

# Assessment of Learners with Mild to Moderate Intellectual Disabilities

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**Abstract:** It is common practice to provide accommodations for learners who demonstrate mild to moderate intellectual disability (MID) in conventional assessments, including high-stakes examinations. Examples of these accommodations include extra time, readers and scribes, test formats and responses, and assistive devices. One concern is that even with these adjustments, academic success remains limited, as they do not address the cognitive load of the task. This study investigated the difficulties faced by learners with MID and how these challenges affect assessment practices. It followed a qualitative approach, using an online survey to collect qualitative data from 30 schools. Additionally, principals from six schools participated in semi-structured interviews. The data was analysed thematically. The findings indicate that learners with MID have limited cognitive abilities and, therefore, experience difficulties in processing and remembering large amounts of information at once. They also have limited executive functions, poor academic attitudes, and short attention spans.

Regarding current assessment practices, the findings reveal that all formal tests consist primarily of various short-answer question formats; all summative assessments are brief and are sometimes administered once per semester, while practical assessments are given a higher weight than theoretical assessments. This study has uncovered that the use of conventional accommodations does not adequately provide learners with MID the opportunity to demonstrate their knowledge and competencies. It recommends that education policies be amended to address the current assessment challenges in order to encourage academic success for learners with MID.

**Keywords:** Mild to moderate intellectual disability, conventional assessment, high-stakes examination, accommodations, mainstream schools.

## 1. Introduction

In South Africa, Umalusi is established as a Quality Council (QC) mandated to be the custodian of general and vocational qualifications pegged at Levels 1–4 on the General and Further Education and Training Qualifications Sub-Framework (GFETQSF) of the National Qualifications Framework (NQF). To fulfil its mandate, Umalusi is governed and guided by its founding Act, the General and Further Education and Training Quality Assurance (GENFETQA) Act (Act No. 58 of 2001, as amended in 2008), and the NQF Act (Act No. 67 of 2008), as amended. Umalusi's responsibilities in fulfilling its mandate include, among others:

- a. Ensuring the development of qualifications and part-qualifications that are necessary for the sector, which may include appropriate measures for the assessment of learning achievement.

- b. Recommending qualifications or part-qualifications to the South African Qualifications Authority for registration.
- c. Advising the relevant Minister on matters relating to the GFETQSF

In performing its responsibilities, Umalusi continues to contribute to the achievement of the objectives of the NQF, which are to:

- a. create a single integrated national framework for learning achievements;
- b. facilitate access to, and mobility and progression within, education, training, and career paths;
- c. enhance the quality of education and training; and
- d. accelerate the redress of past unfair discrimination in education, training, and employment opportunities.

One way of redressing unfair discrimination and facilitating access and progression within education and training is through inclusive education, which has, over the years, emerged as one of the best approaches to addressing challenges of fairness and diversity (Kalyanpur, 2020). South Africa has a commendable history of attempting to address the unique needs of learners through the development of legislation and policies such as the *Education White Paper 6, Special Needs Education* (Laher & Cockcroft, 2015), which is herein referred to as the *Education White Paper 6*. According to Mpu and Adu (2021), *Education White Paper 6* recognises that each learner is unique and therefore has unique features of learning needs. *Education White Paper 6* further acknowledges that learners may require more intense and specialised support due to their unique educational needs and may require placement in special schools. The Policy on Screening, Identification, Assessment, and Support (SIAS) (2014), which, amongst others, regulates the referral of learners who have cognitive learning barriers as their principal learning barrier for placement in special schools and the subsequent assistance thereto, is another important policy that is worth highlighting. Therefore, while the goal is to promote inclusive education, South Africa also has special schools catering to learners with mild to moderate intellectual disabilities (MID) and severe intellectual disabilities (SID). The emphasis on the right of every learner to access quality education, regardless of disability or special educational needs, is therefore evident. Notwithstanding the advancements in the realm of education reform, South Africa still faces challenges with fairness, quality, and accessibility to education (Luthuli, 2018). One key challenge faced in the attempt to reform education systems to be more inclusive is issues relating to the assessment of learning achievement, discussed in the section below.

