Work Opportunities and Workplace Characteristics for Employees with Intellectual Disability in the Norwegian Labour Market

Veerle Garrels, Hanne Marie Høybråten Sigstad, Christian Wenbelborg & Evan E. Dean

Published online: 24 Nov 2022.

Submit your article to this journal ⬀

View related articles ⬀

View Crossmark data ⬀

Routledge
Taylor & Francis Group

Work Opportunities and Workplace Characteristics for Employees with Intellectual Disability in the Norwegian Labour Market

Veerle Garrels [a], Hanne Marie Høybråten Sigstad [b], Christian Wenbelborg [c] and Evan E. Dean[d]

aDepartment of Vocational Teacher Education, Oslo Metropolitan University, Oslo, Norway; bDepartment of Special Needs Education, University of Oslo, Oslo, Norway; cDiversity and Inclusion, NTNU Social Research, Trondheim, Norway; dCenter on Developmental Disabilities, Kansas University, Lawrence, Kansas, USA

ABSTRACT

In most countries, people with intellectual disability are largely excluded from competitive employment. Research has identified school- and workplace-related barriers that may hinder their participation in the labour market. Yet, information about available work opportunities for employees with intellectual disability is lacking. This study aims to address this knowledge gap by mapping work tasks for which Norwegian employers report hiring employees with intellectual disability. Through an online survey, 478 employers in competitive employment companies provided information about whether they had prior experience with hiring employees with intellectual disability and, if so, which work tasks these employees performed. In the study sample, large, private companies within hotel, restaurant and catering were more likely to hire employees with intellectual disability than companies that were small and public and in other sectors. However, findings also indicate that a wide variety of work tasks with different degrees of complexity is available within all of the sectors. These findings may inform adolescents with intellectual disability and transition teams about work opportunities that may be available in their community. This information may further help schools to partner with local businesses for the planning of employment training in upper secondary school.

Introduction

In 2013, Norway ratified the United Nation's Convention on the Rights of Persons with Disabilities, thus affirming the right of people with disabilities to:

> "work on an equal basis with others; this includes the right to the opportunity to gain a living by work freely chosen or accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities" (United Nations General Assembly, 2007).

Yet, for people with intellectual disability (ID), this legal right to employment remains elusive. According to a recent report, only 2.4% of the Norwegian working age population with ID are in competitive employment (Wendelborg et al., 2017). These low rates of

---

CONTACT Veerle Garrels ✉ veerle.garrels@oslomet.no

labour market participation for people with ID are also found internationally (e.g. Bush & Tassé, 2017; McConkey et al., 2017). With limited participation in the labour market, people with ID miss out on important benefits that employment may offer, such as improved quality of life and better mental health (Dean et al., 2018), better physical health (Robertson, Beyer, Emerson, Baines & Hatton, 2019), a more structured daily routine (Lysaght et al., 2009), a sense of relatedness to others (Garrels & Sigstad, 2019), and the experience of being a valued member of society (Voermans et al., 2020). This article seeks to describe characteristics of workplaces that are likely to hire employees with ID, and to identify existing work opportunities for people with ID in a large sample of Norwegian companies. This information may help transition teams to pursue career paths that combine personal interests of the person with ID with evidence-based knowledge about the work opportunities that are available in the competitive labour market

Brief Review of the Literature

Over the past decades, a vast amount of research has shed light on the employment situation of people with ID, and a number of barriers and supports for their labour market participation have been identified. Common barriers include both school-related and workplace-related factors (Garrels & Sigstad, 2021). Amongst school-related barriers, Tøssebro and Olsen (2020) identified educators' low expectations for students with ID as a major obstacle for employment. Many teachers seem to believe that few employment options are available for this group, and that a life on social services is the most likely outcome. Hence, supporting transition to a career pathway is not prioritised, making students with ID less equipped to meet the demands of the competitive labour market (Tøssebro & Olsen, 2020). Therefore, informing educators about possible work opportunities is a necessity to enhance post-school outcomes. This is also highlighted as an area in need of more research by Strnadová et al. (2016), who found that teachers and parents call for more information about post-school settings for students with ID. As Strnadová et al. (2016) underscore, there is a need for evidence-based transition planning processes and easy access to information for all those involved in these processes.

Research has further indicated that career awareness training and work experiences during secondary school are positively associated with participation in competitive employment for students with ID (Wehman et al., 2015). A Swedish study by Tholén et al. (2017) suggests that the provision of internships may function as an important steppingstone to employment. However, school employees and employers typically do not interact often, and many educators may not be familiar with local employers (Whittenburg et al., 2019). Moreover, while employment experiences during secondary school significantly predict post-school employment (Wehman et al., 2015), research suggests that little of what occurs in work experience is processed back in the classroom, so that possibilities for enhancing learning outcomes are overlooked (Winn & Hay, 2009). Thus, there seems to exist a need for closer interaction between upper secondary education and competitive workplaces, so that students with ID can gain school-integrated work experiences and become better prepared for competitive employment. Also, the demands of the labour market are changing rapidly, which makes it harder for educators to know which working life skills employers will consider as valuable assets for their employees. This underscores again the need for a closer collaboration between schools

and local employers. A better coordination and exchange of information between upper secondary school and workplaces may help educators prepare their students with ID for working life, which may affect school-work transition positively.

