

**SHORT
COMMUNICATION**

Volume 17 Issue 2 2025

DOI: 10.21315/eimj2025.17.2.10

ARTICLE INFO

Submitted: 18-07-2024

Accepted: 07-02-2025

Online: 30-06-2025

Introduction to Gerontology Using a Synchronous Online Module among Undergraduate Students

Siti Nurbaya Mohd Naw^{1,2}, Kumitaa Theva Das³, Marahaini Musa⁴, Tan Yun Yi⁵, Asrene Ab Razak^{1,2}, Azidah Abdul Kadir^{1,2}, Abdul Rais Abdul Latiff^{2,6}, Nik Norma Nik Hasan^{2,7}

¹*School of Medical Sciences, Universiti Sains Malaysia, Kelantan, MALAYSIA*

²*USM Initiative on Ageing, Universiti Sains Malaysia, Pulau Pinang, MALAYSIA*

³*Institute for Research in Molecular Medicine, Universiti Sains Malaysia, Pulau Pinang, MALAYSIA*

⁴*Human Genome Centre, School of Medical Sciences, Universiti Sains Malaysia, Kelantan, MALAYSIA*

⁵*Centre for Creative Arts, CoE for Immersive Experience, Faculty of Cinematic Arts, Multimedia University, Selangor, MALAYSIA*

⁶*School of Social Sciences, Universiti Sains Malaysia, Pulau Pinang, MALAYSIA*

⁷*School of Communication, Universiti Sains Malaysia, Pulau Pinang, MALAYSIA*

To cite this article: Mohd Naw SN, Das KT, Musa M, Yi TY, Abdul Razak A, Abdul Kadir A, Abdul Latiff AR, Nik Hasan NN. Introduction to gerontology using a synchronous online module among undergraduate students. *Education in Medicine Journal*. 2025; 17(2): 131–8. <https://doi.org/10.21315/eimj2025.17.2.10>

To link to this article: <https://doi.org/10.21315/eimj2025.17.2.10>

ABSTRACT

As Malaysia transitions into an ageing nation, awareness and preparedness regarding the needs of the ageing population have become a crucial national agenda. Disseminating knowledge about the ageing process within society is crucial and should start at a younger age. With advancements in teaching methods, knowledge transfer in the field of education about ageing can be carried out using a creative form of lesson delivery, especially in the context of the COVID-19 pandemic, where movement restrictions have limited conventional face-to-face teaching. This article reports on an innovative method of teaching about ageing using a synchronous online module among undergraduate university students during the COVID-19 pandemic. A two-week online summer programme called the Live Inclusive Fulfilling Experience (LIFE) Programme was developed and conducted by Universiti Sains Malaysia. Two hundred and eighty students participated voluntarily, with the majority (88.1%) in the first or second year of an undergraduate degree. The majority of participants of the LIFE Programme were females and of Malay ethnicity. The online synchronous gerontology module was conducted over one day and covered four main components: health and ageing, economics of ageing, communications and social ageing. The module employed various learning methods, including interactive and hands-on activities, as well as breakout rooms for small-group discussions. Most students strongly agreed that the module was useful (72%) and applicable to them (76%). The online delivery of the module was positively received by the students (70%). This online module may be adapted as a distance learning programme in the future. The next step is to examine the module's effectiveness and potential for expansion as a more extensive learning platform for disseminating knowledge about ageing within wider society.

Keywords: Gerontology, Ageing, Education, Pandemic, Grouped classroom, Online learning

CORRESPONDING AUTHOR

Siti Nurbaya Mohd Nawi, Department of Internal Medicine, School of Medical Sciences, Universiti Sains Malaysia, Health Campus, Kubang Kerian, 16150 Kota Bharu, Kelantan

E-mail: nurbyanawi@usm.my

INTRODUCTION

The world is undergoing a demographic shift, with an increasing number of people living beyond the age of 60. It is estimated that by 2030, one in six people will be aged 60 years or older. The proportion of the Malaysian population aged 60 and above is expected to increase to 15% by 2030 (1). The impact of population ageing can be observed in various aspects, including health and well-being, finance and economics, housing and social security (2). Middle- to lower-income countries are experiencing a significantly faster rate of population ageing, leaving them unprepared for this change. To enable age-friendly policies, increasing awareness of this topic and removing the stigma of ageism is a top priority. Hence, education on ageing plays a vital role in changing the perception of it and instilling a positive attitude towards ageing and older people (3). Previous research has shown that college students exposed to knowledge related to ageing demonstrate more positive attitudes towards older people (4).

