LIVING the Dementia Journey for Young Adults

Quality Assurance and Pilot Testing Report

Final Report | July 2021

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Executive Summary

Purpose:

The purpose of the quality assurance and pilot test was to assure that the course was free of any technical issues and to assess the acceptability of the content with young adults.

Program reach and demographics:

There were 22 young adults that completed the course and follow-up survey. No instructors were recruited for the pilot. Young adults between the ages of 14 and 24 participated. The majority of participants (59.09%) were from the city of Waterloo and were female (77.27%).

Time to complete LDJ for Young Adults course:

Pilot participants were encouraged to complete the course within two weeks. On average, it took 10.64 days to complete the course but there was a lot of variation. Participants felt that, on average, the course was about the right length.

Ease of Use:

The majority (72.73%) of participant felt that the course was easy to navigate. All participants responded that the system layout was easy to understand and none of the participants accessed technical support.

Design:

The majority of young adults felt that the images used throughout the course were visually appealing (66.66% agreed), suitable for the content of the course (61.90% strongly agreed), and beneficial for learning (47.62% agreed and 33.33% strongly agreed). Participants made a few suggestions for improving the images, including selecting images more closely related to the module content, improving technical aspects of the images, and adding more images.

Learning objectives:

Most young adults (57.14%) felt that it was very easy to understand the learning objectives for the course and felt that the content addressed the learning objectives almost entirely.

Teaching methods:

The majority of young adults were very satisfied with the variety of teaching methods (76.19%) and resources (61.90%) provided in the course. Most participants (61.90%) felt that the course included just the right number of interactive elements, while some (28.57%) felt that there could have been more included.

Reflection opportunities and testing knowledge acquired:

The majority (71.43%) of young adults reported being very satisfied with the opportunities to reflect on their learning process. On average participants rated the difficulty of the quizzes just slightly below average (average score of 4.48 out of 10).

Language:

All respondents felt that the vocabulary and terminology used in the course were appropriate for young adults and the majority (80.95%) felt that new or complex concepts were fully explained throughout the course.

Knowledge attained:

Each of the modules ends with a quiz to assess knowledge attained from the content and linked to the learning objectives for the module. Average scores from all participants ranged from 84.54% for module 4 to 96.36% for module 2. The majority of pilot participants achieved at least 80% on each module quiz on their first attempt. For most modules, with the exception of module 2, at least one participant needed to complete the quiz multiple times in order to obtain at least 80%.

Discussion:

Overall, participants felt that the course was the right length, easy to use, well designed and incorporated a good variety of teaching methods. Young adults performed well on the module quizzes, indicating attainment of knowledge from the course. Based on the feedback provided by participants, there are some minor revisions needed (e.g., formatting text, correcting technical issues, including additional videos) as well as opportunities for more detailed revisions (e.g., including more scenarios for deeper learning).

Praise for the course:

"Thanks so much for creating this course, I think it would really helpful for young people who wants to volunteer/work in related fields."

"Really great course! As someone who didn't know much about dementia, I feel way more knowledgeable and would be able to work with someone who has dementia."

"I think the course is really, really well made, having taken a seminar course focusing on Dementia care and the perspectives of older adults and caregivers this pilot covered nearly everything we did in that seminar, all the while doing so in a concise package."

"I felt that this course was extremely engaging, and easy to follow!"

"Overall, I loved how well the course was put together and how it suits young adults very well. :)"

"The course was excellent and very accessible."

"I enjoyed it at lot and I learnt a lot as well. :)"

"I think that it was a great course!!"

Conclusion:

Overall, the LDJ for Young Adults course was well received by pilot participants, with some areas identified for improvement. The LDJ for Young Adults course will be updated based on pilot results in August 2021 in preparation for a formal launch in the fall of 2021.

Contents

Introduction

About SIIP

What is SIIP and why is it important?

Supporting Inclusion through Intergenerational Partnerships (SIIP) is a five-year project (2019-2024) funded through the New Horizons for Seniors Program. SIIP will use a collective impact approach to facilitate the development and implementation of projects that address social isolation among older adults living in Waterloo Region.

The number of older adults living with dementia in the Waterloo Wellington LHIN is expected to increase to 13,500 in 2020. Many diagnosed with mild to moderate dementia will continue to live in the community. Dementia-related challenges, including memory loss, difficulty problem solving, and changes in mood and behaviour, can make it difficult to maintain or establish new relationships, increasing the risk of becoming socially isolated. Care partners are equally at risk of social isolation due to the ongoing and changing care needs of their partners, as well as the stigma associated with dementia.

RIA will engage community stakeholders to identify needs and opportunities, and to jointly develop, implement and evaluate a collective impact plan to address social isolation. Funding will support up to five intergenerational partnership projects that involve meaningful roles for older adults and create new experiential learning opportunities for secondary and postsecondary students.

Project goal

The primary goal of SIIP is to increase social inclusion among seniors living with mild to moderate dementia, and their care partners, in Waterloo Region, Ontario, through intergenerational partnerships.

One of the project objectives identified to achieve the project goal is to improve dementia education in schools and prepare young people to participate in intergenerational programs.

Background

Purpose of LDJ adaptation

The original LIVING the Dementia Journey is an award-winning, evidence-informed training program for both formal and informal caregivers who support people living with dementia. The original LDJ curriculum uses presentations, individual reflections, small and large group discussions, and experiential learning formats to meet the needs of adult learners.

As part of the SIIP project, the Schlegel-UW Research Institute for Aging is developing a new e-learning course for young adults to gain a better understanding of dementia and impacts of living with dementia to prepare young adults to participate in intergenerational programs.

A literature review of current dementia education programs for youth and young adults (under 25 years of age) was completed. There were only seven formal education programs, resources or toolkits identified and most were international. There are additional online dementia education platforms and projects but they are not formal education curriculums and therefore were not included. This review confirmed the need for a formal dementia education program in Canada to prepare young adults to participate in intergenerational programs that involve people living with dementia.

Throughout the LDJ for Young Adults course, young adults gain insight from people living with dementia as they share their experiences. Young adults will share their own reflections on the material, and participate in interactive and problem-based learning activities to understand and apply the course content to their own life, and interact with older adults living with dementia.

As the population ages and the number of people with dementia increases, more and more young adults will come into contact with someone living with dementia. For some young adults, they may have a personal connection to the course such as a relative or someone they know in their community living with dementia. Increasing the understanding of dementia will increase their confidence when they interact with someone living with dementia, and is a step toward reducing stigma, increasing social inclusion and creating dementia-friendly communities.

Increasing young adult's understanding of dementia will also have long-term benefits as they look toward career paths. One module in the course gives young adults a better understanding of volunteer positions and career paths that they may wish to explore to support people living with dementia. Some of these opportunities include hands-on direct support roles, while others support people living with dementia in a more general way.

Finally, the course also teaches young adults about the importance of developing a healthy, safe lifestyle for themselves and taking care of their own wellbeing, especially if they are a caregiver of someone living with dementia.

Adaptation process

The adaptation process began in January 2020. In order to adapt the original LDJ program for young adults a number of groups were identified for consultation. Not all groups were engaged at the same time, or to the same extent.

The LDJ/SIIP team initially reviewed the original LDJ curriculum and material for irrelevant content (e.g., specific to team members working within a long-term care home). The original LDJ program creators were asked to identify elements of the existing program that should remain in the youth adaptation and considerations for adapting program materials. As well, LDJ program facilitators were asked to provide input regarding additional or unnecessary information, formatting changes and general input to inform the LDJ for Young Adults adaptation.