Along with these school-related barriers, certain workplace-related factors have been identified as barriers to the recruitment of employees with ID (Garrels & Sigstad, 2021). Research indicates that employers may be concerned about the productiveness of employees with ID (Zappella, 2015). Kocman et al. (2018) found that employers believe that employees with ID lack the skills to perform well in the workplace, and Riesen and Oertle (2019) highlighted employers' safety concerns when hiring employees with ID. Furthermore, Nota et al. (2014) found that employers generally hold a narrow view of which work tasks they consider appropriate for employees with ID, and this may reduce their job opportunities. This research highlights employers' need for more information about work tasks that are manageable for employees with ID, so that the right person can be matched to the right job.

Despite the amount of research available on employment for people with ID, we could not find any research studies that have systematically explored the work opportunities that are available to employees with ID in competitive employment. Certain studies report on workplace interventions for people with ID, therein describing the work tasks that these employees perform. For instance, Becerra et al. (2018) presented a study in which employees with ID function as administrative assistants, doing different work tasks such as photocopying, obtaining filed documents, and transferring documents. Another study by Mihailidis et al. (2016) described employees with ID conducting simple factory assembly tasks. Yet, a systematic overview of work tasks that are available to people with ID in competitive employment seems not to have been realised. While it is paramount to take into account the interests and ambitions of students with ID when preparing them for working life, job preparation should also reflect the possibilities and opportunities that are available in the local job market. Therefore, providing an overview of existing work tasks may be an important contribution to improving transition processes. Findings from this study may help transition teams gain insights into which types of work tasks are currently available for employees with ID, so that relevant learning goals may be targeted and proper matches between employers and employees may be achieved.

School and Employment Trajectories for People with ID in Norway

In Norway, upper secondary school is a statutory right for all students (Ministry of Education and research, 1998). At the age of 16 approximately, students choose between two tracks of study in upper secondary education: a study preparation trajectory, which usually lasts for three years and which prepares students for an advanced academic career (i.e. higher education), or a vocational education and training trajectory, which has a duration of three to five years and which prepares students for working life. The vocational education and training trajectory leads to a certificate of apprenticeship, which provides access to a particular trade, such as car mechanics, hair dressing, or fashion designing. Most vocational education programs start with two years of education in upper secondary school, usually followed by two years of training as an apprentice in a company within the respective trade. For students who do not have the prerequisites to achieve a certificate of apprenticeship, a so-called learner candidate arrangement in

upper secondary school provides the opportunity to achieve partial competence within the profession, resulting in a certificate of competence.

Approximately 30% of Norwegian students with ID are enrolled in a study preparation trajectory, supposedly preparing them for higher education in college or university (Wendelborg et al., 2017). In this trajectory, there is generally limited focus on employment-specific learning goals that could make the transition to working life smoother for students with ID. At the same time, the opportunities for students with ID to pursue a university education are limited in Norway, as they generally are unable to meet the formal demands of enrolment. Thus, the study preparation trajectory creates in many ways a dead-end for students with ID, as they rarely qualify for higher education, and they do not learn any particular vocational skills that may help them gain access to the labour market. A Swedish study by Arvidsson et al. (2016) found that vocational education and training may result in better chances in the labour market for students with ID, as this trajectory leads to employment more often than a study preparation trajectory. Yet, three out of ten Norwegian students with ID enrol in a study preparation trajectory (Wendelborg et al., 2017), thereby limiting their likelihood of gaining access to competitive employment. While the reasons for choosing a study preparation trajectory may be multifaceted, the choice of educational program and learning goals for students with ID may also be defined by educators' beliefs about the job opportunities that will be available for the students after upper secondary school (Wendelborg et al., 2017). Once again, this highlights the need for information about the possibilities that exist in the labour market for people with ID.

In Norway, people with ID who want to work after completing upper secondary school and who are in need of support, can receive assistance from the Norwegian Labour and Welfare Administration (NAV) to obtain employment (Norwegian White Paper Number 7, 2016). Many people with ID may require ongoing assistance, and NAV can offer various types of support, such as permanent adapted work in sheltered employment (VTA-S), permanent adapted work in ordinary employment (VTA-O), and permanent wage subsidy (TULT). Permanent Adapted Work (both VTA-O and VTA-S) is available to people who receive a disability pension (for instance, people with ID) and who are able to perform work tasks if these tasks are adapted to their support needs. As a rule, people with ID in Norway receive a disability pension from NAV based on their diagnosis, without undergoing an assessment of their functional level and work capacity. Thus, NAV is typically not heavily involved in the transition process from school to competitive employment for people with ID.

Aim of the Article

In this article, we wish to explore the characteristics of workplaces that hire people with ID and to investigate what work opportunities are available to these employees in a large sample of Norwegian public and private companies. Findings from this study may prove valuable to educators who are preparing students with ID for an effective school-work transition, as it informs about the demands and the possibilities that exist within the different work sectors, so that learning goals may be aligned with realistic prospects of employment. Furthermore, the information may prove valuable to employers who are considering hiring employees with ID, but who are uncertain of their potential working

capacities and the work tasks that match their abilities. Also, this article may inform employment services who try to help people with ID to access the labour market, as findings from the study can help to identify relevant employment skills and provide knowledge about work sectors and companies that may be likely to employ people with ID. In addition, the information made available in this article may be of use not only in a Norwegian context, but also in other countries who organise their labour market and support systems for people with disabilities in a similar way.

