Çukurova Üniversitesi Eğitim Fakültesi Dergisi
Vol: 49 Numb: 2 Page: 1236-1254
https://dergipark.org.tr/tr/pub/cuefd

Functional Skills among Students with Intellectual Disabilities as Perceived by Special Education Teachers in Jordan: A Preliminary Study

Ali ALODAT[a*] (ORCID ID - 0000-0003-1278-1257)
Mohammad MUHAIDAT[a]
Ahmad ALGOLAYLAT[a]
Ahmed ALZBOUN[b]
[a]Counseling and Educational Psychology Department, Faculty of Educ., Yarmouk Uni., Irbid, Jordan.
[b]Ministry of Education, Amman-Jordan

Article Info

DOI: 10.14812/cufej.584249

Research Article

Article history:
Received 27.06.19
Revised 17.06.20
Accepted 20.06.20

Keywords:
Functional Skills, Intellectual Disability, Special Education Teachers, Jordan.

Abstract

This study aimed to identify the importance of functional skills among students with intellectual disabilities as perceived by their special education teachers according to the teachers' experience, academic qualification, and gender. One hundred teachers (28 males and 72 females) working in special education centers in Jordan participated in the study. To achieve the objectives of this study, the researchers developed a Functional Skills Questionnaire (FSQ) that contains 95 items covered twelve categories of functional skills to explore the importance of these skills as perceived by teachers. The findings showed a high degree of functional skills' importance for the total score and across all of the scale dimension. The findings also presented that there were no significant differences attributed to years of experience and gender variables, while there was a significant difference attributed to the academic qualification variable in favor of the master's degree holders.

Ürdün'deki Özel Eğitim Öğretmenlerinin Algıladıkları Zihinsel Yetersizliği Olan Öğrencilerin İşlevsel Becerileri

Makale Bilgisi

DOI: 10.14812/cufej.584249

Araştırma Makalesi

Makale Geçmişi:
Geliş 27.06.19
Düzeltme 17.06.20
Kabul 20.06.20

Anahtar Kelimeler:
İşlevsel Beceriler, Zihinsel Engellilik, Özel Eğitim Öğretmenleri, Ürdün

Öz

Bu çalışma, zihinsel engelli öğrencilerin deneyim, akademik yeterlilik ve cinsiyet değişkenlerine göre öğretmenleri tarafından algılanan işlevsel becerilerinin önemini belirlemeyi amaçlamaktadır. Araştırmaya Ürdün'deki özel eğitim merkezlerinde çalışan yüz erkek ve kadın öğretmen katıldı. Araştırmacılar, bu çalışmanın amaçlarına ulaşmak için öğretmenler tarafından algılanan işlevsel becerilerin önemini keşfetmek için bir ölçek geliştirdiler. Bulgular, toplam puan ve tüm ölçek boyutu için yüksek derecede işlevsel becerilerin önemini (M = 3.484) göstermiştir. Bulgular ayrıca, yüksek lisans derecesi sahipleri lehine akademik yeterlilik değişkenine atfedilen anlamlı bir farklılık varken, deneyim yılı ve cinsiyet değişkenlerine atfedilen anlamlı bir farklılık olmadığını da göstermiştir.

* **Author:** topcuemell@gmail.com

Introduction

The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders DSM defines intellectual disability as "a disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains" (American Psychiatric Association, 2013). In other words, it is a disorder that forms before age 18 that affects a person's intellectual development and the ability to use life skills effectively (Scott, Mihalopoulos, Erskine, Roberts, and Rahman, 2016; American Association on Intellectual and Developmental Disabilities, n.d). Intellectual disabilities may occur alone or as a part of genetic syndromes or other developmental disabilities such as Down syndrome, Prader-Willi Syndrome, or autism spectrum disorder (Abbeduto et al., 2019; Rey & Martin, 2015). Decisions about the educational placement of individual students, including students with intellectual disabilities, are made by an individualized education program (IEP) team (Smith, 2007). The Individuals with Disabilities Education Act (IDEA) requires that this team should include the child's parents, general education teacher, special education teacher, a representative of the local educational agency, and other individuals who have the knowledge or special expertise, such as related service personnel, and whenever appropriate to the students with disabilities. This team must consider the unique educational needs of a student with a disability, consider the degree (Individuals with Disabilities Education Act (IDEA), 2017). These needs might be met in a general education classroom and identify alternative placements if and when those needs cannot be achieved in a general education classroom (Kauffman et al., 2005). Regardless of the educational setting of students with intellectual disabilities, the main objective must be preparing those individuals to make a smooth transition to adult life by using a practical curriculum of functional skills (Davis & Rehfeldt, 2007).

Functional skills are considered as an essential component of the educational process for students with disabilities, particularly at the transition stages. Functional skills include teaching, reading, writing, social skills, self-determination skills, and community participation skills. Cronin (1996) identified functional skills as tasks that assist individuals to achieve the independence that enables them to play their roles as adults successfully. Functional Social Skills of Adults with Intellectual Disability indicated that functional skills enable individuals to take the initiative to use and retain within reasonable circumstances, which could be taught alongside academic functional skills (Vm & Sukumaran, 2012). Academic functional skills are orientation and a style for teaching skills that would help students to become productive individuals in their communities and support the post-school outcomes (Bouck & Joshi, 2012). Among functional skills that are necessary for students with intellectual disabilities' transition and success after school are: functional reading, social skills, determination, and social communication (Al Sha'ah et al., 2018; Bouck, 2010; Carnahan et al., 2009; Carter et al., 2011; Park, 2008). The attention to functional skills has increased following the widespread transfer of students with intellectual disabilities from accommodation institutions and isolation circumstances to regular schools (Artiles & Trent, 1994). This global movement was affected by the emergence of calls, legislation, and scientific developments that asserted the necessity of teaching students with disabilities in public schools (Polloway & Polloway, 2013; Turnbull et al., 2013). There is a need to teach the functional curriculum focusing on living skills instead of academic skills (Browder et al., 2004). Academic skills curriculum has changed with the release of the Education for Persons with Disabilities Act of 1997 and the No Child Left Behind Act of 2001 in the United States of America (USA) (The Elementary and Secondary Education Act (The No Child Left Behind Act of 2001), 2010; Individuals with Disabilities Education Act (IDEA), 2017). Resultantly, it became necessary for students with intellectual disabilities to be taught the same academic curriculum as their peers and for them to proceed in learning the functional curriculum (Turnbull, 2004).