Staff from the Waterloo Region District School Board were consulted to better understand considerations for creating engaging content, developing an e-learning program, and opportunities to align LDJ for Young Adults with curriculum.

The LDJ/SIIP team met with a group of individuals with lived experience with dementia and care partners to understand their perceptions of the original LDJ program and gaps in information with respect to a young adult population.

In February of 2020, the RIA hosted a full day consultation session with 31 young adults, with and without experience interacting with people living with dementia. This session provided input on the information needs of young adults with respect to working with people living with dementia, the preferred format for the course and resources to support the course. Feedback from participants indicated that the course was too long (traditionally a full 8 hour in-person training session), young adults needed additional background information on dementia and would benefit from more activities, case studies, and opportunities to learn about how to apply the information in the course in volunteer and career settings.

The LDJ/SIIP team also discussed options and consideration for sustainability and licensing of the course beyond the SIIP project funding period with the RIA LDJ Program sales team.

Based on all of the feedback gathered from all of the groups, the LDJ/SIIP team drafted revised content between April and August 2020. This included developing two modules beyond the scope of the original LDJ curriculum (module 1 and module 6).

The course is divided into six-modules that help young adults to:

- Module 1: Understand dementia, including symptoms and ways to promote brain health
- Module 2: Reduce stigma associated with aging and dementia
- Module 3: Enhance wellbeing for people living with dementia and their care partners
- Module 4: Improve communication with people living with dementia
- Module 5: Explore how and why people living with dementia may express themselves in different ways
- Module 6: Discover learning opportunities, volunteer positions and career paths that young adults may wish to explore to support people living with dementia.

Final content was reviewed by six RIA team members, three educators, and three young adults. Final approval on the content was given by the RIA Senior Director of Operations.

Development of the LDJ for Young Adults course

The LDJ for Young Adults course was developed by Desire 2 Learn on the Brightspace platform. The Brightspace platform is used by both local school boards to deliver e-learning courses. The course was then migrated to another learning management system (LearnDash) that could be hosted on the RIA's website and made available for young adults outside of the education setting.

Methods

Quality Assurance Testing

Purpose

The purpose of the quality assurance (QA) testing was to assess the technical functionality of the course in the LearnDash and Brightspace platforms. Due to delays in obtaining access to the course on the Brightspace platform, quality assurance testing and piloting has been delayed until a later date. The findings in this report are exclusively from the LearnDash platform.

Timelines

QA testing of the LDJ for Young Adults course took place in February 2021.

Process

Two members of the LDJ/SIIP team completed an initial review of the course to identify any major technical problems.

The LDJ/SIIP team developed an extensive quality assurance review checklist to assess the technical functionality of the course. The checklist included 88 items for testers to consider as they reviewed the course. The items were divided into the following categories:

- Instructional content (4 items)
- Grammar and typography (35 items)
- Audio, voiceover and music (10 items)
- Course navigation (4 items)
- Planning/storyboarding (7 items)
- Interactivity (15 items)
- Quiz and assessment (6 items)
- Technology (7 items)

See appendix A for the complete list of items.

Four testers were asked to reviewed the course. The LDJ/SIIP team met with the testers prior to their review to provide an overview of testing plan, instructions on how to use the checklist and how to record issues in a database, including how to indicate the severity and priority of the issue.

All issues identified during QA testing were send to the course developer to be resolved. A second round of testing was completed to ensure that all issues that had been identified were properly corrected and functioning as intended prior to pilot testing.

Pilot Testing

Research Ethics Board Review

An application was submitted to the University of Waterloo's Research Ethics Board on November 17, 2020. The review process took significantly longer than expected due to Covid-19 and as such final approval was not received until January 26, 2021.

Purpose

The purpose of the pilot test was to assess:

- any problems will the e-learning format,
- relevance of the course for young adults interacting with people living with dementia,
- learnings from the course, and
- time taken to complete the course.

Timelines

Pilot testing of the LDJ for Young Adults took place between May and June 2021.

Recruitment

To pilot test the LDJ for Young Adults course, the LDJ/SIIP team anticipated recruiting at least two community organizations, including approximately 30 young adults and two instructors.

The LDJ/SIIP team generated a list of potential community organizations and schools to discuss pilot testing opportunities. The organizations and schools were considered based on their work with young adults, intergenerational programming, or previously expressed interest in the LDJ for Young Adults course.

A main contact at each potential organization was identified and contacted by email to discuss the opportunity to be involved in the pilot test. If the organization indicated that they were interested, the recruitment flyer was sent to the main contact to distribute to young adults and instructors. Young adults and instructors who were interested in participating contacted the LDJ/SIP team and received an information letter by email.

Young adults 18 years or older received an information letter and were asked to register for the course and pilot online and to complete a consent form. For young adults under 18 years of age, an information letter and permission form were given to young adults to take home to their parent/guardian. Parents/guardians gave permission if they want their child to participate in the pilot. Young adults with parent/guardian permission were given a participant letter, were asked to register for the course and pilot and indicate their consent to participate. Participants had two weeks to complete the course. Upon completion of the course, participants were sent a link to complete the follow-up survey.

Instructors (e.g., classroom teachers or community group leaders) received an information letter and once young adults completed the LDJ for Young Adults course, instructors were invited to participate in a brief one-on-one telephone interview.

Unidentified analytic data from the course was assessed (e.g., time to complete a module, demographic information) as well as results from module quizzes (to assess knowledge gained) through the Learning Management System.

Young adults were invited to complete the LDJ for Young Adults e-learning course (6 modules, approximately 30-45 minutes per module). After completing the course, young adults were invited to complete a 45-minute online follow-up survey. See appendix B for a copy of the survey.

Instructors were invited to participate in a 30-minute telephone interview. See appendix C for a copy of the interview guide.

In appreciation of their participation in the survey, each young adult received a $60 electronic gift card honorarium and a certificate of completion. In appreciation of their participation in the interview, each instructor received a $100 electronic gift card honorarium. Thank you letters and a one-page summaries

Results

Quality assurance testing

The course was tested on a variety of operating systems (Windows, macOS, iOS, Chromebook), browsers (Chrome, Safari) and mobile devices (iPhone, Android) to ensure compatibility across systems.

145 issues were identified in the first round of testing. 23 issues were duplications of issues identified by other reviewers. For nine of the issues identified, the LDJ/SIIP team decided not to make the suggested change (four were spelling/grammar preferences, three were related to changing images, one was contrary to RIA brand guidelines and one was not a function intended for the course).

Of the 113 remaining identified issues, 36 were categorized as either critical or serious issues. These issues required immediate attention and action to fix. The majority of the issues (n=82, 72%) were from the grammar/typography category and did not affect functionality, but were corrected as well.

After these issues were addressed by the developer, two testers completed a second round of testing to verify corrections. During this second round, an additional 14 issues were identified and corrected.

Pilot testing

Program reach and demographics

There were 25 young adults that registered for the LDJ for Young Adults course, and all but three completed the course and follow-up survey. This represents 73.33% of the pilot recruitment target (22 out of 30 young adults).

Given that this pilot was completed without the direct involvement of any schools, no instructors were recruited for the pilot. It is anticipated that instructors will be engaged when the course is piloted with schools on the Brightspace platform.

The results that follow are from young adult participants only.

Geographic location

The majority of participants (n=13, 59.09%) were from the city of Waterloo. There was very little representation from the townships.

