A Chatbot to Help Washington High School Students Get Financial Aid for Postsecondary Education

February 2022

What is Otterbot?

Otterbot is an artificial intelligence (AI) informed chatbot texting tool administered by the Washington Student Achievement Council (WSAC). Otterbot is designed to help Washington high school students through the financial aid and postsecondary education application processes. Students receive periodic text messages from Otterbot about financial aid information, resources, and deadlines. Students may also ask Otterbot for help at any time and they will receive personalized responses based on the bot's AI capabilities, providing answers to student questions with virtually no time lag. If Otterbot cannot answer a question, it is sent to a financial aid expert at WSAC. Otterbot was first launched in the fall of 2019 and continues to be a valuable resource for students to navigate the complicated financial aid application process and help them reach their education goals after high school.

What does the research say?

Evidence from research indicates that personalized text messaging chatbots like Otterbot can be effective at helping students navigate transitions to postsecondary education.

- An evaluation of a chatbot at Georgia State University that used the same platform as Washington's Otterbot found that the technology had a positive impact on college enrollment. In the study, an AI-informed chatbot engaged with a random group of admitted first-year students the summer between high school and college, providing text message outreach and guidance to help students complete the necessary tasks to matriculate in the fall. Students who received the chatbot intervention were 3 percentage points more likely than students who did not receive the chatbot intervention to enroll on time. This effect is similar to other types of college enrollment interventions, such as counselor outreach, but the technology substantially reduced the burden on college staff (Page and Gehlbach, 2017).

- Sending text messages alone may not have a substantial impact on students' behavior, but information and reminders sent through chatbots that are personalized and offer actionable steps to complete a task can be effective. One university program sent targeted, personalized text messages to students during the college application process providing information about deadlines and guiding them to the appropriate forms to complete. Students were then prompted to make specific plans to complete the necessary tasks. This application of behavioral science principles was shown to improve college admission task completion by 3 to 4 percentage points (Castleman et al., 2017).

- Ensuring engagement is intentional and backed by data is also key to effective text messaging interventions. One program sent text message reminders to encourage FAFSA completion, using administrative data on students' FAFSA filing status to inform the message content. This data-informed approach improved FAFSA completion rates by 3 to 4 percentage points, and also encouraged students to complete FAFSA earlier than their peers who did not receive the messages (Page et al., 2019).

This research suggests that thoughtful implementation of chatbot technology has the potential to be extremely impactful, scalable, and cost-effective in the Washington context.

Who is Otterbot for?

Currently, Otterbot engages with high school juniors and seniors[1] in Washington's College Bound Scholarship program, a statewide program designed for low-income students to improve access to higher education. For eligible students who enroll or are auto-enrolled in the program in middle school, the College Bound Scholarship can cover tuition and some fees at public rates, and a small book allowance when they enroll at one of over 65 eligible higher education institutions in the state. College Bound Scholarship students who have a cell phone number on file are automatically enrolled in Otterbot. However, anyone can connect with Otterbot by texting "**Hi Otter**" to 360-928-7281.

Who is Otterbot engaging with?

Since its inception in the fall of 2019, Otterbot has sent over **5 million** messages to nearly **60,000** Washington students. Especially during the ongoing COVID-19 pandemic, virtual supports like Otterbot are even more essential for keeping students informed and connected to resources and opportunities to answer their questions when they may have limited access to in-person supports at school. And the wide reach of Otterbot also allows for contact with diverse students across the state. In fact, the majority of students who receive Otterbot messages are students of color, offering an opportunity to increase financial aid access and postsecondary enrollment outcomes for these students. For example, more than half of Otterbot recipients are Hispanic/Latino (53%), a much higher proportion than the K-12 student population overall (25%).
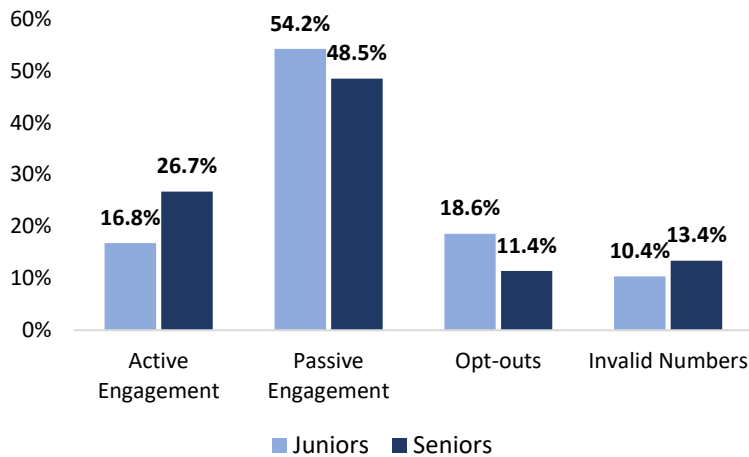
Race/Ethnicity	Distribution of Students who Receive Otterbot Messages	Distribution of Students at WA K-12 Schools
Hispanic/Latino	53%	25%
White	28%	51%
Black/African American	6%	5%
Asian	5%	8%
Two or More Races	5%	9%
Native Hawaiian/Other Pacific Islander	1%	1%
American Indian/Alaskan Native	1%	1%
Total	**100%**	**100%**

Source: WSAC analysis of Otterbot and College Bound Scholarship data, January 2022 and OSPI Report Card, Academic Year 2020-2021

Many students engage with Otterbot passively (55% of all students in December 2021), meaning they receive messages but they do not reply. This can still be a valuable opportunity to learn about important information and resources related to financial aid and postsecondary enrollment. Another 22% of students were engaged actively, meaning they responded to at least one texting campaign or reached out to Otterbot with a question. Figure 1 shows that seniors were more likely to be actively engaged than juniors. Passive engagement in junior year is still likely to provide students with information and resources they need to prepare for financial aid and postsecondary education applications by the time they reach their senior year.

