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# Teachers' perceptions on the importance of occupational readiness skills for students with intellectual disabilities: a Japanese special education context

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In recent years, Japan has made significant progress in transitioning people with disabilities to competitive employment. This is because of employment quota systems and the increasing importance of special education schools in supporting the transition of persons with disabilities into society. This study demonstrated the importance of special education teachers' skills in fostering occupational readiness. An online survey was conducted with 129 teachers from 10 special education schools in rural Japan to assess the importance of the 25 occupational readiness skills. The results showed that the teachers recognized the importance of occupational readiness skills during and after graduation. However, a significant difference was observed in the average importance scores of these skills. The teachers acknowledged the importance of adaptability to specific jobs as a crucial aspect of after-graduate support. These results highlight the difference between the emphasis on vocational education in special needs education in Japan and that perceived by vocational rehabilitation practitioners. Moreover, the survey revealed a strong recognition of the need for support in daily life and health management beyond graduation. This study highlights the importance of teaching specific skills in special education schools in Japan after graduation. Improving the educational content and strengthening collaboration with vocational rehabilitation institutions is necessary to enhance transition support.

## KEYWORDS

transition support, occupational readiness, vocational rehabilitation, special education, Japan

## 1 Introduction

In recent years, Japan has made progress in the competitive employment of people with disabilities. Japan's employment quota system promotes employment among people with disabilities. Companies' employment quotas, which were 2.5% in 2024, are scheduled to increase to 2.7% by 2026 ([Ministry of Health, Labor and Welfare, 2023a](#)). Owing to policies promoting the employment of persons with disabilities, the percentage of their employment by companies has been increasing annually ([Ministry of Health, Labor and Welfare, 2023b](#)). In Japan, special support schools assist students with disabilities in the transition to society. In Japan, there are special education schools for students with visual impairments, hearing impairments, intellectual disabilities, physical disabilities, and chronic health conditions. Among these, schools for students with intellectual disabilities have the largest number of

schools and enrolled students. Students with intellectual disabilities require highly individualized support in preparing for employment. At the same time, they have access to a variety of post-graduation pathways, including welfare-based employment and competitive employment. Therefore, systematic and planned support from the educational stage is essential. In this regard, the education of students with intellectual disabilities is considered one of the central issues in transition support within special needs education. The employment rate of students with intellectual disabilities in special needs schools reached a record high of 34.9% in 2019 and has since remained around 30% (Ministry of Education, Culture, Sports, Science, and Technology, 2020, 2024).

In Japan, education for students with disabilities is provided at special needs schools in accordance with the national curriculum guidelines established by the Ministry of Education, Culture, Sports, Science and Technology. Among individuals with intellectual disabilities, only a small number continue on to higher education, such as university, after graduation. Instead, their primary pathway to social participation typically involves transitioning to welfare services under the Act on Comprehensive Support for Persons with Disabilities or to vocational rehabilitation services under the Act on Employment Promotion for Persons with Disabilities. Both types of services are administered by the Ministry of Health, Labour and Welfare. Welfare services are positioned as a form of preparatory training for employment, with the ultimate goal of facilitating entry into competitive employment through the use of vocational rehabilitation services.

Ministry of Education, Culture, Sports, Science, and Technology (2013), which manages special needs education in Japan, has a variety of special education programs available to meet the diverse needs of students with disabilities. One option is special needs schools, which exclusively serve students with disabilities. These schools provide tailored educational programs and specialized support services in a segregated setting. There are different types of special needs schools for students with visual impairments, hearing impairments, intellectual disabilities, physical disabilities, and frail (including physically weak) students. Another option is special education classes located within regular elementary and junior high schools. In these settings, students with disabilities are placed in separate classes according to the nature and severity of their disabilities. Additionally, students who are primarily enrolled in regular classes can receive individualized instruction in resource rooms or pull-out programs, enabling them to participate in inclusive education while still receiving targeted support based on their specific needs. Usually, individualized educational support plans are developed for both special educational programs, but they often do not function adequately (Fujii and Ochiai, 2011). In addition, individual transition support plans are currently not adequately prepared. There are schools for each disability. Schools include kindergarten, elementary school, junior high school, and high school. Special education schools have a long history in Japan and have an accumulation of educational practices for students with disabilities. In special education schools, the educational programs are mainly conducted by teachers who have obtained special education teacher licenses at universities. Education in schools includes classes for learning skills for independence, social knowledge and skills, and work-related skills. Occasionally, students are educated about working by store managers, cleaning company supervisors, and other community

members, but basically, the educational programs are conducted by licensed teachers. To prepare students for participation in society after graduation, teachers provide career guidance education and workplace development (Wakamatsu et al., 2022; Kuroiwa et al., 2024).