The Functional Curriculum

Traditionally, educational programming for students with moderate and severe disabilities has focused on the acquisition of functional skills (Knight et al., 2017). These skills are very similar to life skills, and they are defined as communicating, establishing and following schedules, and performing daily living (Collins et al., 2010). Teaching functional skills to students with intellectual disabilities will look very different depending on the age and level of function of the young students with intellectual disabilities, it is a matter of creating structure and suitable circumstances for acquiring those skills (Alloway, 2010). Functional teaching activities are instructional programs that involve skills of immediate usefulness to individuals and employ teaching materials that are real rather than simulated (Barbera & Rasmussen, 2007). For older students with intellectual disabilities, teachers address those functional needs in the current performance levels of their IEP's and create programs that lead to success in the functional areas (Leko et al., 2015). The rationale behind the functional curriculum is represented by the fact that students with disabilities need direct and explicit teaching in order to gain daily and academic skills because they do not acquire these skills through daily contact with peers and adults (Halpern & Benz, 1987; Zhang et al., 2005). Increasing individuals' practical life skills will be positively reflected in their functional independence, social competence, and quality of life (Alwell & Cobb, 2009). In addition, participating in the functional curriculum helps students to perform normal activities carried out by adults in the community that facilitates the learning skills they need in order to be members in their societies (Bigge & Stump, 1999).

A curriculum can be viewed as the education system's attempt to reach a match between the students' abilities and needs, and the requirements of society, thereby fulfilling the aims of education (Kelly, 2009). Similarly, pedagogy operates in the middle ground between the child and the curriculum (Biesta, 2019). Furthermore, knowledge about the characteristics, abilities, and interests of students with intellectual disabilities is therefore pivotal in curriculum theory and practice, and the choice of curriculum content is crucial to meeting their educational needs and interests in a life span perspective (Bouck & Flanagan, 2010; Moljord, 2017). Notably, the curriculum received affects post-school success and outcomes, such as employment and independent living (Alwell & Cobb, 2009; Bouck, 2010). Vaz et al. (2014) reviewed 50 studies intervening with 482 youth with disabilities. The findings of this review provide tentative support for the efficacy of using functional or life skills curricular interventions across educational environments, disability types, ages, and gender in promoting positive transition-related outcomes.

On the other hand, Courtade et al. (2012) claimed that teaching functional skills had a higher probability of leading to a more independent life for students with severe disabilities. The functional curriculum derives its importance from the belief that the traditional academic curriculum is failing to provide students with intellectual disabilities with opportunities to develop skills they will need to succeed after school. Without learning these skills clearly and directly, students with disabilities will have difficulty achieving success or productively contributing to their societies (Sitlington et al., 1993). Despite limited researches related to the functional curriculum outcomes for students with mild intellectual disabilities post-school, studies on the functional curriculum for students with disabilities have generally indicated positive results of this curriculum. For example, Benz et al. (2000) suggested that students with disabilities who participated in transition programs that included life skills or vocational skills achieved higher graduation rates and higher involvement in post-school outcomes at work and study, in addition to receiving high salaries. Moreover, Riches (1993) reported that most of the students with disabilities who participated in high school transition programs that concentrated on vocational education, social access, functional academy, leisure, transportation, and personnel management had a job after finishing school.

Planning curriculums for students with intellectual disabilities should consider students' current and future needs in addition to taking into account the requirements of the environmental context that the student is expected to live in after leaving school (Polloway et al., 1991). Morse et al. (1996) pointed out that

the curriculum should focus on functional skills to help students with intellectual disabilities to be able to work and communicate in social services when they become adults. Therefore, functional skills instruction should be conducted in both classrooms and community settings, so students can learn to apply the learned functional skills to their daily living environments (Bobzien, 2014). Given that acquiring appropriate functional skills is crucial to students with and without disabilities, both general and special educators should be responsible for functional skills instruction, and schools should allow teachers to have sufficient time to teach life skills (Bouck, 2010). However, the most effective approaches of teaching students with intellectual disabilities include direct teaching, systematic instruction in reading, arithmetic, and daily living skills, so specific interventions should be taught systematically and explicitly to improve students overall functioning in the areas of functional and social skills (Storey & Miner, 2011). The Council of Exceptional Children reported some systematic instructional strategies that might be useful for teachers, such as task analysis, prompts, and error correction (Council for Exceptional Children, 2017). Most importantly, applying the functional curriculum requires specific competencies of teachers of students with intellectual disabilities (Raphael & Allard, 2013). In general, teachers must have the pedagogical content knowledge to be successful in their classrooms (Pantić, & Wubbels, 2010); nevertheless, teaching students with disabilities require other academic and assessment competencies, such as designing instruction, developing IEPs, supporting the learning environment, accommodations, and designing alternate assessments (Thompson et al., 2006). Rich-Gross (2014) pointed out other necessary competencies that allow teachers to teach a functional curriculum in order to prepare students with intellectual disabilities to be successful in real life. These competencies include teachers' abilities of transition planning, collaborating with families, vocational training, and teach students to be active in the community.

