

Independent Living Skills Needed by Students with Special Educational Needs (SEN) Towards Inclusive Education: A Systematic Literature Review

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Abstract

Background: Inclusive education is vital to nation-building and should be enjoyed by every student, including students with special educational needs (SEN). As the concept of independent living among persons with disabilities has been getting more attention today, it is necessary to identify how the concept of independent living can empower students with SEN toward inclusive education. **Objectives:** Building on this debate, the study aimed to identify independent living skills required by students with SEN in order to ensure that they could have adequate access to inclusive education. **Methods:** Based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol, this study analysed 25 articles from Web of Science and Scopus. **Results:** The results identified ten skills students with SEN would need: language proficiency, reading and writing, financial management, interpersonal skills, social participation, social problem solving, self-care, daily living skills and healthcare skills. **Conclusions:** This study also discussed how these independent living skills could empower students with SEN toward an inclusive education.

Keywords: Inclusive education; independent living; students with SEN; persons with disabilities; learning disabilities; adaptive behaviour skills

1. Introduction

Recently, a number of international organisations have highlighted the need for inclusive education. According to UNICEF (United Nations Children's Fund), through inclusive education, all students in the same classes and schools should be given an equal opportunity to enrol in any class, and learn and acquire the skills they need to succeed (UNICEF, 2022). This implies that every child, regardless of their membership in a group, ethnicity, or stage of disability, deserves the same learning experiences. However, the world still faces difficulties ensuring that every individual has an equal chance of educational success (Nasri et al., 2021). When discussing inclusive education for persons with disabilities, there are some doubts due to the difference in elements of admission, curriculum, governance, finance, and policy (Jameel, 2011).

As a result of the marginalisation of persons with disabilities, the issues of disability have been viewed widely from a different human rights viewpoint. For example, regarding persons with disabilities rights, there has been a lot of worldwide debate about combating all types of

exclusion to avoid the barriers that prevent or hinder the presence, learning, and participation of all students, including students with special educational needs (SEN). Previously, most students with disabilities were educated separately from others in separate classes (Khairuddin et al., 2020). Placement of a student with SEN in regular schools has occasionally been referred to as "integration" or "mainstreaming". However, the actual situation is that the privilege of inclusive education seems to focus more on mainstream education than students with SEN. In discussing the issue regarding the right of a person with disabilities, the United Nations, through The Convention on the Rights of Persons with Disabilities (CRPD, 2015), clearly highlighted that every person with disabilities should have the same rights to equal opportunities, accessibility, participate in society and independent living.

Independent living demands the same options and control for persons with disabilities in their daily lives as those without disabilities take for granted (Ratzka, 2007). For a person with disabilities, independent living is about giving a chance to have choice, control, opportunity, self-determination, supportive resources, and planning for the future (Henry, 2018). The history of independent living started back in the 1960s when numerous American colleges developed various self-help programs to encourage students with "severe" physical disabilities to attend regular classes (Barnes, 2003). According to Ratzka, (2007), independent living is an ideology and a movement focused on self-determination, the same opportunity, and self-respect for every single person with disabilities. Independent living does not imply that persons with disabilities want to do everything themselves and have no need for others, nor does it imply their desire to live alone. They simply want to grow up in their own families, attend local schools, take the same bus as their neighbours, work in jobs that match their education or interests and simultaneously start their own families (Henry, 2018).

Little is known about how the concept of independent living for students with SEN is interrelated with inclusive education. This is due to the situation where most of our society nowadays assumes that those diagnosed with disability have almost no chance of surviving and living independently as members of our community (Henry, 2018). As a result, it has denied them access to inclusive education. Lack of research on the concept of independent living among persons with disabilities may result in a lack of literature review that could help the reader comprehend the idea of independent living. With the growth in the number of persons with disabilities recorded worldwide, there is a need for guidance on a set of skills that should be implemented among students with SEN to ensure that they get proper access to inclusive education (Barnes, 2003) . Building on this debate, this systematic review paper explored more into independent living skills needed by students with SEN in order to grant them access toward inclusive education.

2. Methods

As this systematic review had built based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), this section would focus on the research method. Several subsections will be discussed including PRISMA, resources, inclusion and exclusion criteria, systematic review process, and data abstraction and analysis.

