Chatbot in Moodle
Need for the chatbot

- Students at the university have a lot of questions (Not directly related to Academics)
- Unable to find information that is scattered everywhere
- Need to facilitate computer aided learning and teaching by conversations, especially for language learning, psychology case studies etc
- Answer FAQs
- Keep user engaged to complete online courses
Roles of the chatbot

- Academic counsellor
- Helpdesk - Support
- Personal Assistant
- Friend / Peer
A chatbot is a service, powered by rules and sometimes artificial intelligence, that you interact with via a chat interface.

Artificial Intelligence is when the system does something that requires intelligence.

Machine Learning – the chatbot keeps learning without being explicitly programmed.

Process of transforming user text into actionable data is called Natural Language Understanding (NLU).
Available platforms

- Dialogflow
- Wit.AI
- IBM Watson
- RECAST.AI
- LUIS
FAQs

• The bot can handle basic frequently asked questions from information that is provided statically to it.

• The administrators can keep increasing the question bank and answer set from dialogflow console itself

User data

• With the use of webhooks the bot fetches user data from the Moodle database

• Student can ask relevant questions like which courses am I enrolled in, what are my grades, when is my next class, quiz etc.
Demo

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Questions the bot can answer

01. Show me my courses
02. Show me my grades
03. What should I study
04. Show upcoming events / deadlines
05. How many courses have I completed
06. Any other FAQ
Moodle database tables

- Events, Quiz attempts
- Course last access, Logs
- Grades
- Role Assignments, Context
Dialogflow key concepts

Intent
Action
Entity
Webhook
Response
Context
Working of dialogflow
Intents

Default Fallback Intent
Default Welcome Intent
Show me my grades
What are my courses
What does the enrollment process entail
Where do I give my exams

Search intents

Please use test con try a sentence.
Upon the completion of the 3 registration steps, the payment of the fees included, you will receive an email with the enrollment instructions few days before the beginning of the semester during the regular enrollment period. If you have completed the registration before or after the regular enrollment period, you may enroll via the early enrollment system by visiting this link. Please note that you have only two attempts to enroll. Therefore, you should choose your courses carefully. Staff will be able to help you only if there is a genuine reason.
Fulfillment

Webhook

Your web service will receive a POST request from Dialogflow in the form of the response to a user query matched by intents with webhook enabled. Be sure that your web service meets all the webhook requirements.

Webhook example

URL

This url will receive a POST request from Dialogflow every time the webhook is triggered by an intent.

BASIC AUTH

HEADERS

Enter key

Enter value

DOMAINS

Disable webhook for all domains

Inline Editor (Powered by Cloud Functions for Firebase)

Build and manage fulfillment directly in Dialogflow via Cloud Functions for Firebase. Docs

POST https://api.dialogflow.com/v1/query?v=20150910

Headers:
Authorization: Bearer YOUR_CLIENT_ACCESS_TOKEN
Content-Type: application/json

POST body:
{
  "contexts": [
    "shop"
  ],
  "lang": "en",
  "query": "I need apples",
  "sessionId": "12345",
  "timezone": "America/New_York"
}
Events
Course
Logs
Quiz attempts
Grade grades
User course
last_access

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Roadmap

- Integrating the chatbot as a Moodle plugin, implementing more features
- Making the bot available on common platforms like Google assistant, Alexa, Facebook etc
- Read and use data from Moodle project Inspire and other analytics
- Help pull out data for teachers, administrators. Chat with users proactively to keep them engaged
Implementation options

Part of the theme – include in footer

Block at the side of all the pages

Activity module as a quiz, assignment to chat with a bot to learn or get evaluated

Mobile app standalone

Message output plugin - Messaging
Other bots in Moodle

MoodleBot
bot

Profile: CiBoT

Moodle logo

Amazon Echo

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