### **1.1 Inclusive assessments**

According to the Policy on SIAS (DBE, 2014), curriculum and assessment adjustments necessary for learners at various levels of functioning to access the curriculum and assessment tasks best suited to their needs are outlined in Chapter 9 of the *National Protocol for Assessment Grades R - 12*. The *National Protocol for Assessment Grades R - 12* differentiates three types of alternative assessments as follows:

- a. Alternate assessments based on alternate attainment of knowledge (content concepts and skills).
- b. Alternate assessments based on modified attainment of knowledge (content concepts and skills).
- c. Alternate assessments based on Grade-level attainment of knowledge (content concepts and skills) (DBE, 2012 pg. 36).

Practice has shown that the implementation of the assessment approaches stipulated in the above-mentioned policies proves to be a challenge due to the requirements in the curriculum documents. Systemically, the Policy on SIAS provides a blueprint for the provision of relevant intervention to learners who experience barriers to learning, with regard to curriculum instruction and assessment. However, the successful implementation of this policy is highly dependent on the implementation process (Hudson et al., 2019). According to Mahlaule et al. (2024), the lack of clarity in policies always presents challenges to successful implementation. This lack of clarity leaves the policy's interpretation for implementation to the schools' and teachers' discretion.

According to research by Chauke and Tabane (2024), teachers exercise discretion in deciding how to assess learners in inclusive classrooms. Depending on the needs of each learner, teachers may modify the language used in the assessment instruments to be at a lower cognitive level, use visuals, or allow oral responses. This is congruent with the findings of a study by Kuhnert (2003) wherein the teachers modify assessments through font enlargement, using readers and scribes, putting tests onto tape, as well as extra time. The use of simplified language for students who struggle with comprehension was another noteworthy finding from the study by Kuhnert (2003); however, this would only be used as a last resort for students who follow the personalised education programme. Although some studies indicate that teachers may not be adequately trained to implement inclusive practices, a study by Themane and Thobejane (2018) indicates that teachers are willing and able; however, the schools lack sufficient resources to support inclusive education.

Lin (2021) posits that there is a need for appropriate assessment methods that provide learners with MID opportunities to demonstrate their knowledge and competencies, without changing what the assessment is intended to measure. Lin (2021) further recommends the importance of ensuring that assessment practices used in large-scale assessments such as high-stakes assessments should remain consistent with regular classroom assessment practice. Given this backdrop, despite the policies and guidelines that exist in South Africa regarding various components of inclusive education, learners with MID remain marginalised as, at present, they are unable to achieve any qualification in the general and further education and training band due to the rigidity of the requirements of traditional assessment methods. The ultimate benefit of using inclusive assessment practices lies in making learning accessible to all learners, in a way that is cognisant of the learners' cognitive abilities (Kaur et al., 2018); which is the primary goal of inclusive education.

## **1.2 Schools of skills**

South Africa, through the Department of Basic Education (DBE), has been transforming some special schools into Schools of Skills, which are primarily intended to accommodate learners aged 13 to 18 who experience cognitive barriers to learning and are unable to cope within mainstream schools due to their innate cognitive abilities. These learners have been screened and identified through the Policy on SIAS as having Mild Intellectual Disabilities (MID). Additionally, South Africa is moving towards the development of a new NQF Level 1 qualification to mark the end of compulsory schooling, specifically Grade 9. In light of these developments, Schools of Skills have been piloting occupation-oriented four-year curricula since 2017. These curricula provide learners with a skills-based education, allowing them to build and master occupation-specific skills, and offering them the opportunity to transition to the world of work or pursue further qualifications in the post-education and training (PSET) sector. Completion of the four-year occupation-oriented curricula is intended to signify the achievement of Grade 9. According to the curriculum documents for the pilot occupation-oriented curricula, Schools of Skills must administer school-based assessments throughout the academic year, as well as traditional end-of-year examinations, leading to the attainment of a qualification at Level 1 of the NQF.

