

Robot Librarians: enhancing reference and research support services

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Robots in the library?





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UNIBO/ CPUT and WMU experience



Collaboration: UNIBO/CPUT and WMU experience



It's Talking to Me: Telepresence Robot in the Academic Library

LuMarie Guth, Pat Vander Meer, Samantha Macy

Michigan Academic Library Association 2016 Conference, Mt. Pleasant, Michigan, 2016

Background

The Communication and Social Robotics Labs approached the library to host a telepresence robot for study in a high-traffic campus location. The CSRL uses telepresence robots to understand the ways humans interact through and perceive a robot.

Goals:

1. introduce the technology to students who will encounter it across careers
2. analyze human/robot interaction
3. identify potential library applications

Conducted 2 studies: patron feedback after interaction and chance to drive the robot and employee attitudes pre and post training.



Patron Feedback Study

Patrons were invited to interact and pilot the robot. We collected feedback through observation log and forms. 37 responses were collected representing 23 majors and freshmen through graduate levels.

Don't Sneak Up on Me

"It should have a route or certain areas it should remain in so people can feel comfortable using the robot and ask questions."

"I can wave at people without being near them! ... Can be handy as long they aren't misused... Make the experience in the library less stressful... Only negative is people's fears of the robots turning EVIL! So I would encourage more intro sessions to give heads-up."

Fetch Robot, Fetch

"Program was simple to learn and... use. Could be used to find people in the library, or to deliver things... could offer tech support to people as well."

"Needs arms."

Robot as Enforcer

"Should be used to make sure people are being quiet."

"Needs to be used for security."

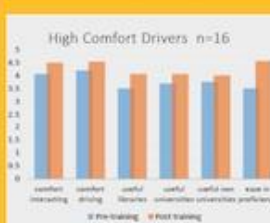
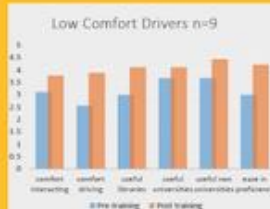
Teaching and Access

"This was neat! Great idea to help those with mobility issues."

"This was cool! I would like to be tutored with this!"

Face 2 Face Forever

"Personally prefer talking face-to-face with a person. The Librarian that assisted me (using the robot) ended up having to walk over to me. I'm not sure why we need a "robot" when someone still needs to drive it."



How We've Used It

- Invited patrons to interact with and drive the robot.
- Greeted at library events.
- Surprised tours of parents and prospective students.
- Backup for student assistants at the reference desk.
- Attended staff meetings remotely while staffing a service point.
- Gave colleague outside the LIS legs to tour the library.
- Recited verse during poetry month.



A librarian (above) recites poetry remotely, projecting students to an audience of students.

Library Employee Study

Hypothesis: Library employee perception of the robot will be more positive after gaining familiarity with the technology through training and use.

Population:

- 10 library faculty, 7 library staff and 8 student workers
- 13 public services, 5 technical services, 1 administration, 2 systems/IT, and 4 operations/building services

Methodology: Study (20 min) included pre-training survey, 2 ½ minute training video and discussion, 5-10 minutes of driving the robot and talking to reference desk employee, and post training survey.

Results: No significant difference between departments, type of employee or years experience in libraries and education. All patrons showed increased positivity consistent with hypothesis.

"Showcasing technology such as the robot in the library is beneficial to students who can have the experience and [adds] to the reputation of the libraries." - Librarian



Recommendations

Library staff to be trained in order to overcome perception of the technology.

Use through PR to avoid confusion. Physical appearance to minimize any sinister

PR Chain

- Published press release on the University Libraries and Communication and Social Robotics Labs blogs.

- Shared blog posts on Communication and Social Robotics Labs Twitter and Facebook pages.

- Emailed the press release to University Relations. They picked it up for WMU news, and published an article online and in their weekly print newsletter.

- Fox17 West Michigan picked up the story and filmed a video piece.



Communication & Social Robotics Labs



Acknowledgements

I thank May Chang, newly appointed Library Chief Technology Officer at the University of Cincinnati Libraries, for the opportunity to collaborate with Western Michigan University colleagues in the telepresence robot pilot project.

My engagement in the telepresence robot pilot project, forms part of my current PhD research project and activities, focusing on academic libraries' role in research support, in the programme: Philosophy, Science, Cognition and Semiotics (PSCS) under the supervision of Dr. Anna Guagnini, Department of Philosophy and Communications at the University of Bologna.

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