Evaluating the Efficacy of AlcoholEdu for College
About the Author

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Bill has worked with EverFi since 2012 on a variety of research, course development, and communications projects. From 2007-2011, he served as the executive director of program research and analysis at Outside The Classroom, now part of EverFi, where he oversaw the development and later revision of AlcoholEdu for College and GreekLifeEdu. Among other accomplishments, Bill directed the U.S. Department of Education’s Higher Education Center for Alcohol and Other Drug Abuse and Violence Prevention (HEC) from 1995-2004. Under his direction, the HEC emerged as the nation’s primary training and technical assistance resource for helping institutions of higher education develop, implement, and evaluate programs and policies to address substance use and violence at the nation’s colleges and universities. In recognition of this body of work, he was awarded the first College Leadership Award by the American Public Health Association’s Alcohol, Tobacco and Other Drug Section in 2000, and received the Outstanding Contribution to the Field Award from The Network Addressing Collegiate Alcohol and Other Drug Issues in 2008.

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Evaluating the Efficacy of AlcoholEdu for College™

College and university officials are expected to use evidence-based prevention programs to address student alcohol problems. The need to do “what works” is self-evident, but for many years this was made difficult by the lack of scholarship on college student drinking.

That’s changed, and the field now has a wide range of research-proven strategies. The difficulty for practitioners, of course, is that they seldom have the time or the expertise to wade through piles of journal publications to figure out what to do, and so they have to rely on what experts tell them the research says.

This brief report reviews the case for the efficacy of AlcoholEdu for College, beginning with a summary statement from the National Institute on Alcohol Abuse and Alcoholism (NIAAA), and then describing two major external evaluations of the course.

OVERVIEW OF THE RESEARCH LITERATURE

Recognizing the need for more guidance, the National Institute of Alcohol Abuse and Alcoholism (NIAAA) assembled 16 leading researchers to produce the College Alcohol Intervention Matrix (CollegeAIM), which rates the relative effectiveness of nearly 60 interventions to address harmful and underage drinking. NIAAA is one of 27 institutes and centers in the esteemed National Institutes of Health.

Released in September 2015, CollegeAIM gave AlcoholEdu for College its highest rating—three stars—for effectiveness. Earning this rating required at least six rigorous studies, with 75% or more reporting a positive effect. Indeed, several studies have demonstrated that AlcoholEdu has a positive impact on first-year students’ alcohol-related attitudes, drinking behaviors, and consequences.

Provided below are descriptions of the methods and results for two of the recent studies that persuaded the NIAAA review team to rate AlcoholEdu so highly. Both were conducted by independent investigators, and both are randomized control trials, with either individual students (Hustad, Barnett, Borsari, & Jackson, 2010) or entire institutions (Paschall, Antin, Ringwalt, & Saltz, 2011a; Paschall, Antin, & Ringwalt, 2011b) randomly assigned to treatment and control groups. Randomized studies are the gold standard for evaluation research.

The College Alcohol Intervention Matrix can be accessed at www.collegedrinkingprevention.gov/CollegeAIM

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Pacific Institute for Research and Evaluation: Multisite Randomized Control Trial

The Pacific Institute for Research and Evaluation (PIRE), led by M. J. Paschall, secured a multi-million dollar grant from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to evaluate AlcoholEdu for College. The PIRE team published its findings in 2011 (Paschall, Antin, Ringwalt, & Saltz, 2011a; Paschall, Antin, & Ringwalt, 2011b).

“Based on the findings, the online course appears to constitute a strategy for reducing hazardous drinking that is particularly appropriate for freshmen who are newly arrived on campus, at a time when they are at high risk for engaging in this behavior.”
—Paschall et al., 2011a, p. 307

The PIRE study was a multisite randomized control trial, with 15 colleges randomly assigned to have their first-year students take AlcoholEdu for College (treatment group) and 15 comparison schools (control group).