Table 1: Number and geographical distribution of registrants and participants

Location	# of registrants	# of participants	% of total participants
Cambridge	3	2	9.09%
Kitchener	4	4	18.18%
Waterloo	14	13	59.09%
Township of North Dumfries	0	0	0%
Township of Wellesley	0	0	0%
Township of Wilmot	2	1	4.54%
Township of Woolwich	0	0	0%
Other	2	2	9.09%
Total	25	22	

Gender

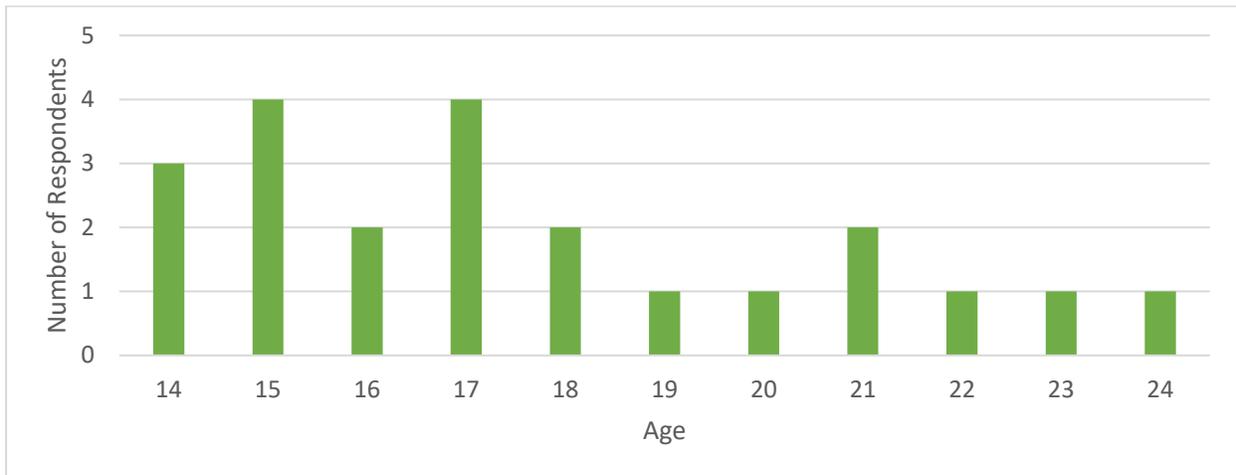Of the 22 participants, the majority of were female (n=17, 77.27%).

Figure 1: Gender of participants
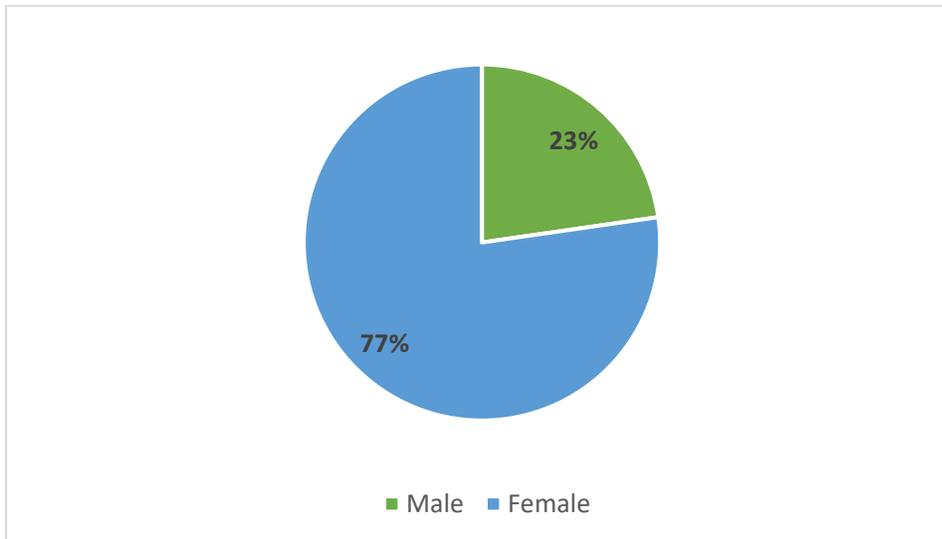
Age

Young adults between the ages of 14 and 25 were invited to participate in the pilot. The age of young adult participants was quite diverse, ranging from 14 years or younger to 22 years old, with the average age being 17.6 years.

Figure 2: Age of participants

Promotion of course

Participants were asked to identify how they found out about the course. Participants found out about the opportunity to complete the course through numerous sources. While family or friend referrals were the most commonly reported source (n=5, 22.73%), targeted outreach through SIIP collaborating organizations and the Volunteer Action Centre were successful recruitment approaches. See table 2 for a summary of the ways participants found out about this opportunity.

Table 2: Ways that participants found out about the course

Source	# of participants	% of participants
Family / friend	5	22.73%
SIIP collaborating organization	4	18.18%
Volunteer Action Centre	4	18.18%
School staff / faculty	4	18.18%
Previous involvement with RIA	3	13.64%
Email	1	4.54%
Church	1	4.54%

Technical aspects of the course

Time to complete the entire LDJ for Young Adults course

Pilot participants were encouraged to complete the course within two weeks. On average, it took 10.64 days to complete the course. Four participants completed the course in one day, while one participant took 41 days to complete the course. Most (n=18, 81.82%) young adults completed the course over multiple sessions.

Participants were asked to rate how satisfied they were with the length of time it took to complete the course where one indicated that the course was too long and 10 indicated that the course should be longer. On average, participants rated the course as 5.86 (range of 4 to 9).

Most participants (n=21, 95.45%) responded that they were able to decide which parts of the course to access, the order and the pace, while one respondent (4.54%) was not sure if this was possible.

Ease of Use

All of the participants (n=18, 100%) who completed the course over multiple sessions felt that the course allow them to leave whenever they wanted to but easily return to the closest logical point in the course.

Participants were asked to rate the ease of navigating within the course on a scale from one to 10, where one was extremely difficult and ten was extremely easy. The majority (n=16, 72.73%) of participants felt that the course was easy to navigate by rating it 9 or 10 out of 10. On average, participants rated the ease of navigating within the course with a score of 9.14 out of 10 (range of 7 to 10). All participants (n=22, 100%) responded that the system layout was easy to understand without many instructions. None of the participants (n=0, 0%) accessed technical support while completing the course.

A few participants offered some suggestions to improve the ease of navigating specific aspects of the course even further:

> "Took a minute to figure out how to enroll and register in the course even with the instructions, specifically having to scroll to find everything was something I'm not used to. Maybe having tabs for each section (registering, enrolling) at the top or side of the page would make things easier to navigate. The actual course itself was very easy to navigate!"

> "All the information was there and pretty easy to navigate. However, the information/buttons needed to move throughout the course itself were sometimes hard to find or almost "buried" in the other info on a given page."

> "On module 4 part 4, the sorting activity was a bit hard to figure out. Maybe there could be boxes around the text to know which ones to drag. There was also an error when I went through it, the arrow beside one of the texts ("Be impatient...") kept on buzzing."

Design aspects of the course
Nearly all participants (n=21, 95.45%) felt that the most important information on the screen was placed in areas most likely to attract their attention.

Participants were asked to what extent do you agree that they felt the images were visually appealing, suitable for the content and beneficial for learning. The majority of young adults agreed (n=14, 66.66%) that the images used throughout the course were visually appealing. The majority of participants (n=13, 61.90%) strongly agreed that the images were suitable for the content of the course. Most young adults either agreed (n=10, 47.62%) or strongly agreed (n=7, 33.33%) that the images were beneficial for learning.