Method

This study is part of a larger project 'Effective school-work transition processes for students with mild intellectual disability', which aims to identify factors that may contribute to the employment of young adults with ID. In the part of the study presented here, an online questionnaire was developed to map Norwegian employers' experiences with and expectations for hiring employees with ID. The questionnaire included a set of background questions about the company, and separate sections about expectations and experiences depending on whether the company had prior experiences with hiring employees with ID or not. Furthermore, the questionnaire also included an open-ended question about the type of work tasks for which employers at the work place hired employees with ID ('Mention up to five types of work tasks that the employee with ID has/had in your company'). This latter item forms the main source of information for this article.

In the survey, we described ID as following:

> "a cognitive impairment, which shows itself through general learning disabilities and difficulties with logical and abstract thinking. People with this condition usually experience challenges with independent functioning, and they often need help to manage their everyday living. ID comes in different degrees, from mild to profound. This means that some people with ID only require a minimal amount of support in certain areas, whereas others may need substantial support in all areas of functioning. There are several conditions that result in ID, such as Down syndrome and some forms of autism. In this survey, we focus on people with mild ID who require some support, and not those with more severe impairments".

For respondents who answered that they had prior experience with hiring employees with ID, we did not verify this information.

Description of the Study Sample

The questionnaire was sent to a targeted population of 2,530 companies who were known to have or considered likely to have prior experience with hiring employees with ID, and 478 of the invited companies responded. This total sample can be divided into three subsamples, namely:

(1) A service sector sample consisting of child care centres (public and private), nursing homes for the elderly (public), and cafeteria businesses (public and private) in a randomly drawn sample of 15% of the municipalities in Norway (N = 302);

(2) A sample from 'Helt Med' ('Fully Included'), a competitive employment support organisation established by the Norwegian foundation SOR, with the purpose of supporting people with ID in competitive employment by matching willing companies with employees with ID. This subsample (N = 22) consisted of employers with confirmed experience of hiring employees with ID;

(3) A sample from 'Ringer i Vannet' (RIV) ('Ripples on water'), an inclusive employment organisation established by the Confederation of Norwegian Enterprise (NHO) to prevent dropout from upper secondary school and to increase the employment of people with impaired functioning (N = 154).

Data Analysis

For a descriptive analysis of the item responses relevant to our research questions, the STATA software package version 14.2 Special Edition was used (StataCorp, 2015). A simple descriptive univariate and bivariate analysis was conducted to investigate different characteristics of the workplaces, such as whether they were private or public companies, which type of sector the companies belonged to, company size, and whether the companies had prior experience with hiring employees with ID.

For the analysis of the open-ended question, we conducted a thematic content analysis (Schreier, 2012) of the 376 responses that were provided by the 127 companies who had experience with hiring employees with ID. The first and second authors conducted a preliminary analysis of all the 376 responses, using an inductive process to identify overarching categories of work tasks. By using preliminary overarching codes based on current employment sector, the characteristics of the work tasks were classified within subcategories. The subcategories were further assembled into overarching categories of work tasks (see, Table 1). This analysis resulted in 14 overarching categories of work tasks. To analyse interrater reliability of the categories, the first two authors coded 30% of the responses based on the overarching categories and calculated the percentage of agreement (= .83). Finally, the remainder of the responses were coded into the different categories.

Then, duplicate work tasks were removed, and unspecific or unintelligible responses (such as 'odd jobs' or 'information') were eliminated, resulting in a total of 118 different work tasks. Then, these remaining work tasks were further categorised into different subcategories, based on the level of difficulty of the work tasks within each category: easy, moderate, or advanced. This classification was based on the complexity of each of the reported work tasks, seen in respect of the cognitive and adaptive impairment that characterises ID. Cognitive and adaptive impairment may result in difficulties with abstract thinking, information processing, language

Table 1. Examples of Thematic Content Analysis of Reported Work Tasks.

Open-ended response	Preliminary overarching code based on sector	Subcategory	Overarching category of work tasks
Making coffee; doing the dishes	Accommodation and catering	Food preparation and light kitchen work	Kitchen and waiter work
Course and conference assistant; checking out guests	Accommodation and cateringHT	Hotel host/reception/bar/ cash register work	Hotel work

Table 2. Examples of Work Tasks Available to Employees with ID.

Category of work tasks	Degree of difficulty		
	Easy	Moderate	Advanced
Sales and service work	Handing out newspapers	Customer service	Operating a cash register
Storage work	Emptying freight containers	Sorting and arranging supplies	Operating a fork lift
Mechanics	Car wash	Easier mechanic tasks	Changing tires
Cleaning	Emptying trash bins	Sorting waste for recycling	Operating floor washing machine
Kitchen and waiter work	Making coffee	Preparing sandwiches	Baking cakes and waffles
Work with children	Helping children to get dressed	Reading time for children	Organising arts and crafts activities

Note: Organised according to level of difficulty within the overarching categories of work tasks.