After graduation, the program is passed on to vocational rehabilitation institutions and other supporters. In Japan, vocational rehabilitation is defined as “providing vocational guidance, job training, job placement, and other measures stipulated in this law to persons with disabilities in order to promote their independence in their work lives,” based on the “Law Concerning Employment Promotion, etc. for Persons with Disabilities. Vocational rehabilitation providers are responsible for helping persons with disabilities adapt to the workplace after graduation, job coaching, and assisting them in their daily lives. It is important to support students with disabilities during the transition from special needs education to society (Japan Society of Vocational Rehabilitation, 2002; Maebara, 2024). The concept of “transition” often evokes the image of a person moving from one step to the next, like climbing stairs. However, in reality, transition is a process that includes various activities such as high school, graduation, additional post-secondary education or adult services, and the initial years of employment that facilitate a successful shift to vocational life (Liao et al., 2024; Poppen et al., 2024). Therefore, the transition is a dynamic process (Trach et al., 2014). Thus, at the point of graduation, the support providers are very different in this system. As a result, there is often a recognition gap in the transition between this special needs education and vocational rehabilitation.

Cooperation among supporters of individual persons with disabilities is needed as a way to resolve this challenge. One tool to facilitate this collaboration is the individualized transition support plan. In Japan, challenges have been identified in supporting students with disabilities during their transition from special needs education to society. To address this, cooperation among support providers is essential. One effective tool to facilitate such collaboration is the individualized transition support plan, which should be developed and implemented through active participation and appropriate system arrangements (Yaeda et al., 2000; Utsumi, 2004).

Special education schools do not cooperate sufficiently with vocational rehabilitation institutions, which are cooperative partners in transition support. Yoshida et al. (2008) highlighted the need for cooperation with vocational rehabilitation institutions when transitioning to society. Issues are often reported regarding cooperation between teachers at special education schools and support staff at vocational rehabilitation institutions (Fujii, 2011, 2018; Fujii and Ochiai, 2011). Cooperation enables the comprehensive provision of services at various levels and dimensions, thereby enhancing the quality of services provided to users (Harley et al., 2003). The cooperation is considered unexpectedly difficult despite being seemingly simple (Maebara, 2021). There are several benefits of cooperation among support institutions (Nonaka et al., 2007), and in transition support, effective cooperation is required (Suzuki and Maebara, 2021). Such cooperation enhances the quality of individual transition support services and improves the quality of employment support in the community (Maebara, 2023). To ensure that transition support functions effectively, cooperation between special-needs education and vocational rehabilitation must be promoted. In Japan, however, cooperation between special education schools and vocational rehabilitation institutions is often difficult (Maebara, 2022).

There are differences in the recognition, knowledge, and skills of teachers at special education schools and support staff at vocational rehabilitation institutions (Fujii et al., 2012, 2017). Maebara et al. (2019) highlighted the differences between special education schools and vocational rehabilitation institutions. For graduates to transition from special education schools to society, teachers at special education schools and support staff in vocational rehabilitation must be aware of these differences and share common goals for social participation. Further research is required to improve the effectiveness of transitional support.

Rather than testing a specific theoretical hypothesis, this study is exploratory and practice-oriented in nature. It seeks to clarify the current perceptions of teachers in special education schools and contribute to a better understanding of transition support through empirical observations. The results are intended to serve as a foundation for future theoretical or policy-oriented work. Thus, for the transitional support between special needs education and vocational rehabilitation to function effectively, it is important to clarify the recognition held by teachers and vocational rehabilitation practitioners in Japan regarding the importance of instruction in skills perceived as necessary for vocational rehabilitation. Specifically, this study seeks to answer the following research questions.

RQ1: What occupational readiness skills do special-education teachers perceive as important for teaching?

RQ2: What differences exist in the occupational readiness skills that teachers perceive as important when teaching during schooling and after graduation?

## 2 Methods

### 2.1 Participants

Participants were 538 teachers from 10 special needs schools for students with intellectual disabilities in Prefecture A, a rural area of Japan. Responses were received from 129 teachers who agreed to be participants. The response rate was 24.0%. Unlike special needs classes in regular schools, special needs schools in Japan specifically cater to children with disabilities. These schools are designed to help students overcome challenges related to their disabilities and achieve independence while receiving an education equivalent to that of elementary, junior high, and high schools. In addition, although some students in Japan's special education schools have multiple disabilities, the schools attended by the primary disability type are divided into those with intellectual disabilities, those with physical disabilities, those with hearing disabilities, and those with visual disabilities. Therefore, the characteristics of education differ depending on the type of school. In this study, we focused on students with intellectual disabilities, who are considered to have a high need for occupational readiness education due to their disability characteristics. The participating schools provided specialized instruction delivered by highly trained teachers. Teachers affiliated with these special needs schools generally receive special needs education and certifications from four-year colleges and universities.