Research Questions and Purposes

Special education movement in Jordan existed in the sixties of the last century, and services and programs were designed based on isolation and distance from inclusive practices (Abu-Hamour & Al-Hmouz, 2014; Al Jabery & Zumberg, 2008; Alodat, Almakanin, et al., 2014). These practices caused a denial of many children with disabilities of being enrolled in formal schools because of a lack of identification, diagnosis procedures, and referral process (AL Khatib & Al Khatib, 2008; Alodat, et al., 2014). Currently, new legislations have been issued to enhance the role of the Ministry of Education in developing educational policies for students with disabilities. For example, Law on the Rights of Persons with Disabilities No. 20 of 2017 Article (18) states that the Ministry of Education is the responsible party for developing public policies, strategies, educational plans, and programs for persons with disabilities (Law on the Rights of Persons with Disabilities Act, 2017). Therefore, the Ministry of Education and the Higher Council for the Rights of Persons with Disabilities launched the Ten-Year National Strategy for Inclusive Education. This strategy seeks to raise the number of children with disabilities enrolled in formal education to 10% of the number of students with disabilities during the next ten years. The strategy aims to prepare school buildings and facilities, as well as develop teachers' skills and competencies through an educational system that accommodates diversity and difference and meets the requirements for persons with disabilities to access educational services and programs on an equal basis with others (Higher Council for the Rights of Persons with Disabilities, 2018). However, there is still an urgent need to determine the quality of services and programs provided and the extent of their suitability and effectiveness in enabling students with disabilities to move to the post-school stages. This situation, unfortunately, is similar to other Arab countries that are still discussing the importance of functional curriculums in preparing children with intellectual disabilities (Hadidi & Al Khateeb, 2015). On the other hand, the United States and western countries focus on procedures that improve the quality of services and programs provided to children with intellectual disabilities that enable them to achieve self-efficacy and personal competences. Hence, it is essential to include the transition planning processes within individual educational plans so that service providers can work towards achieving the goals of both academic and functional skill curriculums in meaningful ways. To do this, service providers should

actively participate with teachers, parents, consultants, principals, and relevant institutions in each community.

Training on functional skills for children with intellectual disabilities is considered as an essential requirement for independent life. It has been observed that teaching children with intellectual disabilities in special education centers and institutions in Jordan is based on the IQ concept that they are taught according to their intellectual ability level. Furthermore, most activities and training provided for children with intellectual disabilities in the current curriculum are irrelevant and do not assist in rehabilitating those children to live and integrate into society; especially that teachers do not have a sufficient experience to deal with students with disabilities in terms of planning for teaching, conducting behavior, and employing effective teaching methods (Al Jabery et al., 2012). The current educational practices, modeled according to global and local laws, do not focus on developing fundamental academic skills such as reading, writing, and mathematics, while functional and social skills do not pay proper attention resulting in non-acquisition of these skills and the inability to achieve a smooth and appropriate transition to the post-school stage. To this end, the purpose of this study was to explore the importance of functional skills among students with intellectual disabilities as perceived by special education teachers in Jordan. This study addressed the following questions:

1. What is the importance of developing functional skills for students with intellectual disabilities enrolling in centers and institutions of special education in Jordan, from the perspective of teachers?

2. Do the teachers' perceptions of the importance of the functional skills vary based on their years of experience?

3. Do the teachers' perceptions of the importance of the functional skills differ based on their academic qualifications?

4. Do the teachers' perceptions of the importance of the functional skills differ depending on their gender?

METHOD

Study Design

This study used a descriptive method approach to investigate the functional skills among students with intellectual disabilities as it exists in Jordanian special education centers. This quantitative method describes special education teachers' perceptions about the importance of functional skills and its association with other phenomena.

Participants

Twenty special education centers that specialized in teaching students with intellectual disabilities were targeted in this study. A total number of 120 special education teachers who worked in special education centers that focused on teaching for those with intellectual disabilities in the city of Irbid, Jordan, were asked to be the participants of the study. The 120 teachers are the total number of teachers who works in these centers; however, 100 teachers responded and returned the instrument material. Table (1) shows the distribution of the participants, organized by independent variables.

Table 1. The Sample According to Participants' Demographics

Variable	Category	Number	Percentage
Gender	Male	28	28.0%
	Female	72	72.0%
Academic qualification	Diploma	43	43.0%
	Bachelor	45	45.0%
	Masters	12	12.0%
Years of experience	1-4 years	41	41.0%
	5-8 years	29	29.0%
	6-12 years	18	18.0%
	More than 12 years	12	12.0%
Total		100	100%

Participants were chosen intentionally due to a set of factors represented in the nature of the geographical area and the quality of the services provided. These services are distinguished by the limited number of workers in the programs of individuals with intellectual disabilities, especially the stage of vocational rehabilitation. Regarding the study's variables, the reason for the differences between males and females' teachers participated in the study attributed to the fact that females have higher rates than males in studying special education in Jordanian universities and working with children with intellectual disabilities in schools. Moreover, the researchers examined the educational qualification and experience variables because it plays an important and influential role in making the difference between the target group of the study. This study assumes that teachers with higher qualifications and experience have a more excellent knowledge of functional skills compared with teachers with lower qualifications. Hence, it is essential to explore the role of educational qualification and experience in perceiving functional skills.

Instrument

To achieve the study objectives, the researchers developed a Functional Skills Questionnaire (FSQ), which consisted of three parts: the first part is related to participants' gender, education level's and years of teaching experience. The second part requested information about the importance of functional skills among students with intellectual disabilities. The survey included 95 items. The 95 items of the instrument were formulated based on a review of relevant literature and reports, which were (Bailey et al., 2009; Bouck, 2009, 2010; Bouck & Joshi, 2012; Vm & Sukumaran, 2012). These items dealt with 12 categories of functional skills: daily living, decision making, self-controlling, social skills, reading, writing, mathematics, general motor, fine motor, receptive language, expressive language, and vocational preparation education. The responses on the 95 items were in 4-Likert type and designated as follows: 4 – very important; 3 – important; 2 – moderately important; 1– and 0 – Not at all important. Meetings were arranged with the principals, technical managers, and teachers in the targeted centers in the second semester of the 2018 academic year. A detailed explanation was provided on the goals of the study and clarification of the FSQ. Then the FSQ was distributed to teachers and the application time range between 15 to 25 minutes.

To ensure the content validity, ten specialized professors in the field of special education working at the Jordanian universities judged the scale, clarity of the items, whether the formulation was suitable and accurate for the purpose for which it was designed. Some suggested adding some items and rephrasing others, such as eating by spoon, imitating adults' movements, and walking on toes. These suggested changes were taken into consideration when making the final version of the FSQ.