skills, reading and writing, logical thinking and reasoning, social judgement, inter-personal communication skills, self-management, and organisation of time (Danielsson et al., 2012; Greenspan & Woods, 2014; Luckasson & Schalock, 2013). Hence, the level of difficulty of each of the work tasks was considered based on whether it required low, moderate or high cognitive capacity, the amount of responsibility and interaction with others, and a risk analysis of the task (i.e. what is the likelihood of doing the task wrong or not finishing it on time, and what are the possible consequences of this). For instance, in the category *Sales and service work*, 'handing out newspapers' was considered an easy task, demanding little cognitive capacity, entailing little responsibility and uncomplex social interaction, and with only minor consequences in case of wrong handling of the task. 'Receiving clients' was deemed a task of moderate difficulty, with higher demands on cognitive performance and social interaction and with some responsibility, but with limited risk in case of unsuccessful task performance. 'Operating a cash register' was considered an advanced work task, with high demands on cognitive functioning, more responsibility, and with a risk of economic consequences for the company in case of error. The authors did not take into consideration the support that may have been available at the workplace to help the employee with ID conducting the work task. The first and second author independently categorised each of the work tasks according to perceived complexity, before interrater reliability was calculated (Percentage of agreement = .81). Then, the first and second author worked together to reach agreement on the work tasks that had received different ratings. Table 2 provides examples of responses organised by category of work tasks and complexity. An overview of the 118 work tasks and their complexity rating is provided in Appendix 1 .

Research Ethics

This study was approved by the Norwegian Centre for Research Data (approval number 380,880). The online questionnaire was developed using a secure and anonymous solution for internet surveys. The collected data could not be traced back to individual respondents.

Results

Descriptive Statistics

Descriptive analysis of the total sample showed that approximately two thirds of the companies that responded to our survey belonged to the private sector, whereas one third was in the public sector. Of the companies in the public sector, 17.8% had experience with hiring employees with ID, while 30.9% of the companies in the private sector had such prior experience. In total, 26% of the companies in our sample reported to have prior experience with hiring employees with ID (Table 3).

Further analysis revealed that the majority of the companies in our sample are within education and child care (46.9%), followed by other services (15.1%), industry and construction (14.0%), and health and social services (12.3%). Companies within the hotel, restaurant and catering sector were those who had the highest occurrence of employees with ID (50.0%), followed by the retail and warehousing sector (44.4.%), health and social services sector (35.1%), and the industry and construction sector (33.8%). See, Table 4.

In our analysis, we also looked into how company size corresponds with the companies' likelihood of hiring employees with ID. Most of the companies in our sample (27.4%) had 30 or more employees, and these larger companies reported more often that they had experience with hiring employees with ID. 45.0% of these larger companies had such prior experience, while smaller companies with fewer employees less frequently reported having this experience (see, Table 5).

Table 3. Public and Private Companies' Experience with Hiring Employees with ID.

	Frequency	%	Number of companies with employees with ID	% of companies with prior experience of hiring employees with ID
Public	157	32.9	28	17.8
Private	320	67.1	99	30.9
Total	477	100.0	127	26.0

Note: 1 respondent did not answer this question.

Table 4. Work Sector and Occurrence of Employees with ID.

	Freq.	%	Number of companies with employees with ID	% of companies that have prior experience with hiring employees with ID
Industry/ construction	65	14.0	22	33.8
Retail and warehousing	27	5.8	12	44.4
Hotel, restaurant and catering	28	6.0	14	50.0
Education/child care	218	46.9	35	16.1
Health and social services	57	12.3	20	35.1
Other services	70	15.1	20	28.6
Total	465	100.0	123	26.5

Note: 13 respondents did not answer this question.

Table 5. Company Size and Likelihood of Hiring Employees with ID.

Company size (number of employees)	Freq.	%	Number of companies with employees with ID	% of companies with employees with ID within size group
10 or fewer	84	17.6	15	17.9
11 to 15	89	18.6	16	18.0
16 to 20	92	19.2	13	14.1
21 to 30	82	17.2	24	29.3
30 or more	131	27.4	59	45.0
	478	100	127	26.6

Table 6. Overarching Categories of Work Tasks Available to Employees with ID.

Category of work tasks	Frequency	Percent
Janitor work	14	3.7
Office work	23	6.1
Production of goods	7	1.9
Sales and service work	14	3.7
Storage work	32	8.5
Mechanics	13	3.5
Cleaning	41	10.9
Gardening	5	1.3
Kitchen and waiter work	74	19.7
Hotel work	8	2.1
Transport services	11	2.9
Work with children	74	19.7
Social work	11	2.9
Other tasks	49	13.0
	N = 376	99.9

Qualitative Content Analysis

Qualitative content analysis of the survey's open-ended questions about the work tasks available to employees with ID led to 14 different overarching categories: janitor work, office work, production of goods, sales and service work, storage work, mechanics, cleaning, gardening, kitchen and waiter work, hotel work, transport services, work with children, social work, and other tasks (i.e. less specific work tasks or low-incidence tasks that could not be sorted into any of the other categories, such as workplace-specific tasks that require on-the-job training, e.g. animal care).

Of the 376 different work tasks that were described by the respondents, most of these work tasks were situated in the following categories: work with children (19.7% of the work tasks), kitchen and waiter work (19.7%), other types of work task (13.0%), cleaning (10.9%), and storage work (8.5%). See, Table 6.

Apart from the category 'Other tasks', work tasks in the other 13 overarching categories were differentiated into three subcategories, based on the degree of difficulty of the tasks (see Appendix 1). Analysis of this level of difficulty shows that there exists a large variety of work tasks that are available to employers with ID, not only within each of the categories, but also within the different levels of difficulty.