## **1.3 Problem statement**

The transformation of selected South African special schools into Schools of Skills, with a focus on occupation-oriented curricula, is a commendable step towards the recognition and acknowledgment of the diverse needs of learners who experience cognitive barriers to learning. Given the intention to develop a qualification proposed for registration at Level 1 of the NQF and possibly certify learners at the end of Grade 9, there has been a delay in the finalisation of the proposed qualification, as well as the underpinning curricula. The occupation-oriented curricula have been under pilot since 2017, as the DBE attempts to establish how best the learners at the Schools of Skills can be accommodated in the qualification proposed for registration at Level 1 of the NQF. One of the various causes of the delay is related to the assessment of learners at the Schools of Skills, given the learners' identification as learners with MID. Therefore, the occupation-oriented 4-year curricula remain under the pilot, and as such, there is no nationally standardised recognition of learner achievement for the learners within the Schools of Skills, as would be the case for Grade 9 learners in mainstream schools. The finalisation of the 4-year occupation-oriented curricula, and by extension, the inclusion of the learners in the new qualification to mark the achievement of Grade 9, is dependent, amongst others, on the appreciation of the cognitive abilities of the learners. This can be achieved by first understanding the learning challenges experienced by the learners with MID and secondly, obtaining insights into the assessment practices employed by the Schools of Skills in a way that is cognisant of the cognitive abilities of the learners with MID.

### **1.3.1 Research questions**

The study sought to answer the following questions:

- What are the learning barriers experienced by the learners at the Schools of Skills?
- How do the Schools of Skills assess the learners at the Schools of Skills?

## **2. Literature Review**

### **2.1 Learning Barriers Experienced by Learners with MID**

Intellectual disability is defined by the South African Department of Health (DoH) as “a significantly reduced ability to understand new or complex information and to learn and apply new skills (impaired intelligence). This results in a reduced ability to cope independently (impaired social functioning) and begins before adulthood, with a lasting effect on development” (DoH, 2001, p. 14). The Australian Disability Clearinghouse on Education and Training (ADCET, n.d.) posits that a notable characteristic of intellectual disability is in the cognitive limitations of the individual affected. Research by Zaqueu et al. (2021) found a strong correlation between academic performance and intellectual impairment, which increases the likelihood of school failure. This is attributed to an assertion by Keskinova and Ajdinski (2018) that learners with MID experience significant learning barriers such as language and speech, in addition to their limited cognitive abilities. Studies also indicate that learners with MID are often comorbid, presenting with specific learning disorders such as dyscalculia and dyslexia, and, as Miranti (2024) further adds, the combination of these has a detrimental effect on the learners’ academic and emotional elements, leading to frustration and poor self-confidence. Miranti (2024) further asserts that such learning challenges necessitate a multidisciplinary approach and suitable learning strategies in the education of children with special needs.

Thus far, numerous studies also indicate that individuals who struggle with fundamental academic domains, especially reading and mathematics, are more likely to experience long-term challenges in many spheres of life (Richmond-Rakerd et al., 2020). Therefore, interventions are necessary to lessen academic difficulties and increase the potential of these individuals and the societies they are a part of (Geary et al., 2020). Fuchs et al. (2020) also argued that the interventions provided are influenced by each individual’s pre-existing general abilities, such as their working memory, and that the effectiveness of these interventions can be enhanced through the provision of support that addresses any domain-general weaknesses.

### **2.2 Assessment practices to accommodate learners with MID**

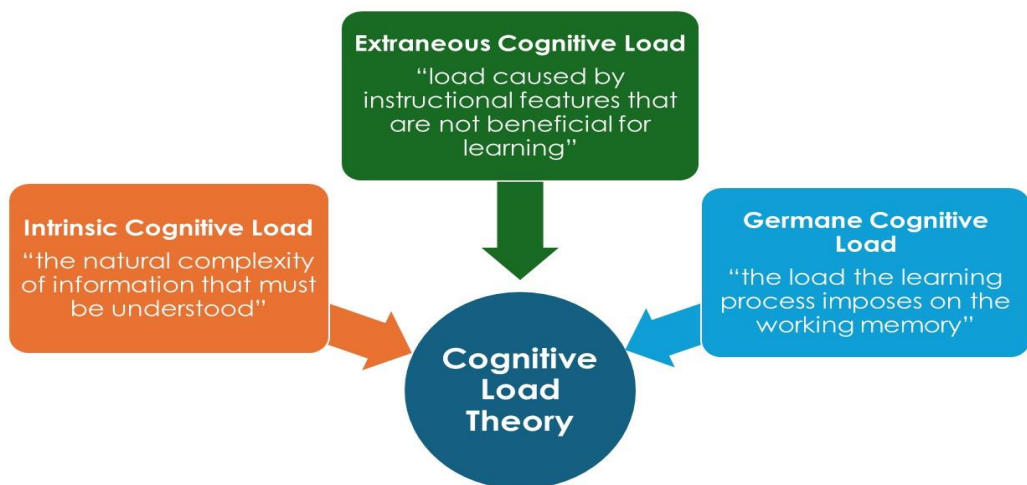
According to Camedda et al. (2024), assessment is a crucial part of teaching and learning, as it traditionally determines how well students have grasped the material to which they have been exposed. The general and further education and training sector in South Africa is currently characterised by the use of high-stakes examinations, whose marks contribute to learner certification. This feature, however, is not unique to South Africa. Mustafa (2023) asserts that