In addition, the internal consistency coefficient (Cronbach Alpha) was calculated to measure the consistency of the respondents 'responses to all the items in the FSQ, WHICH had a high coefficient (.97) of reliability, as illustrated in table (2).

Table 2. Internal Consistency Coefficient of the FSQ's Categories

Category	Items	Cronbach's alpha
Daily living skills	16	0.931
Decision-making skills	5	0.741
Self-control skills	5	0.897
Social skills	9	0.914
Reading skills	7	0.929
Writing skills	7	0.921
Mathematics skills	8	0.874
General motor skills	7	0.893
Fine motor skills	9	0.887
Receptive language	7	0.837
Expressive language	7	0.896
Vocational preparation skills	8	0.841
Total	95	0.969

FINDINGS

The first question asked of participants was: "What is the degree of functional skills' importance for students with intellectual disabilities affiliated with centers and institutions of special education in Jordan from the perspectives of teachers working with them?"

To answer this question, means and standard deviations of functional skills for students with intellectual disabilities affiliated with centers and institutions of special education in Jordan from the perspectives of teachers working with them. The following table illustrates the means and standard deviations of functional skills for students with intellectual disabilities affiliated with centers and institutions of special education in Jordan, from the perspectives of teachers working with them in descending order according to means.

Table 3. Means and Standard Deviations of Functional Skills for Students with Intellectual Disabilities Based on Teachers' Ratings

Functional skills	M	SD	Degree of importance
Decision-making skills	3.624	0.469	High
Vocational preparation skills	3.599	0.476	High
Mathematics skills	3.576	0.530	High
Self-control skill	3.560	0.637	High
General motor skills	3.521	0.618	High
Writing skills	3.496	0.669	High
Social skills	3.479	0.630	High
Expressive language	3.479	0.654	High
Fine motor skills	3.458	0.593	High
Daily living skill	3.421	0.606	High
Expressive language	3.375	0.674	High
Reading skills	3.323	0.775	High
Total	3.484	0.538	High

From the above table, it is clear that the means of teachers' ratings for the importance of functional skills for students with intellectual disabilities ranged between (3.323 and 3.624), all with high importance—and the highest for the decision-making skills with a mean (3.624) followed by (3.599) for the vocational preparation skill. The lowest was for reading skills, and the mean for the total score for the tool was (3.484).

The second question asked was: "Does the degree of teachers' appreciation of the importance of functional skills varies according to the variable years of experience?"

To answer this question, One-Way Analysis of Variance ANOVA was carried out for the degree of teachers' estimations on students with intellectual disabilities' functional skills—and skills as a whole according to years of experience as shown in the following table.

Table 4. Findings of ANOVA Measuring Teachers' Estimations of Students with Intellectual Disabilities' Functional Skills

Functional Skills	S	*SD*	*Df*	*MS*	*F*	*P*
Daily living skills	Between	0.404	3	0.135	0.359	0.783
	Within	35.963	96	0.375		
	Total	36.366	99			
Decision-making skills	Between	0.094	3	0.031	0.139	0.937
	Within	21.688	96	0.226		
	Total	21.782	99			
Self-control skills	Between	0.115	3	0.038	0.092	0.964
	Within	40.045	96	0.417		
	Total	40.16	99			
Social skills	Between	0.343	3	0.114	0.281	0.839
	Within	38.958	96	0.406		
	Total	39.301	99			
Reading skills	Between	1.561	3	0.52	0.863	0.463
	Within	57.892	96	0.603		
	Total	59.454	99			
Writing skills	Between	0.572	3	0.191	0.419	0.74
	Within	43.691	96	0.455		
	Total	44.263	99			
Mathematics skills	Between	0.061	3	0.02	0.07	0.976
	Within	27.748	96	0.289		
	Total	27.809	99			
General motor skills	Between	0.057	3	0.019	0.049	0.986
	Within	37.713	96	0.393		
	Total	37.77	99			
Fine motor skills	Between	0.343	3	0.114	0.319	0.812
	Within	34.43	96	0.359		

	Total	34.772	99			
Receptive language	Between	1.409	3	0.47	1.035	0.381
	Within	43.556	96	0.454		
	Total	44.965	99			
Expressive language	Between	0.113	3	0.038	0.086	0.968
	Within	42.188	96	0.439		
	Total	42.301	99			
Vocational preparation skills	Between	0.037	3	0.012	0.053	0.984
	Within	22.379	96	0.233		
	Total	22.415	99			
Total	Between	0.076	3	0.025	0.085	0.968
	Within	28.616	96	0.298		
	Total	28.692	99			

From the previous table, it is clear that f values for the functional skills and skills as a whole were (0.359, 0.139, 0.092, 0.281, 0.863, 0.419, 0.070, 0.049, 0.319, 1.035, 0.086, 0.053, and 0.085) consecutively—which indicate no significant differences at $\alpha \leq 0.05$ between means of participants' estimations of the importance of functional skills among students with disabilities and of all skills as a whole, attributed to years of experience.

The third question asked was: "Does the degree of appreciation of teachers for the importance of functional skills differs according to the variable of the academic qualification?". To answer this question, One-way Analysis of Variance ANOVA was carried out on teachers' estimations of functional skills for students with intellectual disabilities and all skills as a whole according to the academic qualification, as shown in the following table.