Figure 3: Participant agreement with suitability of images use in course
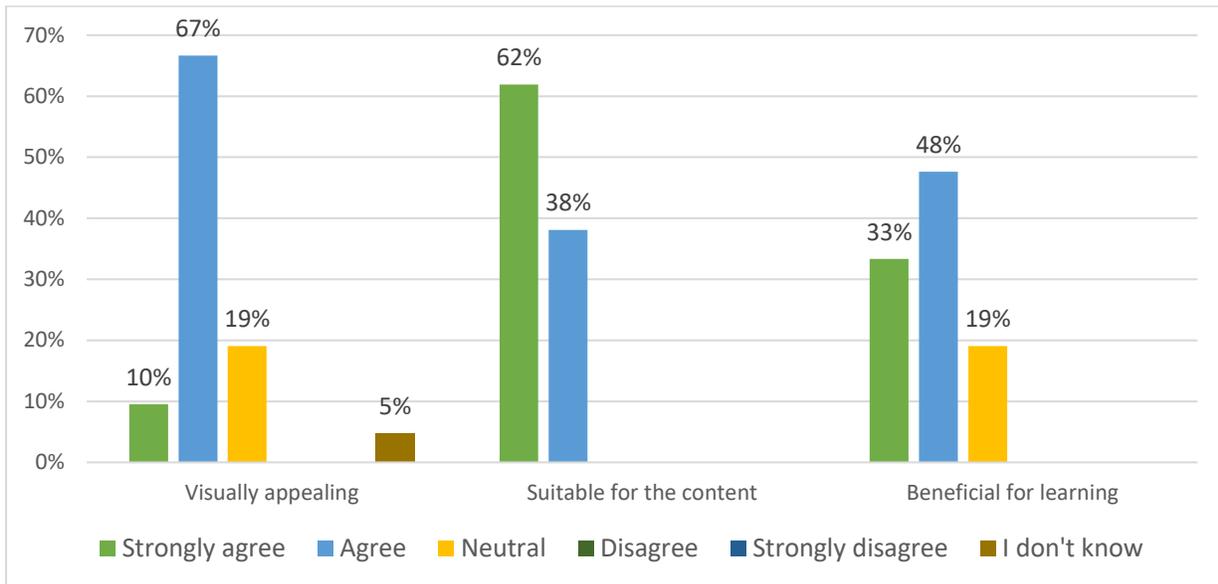
Participants who felt the images were <u>not</u> visually appealing, suitable for the content, or beneficial for learning, provided additional comments or suggestions for improving the images.

Three participants felt that the images could be more closely related to the module content:

> "I feel that the images could be made more appealing by including more images in the course related to the content."

> "Most of the images were appropriate for the content, but they could be a bit more diverse, but at the same time, specific, in themes/ideas they portray. I feel like some images were very generalized photos that could be applied to any section. I wish the photos were more specifically chosen for each module, and each topic."

> "I think that there could have been more images that were larger in size to help learners make visual connections with some of the lessons."

Two participants commented on technical aspects of the images that could be improved:

> "I think some of the images could be easier to visualize by allowing the whole subject to be in frame with little-to-no blurring effects. For example, I found it a little difficult to look at the images in topic 2 ("What is dementia?") of Module 1. On the device I initially used to complete this module, the layout of the screen made the "flashcards" appear inconsistent because some images were heavily zoomed in with a blurred background and others were evidently clear and pictured the entire subject in frame. In some photos, it was harder to identify what the subject was when they were heavily zoomed in compared to other pictures. To note, I have looked at the same module on a different laptop and the photo layout was easier to look at visually on that device in particular. I believe keeping the image styles and editing closely consistent will

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ensure that users of any device can visually understand the images right away, no matter how many flashcards or photos can fit within their screen size."

"The graphics are good, but for one of the matching in "Module 4, communicating dos and don't" my Chromebook seems to have a display problem, and does not want me to click the choices. All the other graphics worked well."

One participant noted that including additional images would help draw in the learners' attention:

"I'd like to think that maybe a few more images with more flashy colors would attract more attention."

One young adult felt that the images didn't particularly add value to the course:

"I think the images were definitely visually appealing but didn't necessarily add to the learning. "

Content
Participants were asked to provide input on the content of the course, specifically around the learning objectives, teaching methods used, opportunities to reflect on learning, and the appropriateness of the language used.

Learning objectives
Young adults were asked to rate how easy the learning objectives for the course were to understand on a scale from one to 10, where 1 was very difficult and 10 was very easy. Most young adults (n=12, 57.14%) felt that it was very easy to understand the learning objectives and on average, participants gave a rating of 9.24 (range 5 to 10).

Participants were also asked to rate how thoroughly the course content address these objectives on a scale from one to 10, where 1 was partially and 10 was entirely. While most young adults felt that the content addressed the learning objectives almost entirely, rating it either a 9 (n=7, 33.33%) or 10 (n=5, 23.81%). There was more diversity in the responses, averaging 8.48 (range 5 to 10).

For participants that felt the course content did <u>not</u> adequately address the learning objectives, they were asked to share the areas that they would have liked more information.

Three respondents suggested that the course include more information about the types of volunteer and job opportunities.

"I would have liked more in-depth information for the last module addressing possible volunteer/job opportunities; the module did a great job explaining WHY they're good to participate in but didn't really explain a lot of types of opportunities."

"The sixth one [module] maybe a bit more information about volunteering would be beneficial for younger viewers."

Two respondents noted that more content, and specifically additional scenarios and practical applications, on communicating with people living with dementia would be helpful.

> "I would have liked more information and scenarios on how to properly communicate in real life situations with people living with dementia."

> "I would like to learn more in Module 4: improving communication and Module 6: future applications. The content in the modules are very good, but I would like more tips on how to implement them in real life situations, because those would be helpful for volunteers."

One respondent suggested including additional details about health care for older adults living with dementia.

> "I would have liked to learn about the medical side of care."

Teaching methods

Young adults were asked to share their feedback on the teaching methods, interactive elements and resources included in the course.

The course included variety of teaching methods (e.g., readings, videos, slides, text, images, figures). Participants were asked to rate how satisfied they were with the variety provided in the course. The majority of young adults were very satisfied (n=16, 76.19%).

Figure 4: Participant satisfaction with variety of teaching methods used in course
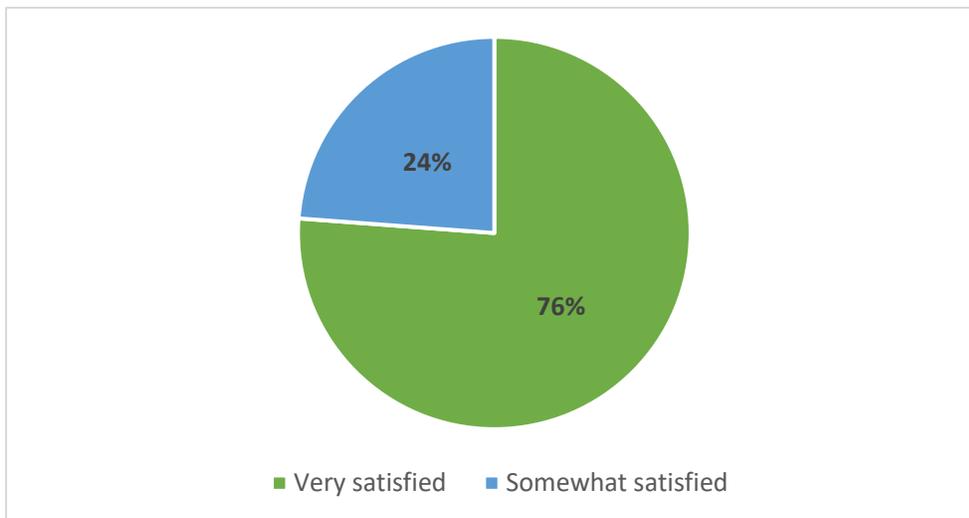
Young adults were asked how they felt about the number of interactive elements (e.g., matching exercises, flip cards, hot spots, scenarios) included throughout the course. Most participants (n=13, 61.90%) felt that the course included just the right number, while some (n=6, 28.57%) felt that there could have been more interactive elements included and a couple of participants (n=2, 9.52%) felt that there were too many included.