various educational systems face the challenge of ensuring that students, irrespective of their impairments, experience assessment processes that are engaging, beneficial, and conducive to their learning. Bouck and Long (2021) agree that, as with all learners, assessments impact the education of learners with intellectual impairments, particularly regarding the achievement of qualifications.

Although it is common for students pursuing the same qualification to take the same standardised test, Noman and Kaur (2020) argue that this approach diminishes the advantages of a differentiated curriculum. According to Lin (2021), assessment accommodations for learners with special educational needs typically focus on "changing regular test administration conditions" during examinations. However, it is well known that other factors, such as a learner's cognitive ability, can impact academic success (Peng & Kievit, 2020).

Standardised examinations, as noted by Awad (2024), tend to prioritise linguistic and logical-mathematical intelligence over other types. This supports the claims made by Sternberg (2003) that occupational skills in which students with disabilities may excel are not covered by standardised tests. To meet the diverse needs of learners, Awad's (2024) study recommends the use of alternative assessments, including performance-based assessments (such as presentations, projects, and portfolios), authentic assessments (real-world activities and simulations), and assessments via technology.

### 2.3 Theoretical Framework



*Figure 1: Jon Sweller's cognitive load theory*

This study is grounded in Cognitive Load Theory (CLT), coined by the Australian cognitive psychologist Jon Sweller in the late 1980s (Sweller, 1988). According to Patel and Alismail (2024), Sweller described cognitive load as the maximum amount of information that working memory can hold at once. Xu et al. (2020, p. 9) differentiated among the three types of cognitive loads which are:

*“the intrinsic load which refers to the complexity of the information being processed, which is determined by the number of interacting elements in a task; the extraneous load, also determined by the number of interacting elements, is part of cognitive load that is irrelevant or unnecessary, caused by the way the information is presented to the learner, or the procedure required to perform the task; and the germane load which refers to the cognitive resources that are allocated to meaningful, effective learning of the information represented by the intrinsic load”.*

The Centre for Education Statistics and Evaluation (2017) claimed that CLT is based on two widely accepted theories: first, that the human brain has a finite capacity to process new information at a given time; and second, that there are no known restrictions on the amount of stored information that can be processed in a given amount of time. Asma and Dallel (2020) concurred that CLT, amongst others, emphasises that the human brain has a limited capacity for information processing, as well as the significance of efficiently managing cognitive load to maximise learning. Although CLT has been used since the 1990s by researchers worldwide in a variety of fields, Schnotz and Kürschner (2007) stated that because CLT deals with how the human brain retains and processes information, it may be used in many educational contexts. The question at hand is: ‘If a normally developing human brain has limited capacity for information processing, what is the case for human brains with developmental limitations, such as in the case of learners with MID?’

There is a considerable amount of literature on the relationship between CLT and human memory, and more specifically, working memory. According to Paas and van Merriënboer (2020), human memory can be divided into working memory and long-term memory; therefore, to understand CLT, it is necessary to understand how the two types of memory process and store information. However, more recently, Patel and Alismail (2024) highlighted that in addition to working memory and long-term memory, CLT builds on a widely accepted model of human information processing in the brain, which includes sensory memory, which retains significant information long enough to go to working memory while filtering out irrelevant sensory data that we are constantly bombarded with. However, given the cognitive abilities of learners with MID at the Schools of Skills, who are expected to sit for final end-of-year examinations on work studied throughout the academic year, academic success cannot be guaranteed.