Table 5. Findings of ANOVA on the Degree of Teachers' Estimations of Students with Intellectual Disabilities' Functional Skills

Functional Skills	*S*	*SD*	*Df*	*MS*	*F*	*P*
Daily living skills	Between	3.128	2	1.564	4.565	*0.013
	Within	33.238	97	0.343		
	Total	36.366	99			
Decision-making skills	Between	1.433	2	0.716	3.414	*0.037
	Within	20.35	97	0.21		
	Total	21.782	99			
Self-control skills	Between	3.11	2	1.555	4.071	*0.020
	Within	37.05	97	0.382		
	Total	40.16	99			
Social skills	Between	2.495	2	1.248	3.288	*0.042

	Within	36.806	97	0.379		
	Total	39.301	99			
Reading skills	Between	3.961	2	1.981	3.462	*0.035
	Within	55.493	97	0.572		
	Total	59.454	99			
Writing skills	Between	2.812	2	1.406	3.29	*0.041
	Within	41.452	97	0.427		
	Total	44.263	99			
Mathematics skills	Between	1.675	2	0.837	3.108	*0.049
	Within	26.134	97	0.269		
	Total	27.809	99			
General motor skills	Between	2.878	2	1.439	4	*0.021
	Within	34.893	97	0.36		
	Total	37.77	99			
Fine motor skills	Between	2.694	2	1.347	4.073	*0.020
	Within	32.078	97	0.331		
	Total	34.772	99			
Receptive language	Between	3.688	2	1.844	4.334	*0.016
	Within	41.277	97	0.426		
	Total	44.965	99			
Expressive language	Between	3.349	2	1.675	4.17	*0.018
	Within	38.952	97	0.402		
	Total	42.301	99			
Vocational preparation skills	Between	1.705	2	0.852	3.992	*0.022
	Within	20.711	97	0.214		
	Total	22.415	99			
Total	Between	2.666	2	1.333	4.968	*0.009
	Within	26.026	97	0.268		
	Total	28.692	99			

*Statistically significant at $\alpha \leq 0.05$

The previous table shows statistically significant differences at $\alpha \leq 0.05$ between means of participants' estimations of functional skills and whole skills attributed to the academic qualification. Scheffe tests were used for post comparisons—the findings of which are displayed in the following table.

Table 6. Findings of Scheffe Tests on the Degree of Teachers' h Estimations of Students with Intellectual Disabilities' Functional Skills

Functional Skills	Academic Qualification	MS	Academic Qualification		
			Diploma	BA	M.A
Daily living skills	Diploma	3.22			
	BA	3.519			
	M.A.	3.692	*0.472		
Decision-making skills	Diploma	3.502			
	BA	3.662			
	M.A.	3.857	*0.355		
Self-control skills	Diploma	3.351			
	BA	3.684			
	M.A.	3.771	*0.42		
Social skills	Diploma	3.295			
	BA	3.578			
	M.A.	3.698	*0.403		
Reading skills	Diploma	3.091			
	BA	3.451			
	M.A.	3.592	*0.501		
Writing skills	Diploma	3.31			
	BA	3.578			
	M.A.	3.776	*0.466		
Mathematics skills	Diploma	3.442			
	BA	3.622			
	M.A.	3.821	*0.368		
General motor skills	Diploma	3.321			
	BA	3.641			
	M.A.	3.724	*0.403		
Fine motor skills	Diploma	3.266			
	BA	3.565			
	M.A.	3.675	*0.409		
Receptive language	Diploma	3.15			
	BA	3.5			
	M.A.	3.631	0.481		
Expressive language	Diploma	3.282			

	BA	3.556			
	M.A.	3.806	*0.524		
Vocational preparation skills	Diploma	3.451			
	BA	3.669			
	M.A.	3.804	*0.353		
Total	Diploma	3.298			
	BA	3.577			
	M.A.	3.731	*0.433		

The previous table indicates statistically significant at ($\alpha \leq 0.05$) between means of participants with a qualification of (diploma, Masters) estimations of functional skills and skills as a whole in favor of the master's degree holders.

The fourth question was: Does the teacher's degree of appreciation of the importance of functional skills differ depending on the gender variable? To answer this question, the independent sample t-test was carried out on teachers' estimation of the degree of the functional skills for students with intellectual disabilities and skills as a whole according to gender. The following table shows this.

Table 7. Degree of Functional Skills for Students with Intellectual Disabilities According to Gender

Functional Skills	Gender	N	MS	SD	t-test	Df	P
Daily living skill	M	28	3.467	0.671	0.598	98	0.639
	F	72	3.403	0.583			
Decision-making skills	M	28	3.586	0.528	0.192	98	0.613
	F	72	3.639	0.447			
Self-control skills	M	28	3.514	0.727	0.369	98	0.657
	F	72	3.578	0.603			
Social skills	M	28	3.504	0.588	0.487	98	0.805
	F	72	3.469	0.649			
Reading skills	M	28	3.408	0.8	0.719	98	0.495
	F	72	3.29	0.768			
Writing skills	M	28	3.531	0.592	0.165	98	0.747
	F	72	3.482	0.7			
Mathematics skills	M	28	3.54	0.61	0.224	98	0.673
	F	72	3.59	0.5			
General motor skills	M	28	3.464	0.68	0.261	98	0.567
	F	72	3.544	0.595			
Fine motor skills	M	28	3.532	0.594	0.888	98	0.439

	F	72	3.429	0.593			
Receptive language	M	28	3.44	0.736	0.841	98	0.547
	F	72	3.35	0.652			
Expressive language	M	28	3.469	0.703	0.703	98	0.931
	F	72	3.482	0.639			
Vocational preparation skills	M	28	3.58	0.504	0.597	98	0.811
	F	72	3.606	0.468			
Total	M	28	3.5	0.601	0.273	98	0.853
	F	72	3.478	0.516			

The previous table shows that t values for the functional skills and skills as a whole were (0.359, 0.192, 0.369, 0.487, 0.719, 0.165, 0.224, 0.261, 0.888, 0.841, 0.703, 0.597, and 0.273), consecutively, which indicate no significant differences at $\alpha \leq 0.05$ between means of participants' estimations on the degree of teachers' estimations of the importance of functional skills for students with intellectual disabilities and skills as a whole according to gender.

DISCUSSION

The purpose of this study was to identify, from teachers' perspectives, the importance of functional skills for students with intellectual disabilities. The relationships between experience, academic qualification, and gender were also considered. This discussion contains two sections. The first section analyzes the findings of the study and provides a discussion of the importance of functional skills for students with intellectual disabilities from teachers' perspectives. The second section discusses implications and recommendations for future research.

