Simulated Person Method for Teaching Soft Skills in the Information Professions: A Pilot Qualitative Study

Aviv Shachak[a], David Remisch[b] and Eva Peisachovich[b]

[a]University of Toronto, Canada
[b]York University, Canada

ABSTRACT

Simulated Person Methodology (SPM) is a type of experiential learning that provides learners with realistic practice of soft skills such as communication and conflict resolution. SPM utilizes humans, who are trained to portray specific roles and provide feedback to learners. SPM training interventions were implemented in a Museum Studies course and a Library and Information Science skill-building workshop. Standard evaluation forms, interviews and focus group were used to obtain post-intervention feedback from students and instructors. Results suggest that the SPM activity was beneficial to the students' learning experience and successfully met educational objectives. Suggestions for improvement are discussed.

ALISE RESEARCH TAXONOMY KEYWORDS

education of information professionals; reference transactions; pedagogy

AUTHOR KEYWORDS

experiential learning; simulation; soft skills

INTRODUCTION

Interpersonal communication is an important skill in any profession and even more so in professions that involve service to clients or the public. Together with critical thinking and problem-solving skills, employers have identified communication, leadership, interpersonal, and teamwork skills as important characteristics that employees who have recently graduated university often lack (Strauss, 2016). Interpersonal communication skills are critical for all information professions including museum curators, librarians, business analysts, and UX designers to name just a few (American Alliance of Museums Curators Committee; Schwartz, 2016; Sonteya & Seymour, 2012; Tyckoson, 2003).

While these skills are taught in many Information programs in a variety of ways (often through the hidden curriculum), including other forms of experiential learning such as work placements, problem based learning, action learning and service learning (Kolb & Kolb, 2020),

simulation offers a particularly useful and explicit approach in that it can recreate characteristics of the real world (Salas et al. 2009). Simulation, too, is a form of experiential learning broadly defined as "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 41). However, as opposed to the real world, simulation enables educators to control the educational environment by designing scenarios to meet specific learning objectives and allowing students to practice their skills and gain immediate feedback on performance through debriefs and guided reflection (McGaghie et al., 2010).

Simulation has been widely adopted in the training of some professions, most notably in the fields of aviation (e.g., training pilots on flight simulators) and health, in which a variety of simulation techniques have been applied ranging from virtual reality to high-fidelity patient manikins to human simulation. The Simulated Person Methodology (SPM) is one type of human simulation that provides specific and realistic practice, enabling educators to assess competencies and students to examine strategies and identify knowledge gaps. This type of active learning helps develop cognitive skills (Harris & Bacon, 2019) and allows participants to practice, experiment and make mistakes, which serve as an opportunity for learning and improvement. In this paper, we describe the application and pilot evaluation of SPM to teach communication and interpersonal skills in a Museum Studies course on Ethics, Leadership and Management and a Reference Interview extra-curricular skills development workshop at the University of Toronto.

METHODS

The Simulated Person Method interventions

The SPM interventions were developed by University of Toronto faculty and a reference librarian in collaboration with York University's SPM Lab, in the context of a Master of Museum Studies (MMSt) course on Ethics, Leadership and Management and a Library and Information Science (LIS) extra-curricular skills development workshop (iSkills) on the reference interview. The overall process is depicted in Figure 1 below.

