Comparison of Characteristics of Different Functional Skills Assessment Tools for Children with Intellectual Disabilities with Kerala SCERT Functional Curriculum

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Abstract

The aim of education- individual and societal – is to shape an individual to acquire skills for independent and community living. Therefore, in the education system, curriculum for different age groups is developed to achieve this end considering the cognitive level of children in each developmental stage. For children with intellectual disabilities (ID), functional skills training is in focus owing to their 'significant limitation in intellectual functioning'. Hence Functional Skills Assessment is the first crucial component when planning educational programs for children with ID. In India, various functional skills assessment tools are used to assess and plan Individualized Education Program (IEP) for children with ID. In this paper, the researcher attempts to compare similar and distinguishing features of important assessment tools namely, Functional Assessment Checklist for Programming (FACP), Madras Developmental Programming System (MDPS), and Behavioral Assessment Scales for Indian Children with Mental Retardation (BASIC -MR), with the most recently developed Kerala SCERT Functional Curriculum, with an emphasis on important domains of skill development, scoring pattern, direction in program planning and evaluation, and their relevance in the present education system. It is noted that the functional skills assessment tools must undergo updating of skills required for children with ID of this age. Besides, the nature of these assessment tools should be supportive to the teacher community - easy to administer and score, provide accurate direction in program planning and in documentation, and have a scope for further training.

Key words: Intellectual Disability, Functional skills, FACP. MDPS, BASIC – MR, Kerala SCERT Curriculum

Introduction

In every field of rehabilitation service, be it medical, educational, community based, or vocational, assessment is an important pre- requisite for planning intervention. As far as children with disabilities are concerned, different kinds of assessments are conducted by different professionals – speech therapist, occupational therapist, physiotherapist, social worker, special educator - to understand nature and level of service required and work together for their all-round development. The professional involvement is vital because it provides 'the extent and direction of a child's personal journey through the special educational experience' (Pierangelo and Giuliani, 2006). In Special Education, the ultimate aim is to help students with disabilities reach their full potential and live an independent life in home, school, work and community environment. Hence, functional skills assessment is of utmost importance and it is the first and foremost step in program planning. It helps to determine the child's strength and needs and plan appropriate intervention programs.

Intellectual Disability and Functional Skills Assessment

The educational assessment of Children with Intellectual Disabilities (ID) involves Grade level assessments and Functional skills assessment. Grade level assessment focuses on academic skills related to the general education curriculum, whereas functional skills assessment implies understanding the level of achievement of 'skills that are necessary for an individual to adjust and cope with his/her environment independently'. Various definitions of Intellectual Disability clearly spell out the focus area of intervention – intellectual and adaptive functioning skills. The most recent American Association on Intellectual Developmental Disabilities (AAIDD) (2002) definition of intellectual disability identifies multiple domains of adaptive behavior: Conceptual, social and practical. A Functional Skills assessment tool includes items related to adaptive behavior.

Adaptive behavior is a more comprehensive area that often assesses what individuals can do and cannot do and also incorporates maladaptive behaviors that may have a negative effect on performance. Nolan et al. (2000) expanded on this idea, and presented information from numerous authors. They reported that much of the skills have been divided into two categories: tangible and intangible skills. Tangible skills comprise those skills which an individual requires for fulfilling daily living needs, for self-care, and to obtain and sustain a vocational career. They can be described as skills we know or do. Intangible skills are those skills that are needed for successful interpersonal relationships and for skills necessary to maintain employment. These skills are socially based and include decision making, problem solving, planning, communication, self-esteem, anger and grief management and overall social skills.

One of the most important reasons for teaching functional skills to individuals with ID is to increase their integration with peers, improve participation and functionality in school, home, work and community settings. The standard of ultimate functioning is 'the ever changing, expanding, localized and personalized cluster of factors that each person must possess in order to function as productively and independently as possible in a socially, vocationally and domestically integrated adult community environment'. Brown et al., (1976) delineated four domains for functional curriculum planning, including community, domestic, vocational and recreational skills. As students get older, home and community skills grow in importance, and the focus becomes increased independence in the home and community (Bambara, Browder, & Koger, 2006).