The findings indicated that the degree of teachers' estimations of the importance of functional skills for students with intellectual disabilities was high in general; decision-making skills were deemed most important, followed by the vocational preparation skills, and finally, reading skills. The researchers attribute this finding to the level of awareness teachers of students with disabilities have towards issues related to functional skills specialized for students with intellectual disabilities. Of additional importance is teachers' interest in providing students with intellectual disabilities the functional skills that enable them to engage in the vocational rehabilitation programs that meet their needs and achieve independence and success in daily and practical life. This finding could be due to the concerted efforts of various government institutions that care for individuals with disabilities and aim to rehabilitate teachers of students with disabilities by providing training programs and workshops that offer growth and development opportunities for workers in this field. Such programs include the Higher Council for People with Disability Affairs, the Ministry of Social Development, and the Ministry of Education. The findings of the current study are congruent Wehmeyer's study (2002), which asserted the importance of developing decision-making skills among individuals with intellectual disability, providing them with decision-making opportunities and interest in establishing a person-based planning philosophy within educating and training individuals with disability practices. The present study also aligns with Ee and Soh (2005) study, the findings of which confirmed the importance of teaching students with disabilities skills of independent living. On the other hand, findings differed partially with Vm and Sukumaran's (2012) study, which was aimed at investigating the level of social functional skills among adults with intellectual disability. Vm and Sukumaran's findings indicated that only 48 percent of

adults with intellectual disabilities who participated in his study have social functional skills, and it showed no statistically significant differences attributed to the study variables.

The current study examined how demographic characteristics such as gender, education levels, and years of teaching experience correlated with the degree of teachers' appreciation of the importance of functional skills. The findings indicated that no statistically significant differences for participants' estimations of the importance of functional skills among students with disabilities due to gender and years of experience. This finding could be attributed to the resemblance in the vocational and behavioral level of participants in terms of provided development opportunities and programs that specialize in preparing teachers to train children with disabilities. Such programs concentrate on teachers recognizing the importance of functional skills to students with intellectual disabilities. In addition, this finding might be explained by the resemblance of programs provided for students with intellectual disabilities, which will be implemented by teachers. Furthermore, findings partially agreed with Vm and Sukumaran (2012), which aimed at investigating the level of social functional skills among adults with disabilities—indicating no statistically significant differences in participants' functional skills attributed to study gender. Finally, findings partially agreed with Alsa'ed's study (2009), which indicated no statistically significant differences between teachers' perspectives attributed to years of experience.

The findings indicated that there are statistically significant differences for participants' estimations of the importance of functional skills among students with disabilities based on academic qualification, in favor of postgraduate degree holders. This finding might be explained by the nature of teachers' preparation programs within general non-classified special education programs at the bachelor and diploma levels. This is contrasted by teachers at the graduate level, who typically receive specialized special education programs and practical implementations, especially in the phase of thesis preparation, thus enabling them to better estimate the importance of functional skills for students with intellectual disabilities. The findings of this study, therefore, differ from the aspect of Alsa'ed's study (2009) that indicated no differences between teachers' perspectives attributed to the academic qualification.

CONCLUSION

The purpose of this study was to explore the importance of functional skills for students with intellectual disabilities from teachers' perspectives. The findings indicated that the degree of teachers' estimations of functional skills' importance for students with intellectual disabilities was high in general because functional skills are considered an essential component of the educational process for students with disabilities. It is represented in the teaching skills required in the transitional process into adulthood for those students. Functional skills are fundamentally important for all children, particularly those with a disability. Teachers of children with intellectual disabilities believe the importance of teaching functional skills to students because, from their point of view, these children can achieve appropriate levels of personal independence in addition to achieving outputs related to growth and education. These teachers also see that children's access to appropriate levels of personal and social competencies reduces their chances of being excluded. From education and their exposure to social isolation, and this also helps in enhancing opportunities for social inclusion and changing negative attitudes towards these children.

Limitations

The main limitations of this study include the number of teachers, who represented special education centers in Irbid city in the north of Jordan and their responses to the study instrument. However, the

purpose of this study was to explore how teachers perceive their students with intellectual disabilities' functional skills rather than making a generalization.

Recommendations

Based on the findings of the current study, it is recommended that education policymakers and other stakeholders review and evaluate teaching curriculums and teaching methods used in special education centers and institutions. Also, functional skills education should be further developed within curriculums and activities. It is recommended that the Ministry of Social Development (MOSD) and Ministry of Education (MOE) pay more attention to professional development programs for teachers and training them on how to teach functional skills. Future research should explore the perspectives of other stakeholders such as general education teachers, students with intellectual disabilities, and parents of students with intellectual disabilities.

References

Abbeduto, L., Thurman, A. J., Bullard, L., Nelson, S., & McDuffie, A. (2019). Genetic Syndromes Associated with Intellectual Disabilities. In C. L. Armstrong & L. A. Morrow (Eds.), *Handbook of Medical Neuropsychology: Applications of Cognitive Neuroscience* (pp. 263–299). Springer International Publishing.

Abu-Hamour, B., & Al-Hmouz, H. (2014). Special education in Jordan. *European Journal of Special Needs Education*, *29*(1), 105–115.

Al Jabery, M., Al Khateeb, J., & Zumberg, M. (2012). Current Special Education Programs in the Hashemite Kingdom of Jordan. In *Advances in research and praxis in special education in Africa, Caribbean, and the Middle East*. Information Age Publishing Inc.

Al Jabery, M., & Zumberg, M. (2008). General and Special Education Systems in Jordan: Present and Future Perspectives. *International Journal of Special Education*, *23*(1), 115–122.

AL Khatib, J., & Al Khatib, F. (2008). Educating Students with Mild Intellectual Disabilities in Regular Schools in Jordan. *Journal of the International Association of Special Education*, *9*(1).

Al Sha'ah, F. K., Muhaidat, M. A., & Almomani, W. A. (2018). Special Education Teachers' Identification of Self-determination Skills in Teaching Handicapped Students at Special Education Institutions in Jordan. *Journal of Educational & Psychological Sciences*, *19*(02), 143–166.