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) was created by an international group of experienced researchers as an evolution of the original guideline for systematic reviews and meta-analyses of evaluations of health care treatments. PRISMA emphasises how researchers may ensure that systematic reviews and meta-analyses are transparent and comprehensive (Liberati et al., 2009). According to David Moher et al., (2016), PRISMA protocol's objective is to enhance the quality of systematic review protocols comparable to existing reporting standards reporting guidelines. PRISMA protocol can potentially improve the conduct of systematic reviews by guiding authors in documenting a priori road map of their study, as indicated by previous reporting guidelines. The PRISMA guidelines provide a four-phase flow diagram alongside 27-item checklist. The flow diagram outlines the criteria for identifying and, screening the eligibility and inclusion of reports that fit within the scope of a review (Selcuk, 2019). A 27-item guideline list on topics including title, abstract, introduction, methodology, findings, and discussion are included in the checklist.

Resources

The review methods of the present study involved two different databases: Scopus and Web of Sciences. Scopus is an abstract and indexing database with full-text links produced by Elsevier Co. (Burnham, 2006) coverings over 35 000 titles. On the other hand, the Web of Science is a database of a selective citation index of scientific and scholarly publishing covering journals, proceedings, books, and data compilations (Birkle et al., 2020). Until 2020 it covers around 34,000 journals. The selection of these two databases was based on the justification that both Scopus and Web of Sciences were one of today's leading sources for citation data, covering multidisciplinary fields of research worldwide (Mohamed Shaffril et al., 2020).

Systematic Review Process

This systematic review has undergone three stages: identification, screening, and eligibility as suggested by Moher et al., (2009) (Figure 1).

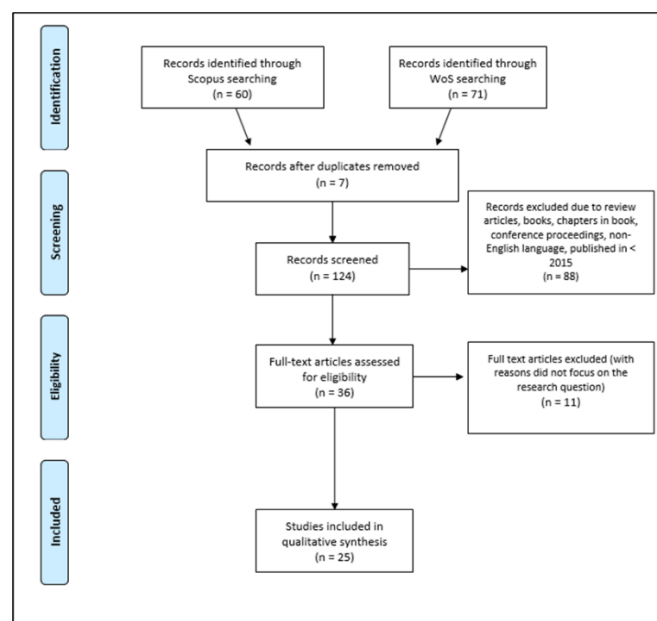


Figure 1: PRISMA Flow Diagram of the study

The first process in the systematic searching strategies was identification (Figure 1). Identification is an essential procedure in any systematic searching strategy as it involves searching for synonyms, related phrases, and variations for the keywords identified during the research question formulation process (Mohamed Shaffril et al., 2020). During this process, the authors identified the relevant keywords by referring to the thesaurus and past research. Consequently, three keywords were identified for the term "skills": readiness, ability, and competence. At the same time, synonym keywords of "independent living" were autonomous and self-supporting. Lastly, related keywords identified for "special educational needs" were disabled students, learning disability, and learning disorder.

Next, these keywords were constructed as part of a search string for the databases Scopus and Web of Sciences. Screening is the second step in systematic searching strategies. Screening involves the process of including and excluding related articles based on the criteria that had been determined by the authors (Hong et al., 2018). According to Mohamed Shaffril et al. (2020), the screening procedure's objective is to eliminate duplicate articles. This procedure made it easier for authors to eliminate duplicated articles since the number of remaining articles should decrease after the inclusion and exclusion process during the screening stage. During the screening process, seven duplicate articles were identified. These seven articles were excluded from this study, and 88 articles were automatically screened based on the sorting function available in the database. This research has sorted three categories of inclusion and exclusion criteria namely literature type, language, and timeline (Table 1).