While working on productivity and independent function of an individual with intellectual disability the quality of life of the individual is improved. With functional skills assessment, we can identify core areas of intervention and plan effective tailor-made instruction to teach functional skills that improve the quality of life of the individual (Keith Storey, Craig Miner 2017). Quality of life refers to how well a person's life is going and if they are satisfied with their life. Felce (1997) has proposed six Quality of Life domains that provide a useful framework for understanding assessment purposes. These domains are physical well-being, material well-being, social well-being, productive well-being, emotional well-being and civic well-being.

We may conclude that a functional skills assessment tool, therefore, should have relevant domains and list of items that would direct a special educator to assess a child with ID and plan Individualized Education Programs (IEPs) that would result in acquiring independent living skills and thereby enhance the quality of life of an individual with intellectual disability.

Functional Skills Assessment Tools in India

In functional skills assessments, both formal and informal assessment tools should be utilized. In India, criterion referenced tools are used for functional skills assessment. Criterion referenced instruments (which are also formal methods of assessment) focuses on more specific skills and assesses what the individual can do and cannot do. This type of tool may be used to determine how many competencies were acquired in a particular training program. Student performance data guides teachers to decide on setting specific learning outcomes, the type of instruction, materials, level of task analysis and educational assistance that the student needs to achieve learning objectives. (Salvia, Ysseldyke, Bolt 2010)

An Assessment helps to determine and focus on skills which will be most beneficial or are of the most importance for that individual; assessing those areas in which the individual is having the most difficulty should follow. After an assessment of functional skills, focus can be placed on skill deficits and educators may individualize their teaching based on the student's needs.

Kerala State Council for Education Research and Training (SCERT) Functional Curriculum: Kerala Curriculum Framework (2007) revised in 2013 recommended to develop a specific educational program for children with intellectual disabilities. In the same year, Dr. Jayaraj Commission set by the State Government to study the issues pertaining to persons with ID also recommended developing a curriculum exclusively for children with intellectual disabilities. Progressively, in 2015, a curriculum was devised which consisted of assessment and evaluation of functional skills, a set of ICT resources, activity books for teachers, and a workbook for students based on five themes namely, food, shelter, organisms, vehicles and celebrations. Here, the functional assessment tool of SCERT Curriculum titled 'Evaluation Program for Intellectually Challenged Children' (EPICC) is compared with the following functional assessment skills. Listed below are the other major tools used in our country for the assessment and program planning and training of students with ID:

1. Madras Developmental Programming System (MDPS): This tool was developed by Jeyachandran P and Vimala V in 1975. It was the first behavior scale to be developed in the country for implementation of the Individualized Education Program (IEP). The latest edition was published in 1992.
2. Behavioral Assessment Scales for Indian Children with Mental Retardation (BASIC -MR): The tool was designed to elicit systematic information on the current level of performance in school going children with ID. It was prepared by Reeta Peshwaria and S Venkatesan
3. Functional Assessment Checklist for Programming (FACP): It was developed by National Institute for the Empowerment of Persons with Intellectual Disabilities (NIEPID) in 1994 by Jayanthi Narayan, Vijayalakshmi Myredi, Rao & Rajgopal. This is an activity-based checklist used for assessment and planning educational programs for children with ID.

Comparative analysis of Functional Skills Assessment tools

a) Age group/ Class-wise grouping

Functional Tools	Variables	
	Age-wise grouping	**Class -wise grouping**
MDPS	Not specified	Not Specified
BASIC – MR	3 to 16 (or 18) years	Not Specified
FACP	3 to 18 years	7 groups as per ability level
EPICC	6 to 11 years	Primary group

Age and class-wise grouping support in understanding the level of performance of students with ID at a particular chronological age. Except for MDPS, other tools clearly specify age or class wise grouping. BASIC -MR provides an age-wise skills acquisition whereas FACP gives an outlook to both chronological and ability level in its grouping criteria. When comparing EPICC with other tools, it focuses only on the primary group of students (6 to 11 years), therefore students undergo assessment and training under this curriculum over five years.