Traditionally, gaining an understanding of ageing at the tertiary education level is incorporated into relevant fields such as medicine, as well as social and health sciences. However, it has now become evident that the application of ageing knowledge extends beyond the health and social sciences. Education on ageing should be made universally accessible. The field of gerontology is unique in that it is multidisciplinary and therefore necessary across different domains of education (3, 5).

The COVID-19 pandemic significantly impacted care for older people due to the burden of infection and restricted provision resulting from the movement control order. This situation has led to a marked increase in the necessity to learn about the care of older people (6). It has become increasingly apparent that, as a society, we lack preparedness for the care needed by the older population, not only during the pandemic but also in equipping ourselves for an ageing nation. Timely education on ageing is crucial and should not be delayed. Yet, the pandemic has caused significant challenges to the academic world, disrupting traditional teaching and learning methods and limiting face-to-face lessons due to public health concerns. Hence, recognising that knowledge about ageing is crucial through an experiential programme called the Live Inclusive Fulfilling Experience (LIFE) Programme, Universiti Sains Malaysia (USM) incorporated exposure to this topic early on during its undergraduate courses.

Conceptualised based on the education systems of some of the world's best universities and adopting their best current practices, the LIFE Programme is the brainchild of USM, which reimagines learning and empowers students with the perspectives and skill sets needed to thrive in the broader world. The name LIFE Programme is derived from the programme's primary objective, which is to provide students with an inclusive and fulfilling experience. The LIFE Programme aims to create equal opportunities and a high-quality education for everyone regardless of their socioeconomic background. This programme's main goal is to be experiential and flexible, which is particularly significant given the increasing need to establish flexible practices to continuously enhance the global education system, especially

in addressing current challenges. More importantly, this is aligned not only with the Education Blueprint but also with Sustainable Development Goal 4 of the Global Education 2030 Agenda (7, 8).

The LIFE Programme was conducted virtually over two weeks as a summer programme. The modules covered topics such as creative thinking, financial literacy, climate crisis, genomic and gerontology and other contemporary topics essential for understanding the modern society.

METHODOLOGY

Participants

Two hundred and eighty students from science and non-science courses were enrolled to participate in a two-week online summer programme in September 2021. The deans from selected schools of USM were invited to nominate students to participate in the LIFE Programme. The selection primarily targeted students in their first or second year of study. However, due to variations in semester structures within certain professional courses, the cohort also included four third-year and four fourth-year students (Table 1).

Table 1: Characteristics of participants

Characteristics	Frequency (n)	%
Gender		
Male	118	42.1
Female	162	57.9
Ethnicity		
Malay	159	56.8
Chinese	47	16.8
Indian	45	16.1
Sarawakian	3	1.1
Siamese	1	0.4
Others	3	1.1
Bumiputera	5	1.8
International	17	6.1
Year of study		
Year 1	251	89.6
Year 2	21	7.5
Year 3	4	1.4
Year 4	4	1.4

The Module

The gerontology module was conducted over one day as part of the USM LIFE Programme. The online platform used was Cisco Webex. The module consisted of four main components on ageing: ageing and health, social ageing, the economics of ageing and communication in ageing. The modules were planned and agreed upon following a series of collaborative discussions between relevant schools of the university. The module began with an

introductory lecture on aging, followed by a hands-on simulation activity on aging. The objective of this activity was to provide participants with a first-hand experience of the physical and sensory challenges associated with ageing. The assistive materials used for the modules, such as goggles wrapped with cling film to simulate blurred vision and earplugs to simulate hearing impairment, were sent to the participants two weeks prior to the programme's commencement. Students were assigned to their respective groups, ensuring diversity and enabling more dynamic discussions. The students could then reflect on their experiences using the Padlet application, where they could share photographs and express their opinions and feelings (Figure 1).