Table 1. The inclusion and exclusion criteria.

Criteria	Inclusion	Exclusion
Literature type	Article journal	Chapter in book, proceeding, conference paper
Language	English	Non- English
Timeline	2015-2020	<2015

The first inclusion and exclusion criteria was literature type. For this study, only article journals were included in the list of potential review articles. At the same time, the chapter in the book, proceeding and conference paper were excluded from this study. The second criteria was the language, with English articles being included. In contrast, non-English articles were excluded from this research. Lastly, the third criteria was the timeline of the selected articles. It was decided that seven years was a timeline for the potential articles to be reviewed in this study. It means that only articles between the years of 2015 until 2021 were included in this review. After going through this process, the number of articles remaining was 36.

The next step in systematic searching strategies was eligibility. Eligibility is the process where the authors manually monitor all the remaining articles after the screening process to ensure all

the articles align with the research's objectives. In this process, authors had to go through the face reading of the title and abstract of all potential articles. During this process, the authors excluded 11 articles because some of these articles focused on other types of students rather than students with SEN. Some of these articles focused more on independent living skills among high school students than students with SEN. After going through this eligibility and screening process, only 25 articles were selected to be reviewed in this research.

Following the quality assessment procedure, the remaining papers were assessed, reviewed, and analysed by the authors in order to figure out an outcome that aligned with the objective of this paper. Following that, the authors conducted a thematic analysis to identify relevant themes and sub-themes based on the patterns that emerged from the evaluated and abstracted data. The authors chose the thematic analysis technique to analyse the data during this study based on the justification that thematic analysis was a method for finding, evaluating, and reporting data patterns by organising and summarising any data set in depth (Braun & Clarke, 2006). After reviewing and analysing data, ten themes were identified regarding the topic of independent living skills needed by students with SEN toward inclusive education. The authors re-examined all themes to ensure their usefulness and accurate data representation.

Quality Assessment

To ensure the quality of each study involved in this research, the researchers used the Mixed Methods Appraisal Tools (MMAT) to evaluate each study involved. According to Hong et al. (2018), MMAT is a critical appraisal tool designed for the appraisal stage of systematic mixed studies reviews, including qualitative, quantitative or any mixed methods studies. This process guided the authors with the related and necessary information that enabled them to evaluate and examine the quality and rigour of a review.

3. Results

In total, there were 25 studies reviewed in this systematic literature review (Table 3).

Authors	Country	Samples	LP	RW	FM	IP	FS	SP	PS	SC	$\frac{D}{L}$	HC
Henry, (2018)	USA	Students with special educational needs (SEN)									/	
Yıldız& Cavkaytar, (2020)	Turkey	Students with special educational needs (SEN) Parents, Teachers, Employers	/			/		/			/	/
Soenen et al., (2016)	Netherlands	Young adults with mild to borderline intellectual disability (MBID)	/					/	/	/	/	
(Frielink et al., 2018)	Netherlands	People with ID with a mild to borderline level of functioning				/					/	

O'Neill & Gutman, (2020)	USA	Youth with moderate ID.	/	/	/	/	/
Björnsdóttir & Stefánsdóttir, (2020)	Iceland	Profound intellectual and multiple disabilities (PMID)		/			
Prohn et al., (2018)	USA	Students with intellectual disability			/	/	
Matthews et al., (2017)	USA	Young adults with autism	/			/	
Bridges et al., (2020)	USA	Adults with moderate-severe intellectual disability		/		/	/
	Italy	People with intellectual disability			/		/
Qian et al., (2015)	USA	People with intellectual disability			/		
Roos & Søndena, (2020)	Norway	Parents and employees			/		/ /
Scott et al., (2017)	USA	Program Coordinator				/	
Gibbs et al., (2019)	USA	Individuals with an intellectual and developmental disability		/	/		/ /
Raspa et al., (2018)	USA	Parents of FXS child					/ /
Bishop-Fitzpatrick et al., (2016)	USA	Adolescents and adults with autism					/
Kauppila et al., (2020)	Finland	Young people with learning disabilities				/	/
Fellinger et al., (2020)	Austria	Deaf adults with intellectual disability	/		/		
Garrels, (2019)	Norway	Students with autism spectrum			/	/	
Overmars-Marx et al., (2017)	Netherlands	Staff from group homes			/		
Chou et al., (2016)	USA	Students with learning disability				/	

