

A background image of a university hallway. In the foreground on the left, a young man in a blue denim jacket and khaki pants is looking at his smartphone. In the background, several other students are walking through the hallway, which has large arched windows and columns.

Student Services Breakthrough:

Preparing Your Higher Education
Institution for AI-Powered Chatbots

Student Services
by Blackboard™



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If one word could describe student services in higher education today, it's pressure.

Institutions are fighting declining enrollments¹ and new sources of competition.² Staff members are striving to deliver a high-quality student experience with falling budgets³ and rising disengagement rates.⁴ And students, most of all, must absorb and act on huge amounts of information that carry high stakes for their higher education experience and career.⁵

Is it any surprise that higher education is turning to AI technology to provide relief?

*With an estimated compound annual growth rate of 31%, **chatbots are expected to grow into a \$1.34 billion industry by 2024.***

One of the most popular AI technologies, chatbots, has already proven successful in the consumer technology space. More than half of consumers polled said they would prefer a chatbot over a human customer-service representative,⁶ and with an estimated compound annual growth rate of 31%, it's expected to grow into a \$1.34 billion industry by 2024.⁷





But what's happening with chatbots is not quite as important as why. Chatbots are proving to be powerful tools that are easing the burden on support teams while improving the experience for those seeking support.

For institutions looking to expand their ability to serve students and improve the quality of the service students receive, AI-powered chatbots are a natural fit.

“An AI-powered chatbot expands an institution's channels of interactions beyond phone calls and walk-ins,” said Ryan Sweany, Director, Implementation, Learning Architecture, Product Management at Blackboard. “They can give students access to

information where students actually spend their time — online. And they can do it consistently around the clock and year-round.”

An AI-powered chatbot is the first line of response that enables escalation to necessary staff or services when needed. The appeal of quickly and easily clearing roadblocks in student experience is powerful, which explains why higher education is increasingly interested in how AI-powered chatbots could help expand capabilities.

Like any technology implementation, you'll succeed more if you prepare for adoption and implementation intentionally. Here are five steps to prepare your institution and your staff members for AI-powered chatbots, and some key terms to help you navigate AI in higher ed.

Key Terms for Navigating AI for Higher Education

Conversational AI

A set of technologies that enable computers to understand, process and respond to voice or text inputs in natural ways, and is typically used in conjunction with bots.

Machine Learning

The process of developing computer programs that can access data and use it to learn and make predictions without being explicitly programmed to do so.

Intent

A chatbot's ability to analyze an interaction and identify the true purpose or desire behind an inquiry.

Natural Language Processing

The process by which a computer looks for statistically significant patterns and considers factors such as synonyms, canonical word forms, grammar, slang and more to understand human language.

Automation

A process that can perform an activity without human intervention.

Dataset or Answer Bank

The data sources a chatbot uses to source answers to student questions, such as a website or student information system platform.

Sentiments Analysis

A computer's ability to gauge tone and connotation by sensing emotion and reacting with emotion or flows.

Algorithm

A set of rules or instructions given to an AI program to help it learn.

Step #1: Coach your team through common AI misconceptions

Staff members without experience with AI and machine learning often borrow assumptions from newspaper headlines and other media. This can make AI seem dramatic and threatening, leaving your team wary and seeking to avoid it.

To prepare your team for your AI implementation, it can help to address these incorrect assumptions head-on and explain how AI will really affect their work. Start with the following four most common assumptions about AI in higher education and the truth behind them:

- **Myth:** A chatbot will replace our jobs.
- **Reality:** AI-powered chatbots don't replace team members; it frees them from transactional and repetitive student support so they can focus on more complex inquiries that build relationships with students.



