Crespi, C.M., **Levin, M.E.**, Genung, S.R., Nealis, M.J., Mitchell, J.L., Bright, E.E., Albright, K., Magidson, J.F. & Stanton, A.L. (2022). Randomized controlled pilot trial of a low-touch remotely-delivered values intervention to promote adherence to adjuvant endocrine therapy among breast cancer survivors. *Annals of Behavioral Medicine*, 56, 856-871. <https://doi.org/10.1093/abm/kaab118>
- Association for Contextual Behavioral Science. (2022). *State of the ACT evidence.*  
[https://contextualscience.org/state\\_of\\_the\\_act\\_evidence](https://contextualscience.org/state_of_the_act_evidence)
- Ebert, D. D., Buntrock, C., Lehr, D., Smit, F., Riper, H., Baumeister, H., Cuijpers, P., & Berking, M. (2018). Effectiveness of web-and mobile-based treatment of subthreshold depression with adherence-focused guidance: a single-blind randomized controlled trial. *Behavior Therapy*, 49(1), 71-83.
- Fauth, E.B., Novak, J.R. & **Levin, M.E.** (2022). Outcomes from a Pilot Online Acceptance and Commitment Therapy (ACT) Program for Dementia Family Caregivers. *Aging and Mental Health*, 26, 1620-1629. <https://doi.org/10.1080/13607863.2021.1942432>
- Fitzsimmons-Craft, E. E., Firebaugh, M. L., Graham, A. K., Eichen, D. M., Monterubio, G. E., Balantekin, K. N., ... & Wilfley, D. E. (2019). State-wide university implementation of an online platform for eating disorders screening and intervention. *Psychological Services*, 16(2), 239. <https://doi.org/10.1037/ser0000264>

- Glasgow, R. E., Vogt, T. M., & Boles, S. M. (1999). Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American journal of public health, 89*(9), 1322-1327. <https://doi.org/10.2105/ajph.89.9.1322>
- Gloster, A. T., Walder, N., Levin, M. E., Twohig, M. P., & Karekla, M. (2020). The empirical status of acceptance and commitment therapy: A review of meta-analyses. *Journal of Contextual Behavioral Science, 18*, 181-192. <https://doi.org/10.1016/j.jcbs.2020.09.009>
- Greenhalgh, T., & Abimbola, S. (2019). The NASSS framework-a synthesis of multiple theories of technology implementation. *Stud Health Technol Inform, 263*, 193-204. <https://doi.org/10.2196/16861>
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change*. Guilford Press.
- Howell, A. J., & Passmore, H. A. (2019). Acceptance and commitment training (ACT) as a positive psychological intervention: A systematic review and initial meta-analysis regarding ACT's role in well-being promotion among university students. *Journal of Happiness Studies, 20*(6), 1995-2010. <https://doi.org/10.1007/s10902-018-0027-7>
- Klimczak, K. S., Twohig, M. P., Peacock, G. G., & Levin, M. E. (2023). Using peer-support coaching to improve adherence to online ACT self-help for college mental health: A randomized controlled trial. *Behaviour Research and Therapy, 160*, 104228. <https://doi.org/10.1016/j.brat.2022.104228>
- Lattie, E. G., Adkins, E. C., Winkvist, N., Stiles-Shields, C., Wafford, Q. E., & Graham, A. K. (2019). Digital mental health interventions for depression, anxiety, and enhancement of

- psychological well-being among college students: systematic review. *Journal of Medical Internet Research*, 21(7), e12869. <https://doi.org/10.2196/12869>
- Levin, M.E., Pistorello, J., Hayes, S.C. & Seeley, J. (2014). Feasibility of a prototype web-based Acceptance and Commitment Therapy prevention program for college students. *Journal of American College Health*, 62, 20-30. <https://doi.org/10.1080/07448481.2013.843533>
- Levin, M.E., Hayes, S.C., Pistorello, J. & Seeley, J. (2016). Web-based self-help for preventing mental health problems in universities: Comparing acceptance and commitment training to mental health education. *Journal of Clinical Psychology*, 72, 207-225. <https://doi.org/10.1002/jclp.22254>
- Levin, M. E., Krafft, J., Hicks, E. T., Pierce, B., & Twohig, M. P. (2020a). A randomized dismantling trial of the open and engaged components of acceptance and commitment therapy in an online intervention for distressed college students. *Behaviour Research and Therapy*, 126, 103557. <https://doi.org/10.1016/j.brat.2020.103557>
- Levin, M. E., Hicks, E. T., & Krafft, J. (2020b). Pilot evaluation of the stop, breathe & think mindfulness app for student clients on a college counseling center waitlist. *Journal of American College Health*, 1-9. <https://doi.org/10.1080/07448481.2020.1728281>
- Lister, K., Seale, J., & Douce, C. (2021). Mental health in distance learning: a taxonomy of barriers and enablers to student mental wellbeing. *Open Learning: The Journal of Open, Distance and e-Learning*, 1-15. <https://doi.org/10.1080/02680513.2021.1899907>
- Lutz-Kopp, C., Luka-Krausgrill, U., Honsbrok, B., Meinhardt-Injac, B., & Gropalis, M. (2021). Development, implementation and first evaluation of an online portal to promote the



mental health of university students (me@ JGU). *International Journal of Environmental Research and Public Health*, 18(3), 1179. <https://doi.org/10.3390/ijerph18031179>

Smith, K. M., Chesin, M. S., & Jeglic, E. L. (2014). Minority college student mental health: Does majority status matter? Implications for college counseling services. *Journal of Multicultural Counseling and Development*, 42(2), 77-92. <https://doi.org/10.1002/j.2161-1912.2014.00046.x>

Stebbleton, M. J., Soria, K. M., & Huesman Jr, R. L. (2014). First-generation students' sense of belonging, mental health, and use of counseling services at public research universities. *Journal of College Counseling*, 17(1), 6-20. <https://doi.org/10.1002/j.2161-1882.2014.00044.x>

Utah State University. (2023, May 1). *Acceptance and commitment therapy self-help programs*. <https://cehs.usu.edu/scce/services/act-guide/index>