

# A Study of Lifelong Education for Persons with Intellectual Disabilities at the University Level

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**Abstract:** *Background:* In recent years, there has been growing interest in developing lifelong education for persons with disabilities at universities and other institutions of higher learning. However, there is still a lack of practical research on people with intellectual disabilities who participate in lifelong education.

*Objective:* This study analyzes the experiences of participants with intellectual disabilities obtained from the practice of the Lifelong Education Program for Persons with Disabilities (AULEPP). It discusses perspectives for the future development of lifelong education.

*Methods:* Eleven persons with intellectual disabilities who participated in the AULEPP from October 2021 to February 2022 were included in the study. Three surveys were administered to these participants before and after the AULEPP and for each lecture.

*Results:* The average number of participants in each lecture was 5.2, and four participants attended more than eight lectures. Qualitative analysis of the survey results revealed that participants acquired new knowledge, expressed the need for continuous learning, and proposed new questions. The lectures helped them recognize changes in their perspectives on daily life and society. Most of the lectures were conducted online, but there were no negative comments about this modality.

*Conclusions:* The study revealed the need to create opportunities for participants to find meaning in lectures, the effectiveness of online media, and the role of lifelong college education in the community. It is necessary to investigate the transferability of these results to urban areas and explore outcome measures and program content to build an evidence-based lifelong learning program.

**Keywords:** Intellectual disability, Lifelong Education, Lifelong learning, Higher education, Inclusive education, social participation.

## INTRODUCTION

People with disabilities have the right to continue learning throughout their lives. Article 24 of the Convention on the Rights of Persons with Disabilities states that “States Parties shall ensure an inclusive education system at all levels and lifelong learning.” In Japan, the ratification of the Convention has led to the consideration of comprehensive measures to promote the social participation of persons with disabilities in lifelong education, sports activities, and cultural activities [1]. Currently, the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) is working in several regions of Japan to expand and promote lifelong education for people with disabilities.

As for the education of people with disabilities in universities, the practice of lifelong education has been implemented in the form of open colleges. This lifelong education for people with disabilities at the university is defined as community service through which the university responds to the learning demands of residents and offers research and education by

conducting open lectures and other events. This activity aims to enhance the university’s educational and research capabilities and build partnerships and collaborations with the local community [2]. We have identified many lifelong learning practices in Japanese universities [3-9]. Many of these practices are initiatives based on open lectures at universities. Hirai reports on the practice of open lectures at universities centered on resolving life issues and improving general education, held about five times a year for two to three hours each [3]. Kunimoto reports on the practice of an open college offering subjects studied at the university throughout the year and subjects that can be selected specifically for a session [4]. Tsurumi *et al.* report on the practice of an open college where students are exposed to diverse fields of knowledge throughout seven sessions [7].

Unlike Japan, Scandinavian countries have established courses for adults with disabilities in their adult and lifelong education institutions called “national universities or folk universities (Folkhögskola)” [10]. Furthermore, higher education for people with intellectual disabilities is already provided in the United States, Canada, Australia, and Ireland [11-13]. In Japan, we have been able to confirm cases of higher education for students with intellectual disabilities [14];

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however, for most people with intellectual disabilities, the final education level is the upper level of a special needs school. In the future, it will be necessary to develop lifelong education further and discuss the implementation of inclusive higher education [4].

Lifelong learning opportunities can be of great value to people with disabilities. Simmons and Bayliss pointed out that inclusive education can promote the development of intersubjectivity, which is the foundation of learning and academic and humanistic development [15]. Rillotta *et al.* [13] reported the benefits of studying in higher education, such as universities, for persons with disabilities, including promoting self-determination, social development, and intellectual development. Bumble *et al.* showed the impact of developing the skills of people with disabilities, providing training and support opportunities, changing attitudes on campus and in the community, and broadening experiences related to building potential partnerships [16]. Thus, creating lifelong learning opportunities for people with disabilities is expected to have many positive impacts.