Participants were asked how satisfied they were with the variety of resources (e.g., web links, case studies, problems, examples) to make the learning process more engaging and motivating. The majority of participants (n=13, 61.90%) were very satisfied.

Table 3: Participant satisfaction with the variety of resources included in the course

Level of satisfaction	# of participants	% of participants
Very satisfied	13	61.90%
Somewhat satisfied	7	33.33%
Minimally satisfied	1	4.76%

For those who felt that the course needed more variety in terms of teaching methods, they were asked what they would have liked to see more of.

Two participants suggested including additional videos to the course.

> "I really like the videos and found them helpful, so I think including more (short length) videos would be good."

Four young adults recommended adding additional interactive elements.

> "I think having more interactive sections where I could test my knowledge and see if I understood the concepts from the previous sections (not specifically the quizzes but things like the flip cards and matching activities)."

> "I believe the course should implement more matching terms/definitions or quiz-like activities and "games" to promote active recall of the text information in each module. An emphasis on statistics and flashcards/slideshows can enhance the ability to be engaged in what is taught in the course too."

> "I feel that the course could have included more activities, quizzes and videos to make the learning more interactive and to solidify the knowledge being obtained."

Two participants suggested including more scenarios to apply concepts covered in the module.

> "The scenarios were a very interesting way to apply the newly learned information from each module, and I think there could be more of them!"

> "I would have liked more scenarios and/or examples to practice with."

Two young adults made suggestions to improve the quiz components of the course. One suggested adding additional quizzes and one recommended providing different response types (currently the quizzes include true or false questions or multiple-choice questions).

"I would've liked to see a variety in the testing methods: there could've been short answer questions so that I get to write out my thoughts and opinions. For example, there could be situation-based questions and an exemplary answer could be provided for me to check with what I've written."

Finally, one participant suggested using audio files with recordings of the content text.

"Person reading the text for you and more interactive activities."

Reflection opportunities and testing knowledge acquired

Young adults were asked how challenging they found the quizzes at the end of each module on a scale of one to 10, where 1 was "too easy" and 10 was "too challenging". On average participants rated the difficulty just slightly below average (average score of 4.48) although there was a range of responses (ranging from 1 to 9).

Figure 5: Difficulty of quizzes
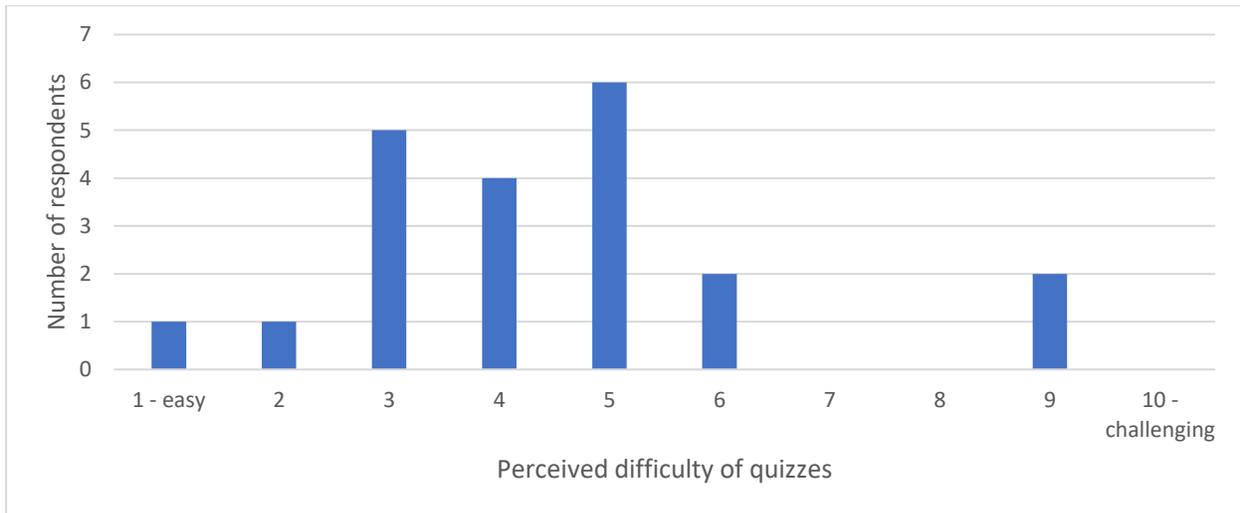
Participant were also asked how satisfied they were with the opportunities to reflect on their learning process (i.e., personal reflections, quizzes, end of course reflection). The majority (n=15, 71.43%) of young adults reported being very satisfied while the remaining young adults (n=6, 28.57%) responded as being somewhat satisfied.

For those participants who were not satisfied with the opportunities to reflect on their learning, they were invited to suggest improvements.

Two participants suggested incorporating a way of recording personal reflection responses within the course:

"I am very satisfied with the reflection opportunities, but I have an improvement suggestion: Instead of having participants writing down their reflection on paper, it might be possible in make a "note pad" in the module and have them be recorded there. That way, the reflections

can also the viewed by the ria to better understand the participants perspective. And at the end of the course, the "note pad" and be compressed into a pdf and send to the participant to keep for future reference. This might or might or be a good idea, just a thought."

"I was a little confused by the personal reflections; I thought they were supposed to be written on our own (off-screen and in a notebook for example) and yet at the end of the course it claimed that we should be able to "download" our reflections. However, there was never any text box that we could write and save our reflections in during the course on-screen."

One participant recommended including additional styles of questions into the quizzes.

"Having some other scenario style questions on the quizzes."

Language

Participants were asked their thoughts on the language used throughout the course. Specifically, young adults were asked to what extent they felt that new or complex concepts were explained by relevant examples or activities. The majority of participants (n=17, 80.95%) felt that new or complex concepts were fully explained throughout the course.

Figure 6: Extent that new or complex concepts were explained in the course
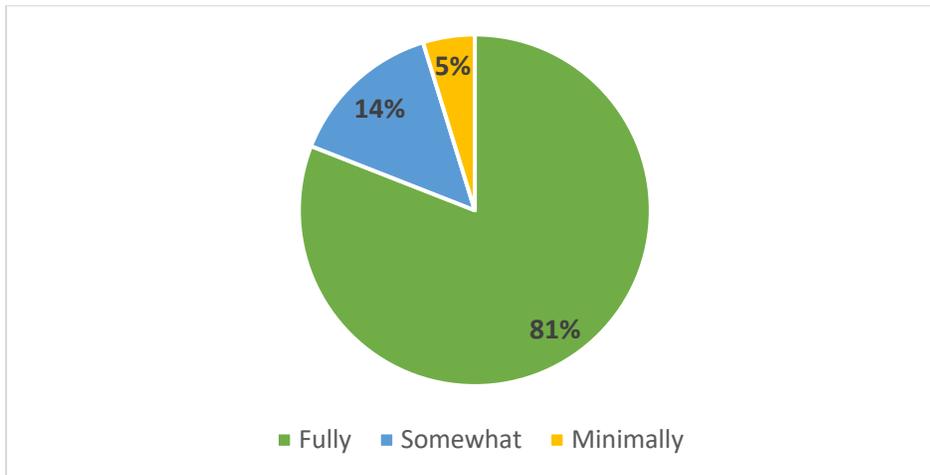
Participants were also asked if the vocabulary and terminology used was appropriate for young adults. All respondents (n=21, 100%) felt that the vocabulary and terminology were appropriate.

