# Kognito

# Utilizing Kognito's At-Risk Mental Health Simulations to Improve Student Retention Rates: an Economic Model

## INTRODUCTION

**This document provides an economic model to calculate the Return on Investment (ROI) of implementing Kognito's evidence-based interactive mental health training simulations for faculty, staff, and students.**

The model is based on data collected from over 300,000 faculty, staff, and students who completed Kognito's simulations and reported how the experience impacted their behavior. This model can be utilized by academic institutions to clearly communicate the financial benefits of implementing Kognito's simulations to improve campus mental health, student retention, and academic performance.

### PREVALENCE OF MENTAL DISTRESS ON CAMPUS IMPACTS RETENTION RATES

According to a 2013 American Psychological Association survey, about one-third of college students reported experiencing depression within the past year that caused them to have difficulty functioning. In addition, at any given time, 32% of college students are dealing with a mental illness: 5% screen positive for panic disorders, 6% for anxiety disorders, 9% for major depression, and 15% for self-injuring without thoughts of suicide[1].

Studies have demonstrated that poor mental health negatively affects academic performance and student retention rates. In a study of NYU students in 2014, 55% of respondents reported that emotional and mental difficulties had affected their academic performance for at least one day in the past month, 22.5% reported that anxiety had affected their academic performance in the last 12 months, and 59% of students with symptoms of depression said that their symptoms made it difficult for them to complete schoolwork[2].

A study of 2,800 college students conducted by the Healthy Minds Networks at the University of Michigan concluded that "depression is a significant predictor of not only GPA but also the likelihood of dropping out from the university."[3]

### MENTAL HEALTH SERVICES CAN IMPROVE RETENTION RATES

The good news is that data shows that investing in mental health improves retention rates. Students who use campus counseling services generally report improvement in their mental health or attendance problem, and report higher satisfaction with their quality of life, which is the most cited reason for deciding to drop out of school [4,5,6,7]. By emphasizing a culture of mental and emotional wellness on campus, schools can improve student quality of life, which leads to greater student success and a better chance of retaining at-risk students[8].

*Depression is a significant predictor of not only GPA but also the likelihood of dropping out from the university*

The Healthy Minds study found that delivering mental health treatment to 100 depressed students could result in 6 averted dropouts during a school year[9]. This direct connection provides the basis for an economic model to estimate the tuition dollar saved by investing in student mental health support.

1  Eisenberg, Daniel, & Sarah Lipson. Data from the Healthy Minds Network: The Economic Case for Student Health Services. Ann Arbor, MI: University of Michigan, 13 Mar. 2014. Pdf.
2  Live Well NYU. "Mental Health / Depression." NYU University Life. New York University, 2014. Web. 11 Feb. 2015.
3  Eisenberg, D., Golberstein, E., Hunt, J. (2009). Mental Health and Academic Success in College. B.E. Journal of Economic Analysis & Policy 9(1) (Contributions): Article 40.
4  National Institute of Mental Health. "Depression and College Students." National Institute of Mental Health. US Department of Health and Human Services, 2012. Web. 04 Feb. 2015
5  American College Health Association. American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2014. Hanover, MD: American College Health Association; 2014.
6  Gruttadaro, Darcy, Dana Crudo, and NAMI. College Students Speak: A Survey Report on Mental Health. Rep. Arlington, VA: NAMI, 2012.
7  "Crisis on Campus: The Untold Story of Student Suicides." College Degree Search. College Degree Search, 2012. Web. 09 Feb. 2015.
8  Arria, Amelia M., Laura M. Gardner-Dykstra, Kimberly M. Caldiera, Kathryn B. Vincent, Emily R. Winick, and Kevin E. O'Grady. "Drug Use Patterns and Continuous Enrollment in College: Results From a Longitudinal Study." Journal of Studies on Alcohol and Drugs 74 (2013): 71-83. Web.
9  Eisenberg, Daniel. Connections between Mental Health and Academic Outcomes. Ann Arbor, MI: University of Michigan, 13 Mar. 2014. Pdf.