### 2.2 Procedure

From October 21 to November 17, 2023, a request letter containing a link to an online survey that takes approximately 20 min to complete was sent via email to special needs education teachers from ten special needs schools for students with intellectual disabilities. Participants' consent was obtained by stating on the survey cover page that their responses to the survey would be considered their consent to participate in the survey.

### 2.3 Survey items

#### 2.3.1 Basic attributes

Participants were asked to provide information on their gender (male, female, other), highest educational attainment (high school, vocational school, junior college, university, graduate school [master/doctorate]), age as of March 31, 2024, and years of support experience.

#### 2.3.2 Skills constituting occupational readiness

This study uses the concept of "occupational readiness," which has been identified as important in Japan's transition. Occupational readiness is defined as "personal abilities necessary for vocational life" (Matsui, 2006, 2020). This was expressed in a five-layer structure: vocational aptitude (Layer 1), basic work habits (Layer 2), interpersonal skills (Layer 3), daily life management (Layer 4), and health management (Layer 5). Vocational aptitude includes the aptitude for duties and knowledge required for job performance. Basic work habits include greeting, responding, reporting, communication, consultation, personal appearance, compliance with rules, and the physical endurance to withstand work for a certain period. Interpersonal skills include emotion control, apologizing when called out, and greeting people with whom one is uncomfortable. Daily life management includes basic life rhythms, money management, leisure activities, and mobility skills. Health management includes meals, nutrition, daily health, and medications.

In Japan, this concept is often used as a guideline for providing the required assessment and training for transitional support. This concept has been presented as the most representative skill guideline for transitional support by several vocational rehabilitation practitioners in Japan. Occupational readiness, a fundamental concept in supporting persons with disabilities, has been integrated into various national training programs for employment support providers in Japan. These are "Basic Employment Support Training," a foundational national training program; "Job Coach Training," a qualification certification program focused on employment support; and "Disability Vocational Counselor Training," a specialized training equivalent to rehabilitation counseling in Japan's law as stipulated in Japan's law.

It has a pyramidal structure that expresses stage-by-stage skill acquisition. In other words, skills in the higher layers cannot be fully utilized unless skills in the lower layers are sufficiently acquired. This provides a practical perspective on support and training, even for providers with little knowledge of employment support.

In this study, an original survey form comprising 25 items, with 5 items for each layer, was created. As mentioned above, the items in this survey form have long been used in the field of vocational rehabilitation in Japan, and the contents of the items are widely accepted in the field of vocational rehabilitation practice. In preparing this survey, the items

were carefully reviewed by the corresponding author, who has about 20 years of experience in vocational rehabilitation practice and research, and the co-authors, who have about 15 years of experience in this field. Participants were asked to rate the importance of each item during school and after graduation on a 5-point scale: not important = 1, not very important = 2, neither important nor unimportant = 3, somewhat important = 4, and important = 5. The survey form for this study is presented in [Supplementary Appendices 1, 2](#).

The survey questions for the 25 items were structured in the following two patterns:

During school: To what extent is it important to provide guidance in classes, school situations, and so on before graduation?

After graduation: To what extent is it important to provide guidance in social situations after graduation?

## 2.4 Data analysis

In this study, we performed a simple tabulation of the basic information. We evaluated teachers' recognition of the importance of items related to occupational readiness using five layers of occupational readiness. Based on these five layers, we calculated the mean scores of teachers' recognition of the importance of vocational readiness items during school and after graduation. In addition, we calculated the Cronbach's alpha coefficient to assess the internal consistency of the scores for each level. Although there is no absolute standard for evaluating the value of Cronbach's alpha coefficient, the academic consensus is that it should be at least 0.70. In this study, if this value of 0.70 or higher was confirmed, the internal consistency of each layer was considered reliable. The analysis compared the differences in mean scores during and after graduation. The analysis excluded missing values and statistically analyzed the remaining data.

A paired *t*-test was conducted to verify the differences in average importance scores between the five layers during schooling and after graduation.

The top five and bottom five rankings were given for the average importance scores of each of the 25 occupational readiness skills, both during schooling and after graduation.

## 3 Results

### 3.1 Basic attributes

Participants were 129 teachers (42 males and 87 females). Most participants had graduated from a university. The average age was 44.1 years, and the average number of years of teaching experience was 18.9 years ([Table 1](#)).