A couple participants shared their positive feedback on the language used in the course:

"I definitely felt that they were appropriate for young adults and just wanted to comment that I really liked the pop-up definitions for some keywords -- I could just hover over them and get a quick explanation about it :)"

"The vocabulary and terminology seemed very appropriate for young adults my age. Really appreciated it!"

Average module quiz scores

Each of the modules ends with a quiz to assess learning and linked to the learning objectives for the module. The questions are either true/false or multiple-choice style. Modules 1 through 5 have 10 questions, while module 6 has five questions. Average scores from all participants ranged from 84.54% for module 4 to 96.36% for module 2.

Table 4: Average and range of scores attained on module quizzes

Module	Average score (%)	Range (%)
Module 1: Understanding dementia	93.18	70 - 100
Module 2: Reducing stigma	96.36	80 - 100
Module 3: Enhancing wellness	90.45	60 - 100
Module 4: Improving Communication	84.54	60 - 100
Module 5: Exploring personal expressions	93.18	70 - 100
Module 6: Discovering future applications	92.73	60 - 100

Attempts required to obtain at least 80% on module quizzes

The course has been programmed so that learners must achieve at least 80% on the module quiz in order to proceed to the next module. The majority of pilot participants achieved at least 80% on each module quiz on their first attempt. While not required, several participants completed the quiz multiple times (at least twice) in order to improve their score. For most modules, with the exception of module 2, at least one participant needed to complete the quiz multiple times in order to obtain at least 80%. See table 2 below for a summary of the quiz complete attempts.

Table 5: Attempts required to obtain at least 80% on module quizzes

Module	Total # of quizzes completed	# (%) of participants who obtained at least 80% on first attempt	# (%) of participants who completed quiz multiple times*	# (%) of participants who completed quiz multiple times to obtain at least 80%
1	29	21 (95.4%)	3 (13.64%)	1 (4.5%)
2	25	22 (100%)	2 (9.09%)	0 (0%)
3	29	20 (90.91%)	5 (22.73%)	2 (9.09%)
4	36	19 (86.36%)	5 (22.73%)	3 (13.64)
5	25	21 (95.4%)	1 (4.5%)	1 (4.5%)
6	26	21 (95.4%)	3 (13.64%)	1 (4.5%)

*Despite passing on first attempt, seemingly to improve their score

Overall Feedback

Young adults were invited to share any other specific recommendations for improving this course.

Participants shared both things they liked about the course, as well as areas they felt the course could use improvement. Most comments were specific to a particular module or element of the course (e.g., quizzes, activities, videos, etc.), although there were some general comments about the course.

Of the recommendations provided, nine comments were related to text formatting or editing. Another nine comments were related to improving or fixing a technical component of the course. Specifically, the module 4 activity was mentioned by three participants.

The most common recommendation (n=4) related to improving the engagement of learners was to add more scenarios and opportunities to practice or apply knowledge gained from the course. Two participants also suggested making the quizzes more challenging.

Table 6: Recommendations for improving the course

Area of course	Type of Recommendation	Recommendation
Module 1	Technical	"Module 1 - (Topic 2) - Please make the photos on the flashcards less zoomed-in and easier to see what subject the content is showing."
	Technical	"Module 1 - (Topic 4) - There is a hyperlink to a video, but the video itself is not embedded into the module tab. I think this should be added to remain consistent with the other videos that are visible within the modules themselves."
Module 2	Formatting / Editing	"Module 2 (Topic 3) - Capitalize the title under the embedded YouTube video to remain consistent with the other video headings."
	Formatting / Editing	"Module 2 (Topic 4) - Capitalize the title under the embedded YouTube video to remain consistent with the other video headings."
	Formatting / Editing	"Module 2 (Topic 6) - Please capitalize the beginning of the World Health Organization's quote in the text."
	Technical	"Module 2 (Topic 6) - The articles linked have many ads and are difficult to navigate without an adblocker. They should preferably be formatted and credited in a different way where the text can be read by all readers, whether or not they have a way to remove the ads. I recommend that the articles are put into a different document or embedded into the modules somehow, with the original article links cited with it."
	Formatting / Editing	"Module 2 (Topic 7) - Please capitalize the title under the embedded YouTube video."
Module 3	Formatting / Editing	"There were a couple of writing errors in some places (for example, in module 3 conclusion it says "well-being is a broader idea than includes happiness, health, life satisfaction, etc... I believe it should say "that" instead of "than" in this context.) but they were very minimal."
	Technical	"Module 3 (Topic 3) - The alternative link for the activity does not work, the page is not found."
	Technical	"Module 3 (Topic 3) - There is no box for an activity where it says, "In the box below..."."
	Formatting / Editing	"Module 3 (Topic 5) - Please center all of the text on the flashcards to keep them visually consistent!"
Module 4	Technical	"The only thing I noticed in terms of a small technical glitch was with Module 4 topic 4 activity, the activity was a little misformatted / broken. "

	Technical	"*Activity Section "Communicating: Dos and Don'ts" in Module 4: formatted in a way that might confuse learners. It could be formatted by having each item on the list more spaced out vertically, so it's easy to drag each statement. When I first tackled the activity, I was confused since I wasn't sure what to drag where. I'm not sure if there was an error on my end, but when I dropped each statement beneath the "Do and Don't" categories, the statements started to flash. I would look into this to get this activity section sorted out."
	Technical	"Module 4 (Topic 3) - Communicating Do's and Don'ts activity is extremely "glitchy" in split-screen mode. This may be an issue to note for future learners following this course who may use split screen mode to assist with note-taking. To note, I have not had other issues in full screen and split screen mode with other modules and activities in this course. I have not checked this module with a different device."
	Formatting / Editing	"Module 4 (Topic 3) - The instructions are also formatted too close together with the statements. The statements should be bullet-pointed or put in a textbox to separate the options you can drag to the "Do" and "Don't" categories."
Quizzes	Revised content	"Perhaps make the quizzes a bit more challenging, maybe add a few context questions into the mix, or questions with more choices. Makes it more rewarding to complete and learn."
	Revised content	"I think the tests at the end of each segment could have been more challenging and could perhaps have benefitted from some long answer questions."
	Technical	"I would've loved to have back buttons on the quizzes so that if I wanted to re-do previous questions, I could easily go back, instead of having to start all over again by reloading."
	Formatting / Editing	"This might be a really small thing, but I would suggest having a quiz on a separate page, not underneath the conclusion. I kept on skipping the quiz, without seeing the "Start the Quiz" button at the bottom of the conclusion page."
Videos	Additional content	"Overall, there were awesome videos and if there were some more of those in some areas that would be more engaging for young adults doing the course."
	Additional content	"I found the first video showing a "pov" of the women living with dementia doing daily tasks really impactful and I will never forget it. So I think it would be beneficial to add more videos (POV's) from their point of view."
Activities	Additional content	"If more scenarios could be added to enhance learning about real-life communication with people living with dementia it would be amazing!! Thank you for this opportunity!"
	Additional content	"Adding more engagement activities and maybe more scenario-based questions could also help with learning."
	Additional content	"This course could be improved by including more activities to test the knowledge being obtained."
	Additional content	"Probably just more opportunities for us to practise, like scenarios."