- **Myth:** A chatbot will do our work for us, and our phone won't ring anymore.
- **Reality:** Quite often, student support teams actually see an increase in more complex calls because students increasingly answer their simple questions with the chatbot.
- **Myth:** Once we build the chatbot, we can "set it and forget it."
- **Reality:** Chatbots must be maintained, often by a full-time knowledge manager, to make sure they deliver up-to-date information to students.
- **Myth:** If a chatbot gets stumped, it will always figure out an answer.
- **Reality:** Chatbots only know what they are programmed to know, so institutions need to plan a response for what the bot will tell a student for whom it doesn't have an answer.

“An AI-powered chatbot needs to be nurtured. While it can be fed an initial data set, your professional staff are a very important component to training the chatbot to perform at the levels necessary to keep students trusting the answers and eliminating escalation.”

***Jesse Boeding**, Doctoral Candidate researching
AI-powered emerging technologies*



Step #2: Build your chatbot's brand

Building a chatbot to be a bland receptacle of knowledge is a lost opportunity to build engagement with your students. Instead, program your bot to deliver information with a voice and tone that's unique to your institution. This can often be the defining factor in students' having a positive experience with your bot, even if they don't get all their questions answered right away.


Here are a few factors to consider as you build a brand for your chatbot:

- **Name your bot**, perhaps inspired by your unique location, institutional history or mascot.
- **Decide the overall tone** you'll use to create your answer sets, such as quirky, dry or enthusiastic.
- **Incorporate this tone in all your answer sets and responses** with word choice, sentence structure and length, and other choices such as incorporating jokes or relationship-building questions.
- **Add humor to bot responses** to smooth out the rough edges of not knowing an answer to a question.



“Matching your chatbot to the overall voice and tone of your institution allows you to **create a unified online student experience.**”

Daniel Woodcock, Director of Help Desk Solutions at Blackboard



Step #3: Gather and verify your data sources

An AI-powered chatbot gathers answers to student questions from the data sets you provide. These sources can be as simple as a public web page or as complex as your back-end student information systems data. But if you feed incorrect or outdated data to your chatbot, that's exactly what it's going to feed to your students.

“Your AI-powered chatbot won't verify the information it has or go out and seek new information on its own,” Sweany said. “It only knows what you tell it, so an important part of this process is making sure you're telling it the correct information and updating the incorrect sources you come across.”

*Before you bring your AI-powered chatbot online, **verify the information your institution has** and identify opportunities to correct or generate new information.*

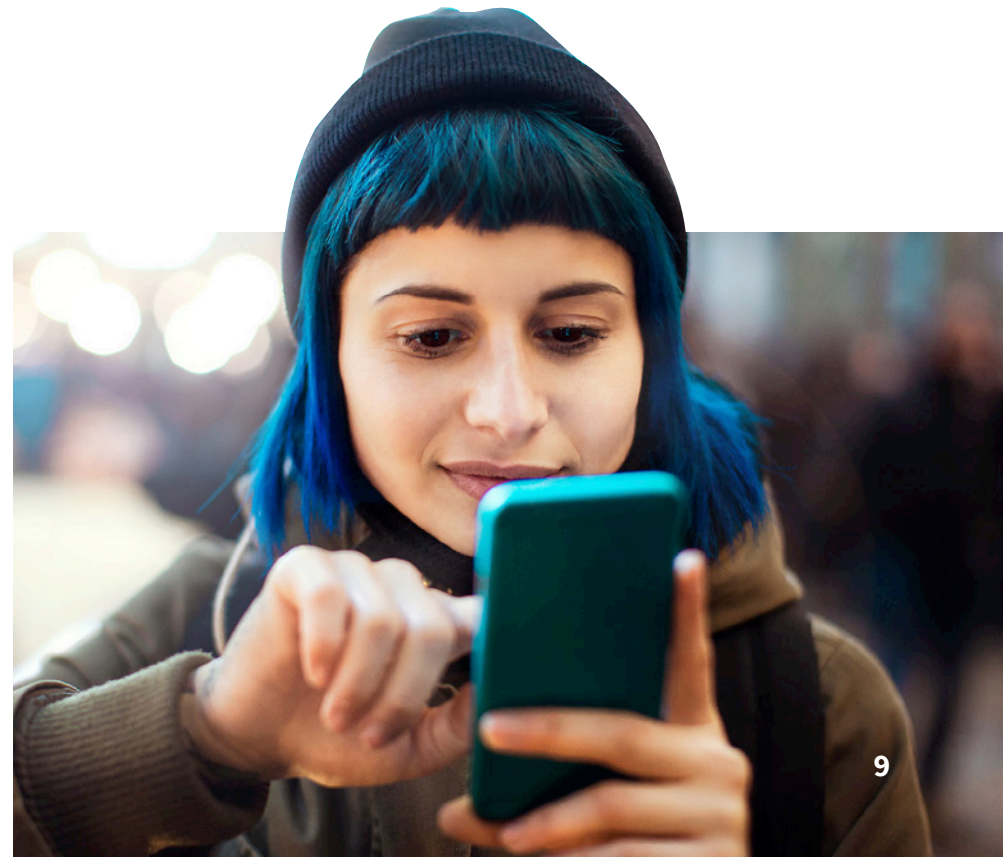
Step #4: Create chatbot scripts based on your institution's unique student needs