### 3.2 Ranking of the average importance scores

The rankings of the top five and bottom five skills identified as important for teaching during schooling are shown in [Table 2](#).

The top five items are shown below: The 1st item, "Able to make necessary reports, contacts, and consultations in the workplace." belongs to the basic work habits layer, with a mean of 4.9 (standard deviation of 0.38). The 2nd item, "Able to follow workplace rules."

TABLE 1 Basic attributes of participants.

Gender	Number	%
Total participants	129	100.0
Male	42	32.6
Female	87	67.4

Education	Number	%
High school	0	0.0
Vocational school	1	0.8
Junior college	0	0.0
University	121	93.8
Graduate school	7	5.4
Total	129	100.0

	Mean	SD
Age	44.1	9.67
Years of experience as a teacher	18.9	9.42

SD, standard deviation.

belongs to the basic work habits layer, with a mean of 4.9 (standard deviation of 0.39). The 3rd item, "Able to make basic greetings and responses." belongs to the basic work habits layer, with a mean of 4.9 (standard deviation of 0.39). The 4th item, "Maintaining appropriate personal appearance." belongs to the basic work habits layer, with a mean of 4.8 (standard deviation of 0.42). The 5th item, "Able to maintain a stable life rhythm." belongs to the daily life management layer, with a mean of 4.8 (standard deviation of 0.45).

Next, the bottom five items are shown below: The 1st item, "Able to manage one's nutrition." belongs to the health management layer, with a mean of 3.7 (standard deviation of 0.86). The 2nd item, "Able to travel alone." belongs to the daily life management layer, with a mean of 3.8 (standard deviation of 0.86). The 3rd item, "Able to use public transportation." belongs to the daily life management layer, with a mean of 3.8 (standard deviation of 0.80). The 4th item, "Able to maintain good relationships with others." belongs to the interpersonal skills layer, with a mean of 3.9 (standard deviation of 0.80). The 5th item, "Working at the expected speed." belongs to the vocational aptitude layer, with a mean of 4.0 (standard deviation of 0.68).

The rankings of the top five and bottom five skills identified as important for teaching after graduation are shown in [Table 3](#).

The top five items are shown below: The 1st item, "Able to follow workplace rules." belongs to the basic work habits layer, with a mean of 4.8 (standard deviation of 0.47). The 2nd item, "Able to make basic greetings and responses." belongs to the basic work habits layer, with a mean of 4.8 (standard deviation of 0.51). The 3rd item, "Maintaining appropriate personal appearance." belongs to the basic work habits layer, with a mean of 4.8 (standard deviation of 0.51). The 4th item, "Able to make necessary reports, contact, and consultations in the workplace." belongs to the basic work habits layer, with a mean of 4.8 (standard deviation of 0.52). The 5th item, "Able to maintain a stable life rhythm." belongs to the daily life management layer, with a mean of 4.7 (standard deviation of 0.47).

Next, the bottom five items are shown below: The 1st item, "Able to maintain good relationships with others." belongs to the interpersonal skills layer, with a mean of 4.0 (standard deviation of



TABLE 2 Ranking of the top five and bottom five occupational readiness skills during schooling.

Top five ranking	Layer	Item	Mean	SD
1	Basic work habits	Able to make necessary reports, contact, and consultations in the workplace	4.9	0.38
2	Basic work habits	Able to follow workplace rules	4.9	0.39
3	Basic work habits	Able to make basic greetings and responses	4.9	0.39
4	Basic work habits	Maintaining appropriate personal appearance	4.8	0.42
5	Daily life management	Able to maintain a stable life rhythm	4.8	0.45

Bottom five ranking	Layer	Item	Mean	SD
5	Vocational aptitude	Working at the expected speed	4.0	0.68
4	Interpersonal skills	Able to maintain good relationships with others	3.9	0.80
3	Daily life management	Able to use public transportation	3.8	0.80
2	Daily life management	Able to travel alone	3.8	0.86
1	Health management	Able to manage one's nutrition	3.7	0.83

SD, standard deviation.

TABLE 3 Ranking of the top five and bottom five occupational readiness skills after graduation.

Top five ranking	Layer	Item	Mean	SD
1	Basic work habits	Able to follow workplace rules.	4.8	0.47
2	Basic work habits	Able to make basic greetings and responses.	4.8	0.51
3	Basic work habits	Maintaining appropriate personal appearance.	4.8	0.51
4	Basic work habits	Able to make necessary reports, contact, and consultations in the workplace.	4.8	0.52
5	Daily life management	Able to maintain a stable life rhythm.	4.7	0.59

Bottom five ranking	Layer	Item	Mean	SD
5	Interpersonal skills	Understanding one's disability.	4.2	0.77
4	Daily life management	Able to use public transportation.	4.1	0.79
3	Health management	Able to manage one's nutrition.	4.0	0.77
2	Daily life management	Able to travel alone.	4.0	0.81
1	Interpersonal skills	Able to maintain good relationships with others.	4.0	0.86

SD, standard deviation.