This article reports that lifelong learning for people with disabilities is implemented at many universities in Japan. However, it isn't easy to judge whether lifelong education programs at universities have been completed because many practices exist. Teratani pointed out that more theory building and practical research are needed to develop program content and curricula that will promote lifelong education for people with disabilities in universities in the future [17]. Corby *et al.* argued for the need for practical research focusing on students' experiences with intellectual disabilities, as much of the research on a lifelong education is limited to policy and organizational practices [18]. To promote lifelong learning for people with disabilities in universities, there will be an even greater need to gather more research results on lifelong learning initiatives and share the results with stakeholders. Therefore, this study analyzes the experiences of people with intellectual disabilities participating in public lectures on lifelong education for persons with disabilities conducted at Akita University and discusses perspectives for the future development of lifelong education.

## METHODS

### Participants

In this practical investigation, participation in the Lifelong Learning Program for People with Disabilities

at Akita University was solicited in cooperation with special needs schools in Akita Prefecture. Participants included senior high school students in special needs schools and graduates within ten years from graduation. As a result, 11 people with disabilities were enrolled in the program. The characteristics of the 11 participants are listed in Table 1. All participants had intellectual disabilities.

**Table 1: Demographics of Participants**

	Number of persons
Gender	
Male	8
Female	3
Total	11
Age	
Under 20 years old	4
21 to 25 years old	7
Total	11
Affiliation	
Currently studying at a special needs high school	1
Special needs high school graduates	10
Competitive employment	7
Sheltered workshop	3
Total	11

### Procedure

From October 2021 to February 2022, 60-minute lectures were given on Saturday mornings, approximately twice a month. Eight of the ten lectures were delivered online to prevent people from contracting infections, and two were delivered face-to-face. The use of Zoom, the software used for online lectures, was taught in the first lecture.

Three online surveys were completed using Google Forms. The pre-survey was conducted before the start of the lifelong education program; the reflection survey was conducted after each lecture, and the post-survey was conducted after the end of the program,

### List of Online Surveys

An original survey form was created to measure the effectiveness of the program. Survey forms were emailed to the participants. We did not prohibit the participants from having their parents or others help them if needed.

### **Pre-Survey**

In addition to the demographic information on gender, age, and current affiliation, the survey included reasons for applying to the program, expectations for classes, perceptions of lifelong education, and reasons for applying to the program.

### **Reflection Survey**

We asked students their impressions, thoughts, and questions about the lecture.

### **Post-Survey**

The survey questionnaire was structured to correspond to the pre-survey and examined changes in perceptions as a result of attending the lectures and preferences for how the lectures were delivered. These surveys are shown in the Supplementary Material.

### **Akita University's Lifelong Education Program for Persons with Disabilities (AULEPP)**

We created a trial AULEPP consisting of ten lectures with the help of researchers affiliated with Akita University. As shown in Table 2, the content of the lectures varied and included topics related to life skills, scientific knowledge, and creative activities, such as art. These topics were assessed by surveying persons with disabilities to ascertain their preferences regarding the subjects they would like to explore prior to the lecture. Based on these topics, at meetings, cooperation was sought from researchers affiliated with the university. As and when necessary, individual requests were made to researchers who fit the topics, based on discussions among the researchers. The lecturers who cooperated eventually offered voluntary cooperation.

Ten researchers at Akita University gave a 60-minute lecture each on a topic in their field. Reasonable accommodation for students with intellectual disabilities was requested and implemented during the lectures. We also told the participants in advance that they would receive an original participation certificate if they participated in eight out of ten lectures to promote their participation.

### **Methods of Analysis**

For the three types of surveys, simple totals were calculated. A simple tally sheet was created for the three types of surveys, and for the selective questions, the number of selectors was given as a percentage. For a three-point scale of "yes," "neither," and "no," "yes" answer was given three points, the "undecided" answer was two points, and the "no" answer was one point. No" was scored as 1 point.