AI-powered chatbots can capture a wealth of institutional information and make that information accessible at any time. But this sense of infinite opportunity can make it difficult to decide where to start. For most institutions, it will make sense to start with the 100 most common student questions you receive, then build out your chatbot scripts from there.

For example, chatbots excel at answering transactional questions with a clear answer such as, “What is the deadline for my financial aid packet?” and “Where do I send my reference letter?” But coaching-type questions, such as, “What do I do if I don’t have enough money to pay for this semester?” can be flagged and quickly referred to a student services staff member in your office.

*For most institutions, it will make sense to **start with the 100 most common student questions you receive**, then build out your chatbot scripts from there.*

Another factor to consider is the importance of intent in creating chatbot scripts. When students are on the go, and the visual space they’re using to converse with your institution’s chatbot is very small, rather than dumping several paragraphs of web page text into the conversation, as a simple machine learning algorithm might, AI-powered chatbots can quickly assess what a student wants to know and deliver the specific answer.



“Sophisticated AI-powered chatbots understand a student’s intent when they ask a question. **Students get the exact answer they need without having to read through every page of your website.**”

Daniel Woodcock, *Director of Help Desk Solutions at Blackboard*

A photograph of a man with a shaved head and a light beard, wearing a blue denim shirt over a white t-shirt. He is sitting at a desk, looking down at a silver laptop with a smile. His hands are on the keyboard. The background is a blurred indoor setting, possibly a library or study area, with bookshelves and a lamp visible.