## THE CHALLENGE OF GETTING STUDENTS TO SEEK HELP

But providing better campus mental health services is not enough. Schools still face an inherent problem: students don't tend to seek help. In fact, only 40% of students who experience psychological distress seek help. The main reasons why students do not seek help are stigma, lack of knowledge that help is available on campus, and a misconception that their level of stress is normal or that they can handle it alone.

## TRAINING HELPS INCREASE THE NUMBER OF STUDENTS SEEKING HELP

One of the most utilized approaches to increase the number of students who seek help for psychological distress is training faculty, staff, and students to recognize signs of psychological distress in fellow students and be ready and able to connect those students with support services (also known as "Gatekeeper Training").

Schools have used a variety of approaches to provide mental health education, including in-person workshops, mental health awareness events, and online/mobile courses. All of these approaches have a price tag attached and in some cases many hidden costs (e.g., missed work time for organizers and attendees, difficulty scheduling and running in-person workshops, and significant wait times before staff and students complete the training).

This paper provides an economic model for school administrators to calculate the ROI in terms of retained tuition dollars when implementing Kognito's evidence-based mental health simulations. This model can also be used to calculate the impact of other mental health programs.
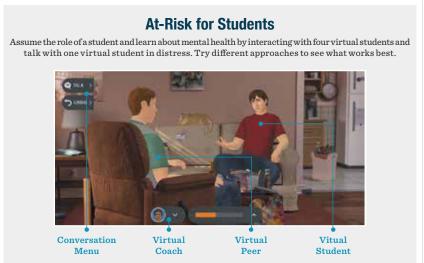
*Click here to view demos of the Kognito programs.*

## KOGNITO MENTAL HEALTH SIMULATIONS

Kognito is a health simulation company based in New York City. Since 2010, more than 350 institutions of higher education have used Kognito's evidence-based mental health education simulations to train more than 400,000 faculty, staff, and students.

In addition to providing faculty and students with education about mental health and suicide prevention, Kognito's simulations provide users with a series of interactive scenarios where they can role-play a conversation with lifelike, animated virtual students exhibiting anxiety, depression, or thoughts of suicide. These practice conversations teach users how to best approach a student to discuss their concerns and how to talk with them about seeking help. By practicing these conversations in a virtual space, with immediate personalized feedback, users develop the skills and motivation to lead similar conversations in real life.



**At-Risk for Faculty & Staff**

Assume the role of a faculty member and talk with three virtual students who are showing signs of distress. Try different approaches to see what works best.

Conversation Menu | Virtual Coach | Virtual Faculty | Vitual Student



**At-Risk for Students**

Assume the role of a student and learn about mental health by interacting with four virtual students and talk with one virtual student in distress. Try different approaches to see what works best.

Conversation Menu | Virtual Coach | Virtual Peer | Vitual Student

## THE KOGNITO BEHAVIOR CHANGE MULTIPLIER

Data collected from 100,000+ faculty, staff, and students who have completed Kognito's simulations indicates that training participants do increase the number of at-risk students whom they recognize, approach, and refer to mental health support services in the twelve months following the training. The changes seen range from increases of 45 to 70% over prior behavior (see the **faculty study here**, and the **student study here**.) These numbers have been translated into a predictive analytics model we call the Kognito Behavior Change Multiplier.

### THE KOGNITO BEHAVIOR CHANGE MULTIPLIER
Over a 12 Month Period Following the Completion of the Kognito Simulation

Every 100 **Faculty/Staff** trained with the Kognito simulation would....

APPROACH AN ADDITIONAL

**162 STUDENTS**

TO DISCUSS CONCERN, AND...

DISCUSS A REFERRAL TO MH SUPPORT SERVICES WITH AN ADDITIONAL

**135 STUDENTS**

Every 100 **Students** trained with the Kognito simulation would....

APPROACH AN ADDITIONAL

**213 STUDENTS**

TO DISCUSS CONCERN, AND...