	Revised content	"I liked that there were lots of different varying elements of learning tools (videos, activities, paragraphs, point forms, scenario -- maybe you could have the scenario section a bit more interactive, and have a section where we could fill out our own thoughts and analysis from reading the case, and then check our answers with detailed explanation."
General	Formatting / Editing	"Possibly explicitly say to keep a note of your personal reflections (not sure if I missed it) but I had to go back as I didn't record my answers. If possibly to have a spot on the module to write in the personal reflections would be great, but I know that might not be possibly with the online format."
	Additional content	"Tips on what to do in a medical emergency."
	Additional content	"At the beginning of each section: What if there was a section where students could write down all the questions they have before starting each module? Then at the end, they could compare their questions and curiosities at the beginning, to what they've learned at the end."
	Additional content	"I would like to suggest providing an official certificate for students who complete the LDJ course. There could also be further (enrichment) opportunities or benefits for students who complete the course to get involved at RIA, which would make the course more appealing for young adults."

Discussion

The recruitment rate of young adults for the pilot was 73.33% of the target of 30 participants. This rate would have ideally been higher, but promotion of the course through SIIP collaborating organizations, school staff/faculty, and the Volunteer Action Centre appeared to be successful approaches. A marketing strategy for the course should consider these as primary audiences for targeted outreach.

Feedback on the course was generally very positive. Overall, participants felt that the course was the right length, easy to use and understand, well designed and incorporated an appropriate variety of teaching methods.

Based on the feedback provided by participants, there are some minor revisions needed as well as opportunities to incorporate additional, more complex content for deeper engagement.

Minor revisions include formatting text, correcting technical issues, specifically the activity in module 4, updating images to ensure their relevance to the content, and including additional videos.

There was a desire from participants to including more scenarios to enhance learning and the application of knowledge. The creation and integration of scenarios into the course is a more lengthy and costly process, so the overall benefit of this type of revision will need to be assessed by the LDJ/SIIP team.

Young adults performed well overall on the module quizzes, indicating attainment of knowledge from the course. A review of the quiz questions for each module should be completed to determine if any updates are necessary in regard to the level of difficulty. From an evaluative perspective, it would have been desirable to be able to access the quiz responses from the LearnDash platform for individual questions, rather than a total score per module. This would have allowed for a more detailed analysis of knowledge attained and to assess if there were specific content areas that learners consistently misunderstood.

It would be beneficial to engage additional young adults and instructors in another round of pilot testing, specifically using the Brightspace platform to ensure consistency of experiences across the platforms. It is anticipated that these groups will be engaged when the course is piloted with schools in the fall of 2021.

Conclusion

Overall, the LDJ for Young Adults course was well received by pilot participants, with some areas identified for improvement and enhancement. The LDJ for Young Adults course will be updated based on pilot results in August 2021 in preparation for a formal launch in the fall of 2021.

Appendices

Appendix A: LDJ for Young Adults Quality Assurance Checklist

Table 7: Quality assurance checklist categories and items

Instructional Content	● Instruction to participate in the course
● Content is accurate	● Registration data is saved accurately
● Content is sequenced logically	

Grammar and Typography	● Tabs / UI elements
● Missing titles	● Incorrect display / Wrong information displayed for a specific scenario
● Missing punctuation	● Delay is showing elements
● Text positioning	● Language transition
● Spelling mistakes	● Overall formatting of the docs, transcripts, subtitles, any text-based assets as per brand style guide
● Content review: Missing abbreviation or acronym definitions	● White space between elements is as per the style guide
● Casing of words	● Mobile view is responsive
● Missing/ broken links	● Missing icons
● Links use text that describes the destination or function (e.g., do not use "click here" or "learn more" that provide no useful information)	● Incorrect / irrelevant icons
● Visual of online content	● Text and Icon alignment
● Brand/design style guide	● Line breaks in slides
● Colors Discrepancy	● Smooth Animation transition
● Copyright / Logo consistency throughout the course	● Blank screen
● Visual details/confusions (graph, charts and their resolutions are clearly seen – High Res Graphics)	● Delay is showing elements
	● Missing buttons
	● Interactive button missing
● Appropriate Graphics as per audience (as per approved in the storyboard)	● Button Labels (static or hover as decided during planning/ storyboarding)
● Visual fade in and fade out as per storyboard	● Able to enlarge images and vice versa
	● Order of items in a graphical image
	● Text/graphic cut off

Audio, Voiceover and Music	● Overlapping Voice Over
● Quality of the audio	● Subtitle sync with audio
● Pronunciation	● Playback Speed adjustment
● No background music	● Text alternatives added for all images, video, and audio (e.g., captioning, transcript provided)
● Loud background music	
● VO: Voice over sync	
● VO: Missing part of Voice Over	

Course Navigation	● Pages have unique meaningful page titles
● Slide navigation	● Pages consistent in the way content is organized across the course
● Lesson sequence	

Planning/Storyboarding ● Able to go to the next lesson only by completing ● Able to go to the next lesson by skipping current one ● Able to go to the next lesson upon successful completion of a test in the current module ● Start the next module automatically	● Starts next module only upon the click "Next" ● Hover over additional info marks lets you access more information ● Stuck at certain interactions
Interactivity ● Shows items at click work correctly for every lesson ● Feedback functions or yes/no interactions functions correctly ● Submit buttons functions properly (e.g., submit an answer, submit text) ● Submit button logic and display of relevant information ● Other interaction was approved in the storyboarding/planning phase ● Praising a certain behavior	● Form completion ● Form dropdown options ● Able to pause course if needed ● Incorrect score displayed ● Hide/unhide player buttons functions correctly ● Go to home or main module buttons available throughout the course ● Able to download files ● Locked menu ● Interactive elements (e.g., drag and drop, flip cards, quizzes, etc.) function properly
Quiz and Assessment ● Submit right answer gives you Green signal and additional information about the questions/answers. ● Submit wrong answers does not let you go to the next module. ● Submit wrong answers shows the right one and tell you why what you choose is wrong and lets you move forward.	● Accurate score gets collected in the backend and shown to the participant ● Number of attempts to answer a question as per the storyboard ● Hitting the back button during test/quiz
Technology ● Tested content on various browsers for compatibility (Internet Explorer, Firefox, Safari, Chrome). ● Mouse clicks and keyboards function smoothly ● Course content player menu functions as desired ● Backend tracks participant's data accurately	● Learning management system compatibility of the content ● Documents (MS Word, Adobe PDF) created in an accessible fashion ● Tested content on various devices (desktop, smart phones including android, tablets)

Appendix B: Pilot follow-up questionnaire for young adults

A small group of young adults in Waterloo Region, just like you, have been asked to take part in this follow-up survey after completing the LIVING the Dementia Journey for Young Adults e-learning course.

This important survey will help Research Institute for Aging to understand if the course is working properly, how relevant it is for young adults who will be interacting with people living with dementia, and to what young adults are learning from the course.

We value your help today and we will use the information you provide to make improvements to the course before offering it to other young adults.

Please answer the questions to the best of your ability.