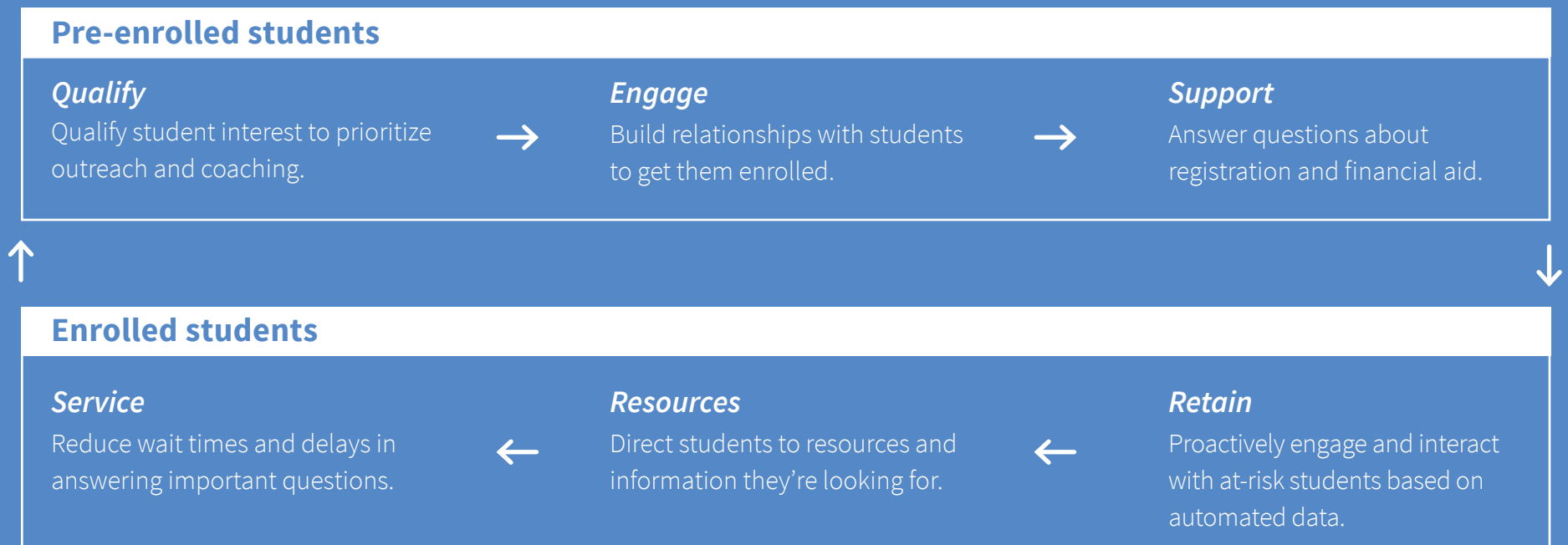
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Step #5: Build your chatbot with expansion in mind

Even though it makes sense for most institutions to start with a small implementation, you should always build your AI-powered chatbot foundation with the potential to expand. Chat is just one mechanism of the AI support, and in the future, you may

want to add in other ways modern students expect to interact, such as social media, AI assistants such as Alexa and Google, and SMS text. How you expand your chatbot will also expand how it supports the entire student life cycle.

Chatbots support the entire student life cycle



“From a student’s perspective, your institution isn’t 30 separate departments functioning independently — it’s one institution with 30 different parts. Scaling your AI powered chatbot across your institution reinforces for students that no matter their question, there is an expert close by. The process of creating that unified feel will build coalitions and relationships for your staff, as well!”

***Jesse Boeding**, Doctoral Candidate researching AI-powered emerging technologies*



AI-powered chatbots serve students and staff

To meet aggressive goals and strict requirements, institutions can sometimes fall into the trap of underestimating the value of their people talent. This disconnect has led to increased burnout and disengagement among higher education support staff members.⁸

Added support in the form of chatbot engagement won't just ease your staff's capacity to respond to student needs by taking transactional and repetitive questions off their to-do list — chatbots actually allow your staff members to expand their capacity to care.

It can take your team members from overwhelmed to relaxed, overworked to refreshed, and the result is an enormous and immediate effect on the rapport they can build with students. This is more important than ever in a higher education environment, where even a **5% increase in staff turnover in a student's first year can result in as much as a 35% decrease in that student's likelihood to graduate on time.**⁹

AI allows your institution to improve the way it serves students and makes sure the interactions students are having with your support team are the ones you want to have — warm, positive and responsive.

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Expand your ability to serve with AI

If overwhelm is the theme of your student-facing departments, it will inevitably be the theme of your overall student experience. But it doesn't have to be. Use these five implementation steps to deploy an AI-powered chatbot that relieves the pressure on your institution, your staff members and your students, and makes room for interactions that build a positive student experience. Every stakeholder within your institution will be better equipped to contribute to the overall mission of successful student learning, regardless of whether or not they interact directly with students.



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Blackboard Student Services offers institutions a set of connected capabilities to make measurable and sustainable impacts on the full student lifecycle. We partner with institutions to enable success by helping them leverage innovative technologies and services. The results lead to increased ROI, better management of costs, and more efficient and strategic use of resources to ensure the long-term health and viability of the institution and student success.

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