Both interventions occurred in Winter 2019 and included one simulated person (SP), one SPM trainer, faculty/librarian instructor, and student learners who volunteered to participate in each simulation round. To prepare for the activity, the team including, SP, SP trainer and faculty member worked with the MMSt course instructor and reference librarian to determine learning objectives, design simulation scenarios using a scenario design template prepared by the York University SPM lab (York University Simulated Person Methodology Lab, n.d.), and discuss logistics, taking into consideration the task difficulty, physical space and time constraints.
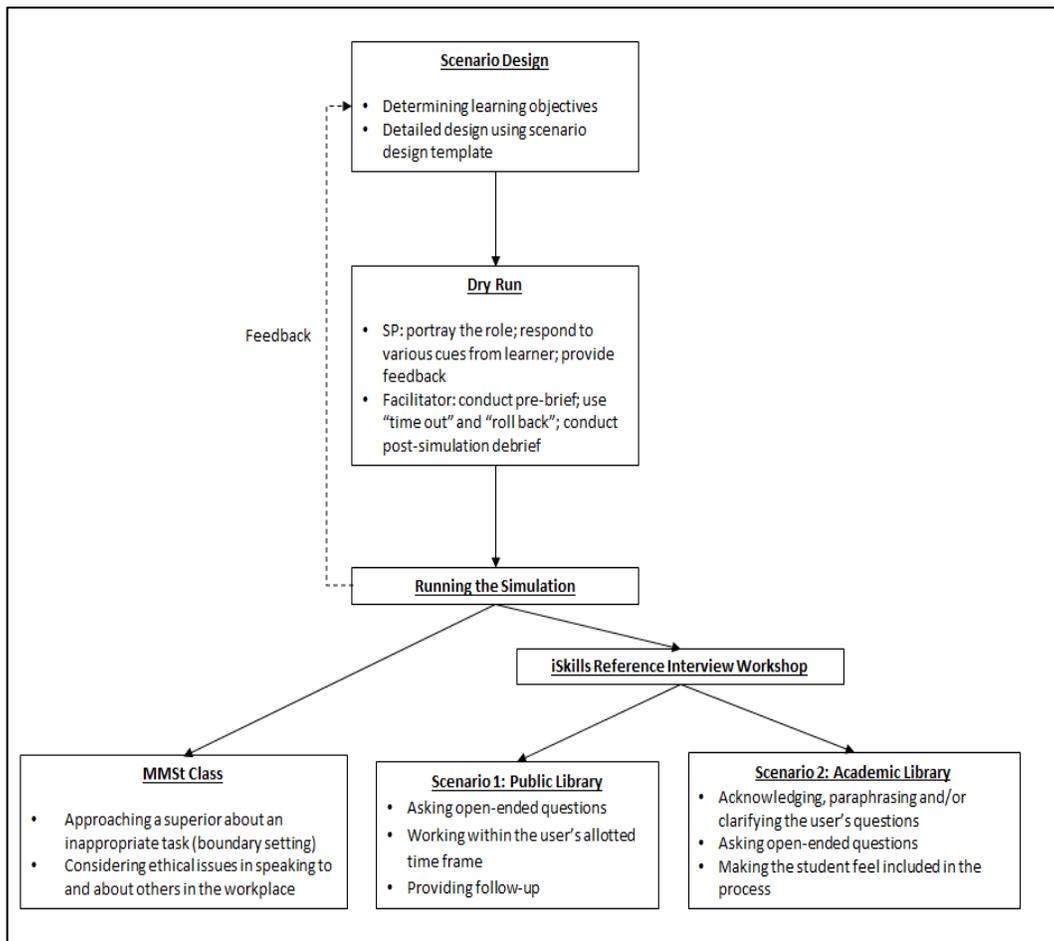
Figure 1. Overall design process of the simulated person method sessions

The instructors and SP then tried out the scenarios under the guidance of the SP trainer ('dry run'). The SP—an undergraduate student with some acting and improvisation experience—was trained to accurately portray each role (a museum registrar, a public library patron, and a first-year university student library user) and respond to a variety of cues and behaviors that may be exhibited by the student learner, based on the scenarios' objectives. The SP was also trained to provide feedback concisely and in a professional, objective, and non-judgmental manner. This feedback usually takes the form of "when you said (or did)… I felt…". Instructors were trained in a variety of SPM techniques, which included 1) conducting a pre-simulation brief to explain the scenario, roles, and rules of engagement; 2) using facilitation techniques such as calling a "time-out", which may be requested by the instructor, SPM trainer, or learners to re-compose, reflect, obtain feedback, or try a different approach (roll-back); and 3) conducting a debrief for learners to reflect on their experience during the simulation.

The MMSt session was developed to simulate a conversation between an employee and manager in a museum setting. The learning objectives for this scenario were for the students to practice approaching a superior about an inappropriate task (boundary setting) and consider ethical issues in speaking to and about others in the workplace. Specifically, in this scenario, the student learner portrays the (future) role of a Collections Assistant working in a museum under a Registrar, portrayed by the SP. The Registrar requests that the employee confront a colleague about project deadlines that have been missed. The employee is aware that this colleague is experiencing significant personal challenges outside of work and feels uncomfortable confronting the colleague. The SP was instructed to initially dismiss the employee's concerns and only provide support once the concerns are expressed in a clear and direct manner. If not expressed clearly, the SP was instructed to become more impatient and dismissive of the learner's concerns. This activity was conducted in-class to complement the existing Museum Studies coursework. The course instructor facilitated the simulation sessions (3 sessions in each of two sections of the class for a total of 6 repetitions), including the pre-brief, facilitation during the session, and a debrief at the end of each session.