0.86). The 2nd item, “Able to travel alone.” belongs to the daily life management layer, with a mean of 4.0 (standard deviation of 0.81). The 3rd item, “Able to manage one's nutrition.” belongs to the health management layer, with a mean of 4.0 (standard deviation of 0.81). The 4th item, “Able to use public transportation.” belongs to the daily life management layer, with a mean of 4.1 (standard deviation of 0.79). The 5th item, “Understanding one's disability.” belongs to the interpersonal skills layer, with a mean of 4.2 (standard deviation of 0.77).

During school and after graduation, the items with the highest importance scores for guidance were related to basic work habits. The items with the lowest importance scores for guidance were common during schooling and after graduation and were interpersonal skills and daily life management.

### 3.3 Importance of skills constituting occupational readiness

The  $\alpha$  coefficient for each layer during graduation was 0.80 for layer 1, 0.86 for layer 2, 0.81 for layer 3, 0.76 for layer 4, and 0.78 for layer 5, all above 0.75; the  $\alpha$  coefficient for each layer after graduation

was 0.89 for layer 1, 0.93 for layer 2, 0.88 for layer 3, 0.85 for layer 4, and 0.86 for layer 5, all layer 5 was 0.86. Therefore, it was confirmed that there was consistency in each layer. Next, a paired t-test was conducted on the average importance scores of each layer during and after graduation. As shown in Table 4, the scores for vocational aptitude [ $t(128) = -4.193$ ,  $p < 0.01$ ], daily life [ $t(128) = -2.733$ ,  $p < 0.01$ ], and health management [ $t(128) = -4.863$ ,  $p < 0.01$ ] were significantly higher after graduation.

## 4 Discussion

In Japan, the concept of occupational readiness used in vocational rehabilitation is not fully understood by support agencies in other fields, such as special education. Occupational readiness is based on career theory, which focuses on the interaction between the environment and the individual and is used as a perspective to support individuals' role performance and career development (Matsui, 2006). This concept is taught to vocational-support professionals in Japan, including vocational counselors and job coaches. However, special education teachers are not necessarily familiar with this concept. In

recent years, as awareness of this concept has spread, more teachers have become aware of it; however, it is difficult to say that all teachers use it as a concept for a common understanding between special education and vocational rehabilitation.

However, from the perspective of transitional support, occupational readiness is useful for teaching special education. Occupational readiness is comprised of five layers: vocational aptitude, basic work habits, interpersonal skills, daily life management, and health management. The first layer, vocational aptitude, comprises work-related skills that correspond to hard skills. The remaining layers consisted of skills related to daily life, which corresponded to soft skills. Soft skills are important support items for vocational rehabilitation professionals (Phillips et al., 2014). The acquisition of these skills affects the success of work-related activities for people with disabilities (Lu et al., 2022; Lu et al., 2023). Considering the current situation, in which several students graduating from special education are entering the workforce, these instructions are important.

In this study, both during and after graduation, each skill was scored 3.8 or higher. This suggests that special education teachers understand the importance of teaching skills conceptualized as occupational readiness. There were significant differences in the perceptions of the importance of guidance after graduation in terms of vocational aptitude, daily life management, and health management. Thus, while special education teachers understand the importance of teaching occupational readiness skills, they do not necessarily think that they can teach everything during student enrollment.

Vocational aptitude, which consists of hard job skills, was recognized by teachers as less important in special education schools. Vocational education in special education schools is part of special education in Japan. Teachers have tried to incorporate various activities into vocational education. It is difficult to complete vocational training for all jobs after graduation. Therefore, on-the-job training and employment support are critical factors. Second, although daily life management and healthcare are fundamental skills for social participation, they are expected to be acquired during schooling. These two layers have been highlighted as important in special education during graduation (Matsui, 2006). Although post-graduation scores were significantly higher, the ranking of mean scores showed no difference in the items perceived as important by teachers during schooling and after graduation.