The impressions, thoughts, and questions that were entered in the form of open-ended responses were analyzed using the content analysis method. The free-response content was divided into categories based on similarities in meaning and then reclassified and integrated into categories, again based on similarities in meaning. As for the requirements for future lectures, the respondents were asked to choose between Face-to-Face, Online, or Either is fine, and the percentage of their choice was calculated.

### **Ethical Considerations**

This study was approved by the Ethical Review Committee for Research Involving Human Subjects at Akita University (No. 3-18, dated September 21, 2021).

**Table 2: Contents of the AULEPP**

Lecture	Date	Type of lecture	Title of lecture
1st	2021 October 9	Online	How to use Zoom
2nd	2021 October 16	Online	Psychology: Psychology for Everyone's Happiness
3rd	2021 October 23	Online	Learning from People in Denmark, a Happy Country
4th	2021 November 6	Online	Let's think about family budgeting and money management!
5th	2021 November 20	Online	Let's learn about shapes and colors - enjoy learning the basics of painting!
6th	2021 November 27	Online	Dissect a fish yourself to find out how its body is made!
7th	2021 December 4	Face-to-face	Think about the background of the song and sing it with facial expressions!
8th	2021 December 11	Face-to-face	Use your body to think! Arithmetic and mathematics
9th	2022 January 22	Online	Familiar cyberspace threats and information security
10th	2022 February 12	Online	Festivals in Akita

## RESULTS

### Attendance at AULEPP

Attendance at the program is shown in Table 3. The average number of participants was 5.2, of whom four attended eight or more lectures.

**Table 3: Number of Participants in the Program**

Lecture	Type of lecture	Number of persons
1st	Online	6
2nd	Online	7
3rd	Online	5
4th	Online	5
5th	Online	5
6th	Online	4
7th	Face-to-face	4
8th	Face-to-face	4
9th	Online	5
10th	Online	7

### REFLECTION ON EACH LECTURE

Each lecture was evaluated positively, as shown in Table 4.

The results of the qualitative analysis of the reflections after the lectures are presented in Table 5.

**Table 4: Evaluation of the Lecture**

Lecture	I could learn something new.		I was interested in the content of the lecture.		I wanted to know more about things.		I was able to fully understand the lecture.		I was able to get interested in the lecture.	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
1st	2.8	(0.41)	2.8	(0.41)	2.8	(0.41)	2.8	(0.41)	2.8	(0.41)
2nd	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)
3rd	3.0	(0.00)	2.8	(0.45)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)
4th	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)
5th	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)
6th	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	2.6	(0.89)	3.0	(0.00)
7th	3.0	(0.00)	2.8	(0.50)	3.0	(0.00)	2.8	(0.50)	3.0	(0.00)
8th	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	2.8	(0.50)	3.0	(0.00)
9th	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	2.8	(0.50)	3.0	(0.00)
10th	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)	3.0	(0.00)

SD: Standard Deviation.

The lectures positively impacted the participants, as shown in Table 5, as they had opportunities to acquire and use knowledge and reinterpret experiences, acquire new questions, change views, increase motivation, and continue to learn.

### The Meaning of AULEPP Participation

The reasons for applying to the program are listed in Table 6. Participants applied for the program mainly because they were interested in a lecture and wanted to learn about its topic.

The expectations about the contents of the program are listed in Table 7. The following were selected as expectations: "I want to learn more about something specialized," "I want to have a chance to interact with my friends," and "I want to have a chance to interact with university students."

The changes in the participants' perceptions before and after the program are shown in Table 8. Even after the program was implemented, the scores for "To grow through various experiences," "To enrich my life," and "To deepen my education" did not decrease and continued to show a score of 3.