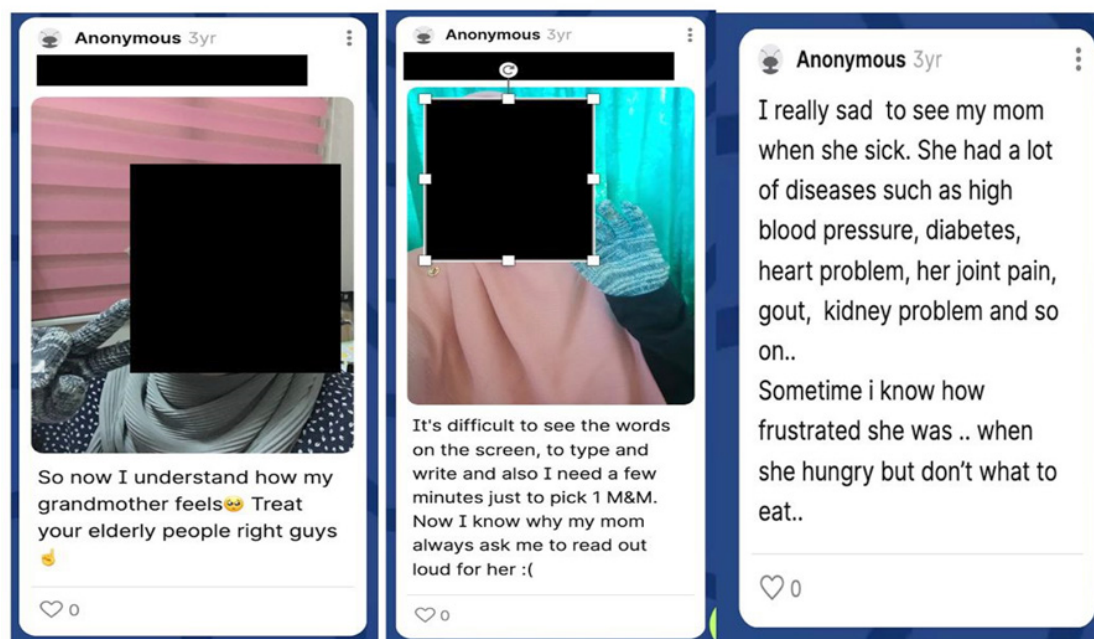


Figure 1: The experience sharing and reflections by students using Padlet.

Subsequently, a modified jigsaw classroom technique was applied. A jigsaw classroom method is a cooperative learning technique introduced by Elliot Aronson in 1971 at the University of Texas. When using this method, students work in smaller groups and become experts in one aspect of a topic. Following that, they will teach the topic back to their peers (9). In the USM LIFE Programme, the students were divided into subgroups on the Cisco Webex platform according to the four main components of the module on ageing: health, economics, social, and communication in ageing. In each subgroup, the students were given case scenarios pertaining to the four components of ageing as described above, which they were instructed to discuss within their groups with the help of facilitators. After completing the discussion session in each subgroup, the students reconvened in their main groups and shared what they had learned in each component with the other group members.

Student feedback was obtained via an online questionnaire at the end of the programme regarding the usefulness, applicability, level of content and delivery of the module. The construct used for the feedback was the perceived overall general performance of the LIFE Programme, and also specific feedback of each module. The scales used were strongly agree, agree, neutral, disagree and strongly disagree.

RESULTS

A total of 280 students participated in the LIFE Programme. The majority of the participants were females (57.9%). Regarding ethnicity, the majority of students (56%) were of the Malay ethnic group. Most (88.1%) of the participants were in their first year of undergraduate studies (Table 1). From the feedback obtained, 72% of students strongly agreed that the module was useful to them (Figure 2). Seventy-two percent also strongly agreed that the level of difficulty of the content was appropriate, and 76% of students strongly agreed that the module is applicable in their daily lives. Seventy percent of participants provided strongly positive feedback on the mode of delivery of the module, which was conducted virtually and supported by individual hands-on tools and equipment mailed to them before the commencement of the programme. Of the students, 77.5% strongly agreed that being introduced to subjects outside their major is important. Some barriers to full engagement in the programme included unstable internet connection (39%) and family obligations during the programme that prevented them from committing to the whole module (12%). Despite the limitations, the students agreed that the module was useful and enhanced their knowledge of the field of gerontology.

