

SPECIMEN FORMAT FOR THESES OF MONTH

Faculty	:	Home Science
Department	:	Human Development
Branch/ Area:	:	Learning Disability
Sub Subject Heading:	:	Knowledge Attitude Praticce
Candidate's Name	:	Rajkumari S
Candidate's Address with email	:	B3, KK's Jai Flat, Maharani Avenue Phase 1 Vadavalli, Coimbatore – 641041 anrajkumari@gmail.com
Title of the thesis	:	Development of Assessment Scale for Primary School Teachers to Identify Children with Learning Disability
(i) In Roman Script (ii) In roman Script		
Nomenclature of Degree:	:	Human Development
Month & Year of Enrolment:	:	25.07.2018
Month & Year of Registration:	:	25.07.2018
Month &Year of Submission:	:	27.09.2024
Month &Year of Award	:	24.04.2025
Name of Supervisor	:	Dr. Ramya Bhaskar
Designation of Supervisor	:	Assistant Professor(SS) and HoD (i/c) Department of Human Development Avinashilingam Institute for Home Science and Higher Education for Women

		Coimbatore -641043
Centre/department/school in Which research was conducted	:	Department of Human Development School of Home Science
University's Name & Address	:	Avinashilingam Institute for Home Science and Higher Education for Women Coimbatore -641043

Abstract within 300 words:

Learning Disabilities (LD) are a group of neurological disorders affecting cognitive skills such as reading, writing, reasoning, and mathematics. In India, approximately five children per classroom may have LD, but lack of awareness results in under-identification. As early detection is crucial, equipping primary school teachers with the right tools is vital. This study aimed to develop a standardised, user-friendly assessment scale to aid primary teachers in identifying children with LD. Secondary objectives included evaluating teachers' Knowledge, Attitude, and Practice (KAP) related to LD, identifying socio-demographic influences, and assessing the impact of a Sensitisation Programme.

The study adopted a cross-sectional design, targeting primary teachers in rural and urban Coimbatore using purposive sampling. The assessment scale was developed through literature review, expert validation, and iterative refinement, resulting in 96 items. The knowledge scale (57 items), attitude scale (35 items), and practices checklist (24 items) underwent validation and were piloted with 133 teachers. Reliability analysis via Cronbach's Alpha confirmed the scale's robustness.

The main study included 514 teachers for tool standardisation. PCA EFA, and CFA-SEM confirmed high validity. Excellent reliability was observed (cronbach's Alpha = 0.972; Kappa = 0.862; Sensitivity = 91.3%; Specificity = 96.83%). KAP analysis showed limited high knowledge (13.4%) and good practices (39.1%), with a positive correlation among KAP elements.

Socio-demographic factors like age, experience, child development/psychology in the curriculum exposure, and school type significantly influenced KAP levels. The Sensitisation

Programme notably improved knowledge and practices, but not attitudes. The HANDY TOOL FOR PRIMARY SCHOOL TEACHERS TO IDENTIFY LEARNING DISABILITIES (HT-LD) emerged as a key outcome, demonstrating its effectiveness in real classroom settings. The study further recommended teacher training and policy support to integrate LD modules in teacher education, and encouraging parent-teacher collaboration for inclusive and early interventions.

Keywords: Learning Disabilities, Primary School Teachers, Assessment Scale, Knowledge, Attitude, Practice, Sensitisation Programme, Socio-Demographic markers.

i) Major objectives :

Primary Objective

- To develop an Assessment Scale for primary school teachers to identify children with Learning Disability.

Secondary Objectives

- To assess the levels and interaction of Knowledge, Attitude and Practice (KAP) of the primary school teachers on learning disability.
- To conduct a Sensitisation Programme for primary school teachers on Learning Disability and to examine its effects on Knowledge Attitude Practice (KAP) on learning disability
- To explore the socio-demographic determinants of KAP of the primary school teachers on learning disability.

ii) Hypothesis:

H_a1: The developed Assessment Scale will have sufficient model fit indices indicating the goodness of fit

H_a2: The developed Assessment Scale will have sufficient validity and reliability

H₀3: There will be no interaction between Knowledge Attitude Practice (KAP) of primary school teachers (PRTs) on Learning Disability (LD)

H₀4: There will be no influence of socio-demographic markers on the knowledge of PRTs on LD

H₀5: There will be no influence of socio-demographic markers on the attitude of PRTs on LD

H₀6: There will be no influence of socio-demographic markers on the practice of PRTs on LD

H₀7: Sensitisation programme will not have a significant change in the KAP of primary school teachers on LD

iii) Methodology :

To achieve the research objectives and observe the assumptions, a cross-sectional research design was employed, utilising purposive sampling to select primary school teachers from schools within the Coimbatore jurisdiction of Tamil Nadu, India. The study focused on educators from mainstream classrooms, encompassing both government and private schools instructing students from grades 1 to 5. A list of primary schools in the Coimbatore district was obtained from the District Education Office to facilitate the selection process. Inclusive criteria comprised both male and female teachers from government and private schools, while exclusion criteria included teachers from special schools, tuition providers and those with disabilities. The sample was drawn from five zones across Coimbatore, namely the north, south, east, west, and central zones as well as rural areas of Coimbatore jurisdiction. Initially, 650 primary school teachers were approached, of which 562 consented to participate. Ultimately, data from 514 teachers were considered for analysis, based on the clarity and completeness of the collected scales. The Institute Human Ethics clearance was obtained.