### Preference for the Format of the AULEPP

Preferences for program types are listed in Table 9. Face-to-face was the least preferred format. Most participants (approximately 85%) chose online or neither. There were no negative comments on the

**Table 5: Analysis Results of Reflection on Lectures**

Category (Number of reflections)	Examples of reflections
Acquisition of knowledge (18)	<ul style="list-style-type: none"> <li>• I understood how to use Zoom.</li> <li>• There are many different festivals in Akita Prefecture, and I was able to learn about the origins of these festivals.</li> <li>• I now understand the meaning of the lyrics of "Red Dragonfly."</li> </ul>
Reconceptualizing experience (17)	<ul style="list-style-type: none"> <li>• I learned that I have my own answers and that each person's answers also exist.</li> <li>• I had an image that art was difficult. But I thought that even a simple drawing would be okay.</li> <li>• I was happy to be told that the household budget management I had been doing was correct.</li> </ul>
Acquiring new questions (7)	<ul style="list-style-type: none"> <li>• What are some of the other things that I should be careful about when using money?</li> <li>• What are the origins of other festivals?</li> </ul>
Changing of perspective (5)	<ul style="list-style-type: none"> <li>• I wanted to try to make the people around me happy, not just myself.</li> <li>• Since my workplace is located in "Tori-machi," I was able to learn about the relationship between "Tori-machi" and the Kanto Festival, which made me feel closer to the town.</li> </ul>
Increasing motivation to learn (5)	<ul style="list-style-type: none"> <li>• I wanted to learn more about the SDGs.</li> <li>• I wanted to learn more about the Danish welfare system for persons with disabilities.</li> </ul>
Continuity of Learning (2)	<ul style="list-style-type: none"> <li>• I was interested in the book that was introduced at the end of the lecture, so I bought it.</li> <li>• I would like to make use of what I learned today and continue to draw various paintings in the future.</li> </ul>
Providing opportunities to apply knowledge (1)	<ul style="list-style-type: none"> <li>• This was my first time using Zoom, and I gradually learned how to do it.</li> </ul>

**Table 6: Reasons for Applying to the Program**

Items	Respondents	%
Because there was a lecture, I was interested in.	5	50.0
Because I was eager to learn.	3	30.0
Because my teacher recommended it.	1	10.0
Because my parents or my siblings recommended it to me.	1	10.0
No reason in particular	0	0.0
Others	0	0.0
Total	10	100.0

**Table 7: Expectations for Program Content**

Items	Respondents	%
I want to learn more about something specialized.	5	50.0
I want to have a chance to interact with my friends.	3	30.0
I want to have a chance to interact with university students.	2	30.0
I want to experience university life.	0	0.0
Others	0	0
Total	10	100.0

**Table 8: Changes in Perceptions Pre-and Post-Program**

Items	Pre-program(n=10)		post-program(n=6)	
	Mean	(SD)	Mean	(SD)
To grow through various experiences	3.0	(0.00)	3.0	(0.00)
To solve problems in our lives	3.0	(0.00)	2.5	(0.84)
To overcome the challenges of life at work or at school	2.8	(0.63)	2.7	(0.52)
To use for volunteer activities in the community and society	2.3	(0.82)	2.2	(0.98)
To maintain and improve my health	2.7	(0.67)	2.3	(0.82)
To interact with others and make friends	2.9	(0.32)	2.0	(1.10)
To enrich my life	3.0	(0.00)	3.0	(0.00)
To deepen my education	2.9	(0.32)	3.0	(0.00)

SD: Standard Deviation.

online implementation among the open-ended responses. Rather, the participants exhibited positive behavior during the lecture, actively using the online tools (e.g., reactions, chat, etc.).

**Table 9: Requirements for the Type of Lecture**

Items	Respondents	%
Type of lecture		
Face-to-face	1	16.7
Online	3	50.0
Either is fine	2	33.3
Total	6	100.0

## DISCUSSION

### Perspectives on the AULEPP

The AULEPP was found to be useful not only for knowledge acquisition but also for supporting the continued growth of participants with intellectual disabilities. Persons with intellectual disabilities are impaired, characterized by apparent limitations in both intellectual functioning and adaptive behavior (represented by conceptual, social, and practical adaptive skills) [19]. In this sense, researchers who served as instructors were obliged to make adequate pedagogical arrangements. These researchers did not have specialized knowledge about people with intellectual disabilities. They were also tasked with delivering online lectures. Despite these limitations, it was observed that the program produced qualitative changes in participants.