AlcoholEdu is a population-level prevention strategy, intended to influence the first-year student body as a whole. Accordingly, PIRE’s research design—with colleges rather than individual students randomly assigned to experimental conditions—is the most rigorous design for evaluating the course’s impact. No other online alcohol course has been evaluated using this methodology.

PIRE set up the strictest possible test of AlcoholEdu by conducting what is called an intent-to-treat analysis. This type of analysis is common in pharmaceutical studies, where patients are considered to be in the treatment group whether or not they have actually used the drug being tested. Following this model, PIRE included all of the colleges that had been randomly assigned to administer AlcoholEdu, even when they failed to administer the course properly and had a very small percentage of students complete it.

This is an important aspect of the study to understand. According to PIRE, the course completion rates ranged from 4% to 100%, with a mean of 56%. In contrast, the colleges that implement AlcoholEdu typically report much higher course completion rates: colleges that use an implied mandate—meaning that first-year students are told they have to complete the course, but no real consequences are assessed if they don’t—have an average course completion rate of 86%, while colleges that do impose consequences typically have rates of 91% to 98%, depending on the nature of the sanction for non-completion.

Why were the PIRE completion rates so low? The colleges taking part in the PIRE study received AlcoholEdu free of charge, which may have led some administrators to place far less value on implementing the course optimally than would have been the case had the colleges paid for it.
What implications does this have for this evaluation? According to the PIRE team (Paschall et al., 2011b, pp. 646, 648): “We used intent-to-treat analyses to test our primary hypothesis concerning the effectiveness of AlcoholEdu on alcohol-related problems at the campus level while recognizing that those results might underestimate the actual effectiveness of the course at the student level.”

To assess the course’s impact, PIRE conducted a series of random-sample student surveys at each of the treatment group and control group colleges during: 1) the 2009 spring semester (baseline), 2) the 2009 fall semester (posttest survey, short term), and 3) the 2010 spring semester (posttest survey, long term).

Even though the treatment group included several colleges with poor completion rates, and the PIRE surveys therefore included many first-year students who had not taken AlcoholEdu, Paschall et al.’s analysis showed that, during the 2009 fall semester that immediately followed course implementation, the treatment group colleges showed statistically significant decreases in the following measures:

- **Frequency of past 30-day alcohol use** (see Paschall et al., 2011a, p. 304; Table 3, p. 305; and Figure 2, p. 306).
- **Frequency of past 30-day binge drinking**, here defined for men as five or more drinks in a row, and for women as four or more drinks in a row, **within a 2-hour period** (see Paschall et al., 2011a, p. 304; Table 3, p. 305; and Figure 2, p. 306).
- **Total number of past 30-day alcohol-related problems** (see Paschall et al., 2011b, p. 648; Table 3, p. 647; and Figure 1, p. 648).

![Figure 1. Frequency of Binge Drinking in the Past 30 Days](image-url)
PIRE reported that AlcoholEdu significantly reduced heavy episodic (“binge”) drinking and alcohol-related problems during the fall semester after students took the course.

The results for the subsequent spring semester were more ambiguous, but given the pattern of results shown in the figures (Paschall et al., 2011a, Figure 2, p. 306; 2011b, Figure 1, p. 648), it seems likely that the study had inadequate statistical power to detect statistically significant long-term differences between the treatment and control groups, even though those differences appear to be substantial.

In sum, the PIRE evaluation provides strong empirical support for AlcoholEdu for College:

- The research design—a multisite randomized control trial—represents the gold standard for evaluating a population-level prevention program like AlcoholEdu.
- PIRE applied an intent-to-treat analysis—the strictest possible test—which Paschall and his colleagues admitted may have underestimated the actual effects of the course because of the low course completion rates at several of the treatment group colleges.
- Even so, PIRE reported that AlcoholEdu significantly reduced heavy episodic (“binge”) drinking and alcohol-related problems during the fall semester after students took the course—a time that is known to be the riskiest period for new college students to drink heavily.
Roger Williams University: Randomized Control Trial

John Hustad and his colleagues (2010) conducted a randomized control trial that compared AlcoholEdu for College and e-Chug (Electronic Check-Up to Go), a brief online alcohol screening and intervention program. Importantly, this investigation is the only published study that directly compares AlcoholEdu and e-Chug.