Discussion

The proposition that many routinised jobs have been eliminated due to advances in labour-saving technology, has become common currency. Undoubtedly, a number of work tasks are now being executed by machines rather than humans, and this change in the occupational landscape may require disability supports and services to consider new methods and frames of references for supporting people with ID to obtain and maintain employment (Djebrouni & Wolbring, 2020; Wehmeyer et al., 2019). Findings from this study indicate that people with ID in Norway are working a variety of types of business-critical positions, and many companies in Norway are hiring employees with ID.

Given the changes in the employment landscape and also the variety of jobs worked by people with ID, an individualised approach to supporting employment in Norway, based on the strengths and interests of each person with ID may be needed. Similar calls for new approaches have been called for by experts in transition education in other countries. For example, Wehmeyer et al. (2019) advocated for a new approach based on current theory in career guidance and vocational counselling fields focused on career construction and life design (Nota & Rossier, 2015; Savickas et al., 2009). The new approach for transition, career design, prioritises capitalising on people's strengths, interests, and previous life experience, emphasises the development of problem-solving skills that can be used in any job, and supports self-reflection on experiences to support job satisfaction and a long-term understanding of a career (Dean et al., 2020; Savickas et al., 2009). Our findings demonstrate that people with ID work many different types of jobs involving a wide range of complexity. This finding suggests the need to explore new approaches of support focused on career design. In our sample, approximately one quarter of all the companies had prior experience with hiring employees with ID, and especially larger companies were more likely to do so. This may be due to a more pronounced sense of social corporate responsibility in larger companies, or that they recognise the important work contributions of employees with ID. Especially companies within the hotel, restaurant and catering sector and within retail and warehousing were positive towards hiring people with ID. Importantly, within all of the sectors, companies reported a variety of work tasks that could be arranged according to complexity. This implies that there might be more opportunities for employment for people with ID than educators, employers and employment services may be aware of. Crucially, with the wide variety of work tasks that are available to people with ID, there is a real possibility of finding work tasks that match the capacity and interests of the individual.

Findings from this study suggest that it is important for the network around the person with ID to gain an overview of the different job possibilities that exist within the community where this person dwells. This knowledge may increase the chances of finding a proper match between individual interests and capacity on the one hand, and work opportunities within the local environment on the other. Furthermore, knowledge about job opportunities may also be useful for educators in upper secondary school, so that at least some of the learning goals for students with ID may be based on the career interests and possibilities for future employment for the student with ID. Hence, it is important for transition teams to closely collaborate with local companies, so that students with ID may be prepared for working life in the best possible way. As was also identified by Tholén

et al. (2017), the provision of internships at these workplaces may be an effective support for students with ID in their school-work transition.

Findings from this study may also be used to help employers identify relevant work tasks when they are considering hiring employees with ID. For employers who have no prior experience with this process, it may be challenging to identify the possibilities that exist to make the workplace inclusive for people who all too often find themselves on the periphery of the labour market. Moreover, employers may have dismissive attitudes towards people with ID, and they may therefore underestimate the value that these employees may add to the workplace (Meltzer et al., 2020). Thus, helping employers to find specific work tasks that are available in the workplace may lead to increased access to the labour market for people with ID. In a systematic review, Ellenkamp et al. (2016) suggest that employers who have positive experiences with hiring employees with ID may function as helpful stakeholders to create disability awareness and support work participation of people with ID. Findings from the current study may add to this role, as employers from inclusive workplaces also may function as examples to other employers, by sharing awareness and information about the different practical work tasks that exist in most workplaces.

In our sample, the education and child care sector was overrepresented compared to other sectors. This sector provides important opportunities for employment for people with ID, as is signalled by the large variety of work tasks that was reported by the respondents from companies within this sector. Yet, findings show that there are ample work tasks available within other sectors as well. This suggests that students' interests and personal preferences can play the lead in their choice of work place and career path. Previous research suggests that people with ID may be directed into gender-traditional occupations (cf., Arvidsson et al., 2016; Myklebust & Båtevik, 2014; Umb-Carlsson & Sonnander, 2006). However, with the relatively large variety of work tasks available within the different work sectors, this need not be the case.

Finally, findings from our study may raise a critical question about which choice of educational program is appropriate for students with ID in Norway. As mentioned, approximately 30% of Norwegian students with ID are enrolled in a general education program in upper secondary school, which prepares students for further studies in higher education, i.e. university or university college (Wendelborg et al., 2017). However, higher education is not a common career path for students with ID, since higher educational institutions in Norway generally do not accommodate students with significant cognitive impairments as people with ID have. Findings from this study also indicate that virtually all work tasks available to people with ID fall within the range of practical tasks. Hence, vocational education and training programs may be a more sensible path to pursue for students with ID in upper secondary education. Within these programs, students may acquire important working life skills and gain valuable on-the-job training through internships, and this may strengthen their position in the labour market as attractive employees to future employers.

Limitations of the Study

While this study has an acceptable sample size that allows for some generalisation of its findings, the response rate for the survey was relatively low, 19% only. This low response

rate leaves us considering what our findings would have looked like, if more of the invited respondents had answered our survey. However, Hellevik (2016) argues that even surveys with a response rate as low as 4% have scientific value. Additionally, we recruited employers based on our knowledge that they were positive to or had prior experience with hiring employees with ID. Hence, the employers and the companies in this study may not be representative of the typical Norwegian company. Moreover, while we made sure to provide a definition ID in the survey, we had no means of checking whether respondents had a similar understanding of the condition as it is described in diagnostic manuals. Thus, some of the respondents' answers may refer to employees who were not formally diagnosed with ID. Nonetheless, we believe that findings from our study yield important information about employment possibilities for people with ID, and they may contribute towards the goal of equal employment for all.