The Reference Interview iSkills workshop included two different scenarios. The first scenario took place in a public library and depicted a patron (portrayed by the SP) seeking travel information from the reference librarian (portrayed by the student volunteer). The SP provided vague details of the search and expressed that she would be picking up her children from school shortly. The objectives of this scenario were for the student learner to 1) ask open-ended questions to gain an accurate understanding of what the library user needs; 2) work within the user's allotted time frame; and 3) provide follow up to ensure that the library user understands she can come back for further support.

In the second scenario, a first-year university student (SP) approaches one of the university librarians (student learner) to ask questions about finding information for an essay she is writing. The SP was instructed to vaguely describe the information required, while the student learner's task was to identify the student's needs and provide support by 1) acknowledging, paraphrasing and/or clarifying the library user's questions; 2) asking open-ended questions; and 3) making the student feel included in the process by expressing individual steps while answering the student's questions.

Before beginning the simulation, the first author provided an overview of SPM to the students. The reference librarian presented principles of good practices when conducting a reference interview; and the SP trainer conducted the pre-brief, explained the process and learning objectives for each scenario, and facilitated the simulation sessions. Both SP trainer and reference librarian conducted the debrief following each session.

Data collection

Following the MMSt course activities and iSkills workshop, feedback was obtained from students and instructors. A total of seven student attendees, from both MMSt sessions and the iSkills workshop, were recruited to participate in a post-intervention focus group to describe benefits and challenges of SPM as well as suggestions for improvement. Informed consent was obtained prior to the focus group session and all participants were given a $50 gift card upon completion of the session. One-on-one, semi-structured interviews were conducted with the MMSt course instructor and the librarian instructor of the Reference Interview iSkills workshop to obtain their feedback. For the iSkills Reference Interview workshop, student evaluations and comments were obtained via standard evaluation surveys conducted by the University of Toronto's Faculty of Information for every iSkills workshops. This study has been approved by the Research Ethics Boards of York University and the University of Toronto.

Data analysis

Focus group were audio recorded and transcribed. Interviews were not recorded but the interviewer took detailed notes, which also included some direct quotes. A thematic analysis of all post-workshop evaluations' data was completed through a qualitative, interpretive description approach. The focus group transcript and interview notes were not coded, partly because of the limited number of data sources, and in order to not lose sight of the overall picture.

RESULTS

A total of six themes were identified and grouped into the following 3 categories: 1) benefits of SPM, 2) challenges and 3) suggestions for improvement. The main findings of the study are presented in Table 1 and described in detail below.

Category	Theme	Description/ Key findings
Benefits	Reactions to SPM were overall positive	Instructors found that the workshops supported learning objectives for their students and participant rating for this method was very high.
	Attendees found the scenarios to be realistic	Students and instructors found that SPM activities accurately re-produced real workplace situations and the simulated person added a higher degree of realism and efficacy to the workshop.
	Time-outs were very useful to student learners	Time-outs allowed students to re-compose, reflect, obtain feedback and try different approaches to encourage more active reflection during the session.
Challenges	Some student felt unprepared to actively participate in the scenario	Having no workshop details prior to the workshop made some students feel unprepared, whereas others suggested that this made the workshop more realistic.
	The first learner to participate in the scenario sets the tone for others	When the first student learner was successful, follow-up trials tended to model the first, resulting in less discovery of alternative solutions.
Suggestions for Improvement	More opportunities to participate	Students wanted more opportunities to practice their skills, suggesting multiple scenarios, multiple simulated persons and workshops interspersed throughout the semester.

Table 1. Benefits, challenges, and suggestions for improvement of the simulated person method intervention.