b) Domains of assessment

Functional Tools	Variables		
	Domains & Subdomains	**Number of items in each domain**	**Nature of items presented**
MDPS	**18 domains** 1. Gross Motor 2. Fine Motor 3. Eating 4. Dressing 5. Grooming 6. Toileting 7. Receptive 8. Expressive Language 9.Social Interaction 10. Reading 11. Writing 12. Numbers 13. Time 14. Money 15. Domestic 16. Community Orientation 17. Recreation, Leisure time activities 18. Vocational	Each domain has 20 items	Developmentally sequenced
BASIC – MR	**Two Parts** **Part A: Skill Behaviors 7 domains** 1. Motor 2. Activities of daily living 3.Language 4. Reading – Writing 5. Number – Time 6. Domestic – Social 7. Prevocational – Money **Part B: Problem Behaviors -10 domains** 1.Violent & Destructive Behavior 2. Temper Tantrums 3. Misbehaves with others 4. Self-injurious Behaviors 5. Repetitive Behaviors 6. Odd Behaviors 7. Hyperactive 8. Rebellious Behaviors 9. Antisocial Behaviors 10. Fears	Part A: Each domain has 40 items Part B: 75 items grouped	Presented in clearly observable and behavioral terms and developmentally sequenced
FACP	**5 domains** 1. Personal 2. Social 3. Academic	Items vary in number under each domain. Provision to add	Presented in Behavioral terms and

	4. Occupational 5. Recreational (Indoor & Outdoor)	items under each item.	developmentally sequenced
EPICC.	**8 domains** **1. Language skills** (Receptive, Expressive, Reading, Writing) **2. Environmental Skills** General knowledge, Vehicle, House, Environment, Community services, National Affairs, Festivals) **3. Mathematical Skills** **4. Domestic Skills** (Gross Motor, Fine Motor, Domestic) **5.Social Skills** (General information) **6. Healthy Living Skills** (Eating, Food habits, Toileting, Dressing, Grooming, Healthy living, Safety & Hygiene) **7.Sports & Arts Skills** **8.Technological Skills**	Items vary in number under each domain	Presented in Behavioral terms and developmentally sequenced

The tools vary in presenting domains for assessment. MDPS has classified Activities of Daily Living, Communication and Functional academics skills into different major domains that result in 18 areas, whereas BASIC – MR and FACP have only major domains of functional skills. All the four assessment tools have almost the same areas with exceptions noted in BASIC – MR by adding Part B dealing with problem behaviors and EPICC has included environmental and technological skills that would enable the student to have an orientation to the environment one lives in and also to have access to the technological devices. This additional part in the skill achievement area makes the tool relevant in the present time. It is notable that only FACP has addressed recreational skills which is also an important area of assessment and intervention. All the assessment tools are developmentally sequenced and presented in clear observable and measurable terms.

c) Assessment & Scoring

Functional Tools	Variables		
	Method	**Scoring**	**Score Presentation**
MDPS	Clearly specified (observation, gathering information, performance of child on-task)	**Qualitative measurement** Grade & Color coding Can Perform – A (Shade blue) Yet to Perform – B (Shade red)	A Behavioral Profile with instruction provided
BASIC – MR	Clear instructions provided for administration of tool Glossary provided to clarify meanings of certain items	**Quantitative scoring procedures**: Independent (Score 5) Clueing (Score 4) Verbal Prompting (Score 3) Physical Prompting (Score 2) Totally dependent (Score 1) Not applicable (Score 0)	Provision to present cumulative percentages and graphic profiles
FACP	Guidelines provided for using the checklist. There is an entry level assessment every year.	**Qualitative and quantitative measurement**: Keys: + = Yes C = Occasional cues NA = Not Applicable NE = No Exposure PP = Physical Prompt VP = Verbal Prompt GP = Gestural Prompt M = Modelling - = No Provision to use any other codes **Scoring of Recreational skills** A = Takes initiative and participated effectively B = Participates effectively when initiated C = Involves self but not aware of rules/does not cooperate D = Observes with interest E – Not interested NE = Not Exposed Percentages of the scores are taken	Progress report, Brief teaching plan of activities and Graph profiles are provided
EPICC	Guidelines provided for using the	**Quantitative scoring procedures** Independent (Score 5) Clues (Score 4) Verbal Prompt (Score 3)	Weekly, monthly, quarterly and annual progress

	curriculum for assessment.	Physical/Modeling/ Gestural Prompt (Score 3) Fully Dependent (Score 1) Not applicable (Score 0) **Grading** 75 – 100: A 60 -74: B 45 – 59: C 33 – 44: D Below 33: E	reports are included