Unlike the PIRE evaluation, this study was conducted at a single college. Individual students were randomly assigned to one of three groups: AlcoholEdu (n = 26), e-Chug (n = 31), or a no-intervention comparison group (n = 25).

The researchers conducted an online baseline survey, followed by a posttest survey conducted one month later. Across the three groups, the students had similar demographic and drinking profiles.

It is important to emphasize that this is a small-scale study with very low statistical power. This means that any significant findings are especially noteworthy, as only huge, substantial differences between any two of the groups would be declared statistically significant.

At one-month follow-up, AlcoholEdu produced a statistically significant reduction in alcohol use and showed significantly fewer negative alcohol-related consequences (Section 3.3, p. 186; Table 1, p. 187). Note that only the AlcoholEdu group was significantly different than the comparison group for alcohol-related consequences. The AlcoholEdu group demonstrated a 37% decrease, while the e-Chug group demonstrated only an 11% decrease. The AlcoholEdu group also consumed fewer drinks per drinking occasion compared to the e-Chug group.

In sum, despite the small number of students involved, the Hustad et al. evaluation provided additional evidence of AlcoholEdu’s effectiveness, comparing favorably to e-Chug, a competing online program.

Figure 3. Total Number of Negative Alcohol-Related Consequences
Why AlcoholEdu Should Be the Cornerstone of Campus Prevention Efforts

Multiple studies have shown that AlcoholEdu benefits first-year students during their first term on campus, a notoriously high-risk period for heavy drinking and negative alcohol-related consequences. All of these studies have been published in peer-reviewed academic publications (Hustad et al., 2010; Lovecchio, Wyatt, & DeJong, 2010; Paschall, et al., 2011a, 2011b; Wall, 2007; Wyatt, DeJong, & Dixon, 2013). Importantly, the results of the Paschall, et al. evaluation—because it involved a wide variety of four-year colleges and universities—can be generalized to other institutions.

**INTERPRETING THE ALCOHOLEDU SURVEYS: A CAUTION**

*AlcoholEdu* has students complete both a pre-intervention survey and a post-intervention survey, which is typically completed 35 or more days after students have finished the main part of the course. A simple comparison of students’ pre-intervention and post-intervention survey results is not a good evaluation strategy.

At many institutions, the impact of the course may be to dampen the typically seen increase in first-year students’ alcohol consumption upon arriving at their school (the so-called “college effect”) rather than to produce an absolute decrease. This result can only be ascertained by conducting a randomized control trial with a non-intervention comparison group.

In this context, it is important to remember that, with the support of EverFi staff, implementing AlcoholEdu is relatively straightforward, and program fidelity is guaranteed. An online program operates the same way, everywhere and every time. In contrast, if a program relies on a cadre of instructors or counselors, then a positive evaluation conducted at one college does not guarantee that the program will work elsewhere.

**When asked, some students may say that the AlcoholEdu for College would not change their drinking behavior or anyone else’s. The research, of course, says otherwise.**

It is customary for campus administrators to seek student input when considering whether to use AlcoholEdu. The feedback students provide—both positive and negative—should be taken into account, but in the end their feedback should not outweigh what the rigorous studies described here say about the course’s effectiveness. If the students like the course, so much the better, but its purpose is not to entertain, but to educate. AlcoholEdu helps incoming students start out on the right foot, but it should be viewed as just one part of a comprehensive approach to promoting student wellness and addressing alcohol-related problems on campus. Administered before or shortly after first-year students arrive for school, the course provides a strong foundation upon which a combination of environmental management strategies and additional programming can be built. The evidence is clear.
References


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