Benefits of SPM

Overall, focus group and interview data revealed that student and staff reactions to the SPM activities were positive. Standard evaluations administered after the iSkills workshop had an average rating of 4.9 out of a 5.0 based on the overall quality of the presentation, knowledge of instructor, clarity, and organization. Furthermore, instructors from both MMSt course and iSkills workshop stated that the activity successfully accomplished the pre-planned learning objectives. Similar opinions were shared by their students:

- *"I felt like, coming out of the workshop, I was like "wow, like this is what I've been wanting from my classes and now I finally have it."*[FG Participant #7]
- *"I was a little bit surprised about how helpful I found that interaction in looking at it from different ways."*[FG Participant #6]

Instructors and students found the SP's portrayal of characters helped make the scenario more realistic. Compared to a previous role-play activity, one participant found the simulated person's portrayal to be more realistic than that of their classmates. Furthermore, students recognized reading the SP's body language as a particularly beneficial challenge when observing or participating in the scenario:

- *"This was a good exercise. It got them (the students) to experientially encounter something that would be hard to do in class. Having a neutral person be this other body was very useful because it then isn't part of the cohort dynamics. So, from that side, there were lots to like."* [Instructor]
- *"Because they're your peers and you know that they are acting, they don't have the same facial expression or body expression, they're just reading the lines and suggesting things... It felt like through the SPM method, I was able to take it to a new level and really practice "what would I do in this situation?"* [FG Participant #5]

Students and instructors found the time-outs were beneficial during the activity. Participants found the option to restart or resume the scenario helped them re-compose, reflect and obtain feedback from others:

- *"After the time-out, you realize that you do have those skills and you just haven't practiced them and being able to practice them was really helpful. So, I think that if I encountered a similar situation, I think, even now, after that workshop, I would be able to look out more for other people's body language and react in an appropriate way."*[FG Participant #5]
- *"To have this trained facilitator there to pause, roll back events, comment on expressions/body language in a really detailed, granular way was extremely helpful to the process."* [Instructor]

- *"In the beginning, even thinking about volunteering was really scary and it got easier as time went on, you could see that people made mistakes and everything didn't come crashing down"* [FG Participant #1]

Challenges and suggestions for improvement of SPM

Participants in the MMSt sessions reported mixed opinions about the amount of preparation received prior to the workshop date. One participant suggested that receiving the scenario in advance may have given them more confidence to volunteer and other students agreed, citing shyness or anxiety as reasons for not volunteering. Alternatively, one other student suggested that less preparation may have produced a more realistic scenario, requiring moment-to-moment decision-making. Less preparation seemed to decrease participants' willingness to participate, but provide a more realistic challenge.

Interestingly, in both MMSt course and iSkills workshop, the first volunteer seemed to "set-the-tone" for the rest of the activity. In Section 1 of the MMSt class, the first student volunteering to play the Collections Assistant's role in the simulation had difficulty expressing their concerns to the 'Registrar' (SP) and required feedback from the audience to discover an effective solution. In contrast, in Section 2, the first volunteer quickly found an effective solution. According to the course instructor, the simulation facilitated a productive classroom discussion in the first section that was not replicated in the second one. It was suggested that the quick solution in the second session may have created a model for other learners to follow, resulting in less engagement with the audience members. A similar challenge was described for one of the scenarios of the iSkills reference interview workshop, as illustrated by the following quote:

- *"The second "librarian" to do the second scenario suffered, I think, because the first "librarian" had been so successful. In the end, he did quite well, but he had a rough start and I think he might have done better if he had a fresh start, because the temptation to compare him to the previous "librarian" was strong."* [Post-workshop student feedback (iSkills)]

It had been suggested that, in future iterations, it may be beneficial to add more branching logic to the scenario to increase the task complexity and produce more consistent outcomes.

Post-interventions feedback suggests that students wanted more opportunities to participate. To encourage participation in future iterations, students suggested splitting the class into small groups and implementing multiple sessions with a variety of scenarios and different SPs. Focus group participants suggested implementing SPM in an introductory course so students may build upon previous performances in sessions distributed throughout the semester:

- *"Another session of simulations would be great"* [Post-workshop student feedback (iSkills)]