Cockroft (2015, p. 1) defines working memory as the *“ability to temporarily store and manipulate information.”* Several studies indicate that children with intellectual disabilities perform poorly on working memory tests compared to their typically developing peers, as stated by Bhati and Sharma (2023). In their study, El Wafa et al. (2020) attributed working memory impairments as a contributing factor to specific learning disabilities and asserted that evidence shows that learners facing this challenge also exhibit central executive dysfunction. Furthermore, El Wafa et al. (2020) claimed that a learner’s executive function may influence their reading development, as well as their ability to monitor and manipulate information (working memory), which plays a significant role in the development of mathematical proficiency. This is particularly relevant

since learners with moderate intellectual disabilities (MID) are known to have limited cognitive abilities, and those with comorbidities often present with specific learning disabilities such as dyscalculia and dyslexia.

Sweller's Cognitive Load Theory (CLT) suggests that, due to the limited capacity of working memory, instructional methods must be effective and should not overload the memory with unnecessary activities and information that do not contribute to learning (Patel & Alismail, 2024). This current study posits that this is even more critical in the support of learners with MID, given their innate cognitive limitations. Research indicates that interventions provided for learners with MID typically include conventional accommodations such as extra time, isolated seating, readers, and scribes (Guez et al., 2024), while other researchers mention test formats and presentation or response methods, as well as assistive devices, as additional reasonable accommodations. However, for learners with MID at the Schools of Skills, these measures do not adequately address the cognitive load of the tasks as outlined in curriculum policy documents. Therefore, in the context of this study, the focus is on how various factors impose an additional cognitive load on learners with MID and how this influences the assessment practices used by their schools.

### **3. Methodology**

#### **3.1 Research paradigm**

A paradigm in research is a collection of ideas, principles, practices, and presumptions that direct the planning, execution, and interpretation of investigations by researchers (Creswell & Creswell, 2017). The interpretive research paradigm serves as the foundation for this study. According to Ugwu et al. (2021), interpretivism's epistemology maintains that both the researcher and research participants are involved in the knowing process and the reality that is influenced by the context, whereas its ontology assumes that knowledge can be generated from the point of view of the individual who is directly involved. As such, in the context of this study, the researcher's focus was on interpreting data received from the principals of the Schools of Skills within the context in which they operate, and also interpreting their lived experience with the accommodation of learners with MID.

#### **3.2 Research approach**

This study employed a qualitative research approach characterised by data collection methods that utilise non-numerical data (Bhangu et al., 2023). According to Taherdoost (2022), qualitative research involves a more naturalistic and interpretive approach to phenomena. The objective of this research was to understand the learning challenges experienced by learners at the Schools of Skills, which informs how they are assessed. This approach was deemed appropriate, as Mulisa (2022) stated that qualitative research provides the potential to deeply explore the area of interest



to achieve the research objectives. Taherdoost (2022) further indicated that qualitative research primarily relies on the collection of primary data through methods such as interviews.

### **3.3 Research design**

Qualitative research techniques focus on humanistic, descriptive, and qualitative aspects of phenomena (Cresswell, 2007) and necessitate the use of a qualitative research design. The nature of a qualitative research design informed the researcher's choice to use an open-ended survey, the data from which was substantiated through follow-up semi-structured interviews with the school principals of the Schools of Skills. As posited by Tümen-Akyıldız and Ahmed (2021), in qualitative research, the researcher is concerned with providing a descriptive explanation of a phenomenon under investigation; hence, a qualitative research design was deemed more appropriate to provide the researcher with an in-depth understanding of the lived experiences of the principals of the Schools of Skills in the provision of education to learners with MID, more particularly in the context of this study, their assessment.

### **3.4 Target population and sampling**

A research population is the entire group of individuals or items with one or more characteristics of interest (Asiamah et al., 2017). In the context of this study, this refers to the principals of the Schools of Skills in South Africa that are piloting the occupation-oriented curricula. However, the researcher had to select a sample of these principals to serve as participants in the study using convenience sampling. According to Johnson and Christensen (2019), sampling is a procedure where the researcher specifies the characteristics of interest and tries to locate individuals with those characteristics. Schools of Skills are a relatively new concept, with various special schools gradually joining the piloting of the occupation-oriented curricula. Due to issues of accessibility, the researcher opted for convenience sampling, which, as defined by Stratton (2021, p. 374), is a “non-probability sampling that is often used for clinical and qualitative research.” The use of convenience sampling in this context ensured that the researcher focused on a sample that was easily accessible. Consequently, the sample for this study comprised 30 principals of Schools of Skills who responded to the online survey and six principals from Gauteng and Western Cape provinces of South Africa, who were visited for in-depth semi-structured interviews.