ORCID

Veerle Garrels 🔟 http://orcid.org/0000-0002-3237-5371
Hanne Marie Høybråten Sigstad 🔟 http://orcid.org/0000-0001-7300-123X
Christian Wenbelborg 🔟 http://orcid.org/0000-0003-3610-9254

References

Arvidsson, J., Widén, S., Staland-Nyman, C., & Tideman, M. (2016). Post-school destination – A study of women and men with intellectual disability and the gender-segregated Swedish labor market. *Journal of Policy and Practice in Intellectual Disabilities*, *13*(3), 217–226. https://doi.org/10.1111/jppi.12157

Becerra, M., Montanero, M., & Lucero, M. (2018). Graphic support resources for workers with intellectual disability engaged in office tasks: A comparison with verbal instructions from a work mate. *Disability and Rehabilitation*, *40*(4), 435–443. https://doi.org/10.1080/09638288.2016.1258739

Bush, K. L., & Tassé, M. J. (2017). Employment and choice-making for adults with intellectual disability, autism, and down syndrome. *Research in Developmental Disabilities*, *65*, 23–34. https://doi.org/10.1016/j.ridd.2017.04.004

Danielsson, H., Henry, L., Messer, D., & Rönnberg, J. (2012). Strengths and weaknesses in executive functioning in children with intellectual disability. *Journal of Research in Developmental Disabilities*, *33*(2), 600–607. https://doi.org/10.1016/j.ridd.2011.11.004

Dean, E. E., Shogren, K. A., Hagiwara, M., & Wehmeyer, M. L. (2018). How does employment influence health outcomes? A systematic review of the intellectual disability literature. *Journal of Vocational Rehabilitation*, *49*(1), 1–13. https://doi.org/10.3233/JVR-180950

Dean, E. E., Shogren, K. A., & Wehmeyer, M. L. (2020). Career Design. In K. A. Shogren & M. L. Wehmeyer (Eds.), *Handbook of Adolescent Transition Education for Youth with Disabilities* (2nd ed; pp. 61–70). Routledge.

Djebrouni, M., & Wolbring, G. (2020). Impact of robotics and human enhancement on occupation: What does it mean for rehabilitation? *Disability and Rehabilitation*, *42*(11), 1518–1528. https://doi.org/10.1080/09638288.2018.1527401

Ellenkamp, J. J. H., Brouwers, E. P. M., Embregts, P. J. C. M., Joosen, M. C. W., & van Weeghel, J. (2016). Work environment-related factors in obtaining and maintaining work in a competitive employment setting for employees with intellectual disabilities: A systematic review. *Journal of Occupational Rehabilitation*, *26*(1), 56–69. https://doi.org/10.1007/s10926-015-9586-1

Garrels, V., & Sigstad, H. M. H. (2019). Motivation for employment in Norwegian adults with mild intellectual disability: The role of competence, autonomy, and relatedness. *Scandinavian Journal of Disability Research*, *21*(1), 250–261. http://doi.org/10.16993/sjdr.639

Garrels, V., & Sigstad, H. M. H. (2021). Employment for persons with intellectual disability in the Nordic countries: A scoping review. *Journal of Applied Research in Intellectual Disabilities, Online First*, *34*(4), 993–1007. https://doi.org/10.1111/jar.12880

Greenspan, S. W., & Woods, W. W. (2014). Intellectual disability as a disorder of reasoning and judgement: The gradual move away from intelligence quotient-ceilings. *Current Opinion in Psychiatry*, *27*(2), 110–116.

Hellevik, O. (2016). Extreme nonresponse and response bias. *Quality & Quantity*, *50*(5), 1969–1991. https://doi.org/10.1007/s11135-015-0246-5

Kocman, A., Fischer, L., & Weber, G. (2018). The Employers' perspective on barriers and facilitators to employment of people with intellectual disability: A differential mixed-method approach. *Journal of Applied Research in Intellectual Disabilities*, *31*(1), 120–131. https://doi.org/10.1111/jar.12375

Luckasson, R., & Schalock, R. (2013). Defining and applying a functionality approach to intellectual disability. *Journal of Intellectual Disability Research*, *57*(7), 657–668. https://doi.org/10.1111/j.1365-2788.2012.01575.x

Lysaght, R., Ouellette-Kuntz, H., & Morrison, C. (2009). Meaning and value of productivity to adults with intellectual disabilities. *Intellectual and Developmental Disabilities*, *47*(6), 413–424. https://doi.org/10.1352/1934-9556-47.6.413

McConkey, R., Kelly, F., Craig, S., & Keogh, F. (2017). A longitudinal study of post-school provision for Irish school-leavers with intellectual disability. *British Journal of Learning Disabilities*, *45*(3), 166–171. https://doi.org/10.1111/bld.12190

Meltzer, A., Robinson, S., & Fisher, K. R. (2020). Barriers to finding and maintaining open employment for people with intellectual disability in Australia. *Social Policy & Administration*, *54*(1), 88–101. https://doi.org/10.1111/spol.12523

Mihailidis, A., Melonis, M., Keyfitz, R., Lanning, M., Van Vuuren, S., & Bodine, C. (2016). A nonlinear contextually aware prompting system (N-CAPS) to assist workers with intellectual and developmental disabilities to perform factory assembly tasks: System overview and pilot testing. *Disability and Rehabilitation. Assistive Technology*, *11*(7), 604–612. https://doi.org/10.3109/17483107.2015.1063713

Ministry of Education and research. (1998). Lov om grunnskolen og den videregåande opplæringa (opplæringslova). *[Act Relating to Primary and Secondary Education and Training (The Education Act)]*, LOV-1998-07-17–61.