About You

1. **How old are you today?**
   14 years or younger
   15
   16
   17
   18
   19
   20
   21
   22
   23
   24
   25 years or older
2. **What is your gender?**
   a. Male
   b. Female
   c. Other

Technical / Design

3. **On a scale of 1 to 10, how easy was it to navigate within the course?**

Very difficult									Very easy
1	2	3	4	5	6	7	8	9	10

4. **Is the system layout easy to understand without many instructions?**
   a. Yes
   b. No
5. **If you felt that the layout was <u>not</u> easy to understand, how could this be improved?**
6. **Did you access technical support while completing this course?**

a. Yes

b. No

7. **If you accessed technical support, was support provided in a timely manner?**

a. Yes

b. No

8. **Were you able to decide which parts of the course to access, the order and the pace?**

a. Yes

b. No

c. I don't know

9. **Did you complete the course all at once or over multiple sessions?**

a. All at once

b. Over multiple sessions

10. **If you completed the course over multiple sessions, did the course allow you to leave whenever you want to but easily return to the closest logical point in the course?**

a. Yes

b. No

c. I don't know

11. **On a scale of 1 to 10, how satisfied were you with the length of time it took to complete the course?**

The course is too long							The course should be longer		
1	2	3	4	5	6	7	8	9	10

12. **Is the most important information on the screen placed in areas most likely to attract your attention?**

a. Yes

b. No

c. I don't know

13. **To what extent do you agree that the images were…**

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	I don't know
Visually appealing						
Suitable for the content						
Beneficial for learning						

14. **If you felt the images were <u>not</u> visually appealing, suitable for the content, or beneficial for learning, how could they be improved?**

Content

This course was divided into six-modules intended to help you:

● Understand dementia, including symptoms and ways to promote brain health

● Reduce stigma associated with aging and dementia

- Enhance wellbeing for people living with dementia and their care partners
- Improve communication with people living with dementia
- Explore how and why people living with dementia may express themselves in different ways
- Discover learning opportunities, volunteer positions and career paths that you may wish to explore to support people living with dementia.

15. On a scale of 1 to 10, how easy to understand were the learning objectives for the course?

Very difficult									Very easy
1	2	3	4	5	6	7	8	9	10

16. On a scale of 1 to 10, how thoroughly did the course content address these objectives?

Partially									Entirely
1	2	3	4	5	6	7	8	9	10

17. If you felt the course content did <u>not</u> adequately address the learning objectives, what areas would you have liked more information?

18. How satisfied were you with the variety of teaching methods (e.g., readings, videos, slides, text, images, figures) provided in the course?
   a. Very satisfied
   b. Somewhat satisfied
   c. Minimally satisfied
   d. Not at all satisfied

19. If you felt the course needed more variety in terms of teaching methods, what would you like to see more of?

20. Did the course provide engaging interactive elements (e.g., matching exercises, flip cards, hot spots, scenarios)?
   a. Yes, but too many
   b. Yes, just the right amount
   c. Yes, but not enough
   d. No

21. How satisfied were you with the variety of resources (e.g., web links, case studies, problems, examples) to make the learning process more engaging and motivating?
   a. Very satisfied
   b. Somewhat satisfied
   c. Minimally satisfied
   d. Not at all satisfied

22. On a scale of 1 to 10, how challenging did you find the quizzes at the end of each module?

Too easy									Too challenging
1	2	3	4	5	6	7	8	9	10

23. How satisfied were you with the opportunities to reflect your learning process (i.e., personal reflections, quizzes, end of course reflection)?
   a. Very satisfied
   b. Somewhat satisfied
   c. Minimally satisfied
   d. Not at all satisfied

24. If you were not satisfied with the opportunities to reflect on your learning, what improvements would you suggest?

Language

25. To what extent are new or complex concepts explained by relevant examples or activities?
   a. Fully
   b. Somewhat
   c. Minimally
   d. Not at all

26. Are the vocabulary and terminology used appropriate for young adults?
   a. Yes
   b. No

27. If you felt that the vocabulary and terminology used were not appropriate for young adults, do you have any recommendations for improvement?

Overall Feedback

28. Where did you hear about this course?

29. Do you have any other specific recommendations for improving this course?

Appendix C: Pilot follow-up interview guide for instructors

Thank you for agreeing to join me today. Before we begin, I need to review the consent information with you and then we'll get into the real content of our discussion.

Our purpose in wanting to have this discussion is to help us understand your experience using the course with young adults. This results from this pilot will help Research Institute for Aging to understand if the course is working properly, how relevant it is for young adults who will be interacting with people living with dementia, and to what young adults are learning from the course.

First, I want to assure you that your identity will be kept confidential. You can choose not to respond to questions if you wish and can withdraw from participation at any time, just let me know. We want you to be very candid throughout the interview.

Once we're done, we'll combine your input with other interviews. Any reports that summarize the results will not identify you or your organization.

With full knowledge of what I have just described, do you agree to participate in this interview?

(Yes / No)

Second, to help me track what you say, I plan to record our talk.

Do you agree to have this interview audio recorded?

(Yes / No)

Do you agree to the use of anonymous quotations in any report that comes of this pilot?

(Yes / No)

Okay, let's get started.

Technical / Design

The first few questions are related to the technical aspects of the course. Your responses can be based on your own experience if you went through the course yourself, or from what you noticed as young adults went through the course.

1. How easy was it to navigate within the e-learning course?
   a. [Prompt: Is the layout easy to understand without many instructions? How could this be improved?]
2. Did you access technical support while completing this course?
   a. If yes, was support provided in a timely manner?
3. Did you customize the course for your specific classroom or volunteer context?
   a. If yes, in what way did you customize the course?
   b. If no, was this because you felt it wasn't necessary or because you didn't feel comfortable doing so?
4. How satisfied were you with the length of time it took young adults to complete the course?
   a. [Prompt: Is the course too long? Did you have young adults complete the course in one session or over multiple sessions?]

Content

The next few questions are related to the content offered in the course.

5. In your opinion, were the learning objective easy to understand?
6. How well do you think the course content addresses the learning objectives?
   a. If you felt that the content did not adequately address the learning objectives, what areas would you have liked more information?
7. How satisfied were you with the variety of teaching methods (e.g., readings, videos, slides, text, images, figures) provided in the course?
   a. Is there anything you would have liked to see more of?
8. How well did the course provide frequent and various learning activities that increase engagement and learning success?
   a. Were there enough interactive elements (e.g., matching exercises, flip cards, hot spots, scenarios) or too many?
9. How satisfied were you with the variety of resources (web links, case studies, problems, examples) to make the learning process more engaging and motivating?
   a. Do you have any comments or suggestions to improve the resources?
10. Did the course provide an adequate opportunity for young adults to reflect on the learning process (e.g., through personal reflections, quizzes, end of course reflection)?
    a. Do you have any comments or suggestions on the end of module quizzes? (Prompt: Are they fair questions, too easy to answer?)

Language

The next couple of questions are related to the language used in the course.

11. To what extent did you think new, abstract or complex concepts concretely illustrated by relevant examples or activities?
    a. Were there any specific concepts that you felt were not well described?
12. Are the vocabulary and terminology used appropriate for young adults?
    a. If no, do you have any recommendations for improvement?

Implementation

The next couple of questions are related to your experience implementing the course.

13. In your opinion, what is the biggest strength of the LDJ for Young Adults course?
14. In your opinion, what is the biggest challenge with the LDJ for Young Adults course?
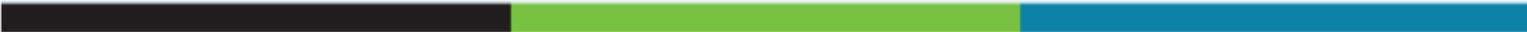
[For instructors in school settings only]

15. How likely are you to include the LDJ for Young Adults course within your lesson plans?
16. Where do you feel that the LDJ for Young Adults course best fits within the curriculum?
17. How applicable do you feel the LDJ for Young Adults course is to this curriculum?

18. Did you access the supplemental materials (e.g., teacher's guide)?
    a. If yes, in what ways did you make use of the supplemental materials?

Overall Feedback

The last couple of questions about your overall feedback on the course.

19. Overall, how satisfied were you with this course?

20. Would you recommend the LDJ for Young Adults course to other schools / organizations?
21. Do you have any other specific recommendations for improving this course or other final comments?

That concludes the interview. Thank you again for taking the time to speak with me today. We value your insight and we will use the information you provide to make improvements to the course over the next few months before offering it to other young adults in Waterloo Region.