This study surveyed the perceptions of special education school teachers toward vocational readiness, which is a known and accepted theory among Japanese vocational rehabilitation practitioners. Congruence in the perception of the importance of occupational

readiness items is considered an advantage in teaching about occupations in schools, as it clarifies the issues that need to be addressed in education. However, this congruence can also be viewed as a challenge in the collaboration between teachers and vocational rehabilitation practitioners. In particular, the importance of teaching after graduation was perceived as significantly higher among the three occupational readiness layers. The concern from these perceptual realities is the potential for a lack of successful role-sharing in collaboration between teachers and vocational rehabilitation practitioners. Vocational rehabilitation practitioners often want students to acquire skills during their school years so that they do not encounter problems after employment in special needs education (Maebara, 2022). Further improvement of the transition process from special needs education to employment will require not only congruence of perceptions but also sharing of roles. Instead of providing the same education at different stages, it is desirable to provide a variety of support in a planned approach that will connect to support in vocational rehabilitation after graduation.

We view the results of this study not only to identify skills that are important as guidance for the transition from special needs education to employment but also as data that can serve as a basis for considering how to support the transition shared by special needs education and vocational rehabilitation. Recognizing the results of this study will be useful for achieving better transition support. While further evidence is needed, it is possible that, traditionally—especially in Japan—there has been a disconnect between special support education and vocational rehabilitation. However, we hope that the results of this study will help teachers in special support education improve their own education and consider how they can share their roles in collaborating with vocational rehabilitation practitioners. Perhaps a policy approach to the development of transition support, which is still unfamiliar in Japan, may also be necessary. Looking ahead, we hope that improvements in special education content will enhance support for this transition. This study did not adopt a formal theoretical framework, as it sought to reflect actual perceptions in practice. However, the findings may help bridge the gap between theory and practice in transition support by offering a descriptive basis for future research and collaboration among stakeholders.

## 5 Limitations of the study

This study had several limitations. The study was limited to special education schools in rural areas of Japan. Therefore, it is

TABLE 4 The difference in importance among five layers of occupational readiness.

Skills constituting occupational readiness	During schooling			After graduation			<i>p</i> -value
	Mean	SD	$\alpha$	Mean	SD	$\alpha$	
Vocational aptitude	4.2	0.52	0.80	4.4	0.57	0.89	**
Basic work habits	4.8	0.35	0.86	4.8	0.48	0.93	n.s.
Interpersonal skills	4.3	0.52	0.81	4.4	0.61	0.88	n.s.
Daily life management	4.2	0.51	0.76	4.3	0.58	0.85	**
Health management	4.2	0.52	0.78	4.4	0.55	0.86	**

SD, standard deviation;  $\alpha$ ,  $\alpha$ -coefficient; n.s., non significance. \*\*  $p < 0.01$ .

necessary to conduct research on special education schools in Japan. This study investigated occupational readiness, which is a common concept in vocational rehabilitation in Japan. The tendencies of Japan's vocational rehabilitation institutions, which are collaborative partners in transitional support, were identified. However, this does not mean that the recognition of these institutions is understood. In future research, it will be necessary to compare the differences in recognition among vocational rehabilitation institutions in Japan. It is possible that identifying differences in recognition among teachers of different grades they educate could further clarify teachers' recognition. In addition, it may be possible to study recognitions of students with intellectual disabilities as well as students with other disabilities and compare them with the results of this study to reveal the nature of the teachers' recognitions. Finally, this study focuses on special education teachers who support students with disabilities. However, transition support requires comprehensive collaboration not only with the teacher but also with the vocational rehabilitation practitioner, employer, and even the students themselves and their family members. In particular, the perspectives of students with disabilities and their families are always neglected, so it is necessary to integrate the results.

## 6 Conclusion

This study identified the occupational readiness skills that teachers identified as needing to be taught during the school year and after graduation, respectively. The results identified skills that teachers emphasized acquiring through their educational programs. In order to improve educational programs for further social participation, teachers need to understand that there are differences from the perceptions of vocational rehabilitation providers and aim to be able to share an intentional role in the program. In Japan, providing reasonable accommodations has become mandatory, and requesting reasonable accommodations in the workplace is the starting point of support. Rather than approaching the idea of mastering everything and improving problems, teachers may need to approach support from an assessment perspective, focusing on where to improve and request accommodations. With this understanding, the transition support is expected to become smoother. While instruction in special education has been improving toward enhancing transition support, it is challenging to determine whether concrete guidance for transitioning into society is being fully implemented. This situation could lead to failure in collaboration with transition support. Looking ahead, we hope that improvements in special education content will enhance support for this transition.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

The studies involving humans were approved by the Research Ethics Committee for Research Involving Human Subjects at the

Akita University Tegata Campus (Approval No. 5–37, dated October 11, 2023). The studies were conducted in accordance with the local legislation and institutional requirements. In conducting this survey, we explained the protection of personal information on the front page of the questionnaire and obtained informed consent from the participants.

