THE ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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AI IN EDUCATION AND TRAINING
Eliza is a mock Rogerian psychotherapist.
The original program was described by Joseph Weizenbaum in 1966.
This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you?
YOU: Men are all alike.
ELIZA: What is the connection, do you suppose?
YOU: They're always bugging us about something or other.
ELIZA: Can you think of a specific example?
YOU: Well, my boyfriend made me come here.
ELIZA: Is it important to you that your boyfriend made you come here?
YOU: He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
YOU: It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy?
YOU: ELIZA: I am sorry to hear that you are depressed.
YOU: It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy?
YOU:
AI IN EDUCATION: A SEMI-PERSONAL HISTORY

ELIZA (Weizenbaum)

1966
AI IN EDUCATION: A SEMI-PERSONAL HISTORY

ELIZA (Weizenbaum) 1966

INTELLIGENT TUTORING SYSTEMS 1970s
AI IN EDUCATION: A SEMI-PERSONAL HISTORY

- **ELIZA** (Weizenbaum) in 1966
- **INTELLIGENT TUTORING SYSTEMS** in the 1970s
- **EXPERT SYSTEMS** in the 1970s
AI IN EDUCATION: A SEMI-PERSONAL HISTORY

- ELIZA (Weizenbaum) - 1966
- INTELLIGENT TUTORING SYSTEMS - 1970s
- EXPERT SYSTEMS - 1970s
- TRAINING SIMULATIONS USING AI - 1991
EARLY SIMULATION-BASED TRAINING
**1 1/2 WITH SIDES**

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<th>1/2 WITH SIDES</th>
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<td><strong>TOTAL DUE</strong></td>
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<td>REGULAR BROWNIE</td>
<td>COOKIE</td>
<td>CORN BREAD</td>
<td>SMALL CHIPS</td>
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KEY ELEMENTS OF THIS EXPERIENCE

- A true learning-by-doing simulation, with guidance and feedback.
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• The performance meters add a game-like feel that maintains the realism of the task.
• The “challenge” aspect of this game was very effective.
• The guidance and feedback components used AI techniques.
EARLY SIMULATION-BASED TRAINING
You need to go to the location (LOC) field now.
You need to go to the location (LOC) field because that's where you enter the location (city) information for the listing.
Directory Assistance Training System

To go to the location (LOC) field, you need to press the LOC key. It is the key you see flashing now.

Talk to the Tutor
Now What? How do I do that? Why?

Talk to the Customer

Unplug headset

BOOK: CHICAGO  LOC: CHICAGO
NAME:        TYPE:  NPA: 708
STRT:        OPER:

CLG#: 708
868-5549
Directory Assistance Training System

To go to the location (LOC) field, you need to press the LOC key. It is the key you see flashing now.

BOOK: CHICAGO  LOC: CHICAGO
NAME:     TYPE:  NPA: 708
STRT: OPER:  
CLG#: 708 868-5549

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Now What?  How do I do that?  Why?

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AI IN EDUCATION: A SEMI-PERSONAL HISTORY

- ELIZA (Weizenbaum), 1966
- Intelligent Tutoring Systems, 1970s
- Expert Systems, 1970s
- Training Simulations Using AI, 1991
- Analytics, Chatbots, Recommender Systems, Robots..., TODAY
A POTENTIAL FUTURE TRAINING EXPERIENCE
Hello!
Can I help you find anything?
AI Coach:
Make sure you smile and look friendly!
Hello!
Can I help you find anything?
Hello!
Can I help you find anything?

Customer: Yes! Do you have this in a size “small”? 
Hello!
Can I help you find anything?

Customer: Yes! Do you have this in a size “small”?

I'm sure we do!
Let me check for you...
AI Coach: You did great! But you need to work a bit more on your facial expressions.

PERFORMANCE SUMMARY

Wording: 95
Tone: 85
Facial Expressions: 60
Overall Customer Satisfaction: 70
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• Coaching guidance
• Feedback (from a coach and from peers)
• A realistic, performance-based assessment and evaluation
• Learner control, but the learner is also assisted and advised
• An immersive, personalized, experience
Use AI to help create more humanizing experiences, let machines do what machines do well.

We can use AI techniques to help create individualized, engaging learning experiences that are scalable.
AI IN EDUCATION AND TRAINING

• Use AI to help create more humanizing experiences, let machines do what machines do well.
THANK YOU!

I’m happy to discuss any questions and comments!

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