In AULEPP, we asked the researchers in charge of the lectures to make the content of the lectures

attractive and make them a starting point for learning. We also asked the participants to take these lectures as a starting point and continue learning. We believe that the principles taught to both the lecturer and participants contributed to the effectiveness of this program. Nind pointed out that lifelong learning for people with disabilities must be "meaningful and transformative," "active and interactive," "intrinsically motivating," "controllable," "allow for creativity and dialog," "take place in warm relationships," "allow for rich communication," "be a learning environment," and "inspire an individual's desire to continue learning [20]." We believe that the principles we presented raised awareness of these elements among both the instructors and the participants, making the program meaningful for each individual. From the results, we were able to gain insights on how to improve the program. We felt it would be useful to incorporate a mechanism into the program that would allow participants with intellectual disabilities to make the content of the lecture more meaningful to them. We believe that the AULEPP will contribute to the establishment of lifelong educational programs in Japan in the following ways. First, Japan is currently in the process of promoting lifelong educational programs, and we believe that the AULEPP will serve as a reference point for universities for implementing future initiatives. In particular, we believe that it is valuable as a practical initiative for university researchers who are unfamiliar with disabilities to participate in, even if it is well-understood by those leading the initiative.

We look forward to promoting lifelong education in Japan in the future.

## Effects of Online Lectures

In this program, lectures were conducted online. This was done to prevent the spread of COVID-19. Because the lectures were held online, we could not provide enough opportunities for the participants to interact with their friends and college students, which they had hoped for. However, none of the participants rejected online lectures. This may be because the advantages of online lectures are greater than those of face-to-face lectures. Akita Prefecture, where the university is located, is a rural area in northern Japan, where transportation accessibility for participants is limited. Especially in winter, accessibility is even worse because of heavy snowfall. Under these circumstances, the online lectures were considered a great advantage for participants. Furthermore, online lectures were useful for participants with intellectual disabilities.

Savinova *et al.* pointed out that information and communication technology (ICT) is a tool for continuous learning for people with disabilities, in remote or mixed forms, without leaving their place of residence [21]. Maebara *et al.* also reported the effectiveness of using ICT devices effectively in teaching and other activities for persons with intellectual disabilities [22]. Online lectures were useful not only to prevent infections but also because of the geographical convenience and ease of understanding due to the full use of visual materials. Of course, there are also benefits of face-to-face lectures, such as interactions with others. However, in the Akita region, where this program was conducted, the online lectures were appropriate, given the geographic and seasonal conditions.

## CONCLUSIONS

This article reports on the practice of lifelong education for people with disabilities at Akita University. We also discussed the importance of lifelong education and perspectives on improving the program. Kang pointed out that in the lifelong education for people with severe and multiple disabilities, various programs and management systems should be developed to consider their individuality and provide opportunities to promote their social participation [23]. Akita University has already developed a program for educating people with severe and multiple disabilities, including practices to support recreational activities. Additionally, in the Akita region, other educational programs are also present at other universities [24] and social service agencies [25].

Although we focused on lifelong education practices for people with disabilities at Akita University, the presence of these local resources encourages more discussion in the community on the needs of people with intellectual disabilities and the various resources that can be offered to them. We believe that this discussion will help clarify the content of the lifelong education provided by Akita University.

This study is based on the practice of lifelong education for people with disabilities at a university in rural Japan and provides limited data. Future work will need to examine whether these data can be confirmed for urban areas that have many social resources. Future research will need to focus on outcome indicators and program content to develop evidence-based lifelong learning programs.

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## CONFLICT OF INTEREST

The authors reported no potential conflict of interest.

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