## Author contributions

KM: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. AY: Data curation, Formal analysis, Investigation, Writing – original draft.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

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## Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2025.1580736/full#supplementary-material>

## References

- Fujii, A. (2011). The survey of the knowledge and skills required for transition specialists in high school divisions of special schools for students with intellectual disabilities: based on the opinions of staffs of employment and life support centers for individual with disabilities. *Bull. Grad. Sch. Educ. Hiroshima Univ.* 60, 127–133. doi: 10.15027/32108
- Fujii, A. (2018). Interprofessional collaboration between special education and vocational rehabilitation. *Jpn. J. Rehabil.* 173, 16–21.
- Fujii, A., Kawai, N., and Ochiai, T. (2012). The competencies required for transition specialists in high school divisions of special needs schools for students with intellectual disabilities: from the perspectives of vocational rehabilitation. *Jpn. J. Vocat. Rehabil.* 25, 2–13.
- Fujii, A., Kawai, N., and Ochiai, T. (2017). The relevance between satisfaction and frequency with transition teachers' competencies in special needs schools' school-to-work transitions. *Bull. Center Spec. Needs Educ. Res. Pract. Grad. School Educ.* 15, 23–31. doi: 10.15027/42878
- Fujii, A., and Ochiai, T. (2011). The survey of the knowledge and skills required for transition teachers in high school divisions of special needs education with intellectual disabilities: based on the opinions of transition teachers in high school divisions of special needs education with intellectual disabilities. *Bull. Grad. Sch. Educ. Hiroshima Univ.* 60, 119–126. doi: 10.15027/32107
- Harley, D. A., Donnell, C., and Rainey, J. A. (2003). Interagency collaboration: reinforcing professional bridges to serve aging populations with multiple service needs. *J. Rehabil.* 69, 32–37.
- Japan Society of Vocational Rehabilitation (2002). Glossary of vocational rehabilitation. 2nd Edn: Japan Society of Vocational Rehabilitation. (Saitama: Yadokari-shyuppan).
- Kuroiwa, S., Tsuji, K., Sasaki, T., Fukuda, C., Sakuma, T., Sakurai, K., et al. (2024). Model lessons and teaching materials developed for agricultural group of high school work study of special needs education for intellectual disabilities. *Bull. Fac. Educ. Chiba Univ.* 72, 127–138. doi: 10.20776/S13482084-72-P127
- Liao, C.-W., Juan, S.-N., Ho, W.-S., Sun, S.-J., and Hsieh, Y.-J. (2024). Key facets of effective career development for students with intellectual disabilities: insights from a Taiwanese high school case study. *Int. J. Dev. Disabil.* 70, 1318–1331. doi: 10.1080/20473869.2024.2363013
- Lu, W., Oursler, J., Gao, N., Herrick, S. J., Mariani, J., Diviney, J., et al. (2023). Focus groups on employment related soft skills for transition age youth with disabilities. *J. Vocat. Rehabil.* 59, 123–137. doi: 10.3233/JVR-230033
- Lu, W., Oursler, J., Gao, N., Herrick, S. J., Mariani, J., Socha, C., et al. (2022). Service needs assessment of employment-related soft skills for transition age youth with disabilities. *J. Vocat. Rehabil.* 56, 69–79. doi: 10.3233/JVR-211173
- Maebara, K. (2021). Handbook of vocational assessment in employment-related disability welfare services. Research output of the 2020 fiscal year grant-in-aid for scientific research (20GC1009) from the Ministry of Health, Labor and Welfare. Available online at: <https://www.mhlw.go.jp/content/12200000/000822240.pdf> (Accessed December 25, 2024).
- Maebara, K. (2022). Case study on the employment of a person with intellectual disability in childcare work in Japan. *J. Intellect. Disabil. Diagn. Treat.* 10, 122–129. doi: 10.6000/2292-2598.2022.10.03.1
- Maebara, K. (2023). Case studies for multi-agency collaboration through assessment. Research output of the 2023 fiscal year grant-in-aid for scientific research (21GC1009) from the Ministry of Health, Labor and Welfare. (Accessed December 25, 2024).
- Maebara, K. (2024). Considering support for transition to society from the classroom scene of special needs education! *Jissen Minna Tokubetsu Shien Kyouiku* 613, 10–13.
