PROGRAMMING ARTIFICIAL INTELLIGENCE FOR A WRITING CENTER: APPLICATIONS AND FUTURE POSSIBILITIES

Sipai Klein and Justin Mays
WORKSHOP OVERVIEW

AI in education
Designing LochBot
Interact with LochBot, our writing center chat bot
Deploying LochBot in D2L
Iterative design and usability testing
Comparing LochBot to situated social situations
Consider how chat bots apply to online literacy tutoring
Do any of you use Siri, Cortana, Amazon Alexa, Google Home, Apple HomePod product?

Do you use it regularly?
Do you enjoy the product?
Does it frequently provide you with incorrect responses?

Has a situation ever occurred where you abandoned asking the question because of the misinterpretation/miscommunication?
ARTIFICIAL INTELLIGENCE (AI) - BROADLY

AI Providers: "The Big Four"
ARTIFICIAL INTELLIGENCE (AI) - IN EDUCATION

Companies now focusing on Higher Ed use:
- AdmitHub
- Ivy.ai
- Unifyed (Yoda)

Notable institutional experimentation:
- Georgia Tech – Jill Watson
- Stanford University - QuizBot
ARTIFICIAL INTELLIGENCE (AI) - AT CLAYTON STATE

Data Sources

- clayton.edu/writersstudio FAQ page
- Focus groups (multiple)

Bot Engine

IBM Watson Assistant
DESIGNING LOCHBOT

• Intents and Entities
DESIGNING LOCHBOT

• Intents
  • User goal
DESIGNING LOCHBOT

• Intents
  • User goal
    • Example: “How do I schedule an appointment?”
      • Intent = Appointment_Schedule
DESIGNING LOCHBOT

• Intents
  • User goal
    • Example: “How do I schedule an appointment?”
      • Intent = Appointment_Schedule

• Entity
DESIGNING LOCHBOT

• Intents
  - User goal
    - Example: “How do I schedule an appointment?”
      - Intent = Appointment_Schedule

• Entity
  - Provides contextual information
DESIGNING LOCHBOT

• **Intents**
  • User goal
    • Example: “How do I schedule an appointment?”
    • Intent = Appointment_Schedule

• **Entity**
  • Provides contextual information
    • Example: “How do I schedule an appointment online?”
    • Intent = Appointment_Schedule
    • Entity = Appointment:online
DESIGNING LOCHBOT - MAP

Writers Studio - Mapping

- Welcome
- Bot Capabilities
- Endings
- Anything Else
- Questions

Account
- Missed/Cancel
  - Number
  - Online
  - Schedule

Appointment
- Computer
- Contact
- General
- Hours
- Location
- No Computer
- Paper
- Preparation
- Print
- Weekend
INTERACT WITH LOCHBOT

• Spend the next 5 - 7 minutes interacting with the LochBot
  • https://csuloch.link/32DLYbw

• Usability test:
  • https://csuloch.link/2NCliE8
DEPLOYING LOCHBOT

• Launched 9/17/19
  • 39 courses
    (ENGL 1101/1102)

Delivery Channel
DEPLOYING LOCHBOT
### Perceived Usefulness
I think the chatbot can help me with many things

### Perceived Enjoyment
I find the chatbot enjoyable and fascinating

### Perceived Sociability
I find the chatbot pleasant to interact with

### Perceived Adaptability
I think the chatbot can be adaptive to what I need

### Social Presence
When interacting with the chatbot, I felt like I’m talking with a real person

### Attitude
It would be a good idea to make use of the chatbot

### Intention to Use
I recommend others to use the chatbot

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<table>
<thead>
<tr>
<th>Total conversations</th>
<th>Avg. msg. per conversation</th>
<th>Max. conversations</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>1.36</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10/17/2019</td>
</tr>
</tbody>
</table>
Q: I can’t find research for my argument with sources. What should I do?
Q: What goes in the introduction and the conclusion of my essay?
Q: How do I create a Works Cited page? Do I just copy the web link and add it to the Works Cited page?
## COMPARE F2F AND AI RESPONSES TO FAQS IN FYW

<table>
<thead>
<tr>
<th>Question</th>
<th>AI</th>
<th>Situated Social Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q: I can’t find research for my argument with sources. What should I do?</td>
<td>Embed responses with language from how to research guides from the university library</td>
<td>Ask more about topic and thesis, practice together using the university’s library website, review together how to read search results</td>
</tr>
<tr>
<td>Q: What goes in the introduction and the conclusion of my essay?</td>
<td>Embed responses with links to videos about writing introductions and conclusions</td>
<td>Discuss the audience and the purpose of the composition, discuss how to apply specific strategies</td>
</tr>
<tr>
<td>Q: How do I create a Works Cited page? Do I just copy the web link and add it to the Works Cited page?</td>
<td>Embed responses with language available at public OWLs and Studio handouts</td>
<td>Discuss the concepts of formatting and citation style guidelines, review together how to format a Works Cited page, review together the web link and discuss genre</td>
</tr>
</tbody>
</table>
IMPACT ON ONLINE LITERACY TUTORING

• integrate live chat into the AI so that students can talk with front desk assistant about scheduling
• text-to-speech and speech-to-text adaptation for students with disabilities
• wrap translation services around the bot to serve multilingual students
• connect questions to open sources textbooks
• refer students to the syllabus
PLANNING CONSIDERATIONS

• Privacy Concerns
• Institutional Steering Committee
• Bot Functionality
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