Alloway, T. P. (2010). Working memory and executive function profiles of individuals with borderline intellectual functioning: Working memory & executive function profiles. *Journal of Intellectual Disability Research*, *54*(5), 448–456.

Alodat, A., Almakanin, H., & Zumberg, M. (2014). Inclusive Education within the Jordanian Legal Framework: Overview of Reality and Suggestions for Future. *International Journal of Academic Research in Business and Social Sciences*, *4*(5).

Alodat, A., Zumberg, M., & Algolaylat, A. (2014). *Special education of persons with intellectual disabilities in Jordan*. YAI International Conference, New York City, NY, USA.

Alsa'ed, A. (2009). *Extent relevance of the objectives of the reading curriculum to meet need student's intellectual disability in the primary grades from the point of view of their teachers*. Master Thesis, King Saud University, Riyadh, Saudi Arabia.

Alwell, M., & Cobb, B. (2009). Functional Life Skills Curricular Interventions for Youth With Disabilities: A Systematic Review. *Career Development for Exceptional Individuals*, *32*(2), 82–93.

American Association on Intellectual and Developmental Disabilities. (n.d.). *Intellectual Disability*. Retrieved from https://www.aaidd.org/intellectual-disability/definition/faqs-on-intellectual-disability

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition). American Psychiatric Association.

Artiles, A. J., & Trent, S. C. (1994). Overrepresentation of Minority Students in Special Education: A Continuing Debate. *The Journal of Special Education*, *27*(4), 410–437.

Bailey, D. B., Raspa, M., Holiday, D., Bishop, E., & Olmsted, M. (2009). Functional Skills of Individuals With Fragile X Syndrome: A Lifespan Cross-Sectional Analysis. *American Journal on Intellectual and Developmental Disabilities*, *114*(4), 289–303.

Barbera, M. L., & Rasmussen, T. (2007). *The verbal behavior approach: How to teach children with autism and related disorders*. Jessica Kingsley Publishers.

Benz, M. R., Lindstrom, L., & Yovanoff, P. (2000). Improving Graduation and Employment Outcomes of Students with Disabilities: Predictive Factors and Student Perspectives. *Exceptional Children*, *66*(4), 509–529.

Biesta, G. (2019). *Making Pedagogy Public: For the Public, of the Public, or in the Interest of Publicness?* Brill Sense.

Bigge, J. L., & Stump, C. S. (1999). *Curriculum, assessment, and instruction for students with disabilities*. Wadsworth Pub.

Bobzien, J. L. (2014). *Academic or Functional Life Skills? Using Behaviors Associated with Happiness to Guide Instruction for Students with Profound/Multiple Disabilities* [Research Article]. Education Research International.

Bouck, E. C. (2010). Reports of life skills training for students with intellectual disabilities in and out of school: Life skills for intellectual disabilities. *Journal of Intellectual Disability Research*, *54*(12), 1093–1103.

Bouck, Emily C. (2009). Functional curriculum models for secondary students with mild mental impairment. *Education and Training in Developmental Disabilities*, *44*(4), 435–443.

Bouck, Emily C., & Flanagan, S. M. (2010). Functional Curriculum Evidence-Based Education: Considering Secondary Students With Mild Intellectual Disabilities. *Education and Training in Autism and Developmental Disabilities*, *45*(4), 487–499. JSTOR.

Bouck, Emily C., & Joshi, G. (2012). Functional Curriculum and Students with Mild Intellectual Disability: Exploring Postschool Outcomes through the NLTS2. *Education and Training in Autism and Developmental Disabilities*, *47*(2), 139–153. JSTOR.

Browder, D., Flowers, C., Ahlgrim-Delzell, L., Karvonen, M., Spooner, F., & Algozzine, R. (2004). The Alignment of Alternate Assessment Content with Academic and Functional Curricula. *The Journal of Special Education*, *37*(4), 211–223.

Carnahan, C. R., Hume, K., Clarke, L., & Borders, C. (2009). Using Structured Work Systems to Promote Independence and Engagement for Students with Autism Spectrum Disorders. *TEACHING Exceptional Children*, *41*(4), 6–14.

Carter, E. W., Lane, K. L., Crnobori, M., Bruhn, A. L., & Oakes, W. P. (2011). Self-Determination Interventions for Students with and at Risk for Emotional and Behavioral Disorders: Mapping the Knowledge Base. *Behavioral Disorders*, *36*(2), 100–116. JSTOR.

Collins, B. C., Karl, J., Riggs, L., Galloway, C. C., & Hager, K. D. (2010). Teaching Core Content with Real-Life Applications to Secondary Students with Moderate and Severe Disabilities. *TEACHING Exceptional Children*, *43*(1), 52–59.

Council for Exceptional Children. (2017). *High-leverage practices in special education: Foundations for student success*.

Courtade, G., Spooner, F., Browder, D., & Jimenez, B. (2012). Seven Reasons to Promote Standards-Based Instruction for Students with Severe Disabilities: A Reply to Ayres, Lowrey, Douglas, & Sievers (2011). *Education and Training in Autism and Developmental Disabilities*, *47*(1), 3–13.

Cronin, M. E. (1996). Life Skills Curricula for Students with Learning Disabilities: A Review of the Literature. *Journal of Learning Disabilities*, *29*(1), 53–68.

Davis, P. K., & Rehfeldt, R. A. (2007). Functional Skills Training for People with Intellectual and Developmental Disabilities. In J. W. Jacobson, J. A. Mulick, & J. Rojahn (Eds.), *Handbook of Intellectual and Developmental Disabilities* (pp. 581–599). Springer US.

Ee, J., & Soh, K.-C. (2005). Teacher perceptions of what a functional curriculum should be for children with special needs. *International Journal of Special Education*, *20*(2), 6–18.

Hadidi, M. S., & Al Khateeb, J. M. (2015). Special Education in Arab Countries: Current challenges. *International Journal of Disability, Development and Education*, *62*(5), 518–530.