- Maebara, K., Uehara, M., Nawaoka, K., Furuno, M., and Yamaguchi, A. (2019). Vocational rehabilitation connecting through support – Focusing on the transition from education to vocation (transition) [in Japanese], in Proceedings of the 47th Osaka Conference of the Japan Society of Vocational Rehabilitation. Osaka. 165–167.
- Matsui, N. (2006). “Vocational rehabilitation studies” in Challenges in career education. eds. N. Matsui and E. Kikuchi. 2nd ed (Tokyo: Kyodo-Isho-Publishing), 40–43.
- Matsui, N. (2020). “Occupational readiness [in Japanese], in glossary of terms in Vocational Rehabilitation” in Japan Society of Vocational Rehabilitation, 18–19 (Saitama: Yadokari-Publishing).
- Ministry of Education, Culture, Sports, Science, and Technology. (2013). Educational support resources. Available online at: [https://www.mext.go.jp/a\\_menu/shotou/tokubetu/material/1340250.htm](https://www.mext.go.jp/a_menu/shotou/tokubetu/material/1340250.htm) (Accessed May 2, 2025).
- Ministry of Education, Culture, Sports, Science, and Technology. (2020). Special education materials (Fiscal year 2019). Available online at: [https://www.mext.go.jp/a\\_menu/shotou/tokubetu/material/1406456\\_00008.htm](https://www.mext.go.jp/a_menu/shotou/tokubetu/material/1406456_00008.htm) (Accessed April 17, 2025).
- Ministry of Education, Culture, Sports, Science, and Technology. (2024). Special education materials (fiscal year 2023). Available online at: [https://www.mext.go.jp/a\\_menu/shotou/tokubetu/material/1406456\\_00012.htm](https://www.mext.go.jp/a_menu/shotou/tokubetu/material/1406456_00012.htm) (Accessed April 17, 2025).
- Ministry of Health, Labor and Welfare. (2023a). Regarding the strengthening of measures to increase the statutory employment rate of persons with disabilities [in Japanese] (Ministry of Health, Labor and Welfare). Available online at: <https://www.mhlw.go.jp/content/001064502.pdf> (Accessed January 12, 2024).
- Ministry of Health, Labor and Welfare. (2023b). Summary of the employment situation of persons with disabilities [in Japanese] (Ministry of Health, Labor and Welfare). Available online at: [https://www.mhlw.go.jp/stf/newpage\\_36946.html](https://www.mhlw.go.jp/stf/newpage_36946.html) (Accessed January 12, 2024).
- Nonaka, T., Takamuro, N., and Uehara, H. (2007). Techniques of care conferences. Tokyo: Chuo-Hoki-Publishing.
- Phillips, B. N., Kaseroff, A. A., Fleming, A. R., and Huck, G. E. (2014). Work-related social skills: definitions and interventions in public vocational rehabilitation. *Rehabil. Psychol.* 59, 386–398. doi: 10.1037/rep0000011
- Poppen, M., Sheftel, A., Lindstrom, L. E., Rowe, D. A., Unruh, D., and Mazzotti, V. L. (2024). Transition self-assessment tool: the development and field testing of a statewide assessment of pre-employment transition services. *J. Vocat. Rehabil.* 60, 175–184. doi: 10.3233/JVR-240004
- Suzuki, D., and Maebara, K. (2021). Current status and issues of transition support efforts for social participation of persons with disabilities: from the efforts of the Edogawa Ward work support Center for Persons with disabilities. *Bull. Cent. Educ. Res. Pract. Fac. Educ. Hum. Stud. Akita Univ.* 43, 89–95. doi: 10.20569/00005672
- Trach, J. S., Oertle, K. M., and Plotner, A. J. (2014). “Transition from school through process to outcomes” in Career development, employment and disability in rehabilitation: from theory to practice. ed. D. R. Strauser (New York: Springer Publishing Company).
- Utsumi, J. (2004). “Transition to new career guidance and “transition support” [in Japanese]” in Individual transition support that supports autonomy. ed. K. Matsuya (Chiba: Taiyo-Shobo), 9–28.
- Wakamatsu, R., Hirokane, C., and Nakato, D. (2022). The teachers that continued to learn through community collaboration: from the case of learning through working at special needs education high school for students with intellectual disabilities. *Bull. Center Spec. Needs Educ. Res. Pract. Gradu. School Hum. Soc. Sci. Hirosh. Univ.* 20, 43–55. doi: 10.15027/52248
- Yaeda, J., Shibata, J., and Umenaga, Y. (2000). Transition from school to work: the key to collaboration in rehabilitation services. *Jpn. J. Vocat. Rehabil.* 13, 32–39. doi: 10.11327/jsvr1987.13.32
- Yoshida, M., Fujita, M., and Sekiguchi, T. (2008). Career guidance and support in special needs education (intellectual disabilities, autism) – a guide for homeroom teachers. Tokyo: Zearth-Education-Shin-Sha.