DISCUSS A REFERRAL TO MH SUPPORT SERVICES WITH AN ADDITIONAL
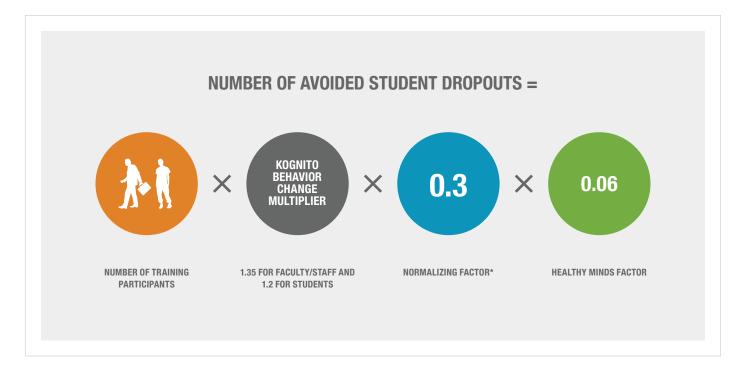
**120 STUDENTS**

## CALCULATING IMPACT ON RETENTION RATES

By combining the Kognito Behavior Change Multiplier with the findings of the Healthy Minds Study that showed that for every 100 students treated for depression,

6 dropouts can be averted, we can develop a simple calculation to predict the impact of adopting Kognito's *At-Risk* simulations, including the number of avoided student dropouts, tuition dollars saved, and a general ROI analysis. Please see Appendix A for a Worksheet.

**NUMBER OF AVOIDED STUDENT DROPOUTS =**

NUMBER OF TRAINING PARTICIPANTS × KOGNITO BEHAVIOR CHANGE MULTIPLIER (1.35 FOR FACULTY/STAFF AND 1.2 FOR STUDENTS) × **0.3** NORMALIZING FACTOR* × **0.06** HEALTHY MINDS FACTOR

**\*Normalizing Factor:**

When predicting the number of avoided student dropouts, Kognito discounts its Behavior Change Multiplier by a 0.3 Normalization Factor to account for the fact that multiple students/staff may approach the same at-risk students and that not all those approached will end up seeking help.

**RETURN ON INVESTMENT =**

NUMBER OF AVOIDED STUDENTS DROPOUT × YEARLY TUITION PER STUDENT / COST OF A 1-YEAR LICENSE TO THE KOGNITO SIMULATION

**FOR MORE INFORMATION** – Please contact us at **info@kognito.com** or 212-675-9234

## APPENDIX A: WORKSHEET

### CALCULATING ROI AND IMPACT ON RETENTION RATES OF IMPLEMENTING THE KOGNITO SIMULATION IN INSTITUTIONS OF HIGHER EDUCATION

| LINE | ITEM | VALUE |
|------|------|-------|
| 1 | Number of Targeted Learners - Faculty/Staff | |
| 2 | Kognito Behavior Change Multiplier for Faculty/Staff | **1.35** |
| 3 | Normalizing Factor* | **0.3** |
| 4 | Est. Number of Avoided Student Dropouts Resulting from Faculty/Staff Training (Lines 1 x 2 x 3 x 0.06**) | |
| 5 | Number of Targeted Learners - Students | |
| 6 | Kognito Behavior Change Multiplier for Students | **1.20** |
| 7 | Normalizing Factor* | **0.3** |
| 8 | Est. Number of Avoided Student Dropouts Resulting from Student Training  (Lines 5 x 6 x 7 x 0.06**) | |
| 9 | Cost of a 1-year License of the Kognito Simulation | |
| 10 | Yearly Tuition per Student | |
| 11 | Tuition Dollars Saved by Implementing Kognito Simulations (Lines 4 + 8) x Line 10 | |
| 12 | Return on Investment (Line 11 Divided by Line 9) | |

\*   When predicting the number of avoided student dropouts, Kognito discounts its Behavior Change Multiplier by a 0.3 Normalization Factor to account for the fact that multiple students may approach the same at-risk students and that not all those approached will end up seeking help.

\*\* Based on the Healthy Minds Network: The Economic Case for Student Health Services study, which showed that for every 100 students treated for depression, 6 dropouts can be averted Citation for the study:  Eisenberg, Daniel, & Sarah Lipson. Data from the Healthy Minds Network: The Economic Case for Student  Health Services. Ann Arbor, MI: University of Michigan, 13 Mar. 2014.

*Click here to download an excel version of this worksheet.*