- *"Perhaps we can break it up into smaller groups and try it out, because not everyone is comfortable going up to the front and being watched by the entire group."* [Post-workshop student feedback (iSkills)]
- *"Perhaps if there had been additional time to practice in smaller groups, but I think it was most helpful to give feedback as a larger group and hear feedback as a larger group."* [Post-workshop student feedback (iSkills)]
- *"I was happy with the training we received. Perhaps a follow-up session to practice more would be great!"* [Post-workshop student feedback (iSkills)]
- *"I wish we had even had one (course) dedicated to doing this workshop."* [Post-workshop student feedback (iSkills)]
- *"I thought that it might have been a good idea to have a third scenario prepared."* [Post-workshop student feedback (iSkills)]

DISCUSSION

The main goal of SPM is to provide students with an opportunity to practice learned skills in a safe and controlled environment. Overall, reactions to the workshops were positive and suggested that the scenarios and SP showcased real-life situations in a realistic way. The time-out feature seemed to be a particularly useful way for participants to reflect, recompose and obtain feedback.

Although students found many benefits to the workshop, there was also a desire for more opportunities to participate. Including several scenarios in each SPM session could allow more students to participate. It can also mitigate the 'first volunteer effect' described above because is less likely that all first participants will be successful in a session with multiple scenarios. In future workshops, it may be possible to include multiple stations for students to observe multiple scenarios with different SPs. Rotating between scenarios in smaller groups may provide students with more opportunities for active participation and engagement. However, expanding the SPM sessions in these ways will require further consideration of resources and preparation required. Finally, while we have conducted our SPM sessions face to face, the method could be adapted to online teaching. In response to the COVID-19 situation, the SPM lab at York University now offers virtual SPM sessions.

In summary, this study provides preliminary support for the potential use of SPM for teaching 'soft' skills in the Information professions. By implementing and improving SPM, educators may provide students with the opportunity to learn these skills in an interactive, experiential learning, way.

LIMITATIONS

SPM could be a resource intensive initiative. These resources included hiring SP trainers and a work-study student as SP as well as faculty and librarian's time for developing, rehearsing, and conducting the SPM sessions. While the ultimate goal is for faculty to eventually learn the method and be able to run it independently, initial investment is required. The study, too, has a number of limitations. Recruiting students from both iSkills workshop and two course sections into one focus group session can increase the risk of sampling bias. Future iterations of this method may benefit from conducting separate focus groups for each workshop. The thematic analysis was performed by one author on a small set of data, which may increase the risk of bias, but is notably more efficient.

ACKNOWLEGEMENTS

REFERENCES

American Alliance of Museums Curators Committee. Curator core competencies
http://www.aam-us.org/docs/default-source/professional-networks/curator-core-competencies.pdf?sfvrsn=2

Harris, N. & Bacon, C. E. W. (2019). Developing cognitive skills through active learning: a systematic review of health care professions. *Athletic Training Education Journal: April-June 2019*, *14*(2), 135-148. doi:10.4085/1402135

Kolb, A.Y. & Kolb, D.A. (2020). Experiential learning theory as a guide for experiential educators in higher education. *Experiential Learning & Teaching in Higher Education*, *1*(1), Article 7.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development* (Vol. 1). Englewood Cliffs, NJ: Prentice-Hall.

McGaghie, W. C., Issenberg, S. B., Petrusa, E. R., & Scalese, R. J. (2010). A critical review of simulation-based medical education research: 2003-2009. *Medical Education*, *44*(1), 50-63. doi: 10.1111/j.1365-2923.2009.03547.x

Salas, E., Wildman, J. L., & Piccolo, R. F. (2009). Using simulation-based training to enhance management education. *Academy of Management Learning & Education, 8*(4), 559-573.

Schwartz, M. (2016). Top skills for tomorrow's librarians. *Library Journal*, *141*(4), 38-39.

Sonteya, T., & Seymour, L. (2012). Towards an understanding of the business process analyst: an analysis of competencies. *Journal of Information Technology Education: Research*, *11*(1), 43-63.

Strauss, K. (2016). These are the skills bosses say new college grads do not have: *Forbes*. Retrieved April 20, 2017, from https://www.forbes.com/sites/karstenstrauss/2016/05/17/these-are-the-skills-bosses-say-new-college-grads-do-not-have/#72a25f635491

Tyckoson, D. (2003). Reference at its core: the reference interview. *Reference & User Services Quarterly, 43*(1), 49-51.

York University Simulated Person Methodology Lab (n.d.). Scenario template. https://spm.info.yorku.ca/files/2018/04/Scenario-template-_.pdf?x22994