Halpern, A. S., & Benz, M. R. (1987). A Statewide Examination of Secondary Special Education for Students with Mild Disabilities: Implications for the High School Curriculum. *Exceptional Children*, *54*(2), 122–129.

Law on the Rights of Persons with Disabilities Act, no. Law No. (20) (2017).

Higher Council for the Rights of Persons with Disabilities. (2018). *Ten-year Accessibility Plan for People with Disabilities*. http://www.hcd.gov.jo/en/news

Kauffman, J. M., Landrum, T. J., Mock, D. R., Sayeski, B., & Sayesk, K. L. (2005). Diverse Knowledge and Skills Require a Diversity of Instructional Groups: A Position Statement. *Remedial and Special Education*, *26*(1), 2–6.

Kelly, A. V. (2009). *The Curriculum: Theory and Practice*. SAGE.

Knight, V., Browder, D., Agnello, B., & Lee, A. (2017). Academic Instruction for Students with Severe Disabilities. *Focus on Exceptional Children*, *42*(7).

Leko, M. M., Brownell, M. T., Sindelar, P. T., & Kiely, M. T. (2015). Envisioning the Future of Special Education Personnel Preparation in a Standards-Based Era. *Exceptional Children*, *82*(1), 25–43.

Moljord, G. (2017). Curriculum research for students with intellectual disabilities: A content-analytic review. *European Journal of Special Needs Education*, 1–14.

Morse, T. E., Schuster, J. W., & Sandknop, P. A. (1996). Grocery Shopping Skills for Persons With Moderate to Profound Intellectual Disabilities: A Review of the Literature. *Education and Treatment of Children*, *19*(4), 487–517. JSTOR.

Pantić, N., & Wubbels, T. (2010). Teacher competencies as a basis for teacher education – Views of Serbian teachers and teacher educators. *Teaching and Teacher Education*, 26(3), 694–703.

Park, Y.-Y. (2008). Transition Services for High School Students with Disabilities: Perspectives of Special Education Teachers. *Exceptionality Education International*, *18*(3), 95–111.

Polloway, E. A., Patton, J. R., Smith, J. D., & Roderique, T. W. (1991). Issues in Program Design for Elementary Students with Mild Retardation: Emphasis on Curriculum Development. *Education and Training in Mental Retardation*, *26*(2), 142–150. JSTOR.

Polloway, E. A., & Polloway, E. A. (Eds.). (2013). *Strategies for teaching learners with special needs* (10th ed). Pearson.

Raphael, J., & Allard, A. C. (2013). Positioning people with intellectual disabilities as the experts: Enhancing pre-service teachers' competencies in teaching for diversity. *International Journal of Inclusive Education*, 17(2), 205–221.

Rey, J., & Martin, A. (Eds.). (2015). Intellectual disability. In *JM REY'S IACAPAP e-Textbook of Child and Adolescent Mental Health*. http://iacapap.org/iacapap-textbook-of-child-and-adolescent-mental-health

Riches, V. (1993). *Secondary Education: A Follow-Along Study of Students with Disabilities in Transition in New South Wales*. https://eric.ed.gov/?id=ED358627

Rich-Gross, D. A. (2014). Maximizing the Potential of Our Youth with Intellectual Disabilities: Rethinking Functional Curriculum. *Journal of the American Academy of Special Education Professionals*. https://eric.ed.gov/?id=EJ1134846

Scott, J. G., Mihalopoulos, C., Erskine, H. E., Roberts, J., & Rahman, A. (2016). Childhood Mental and Developmental Disorders. In V. Patel, D. Chisholm, T. Dua, R. Laxminarayan, & M. E. Medina-Mora (Eds.), *Mental, Neurological, and Substance Use Disorders: Disease Control Priorities, Third Edition (Volume 4)*. The International Bank for Reconstruction and Development / The World Bank.

Sitlington, P. L., Frank, A. R., & Carson, R. (1993). Adult adjustment among high school graduates with mild disabilities. *Exceptional Children*, *59*(3), 221–233.

Smith, P. (2007). Have we made any progress? Including students with intellectual disabilities in regular education classrooms. *Intellectual and Developmental Disabilities*, *45*(5), 297–309.

Storey, K., & Miner, C. A. (2011). *Systematic instruction of functional skills for students and adults with disabilities*. C.C. Thomas.

Thompson, S. J., Lazarus, S. S., Clapper, A. T., & Thurlow, M. L. (2006). Adequate Yearly Progress of Students with Disabilities: Competencies for Teachers. Teacher Education and Special Education: The *Journal of the Teacher Education Division of the Council for Exceptional Children*, 29(2), 137–147.

Turnbull, A. P., Turnbull, H. R., & Wehmeyer, M. L. (2013). *Exceptional lives: Special education in today's schools* (7th ed). Merrill.

Turnbull, H. R. (Ed.). (2004). *Exceptional lives: Special education in today's schools* (4th ed). Pearson/Merrill/Prentice Hall.

The Elementary and Secondary Education Act (The No Child Left Behind Act of 2001), no. Public Law print of PL 107-110 (2010).

Individuals with Disabilities Education Act (IDEA), (2017) (testimony of U.S. Department of Education). https://sites.ed.gov/idea/

Vaz, S., Parsons, R., Falkmer, T., Passmore, A. E., & Falkmer, M. (2014). The Impact of Personal Background and School Contextual Factors on Academic Competence and Mental Health Functioning across the Primary-Secondary School Transition. *PLoS ONE*, *9*(3), e89874.

Vm, U., & Sukumaran, P. (2012). Functional Social Skills of Adults with Intellectual Disability. *Disability, CBR & Inclusive Development*, *23*(2).

Wehmeyer, M. (2002). Self-Determination and the Education of Students with Disabilities. *The ERIC Clearinghouse on Disabilities and Gifted Education*, *ERIC EC Digest #E632*.

Zhang, D., Ivester, J., & Katsiyannis, A. (2005). Teachers' View of Transition Services: Results from a Statewide Survey in South Carolina. *Education and Training in Developmental Disabilities*, *40*(4), 360–367. JSTOR.