### **3.5 Data collection tools**

Data collection occurred in a sequential manner, wherein data collection was done in phases, with phase 1 being data collection through an open-ended online survey sent to Schools of Skills within the researcher's access. The open-ended survey questions afforded a qualitative description of the opinions of the school principals by providing insight into the current nature of the Schools of Skills. The use of an open-ended survey allowed the researcher to reach as many principals of the Schools of Skills in South Africa as possible, including the receipt of

qualitative data which the researcher deemed beneficial to achieve the objectives of this study.

The second phase of data collection was through in-depth semi-structured interviews with principals of Schools of Skills from the Gauteng and Western Cape provinces of South Africa. Semi-structured interviews allow for in-depth analysis from a relatively small sample size and place the research's focus on participants' views (Paradis et al., 2016). For this reason, semi-structured interviews were regarded as appropriate to strengthen and substantiate the data collected from the first phase of data collection through surveys.

### **3.6 Data analysis**

Data collected through the online survey and in-depth semi-structured interviews were analysed through content analysis, a process of categorising data and grouping data into patterns or themes (Theron, 2015). According to Dawadi (2020), thematic analysis is a technique used in research to methodically collect and examine large, complicated data sets, and it is an exploration into themes that might encapsulate the stories found within the data sets' accounts. For this study, the use of content analysis into themes allowed the researcher to integrate and organise all data collected into a coherent whole.

### **3.7 Ethical considerations**

This study considered various ethical principles by obtaining permission to conduct the study from the Department of Basic Education and the Provincial Education Departments, and fostering voluntary participation and informed consent from the schools/school representatives. Lastly, all participants were assured confidentiality.

## **4. Presentation of Results**

### **4.1 Learning barriers experienced by learners in schools of skills**

The first objective of the study was to provide an understanding of the learning challenges experienced by learners at the Schools of Skills. Results reveal that learners enrolled in Schools of Skills experience a varied range of challenges mainly attributed to their limited cognitive abilities. The limitations to the learners' cognitive abilities are often coupled with mild to moderate intellectual disabilities related to dyslexia, autism, physical disabilities, specific learning barriers, and attention deficit hyperactivity disorder (ADHD). As a result, learners exhibit limited executive functions, struggle with reading and writing, and general comprehension. Another common challenge attributed to their limited cognitive abilities is that learners at the Schools of Skills struggle to grasp and retain copious amounts of information as required by the draft curricula, as well as the pace at which the curricula are delivered.

The draft curricula of compulsory academically inclined subjects such as English and Mathematics are found to be too heavy for the learners to cope with, further playing a role in

their inability to process such information in line with required assessments. However, contrary to their struggle with academic subjects, findings further indicate that learners at the Schools of Skills excel in the elective occupation-oriented subjects, which are more practically inclined. Learners whose home language is not the Language of Learning and Teaching (LOLT) are reported to be experiencing language barriers, further intensifying their existing cognitive challenges. Furthermore, other challenges highlighted include psychosocial difficulties, which, when coupled with cognitive challenges, lead to behavioural problems, short attention spans, and poor academic attitudes. Lastly, concerns were raised that all these challenges have led to poor self-motivation, drug abuse by some learners, and high absenteeism rates, especially in academic subjects.

## **4.2 Current assessment practices**

The current assessment regime within the Schools of Skills is not standardised, as the curricula being piloted are still in draft format. Therefore, schools use various assessment practices to meet the needs of their respective learners. For example, while some schools conduct examinations once a year in October/November, others have adapted their practices to conduct examinations semesterly, aiming to reduce the workload for learners. Additionally, it has been observed that the examination question papers set for learners are not of the same standard; most schools opt to assess out of 50 marks, while a few assess up to 100 or even 150 marks for exit-level learners.