All the assessment tools have clearly provided guidelines for tool administration and scoring. MDPS has a qualitative approach in scoring while BASIC -MR, and EPICC adopt a quantitative approach. FACP follows both quantitative and qualitative procedures in scoring. In its scoring pattern in recreational skills, FACP has introduced different levels of involvement of students in indoor and outdoor games. The assessment tools provide a profile to mark scores. In addition, BASIC – MR and FACP provide a graphic representation of scores whereas MDPS follows color coding and different kinds of strokes across the column denoting respective quarterly evaluation.

d) Program planning (Curriculum)

Functional Tools	**Variables**	
	Nature of tool	**Duration of program**
MDPS	Serves as an assessment tool and supports program planning	Suggests quarterly planning of IEPs
BASIC – MR	Serves as an assessment tool	Suggests quarterly planning of IEPs
FACP	Serves as an assessment tool and supports program planning	Suggests quarterly planning of IEPs
EPICC	Serves as an assessment tool and a curriculum	Suggests quarterly planning of IEPs

All the assessment tools are suggestive of program planning for three months (3 quarters in a year). Hence all the assessment tools have the provision for marking scores quarterly and plan further programs. MDPS, FACP and EPICC mention the nature of the tool as a means for assessment and for program planning. Though BASIC – MR, has provision for scoring quarterly, it has not been specified to use as a curriculum for setting goals and formulating IEPs. EPICC in its name itself specifies it as a curriculum for primary level students with intellectual disabilities.

e) Evaluation & Promotion

Functional Tools	Variables		
	Type of Evaluation (Formative/Summative)	**Marking of scores**	**Promotion criteria**
MDPS	Formative evaluation after each quarter (3 quarters)	Provision for score marking each quarter	Not mentioned
BASIC – MR	Formative evaluation after each quarter (3 quarters)	Provision for score marking each quarter	Not mentioned
FACP	Formative evaluation after each quarter (3 quarters) and a summative evaluation happens as an entry level assessment in the following year	Provision for score marking each quarter	Clearly specified: If a student acquires 80% he can be promoted to next class. If student fails to achieve, may continue in Primary II and once reaches age 14 moves to pre-vocational group
EPICC	Formative evaluation after each quarter (3 quarters).	Provision for score marking each quarter and monitoring of progress weekly and scores monthly	Not mentioned

All the assessment tools suggest formative evaluation in every quarter with an exception of FACP with a provision for summative evaluation as an entry level assessment for the following year. Since FACP has class-wise grouping, it clearly specifies criteria for promotion to the next class. In its evaluation system, EPICC provides monitoring of progress in a weekly manner. Therefore, a profile is provided for weekly scoring and an aggregated monthly score. This supports teachers and parents to understand the pace of skill achievement or to decide if any modification of strategies or skill is required.

Conclusion:

Education is intended to provide all students with the skills and competencies they need to enhance their lives and the lives of their fellow citizens. To achieve this end, assessment is a critical practice. It serves the purpose of selecting appropriate individualized educational goals, planning child-oriented instruction, monitoring student progress, modifying instruction, and working systematically to enhance student competence. It is a critical component of teaching, and so it is necessary for teachers to have good skills in assessment and a good understanding of assessment information. Assessment tools must meet professional standards and it is critical that testing be done correctly, well-documented. The professionals who assess students must do it with 'technical accuracy, fidelity and integrity'. The population of students attending schools change, and bring new challenges to the educational personnel who are working to enhance the academic and behavioral competencies. Therefore, assessment practices should be dynamic in nature. New or updated tests must be available, and old ones go away. In this light it is important to note that assessment tools were developed to meet the needs of the time, to support institution -based training programs and in later stages for planning educational programs in special schools. The nature of EPICC seems to be

supportive of the current educational system i.e. inclusive education program. This tool can be used in general and special education systems alike.

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