Garrels, (2017)	Norway	Student school without disabilities	with and intellectual			/
King et al., (2017)	Ireland	Adults with disabilities	learning			/
Trip et al., (2015)	New Zealand	Staff from intellectual services	residential disabilities	/		/
Whitehead et al., (2016)	New Zealand	Students with special educational needs (SEN) and support workers		/	/	
Marlow & Walker, (2015)	UK	People with intellectual family, and staff	severe disabilities,			/
LP-Language Proficiency		IP-Interpersonal Skills		SC-Self-Care		
RW-Reading and Writing Skills		FS-Friendship Skill		DL-Daily Living		
F-Financial Management		SP-Social Participation		HC-Health Care		
PS- Social Problem-Solving						

Among these 25 articles, 21 articles involved students with SEN (intellectual disability, learning disability or autism) as a part of their research, four articles analysed data from the family of people with disabilities, and seven articles had professionals (teachers, program coordinator, or staff from group homes) as a part of research participation. Most papers were from the United States of America, while three were from the Netherlands, two from Norway and New Zealand and one from Turkey, Iceland, Italy, Finland, Australia, Ireland and the United Kingdom.

This systematic literature review identified ten independent living skills required by students with SEN. These ten skills were language proficiency, reading and writing, financial management, interpersonal skills, social participation, social problem solving, self-care, daily living, and healthcare skills.

4. Discussion

In discussing the independent living skills required by students with special educational needs (SEN), the first skill that emerged was conceptual skills. Conceptual skill is a part of basic skills, enabling human beings to manage various aspects of life, such as understanding abstract concepts, problem-solving, relationships, and how the concept of specific systems works (Andjelkovic, 2017). According to Andjelkovic (2017), functional literacy and self-direction skills are among the skills that could be categorised under conceptual skills within the context of adaptive behaviour. For the purposes of this research, three subthemes were classified as conceptual skills: language proficiency (Fellinger et al., 2020; O'Neill & Gutman, 2020; Soenen et al., 2016; Yıldız & Cavkaytar, 2020), reading and writing abilities (Matthews et al.,

2017), and financial management skills (Björnsdóttir & Stefánsdóttir, 2020; Bridges et al., 2020; Frielink et al., 2018; O'Neill & Gutman, 2020; Trip et al., 2015). These three subskills have their own strength, and they are significant in ensuring that students with SEN are fit enough to live independently and thus, being granted their rights toward inclusive education. According to Shree and Shukla (2016), one of the difficulties faced by students with SEN in their daily lives is their lack of conceptual abilities, which include language and literacy, money, time, numerical ideas, and self-direction. It is vital to ensure these students obtain the same education as other students by providing comprehensive facilities adapted to their requirements (Amin et al., 2019).

The second category of skills, social skills, has been recognised as an approach to improve SEN students' communication abilities and empower them to pursue an inclusive education. Social skills may be defined as a complex multidimensional construct, comprising integrated, overlapping, and supplementing structural components of interaction, communication, participation, emotional, and social-cognitive skills (Jurevičienė et al., 2018). Numerous researchers categorise social skills into different types of abilities based on individuals' levels of complexity. According to O'Reilly et al. (2004), social skills form the basis for social competence. Social skills training can aid adolescents with disabilities in establishing strong and positive peer interactions, and enhancing students' academic performance. It could kickstart the students with SEN to explore the nature of adult responsibilities.