Furthermore, schools have chosen to use various short-answer question formats, which are kept brief. Some Schools of Skills have opted to further deviate from the prescripts of the draft occupation-oriented curricula by assigning a higher weight contribution for practical assessments to the overall learner mark. Lastly, although this is not current practice, some schools have recommended that the DBE consider the introduction of integrated subjects (interdisciplinary curricula), where compulsory academically inclined subjects (especially English and Mathematics) can be infused into occupation-oriented subjects, making them more manageable for learners. The rationale behind this recommendation is that learners with MID struggle to cope with the curricula and are more likely to experience academic failure if expected to sit for the same standardised examinations as their mainstream peers.

## **4.3 Accommodations and concessions**

The study also sought to understand and suggest accommodations that can be considered and subsequently incorporated for the accommodation of learners from schools of skills. Schools of Skills accommodate the learners through the use of teachers as readers and scribes for the learners, whereas a few schools use e-assessments administered through artificial intelligence applications that can read and type for the learners, additional time, isolated examination rooms due to restlessness when with large crowds, and rest periods. However, due to the innate cognitive abilities of the learners, such accommodations are not adequate; therefore, the schools

have introduced additional accommodations such as semesterly (bi-annual) examinations instead of one examination at the end of the year; examinations of between 50 and 100 marks that last one to one-and-a-half hours instead of the traditional two or three-hour examinations, short response question formats, and the use of assessment instruments that have less text and more illustrations/images.

## **5. Discussion of Findings**

The findings of this study identify the learning challenges faced by learners at the Schools of Skills due to the limitations of their cognitive abilities and further confirm the high likelihood of academic failure among these learners. The learning challenges highlighted in this study are seen as common indicators of limitations in an individual's working memory, which, as noted by El Wafa et al. (2020), contributes to learning disabilities. Bhati and Sharma (2023) also stated that working memory is essential for learning and contributes to the development of cognitive ability, further emphasising the link between working memory impairments and limited cognitive abilities. For learners with MID, CLT elucidates the formidable task that learners from Schools of Skills encounter in managing the cognitive demands of the curriculum and assessments due to their working memory limitations.

Although CLT is primarily associated with instructional design, assessment is an integral component of teaching and learning; therefore, the reduction of cognitive load, as suggested by Sweller, should be extended to assessment practices if the education system is to fully accommodate learners with MID. Thus far, the assessment practices employed by different Schools of Skills at their discretion appear effective, although they have yet to be endorsed through policy. Houichi and Sarnou (2020) alluded to several ways of managing cognitive load, such as using integrated sources of information from multiple sources and limiting or eliminating stressful situations like traditional high-stakes examinations. This supports the recommendations provided by the schools regarding the consideration of interdisciplinary curricula and alternative assessments that do not subject learners to traditional assessment practices. However, the success of such innovative strategies requires endorsement through policy.

## **6. Conclusions and Recommendations**

This study sought to investigate the assessment of learners with MID by first understanding the learning barriers experienced by these learners and, secondly, the assessment practices employed by the Schools of Skills. With regard to the learning barriers faced by learners with MID, findings indicate that they have limited cognitive abilities and therefore experience difficulties processing and remembering large amounts of information at once. Additionally, they have limited executive functions, poor academic attitudes, and short attention spans. Furthermore, the findings regarding current assessment practices reveal that all formal tests primarily consist of various short-answer question formats; all summative assessments are brief and sometimes administered semesterly, and practical assessments are given higher weight than theoretical

assessments. This study also indicates that for learners with MID to be accommodated within an education system that is cognisant of their innate cognitive abilities, traditional accommodations such as extra time, isolated seating, and the use of readers and scribes do not adequately provide these learners with the opportunity to demonstrate their knowledge and competencies.

Therefore, the study recommends that education policies be amended to address the current assessment challenges and encourage academic success for learners with MID. This includes the consideration of developing a qualification that adopts an interdisciplinary approach to education, such as integrating core subjects like Mathematics and English with elective subjects; using innovative assessment practices that take into account the learner's innate cognitive abilities; and embracing technological advances that can alleviate some of the learning barriers experienced by learners with MID.

A methodological shortcoming of this research is that the six principals who participated in the semi-structured interview phase of the study were all from urban and semi-urban Schools of Skills. Therefore, including principals from Schools of Skills located in rural parts of South Africa may yield additional findings to contribute to this body of knowledge on the operations of the Schools of Skills.

## 7. Declarations

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**Conflicts of Interest:** The author declares no conflict of interest.

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