Myklebust, J. O., & Båtevik, F. O. (2014). Economic Independence among former students with special educational needs: Changes and continuities from their late twenties to their midthirties. *European Journal of Special Needs Education*, *29*(3), 387–401. https://doi.org/10.1080/08856257.2014.922791

Norwegian White Paper Number 7. (2016). På lik linje – Åtte løft for å realisere grunnleggende rettigheter for personer med utviklingshemming [On equal terms. Eight measures to realize basic rights of people with intellectual disabilities]. *Ministry of Children and Equality*.

Nota, L., & Rossier, J. (2015). *Handbook of life design: From practice to theory and from theory to practice*. City?) Hogrefe Publishing.

Nota, L., Santili, S., Ginevra, M. C., & Soresi, S. (2014). Employer attitudes towards the work inclusion of people with disability. *Journal of Applied Research in Intellectual Disabilities*, *27*(6), 511–520. https://doi.org/10.1111/jar.12081

Riesen, T., & Oertle, K. M. (2019). Developing work-based learning experiences for students with intellectual and developmental disabilities: A preliminary study of employers' perspectives. *The Journal of Rehabilitation*, *85*(2), 27–36.

Robertson, J., Beyer, S., Emerson, E., Baines, S., & Hatton, C. (2019). The association between employment and the health of people with intellectual disabilities: A systematic review. *Journal of Applied Research in Intellectual Disabilities*, *32*(6), 1335–1348. https://doi.org/10.1111/jar.12632

Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J.-P., Duarte, M. E., Guichard, J., Van Vianen, A. E. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, *75*(3), 239–250. https://doi.org/10.1016/j.jvb.2009.04.004

Schreier, M. (2012). *Qualitative content analysis in practice*. Sage Publishing.

StataCorp. (2015). *Stata statistical software: Release 14*.

Strnadová, I., Cumming, T., & Danker, J. (2016). Transitions for students with intellectual disability and/or autism spectrum disorder: Carer and teacher perspectives. *Australasian Journal of Special Education*, *40*(2), 141–156. https://doi.org/10.1017/jse.2016.2

Tholén, S. L., Hultkrantz, L., & Persson, M. (2017). Economic evaluation of supported-employment inspired program for pupils with intellectual disabilities. *Nordic Journal of Working Life Studies*, *7*(1), 69–86. https://doi.org/10.18291/njwls.v7i1.81401

Tøssebro, J., & Olsen, T. (2020). Employment opportunities for people with intellectual disabilities. In R. Stancliffe, M. Wehmeyer, K. Shogren, & B. Abery. (Eds.), *Choice, preference, and disability. Promoting self-determination across the lifespan* (pp. 225–246). Springer Nature Switzerland AG. https://doi.org/10.1007/978-3-030-35683-5_12

Umb-Carlsson, Ö., & Sonnander, K. (2006). Living conditions of adults with intellectual disabilities from a gender perspective. *Journal of Intellectual Disability Research*, *50*(5), 326–334. https://doi.org/10.1111/j.1365-2788.2005.00779.x

United Nations General Assembly. (2007). *Convention on the rights of persons with disabilities*. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html

Voermans, M. A. C., Taminiau, E. F., Giesbers, S. A. H., & Embregts, P. J. C. M. (2020). The value of competitive employment: In-depth accounts of people with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities*, *34*(1), 239–249. https://doi.org/10.1111/jar.12802

Wehman, P., Sima, A. P., Ketchum, J., West, M. D., Chan, F., & Luecking, R. (2015). Predictors of Successful Transition from School to Employment for Youth with Disabilities. *Journal of Occupational Rehabilitation*, *25*, 323–334. https://doi.org/10.1007/s10926-014-9541-6

Wehmeyer, M. L., Nota, L., Soresi, S., Shogren, K. A., Morningstar, M., Ferrari, L., Di Maggio, I. (2019). A crisis in career development: Life designing and implications for transition. *Career Development and Transition for Exceptional Individuals*, *42*(3), 179–187. https://doi.org/10.1177/2165143417750092

Wendelborg, C., Kittelsaa, A. M., & Wik, S. E. (2017). *Overgang skole arbeidsliv for elever med utviklingshemming [Transition school employment for students with intellectual disability]*. NTNU Samfunnsforskning.