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[1] Otterbot began engaging with juniors in the fall of 2021. Previously, the chatbot was geared towards seniors only.

Figure 1. Otterbot Engagement Type in December 2021

Otterbot Engagement Definitions
Active Engagement: Students receive Otterbot messages <u>and</u> reply to campaigns or send Otterbot questions
Passive Engagement: Students receive Otterbot messages only

Source: Mainstay Strategic Program Review Slides, January 2022

What are we learning about students who engage with Otterbot?

WSAC is able to match College Bound Scholarship student records to FAFSA completion status records to tailor messaging to students. Students who interact more actively and frequently with Otterbot tend to have higher FAFSA completion rates. For high school seniors who received Otterbot messages in the class of 2020, those who sent more than 16 messages to Otterbot had a FAFSA completion rate of 62%, compared to 36% for students who didn't send any messages to Otterbot (Figure 2). The pattern was the same for the class of 2021—seniors who sent more than 16 messages had a FAFSA completion rate of 66%, compared to 34% for students who didn't send any (Figure 3). This relationship is not causal, but it indicates an association between Otterbot engagement and FAFSA completion.

Figure 2. FAFSA Completion Rate by Student Messages to Otterbot
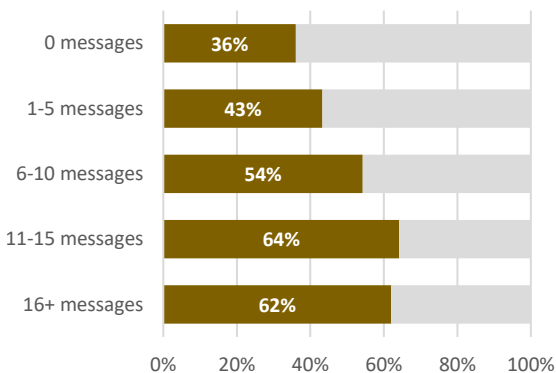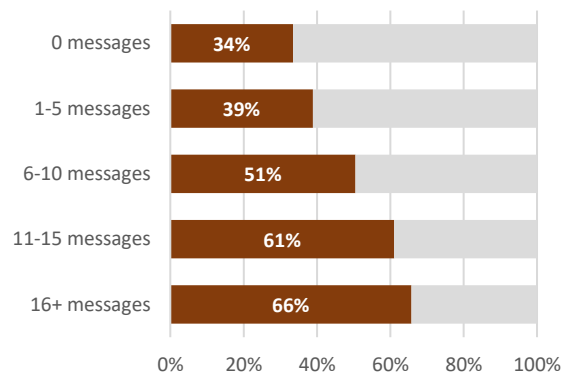Class of 2020

Figure 3. FAFSA Completion Rate by Student Messages to Otterbot
Class of 2021

Source: WSAC analysis of Otterbot and College Bound Scholarship data, January 2022
Note: FAFSA completion rates class of 2020 are for the 2020-2021 FAFSA cycle. FAFSA completion rates for the class of 2021 are for the 2021-2022 FAFSA cycle.

Throughout the project, WSAC has administered surveys to students through Otterbot to understand their experiences with the chatbot and gather feedback. Qualitative evidence suggests that students are benefitting from Otterbot engagement. Through surveys, students have indicated that Otterbot is a useful resource in their financial aid and postsecondary education application process. A majority of survey respondents in 2021 replied that Otterbot was helpful (84%), and nearly half said Otterbot was *very* or *extremely* helpful (46%). Students also provided positive feedback about Otterbot.

"Otterbot was very helpful with reminding me of deadlines and I loved that Otterbot felt very personable" *-Student*	*"It was just nice having updates reminding me about how far I should be along every now and again!"* *-Student*	*"I really appreciated having regular check-ins about what I needed to be getting done, combined with all the encouragement for when I was doing well" -Student*

Source: 2021 Otterbot User Satisfaction Survey

What's next?

WSAC continues to refine and improve Otterbot to better meet the needs of Washington students and ensure they have the information and support to apply for financial aid and enroll in a postsecondary program after high school. This includes using Otterbot to share financial aid resources such as the 12th Year Campaign, Washington State Opportunity Scholarship, and WashBoard Scholarship search engine. In the future, WSAC will more consistently implement principles from behavioral science within Otterbot to effectively engage students to take action around financial aid. WSAC also plans to pursue more rigorous evaluation methods to understand Otterbot's impacts for Washington students. Finally, WSAC will continue to develop strategies to use Otterbot to help close equity gaps in financial aid application and postsecondary enrollment. This wide-reaching technology is already showing promise to support Washington students as they transition to postsecondary education and training, and there is even more potential to improve and expand its impact in the future.

References

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