Messenger Chatbots in Teaching and Learning

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University of Pretoria, South Africa 🇿🇦
Agenda

- What is Messenger?
- What is a chatbot?
- Chatbots in education
- Examples

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What is Messenger?

Messenger is an instant messaging service released by Facebook, available as an app (iOS or Android) or at www.messenger.com
What is a chatbot?

Artificial narrow intelligent (ANI) programs designed to interact, through text or speech, with users in a human-like way, answering questions and performing tasks, in a specific area.
<table>
<thead>
<tr>
<th>Company</th>
<th>Likes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adidas</td>
<td>2,441,254</td>
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<tr>
<td>BuzzFeed</td>
<td>8,876,667</td>
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<td>TechCrunch</td>
<td>2,495,112</td>
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<td>Christina Milian</td>
<td>4,708,905</td>
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<td>Volkswagen</td>
<td>29,673,185</td>
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<td>British Airways</td>
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<td>World Surf League</td>
<td>5,741,230</td>
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<td>Complex</td>
<td>3,619,148</td>
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<td>jWOWWW</td>
<td>9,793,225</td>
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<td>Lowe's Home Improvement</td>
<td>3,835,686</td>
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<td>MTV</td>
<td>49,137,401</td>
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<td>ABC News</td>
<td>2,584,079</td>
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<td>CNBC</td>
<td>1,758,993</td>
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<td>Goal.com</td>
<td>12,043,292</td>
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<tr>
<td>UBER</td>
<td>7,770,602</td>
</tr>
</tbody>
</table>
Apps vs Chatbots

Apps need to be downloaded, logged into, updated, and may not be compatible with all devices, chatbots exist in a messaging app.

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Leading social networks worldwide as of April 2017, ranked by number of active users (in millions)

<table>
<thead>
<tr>
<th>Social Network</th>
<th>Active Users (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>1,968</td>
</tr>
<tr>
<td>WhatsApp</td>
<td>1,200</td>
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<tr>
<td>YouTube*</td>
<td>1,000</td>
</tr>
<tr>
<td>Facebook Messenger</td>
<td>1,000</td>
</tr>
<tr>
<td>WeChat</td>
<td>889</td>
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<tr>
<td>QQ</td>
<td>868</td>
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<tr>
<td>Instagram</td>
<td>600</td>
</tr>
<tr>
<td>QQZone</td>
<td>595</td>
</tr>
<tr>
<td>Tumblr*</td>
<td>550</td>
</tr>
<tr>
<td>Twitter</td>
<td>319</td>
</tr>
</tbody>
</table>

Number of active users in millions

Source: Facebook; We Are Social; WhatsApp; Twitter; Tumblr; LinkedIn; Google © Statista 2017

Additional Information: Worldwide; We Are Social; WhatsApp; Tumblr; LinkedIn; Google; as of April 11, 2017; social networks and messenger/chat app/voip included
Chatbots in Education

● Overview
● University admission
● Course administration
● Textbook & tutor

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Chatbots in Education

Messenger apps are “native” communication methods for millennials.

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Chatbots in Education

- Offer help on demand
- Less anxiety than interacting with the teacher
- Chat history & analytics
- Large classes
- Repetitive questions
- Personalised learning
- Differentiated instruction
- Increase engagement
- Scaffolding
- Campus closures
- Flipped classroom

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What went wrong with education apps?

- Flashcards
- Rote learning
- Designed by instructors?
- Commitment to learning theories?

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Chatbots in university admission

By using an AI text message system offering data-informed, personalized guidance, students are more likely to enroll in college (Page & Gehlbach, 2017)

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Chatbots in course administration

- Learner's guide
- FAQ’s
- Course communication
- https://m.me/frk201tuks

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“Like most technology in education, the field would be best served if educators themselves took to programming the apps we’d like to use. **If you have an idea, give it a try!**” (Riel, 2016)