Whittenburg, H. N., Sims, K. A., Wehman, P., & Walther-Thomas, C. (2019). Strategies for developing work experiences for youth with intellectual and developmental disabilities. *Career Development and Transition for Exceptional Individuals*, *42*(4), 259–264. https://doi.org/10.1177/2165143418813900

Winn, S., & Hay, I. (2009). Transition from school for youths with a disability: Issues and challenges. *Disability & Society*, *24*(1), 103–115. https://doi.org/10.1080/09687590802535725

Zappella, E. (2015). Employers' attitudes on hiring workers with intellectual disabilities in small and medium enterprises: An Italian research. *Journal of Intellectual Disabilities*, *19*(4), 381–392. https://doi.org/10.1177/1744629515580883

Appendix 1: Overview of Reported Work Tasks and Level of Difficulty

Work tasks (frequency of responses)	Easy	Moderate	Advanced
		Level of difficulty	
Kitchen assistant (easy kitchen tasks) (21)	X		
Child care work – attending to children (19)		X	
Child care work – playing with children (16)	X		
Tidying (16)	X		
Food production (e.g. baking, arranging salad bar, making waffles) (15)			X
Packing and unpacking goods (15)	X		
Cleaning (e.g. responsible for cleaning, sorting waste for recycling) (13)		X	
Easy food preparation (e.g. making sandwiches, cutting fruit) (13)		X	
Waiting tables (11)		X	
Sorting (10)	X		
Stocking shelves (8)		X	
Easy cleaning work (e.g. emptying trash bins, sweeping floors, cleaning tables) (8)	X		
Organising practical pedagogical work for children (6)			X
Driving a forklift (6)			X
Reading aloud to children (6)		X	
Reception work (e.g. booking, answering phone calls, customer service) (5)			X
Internal transport/ delivering aids (5)		X	
Socialising with patients and 'spreading joy' (4)	X		
Accounting and registering costs (4)			X
Production assistant (4)	X		
Cashier (4)			X
Leading circle time with children in day care (4)			X
Operator in a production line (3)		X	
Easy gardening (e.g. lawn mowing, planting) (3)		X	
Breakfast host/ course assistant (3)		X	
General maintenance (3)		X	
Collaborating with parents (3)			X
Shaping metal (3)			X
Office work (3)		X	
Setting tables and cleaning up after meals (3)	X		
Driving a plough truck to clear snow (2)			X
Driver with a driver's licence (2)			X
Operating a floor washing machine (2)			X
Archiving (2)		X	
Opening day care and receive children in the morning (2)			X
Creative activities with children (2)			X
Taking care of animals (2)		X	
Canteen work (2)		X	
Grocery shopping (2)		X	
Making coffee (2)	X		
Operator in production with a trade certificate (1)			X
Preparing cars (1)		X	
Washing cars (1)	X		
Collecting luggage trolleys (1)	X		
Helping children during meals (1)		X	
Surveying during recess (1)		X	

(Continued).

Work tasks (frequency of responses)	Level of difficulty		
	Easy	Moderate	Advanced
Dismantling (1)		X	
Mechanic with trade certificate (1)			X
Changing tires (1)			X
Easy mechanics (1)		X	
Feeding machines (1)		X	
Milking cows (1)		X	
Janitor work (1)		X	
Placing isolation materials (1)		X	
Quality control (1)			X
Placing curbs (1)			X
Carpenting (1)			X
Placing mouse guards (1)		X	
Store work (1)		X	
Taking care of animals (1)		X	
Operating machines (1)		X	
Handling warranties (1)			X
Bricklaying (1)			X
Chopping wood with a wood chopper (1)		X	
Folding clothes (1)	X		
Easy outdoor winter maintenance (1)	X		
Customer service (1)		X	
Workplace health and safety control (1)			X
Drilling (1)			X
Gardening (preparing soil and sowing) (1)		X	
Connecting low current equipment (1)			X
Cleaning conference rooms (1)	X		
Putting in place cables for AV equipment (1)		X	
Placing equipment (1)		X	
Bar work (1)			X
Responsible for equipment (1)			X
Daily ICT routines and maintenance (1)		X	
Supervision of groups of children (1)		X	
Coordinating practical tasks (1)			X
Closing daycare at the end of the day (1)			X
Helping pupils with school work (1)			X
Setting boundaries for children (1)			X
Planning pedagogical work (1)			X
Technical support (1)			X
Evaluating business (1)			X
Organising music time for children (1)			X
Fire safety (1)			X
Playing guitar (1)		X	
Assistant occupational therapist (1)			X
Operating switch board (1)			X
Responsible for waste room (1)	X		
Filling up supplies in patient rooms (1)		X	
Service tasks (1)		X	

(*Continued*)

(Continued).

Work tasks (frequency of responses)	Level of difficulty		
	Easy	Moderate	Advanced
Assisting in patient care (1)		X	
Make door signs for offices (1)	X		
Delivering newspapers (1)	X		
Contact with patients (1)		X	
Playing games and doing activities with patients (1)		X	
Assisting at events (1)		X	
Assisting ICT workers in practical tasks (1)	X		
Cleaning outdoor areas (1)	X		
Receiving visitors and goods (1)		X	
Go for walks with patients (1)		X	
Keeping order in clothes (1)	X		
Transporting patients (1)		X	
Washing clothes (1)		X	
Assistant work in day care (1)			X
Making telephone calls (1)			
Responsible for small group activities (1)			X
Graphic design (1)			X
Welding (1)			X
Collecting data by phone (1)			X
Scanning (1)	X		
Sandpapering/polishing (1)			X
Responsible for specific areas in day care (1)			X
Case processing (1)			X
Easy customer care (1)		X	