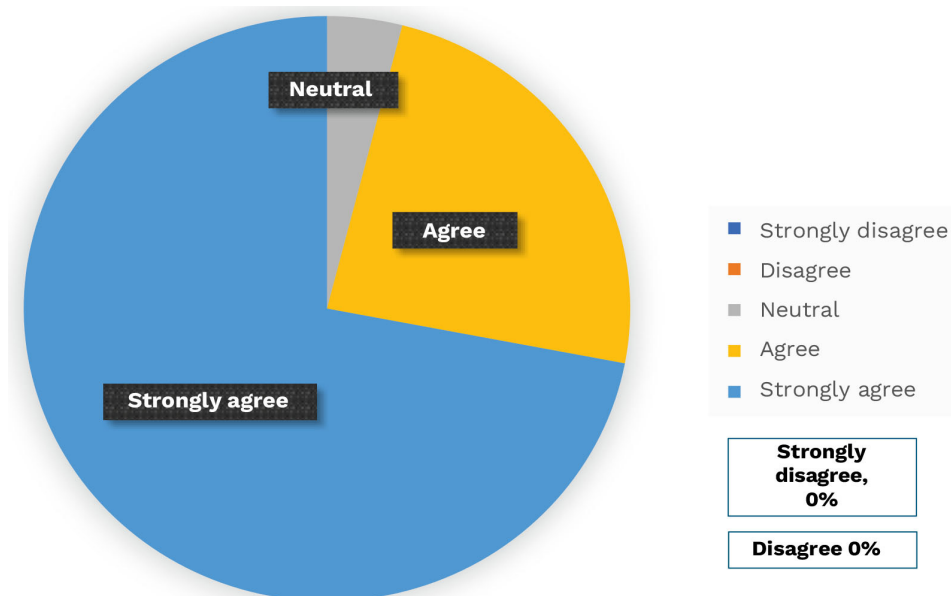


Figure 2: Students' feedback on the usefulness of the module.

DISCUSSION

According to the World Health Organization (WHO), ageism is one of the major contributors to the deterioration of the physical and mental well-being and quality of life of older people. The WHO global report on ageism has emphasised policies and laws that address ageism, promote inclusive education to enhance empathy and reduce prejudice towards older people (10). Hence, knowledge of ageing should be introduced and incorporated early in formal education systems.

The pandemic drove teachers and instructors to be more creative, innovative and flexible in their teaching and learning methods. This online module was shown to be acceptable among the participating students. Being a synchronous online module, the students had

live communication with their facilitators and colleagues, enabling continuous interaction. Synchronous online classes may help students develop a stronger sense of connection to their peers and facilitators and encourage continuous engagement with the module (11). The use of breakout rooms during small group discussions empowered students to contribute ideas and build their confidence, thanks to the more comfortable learning space, which created a sense of security that allowed them to express themselves (12). In addition, this module also used case-based learning as its main mode. This type of learning has been adopted in various fields worldwide, enhancing students' problem-solving skills. The cases used in the module were multidisciplinary-focused, requiring the integration of knowledge across various disciplines, which made them more interesting. It also encouraged critical thinking and good communication skills among the students (13). Another strength of this module was the use of tools and kits to enhance learning. Despite it being delivered online, a hands-on practical session was still feasible, which students found highly engaging. Furthermore, previous studies have shown that experiential learning in the field of ageing increases empathy and fosters better attitudes towards ageing (14, 15).

However, the module had some limitations. In settings where students were unable to participate synchronously, a backup asynchronous module was needed. This was particularly relevant for students from underprivileged backgrounds or those with lower socioeconomic status, who may not have access to a reliable internet connection. Strategies that can be implemented to overcome this challenge include preparing an asynchronous video or instruction manual for students who may not be able to participate.

Furthermore, setting up a backup chat or an alternative channel is also plausible for students to communicate and participate in the module. This backup mechanism is crucial in ensuring a robust support system is in place so that no students are left behind (15). The module could be improved by integrating the flipped classroom approach, where students engage with learning materials before attending class. This method has been shown to enhance students' learning (15).

Notably, despite the limitations imposed on learning during the pandemic, new knowledge could still be disseminated among our students by utilising the full potential of online learning platforms. However, the true effectiveness of the module can only be assessed by having a pre- and post-module competency assessment or questionnaire. Future research should also explore whether this kind of module can be applied to other subjects or settings.

CONCLUSION

Knowledge of ageing is crucial due to the global demographic shift towards an ageing population and should be taught across all disciplines at every level of tertiary education. The synchronous online module described in this article has been shown to be feasible for and viewed positively by university students. The delivery of the module can be further improved with multiple support backup strategies. The next step is to assess the module's effectiveness, including the level of knowledge acquired by participants and its long-term impact and practical application in real life. As knowledge on ageing is universal, future research and innovations should also explore the potential for incorporating this type of module in education not only in an academic setting but also in the effort to educate others in relevant organisations and society at large to promote the widespread dissemination of knowledge on this topic, making it available to all individuals.

ACKNOWLEDGEMENTS

We acknowledge the contributions and support provided by the former Vice Chancellor of Universiti Sains Malaysia, Professor Dato' Ir. Dr. Faisal Rafiq Mahamd Adikan. We also acknowledge the contributions and support from Professor Dr. Saidatulakmal Mohd from the School of Social Sciences, Universiti Sains Malaysia.

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