Social skills can be seen in a diverse range of interpersonal interactions, involving the proper abilities of verbal and nonverbal interactions and individual assessments of what conditions and behaviours will be accepted by the surroundings (Jurevičienė et al., 2018). In this research, four subskills were identified as social skills: interpersonal skills (Fellinger et al., 2020; Garrels, 2019; Overmars-Marx et al., 2017; Ptomey & Wittenbrook, 2015; Yıldız & Cavkaytar, 2020), friendship skills (Prohn et al., 2018; Roos & Søndena, 2020; Trip et al., 2015), social participation (Garrels, 2019; Panerai et al., 2018; Ptomey & Wittenbrook, 2015; Qian et al., 2015; Soenen et al., 2016; Yıldız & Cavkaytar, 2020), and social problem-solving (Chou et al., 2016; Kauppila et al., 2020; Matthews et al., 2017; O'Neill & Gutman, 2020; Prohn et al., 2018; Soenen et al., 2016). Regarding this, Raudeliunaite and Gudžinskienė (2017) suggested that communication skills could be acquired by studying and practising etiquette in a range of situations, such as encouraging students with SEN to speak courteously with others, providing a real-life example, imitating the example of others, and engaging in different activities, festivals, and collective activities. Children with special needs may find it easier to establish rapport and create synergy if they have various communication skills (Mohamed et al., 2019). Engaging in different activities and connections with others could develop a sense of belonging (Khairuddin et al., 2020), which acts as an internal stimulus for students with SEN to become more active in their daily lives and simultaneously to provide them with a brighter opportunity for inclusive education.

The last category in discussing the independent living skills needed by students with SEN was practical skills. Practical skills focus more on a daily routine, like cooking, basic housework, and hygiene abilities, and they are the most easily learned independent living skills as most tend to learn how to work by cleaning their homes when living with their family. Meanwhile,

the most challenging skills to learn are economic abilities, such as budgeting, allocating funds, paying for services and purchasing. Raudeliunaite and Gudžinskienė (2017) suggested that engaging young individuals with intellectual disabilities in practical activities could help promote independent living skills. As stated by Mohamed et al. (2019), complete facilities tailored to their requirements should enable persons with disabilities to access an excellent education.

Students with SEN should be encouraged to make decisions by leading them on the proper path while simultaneously respecting their interests. They are also trained on responsibility for their decisions and the repercussions of those actions. Regarding this, specialised services must be offered to maximise the students' capacity to engage in the education process (Amin et al., 2019).

Based on the findings, none of the three adaptive skills—conceptual, social, and practical—stood out as more crucial than the others. Undeniably, each category of these skills seemed to have significant importance in empowering SEN students to access inclusive education. For example, in the category of conceptual skills, financial management is one of the skills highlighted six times by the authors, thus making this skill as one of the essential conceptual skills that should be mastered by students with SEN. Concurrently, from the aspect of social skills, social participation and problem-solving skills were mentioned mostly by the authors six times, respectively. Finally, for practical skills, specific skills, like daily living and health care skills, were identified as vital skills as these skills were highlighted eleven and eight times, respectively.

Thus, in discussing inclusive education, it is beyond doubt that the role of family, educators and researchers should be recognised as important to ensure that students with SEN are trained with these skills so that they are well-prepared and their inclusive education rights are guaranteed. Teachers are responsible for training students with SEN with conceptual skills like financial management at school and other essential skills, such as reading and writing. Back at home, family members can help students with SEN adapt to practical skills, such as daily living and self-care skills. Aside from that, students themselves can master social skills like interpersonal and friendship skills by active involvement in the community. The collaborations from every element in our system could help address issues of inclusiveness and equity for persons with disabilities all around the world.

5. Conclusion

In conclusion, this systematic literature review highlighted various independent living skills that could empower students with SEN toward inclusive education. Inclusive education could be a tool for students with SEN to be well-prepared to live independently once they finish school. Lastly, as inclusive education is a worldwide agenda, UNICEF has stepped up its efforts in four crucial areas to close the educational gap for persons with disabilities through advocacy, awareness-raising, implementation support, and capacity building. Now, it is incumbent upon us to decrease the educational gap for students with SEN. Even though it is hard for us to work on all of these four areas as highlighted by UNICEF, the least thing we could do to empower students toward an inclusive education is to enhance their capacity building. Therefore, it is

hoped that this systematic literature review will guide families and educators in ensuring that students with SEN are empowered and provided with the right skills.

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