The development of study tools progressed through a comprehensive review of existing literature was conducted, alongside theoretical orientation sessions followed by the actual construction of the tools, which included several key steps. An assessment scale tailored for PRTs to identify LD was formulated. For the development of the assessment scale, an extensive literature review was conducted, delving into textbooks, journals, and various search engines. This review meticulously sifted through text materials and research about learning disabilities, covering aspects such as definitions, characteristics, symptoms, causes, and types. Relevant full-text sources were carefully selected and scrutinised to extract pertinent statements. These statements were then systematically organised and categorised into domains to align with the

subsets of the assessment scale. Additionally, a Knowledge, Attitude, and Practices (KAP) scale focusing on teachers' understanding and approach towards learning disabilities was constructed.

The assessment scale initially had a total of 104 items generated from this wealth of relevant material, ensuring comprehensive coverage of statements related to all types of LDs. These items were integrated into a 5-point Likert scale designed to aid in the identification of SLD. The statements in the scale were based on the frequency of indications and signs exhibited by children, with a higher frequency indicating a more severe learning disability. The scoring system was intentionally designed to be straightforward for teachers to calculate, devoid of negative questions, to facilitate ease of use in practical classroom settings. The primary objective of this scale was to streamline the identification process of LD for PRTs.

Following the item generation phase, the developed scale underwent rigorous validation procedures, including face validity and content validity assessments by a panel of nine experts. This panel comprised three developmental paediatricians, one neurologist, one professor from the Department of Special Education, two professors from the Department of Human Development, one clinical psychologist, and one special educator. Incorporating the suggestions and opinions of these experts, the assessment scale was refined, resulting in a total of 96 items. The Teacher's Knowledge Scale on LD, the Attitude Scale for primary school teachers towards Learning Disability, and the Checklist on Teaching Practices of primary school teachers, also underwent rigorous assessments for both face and content validity. Suggestions and opinions from experts were integrated into the KAP Scale. Specifically, the Knowledge Scale comprised 57 items, the Attitude Scale consisted of 35 items and the Practices checklist contained 24 items. Subsequently, the tool was deployed in a pilot study involving 133 samples. The data collected from the pilot study underwent thorough analysis, including the application of Cronbach's Alpha test for tool validation. The results of Cronbach's alpha analysis provided conclusive evidence of the reliability and robustness of the developed scale, affirming its utility and efficacy in identifying LD among primary school children.

Data collection was crucial for obtaining information from participants. Active participation was seen from 564 teachers. Responses from 514 teachers were suitable for analysis. During data collection, the assessment scale for identifying learning disabilities was

administered with clear instructions. Similarly, the KAP scale and socio-demographic questionnaire were administered with detailed instructions for congruent responses from teachers. The data was scored and consolidated according to developed scoring norms to evaluate KAP levels. Higher scores corresponded to higher levels of knowledge, favourable attitudes, and good/satisfactory teaching practices. KAP levels were categorised based on the average sum of scores. This data of 514 teachers underwent validity and reliability testing procedures to standardise the scale.

The Sensitisation Programme was carefully structured to enhance teachers' knowledge about learning disabilities, ensuring they are informative, engaging, and highlighting the vital importance of sensitisation in this study. By focusing on expanding their understanding of how learning disabilities manifest in the classroom, the programme aimed to equip teachers with the necessary skills and awareness to identify and support children effectively. Sensitisation was crucial to ensure that teachers grasped the significance of their role and recognised how their teaching practices could directly influence the educational experiences and outcomes of children with LD.

The sensitisation programme was instrumental in familiarising teachers with crucial aspects such as identification techniques, assessment scales, and inclusive teaching strategies. Through structured sessions, participants were immersed in a carefully planned curriculum, designed to optimise learning outcomes.

The content development process adhered to instructional design principles, outlining learning disabilities, highlighting common signs, and emphasising inclusive teaching strategies. Materials were tailored to meet teachers' needs, utilising clear language, visuals, and interactive elements. The overarching goal was to equip educators with the knowledge and skills necessary to effectively identify and support students with learning disabilities in the classroom.

The Sensitisation Programme was grounded in Gagne's instructional design based on Gagne's Conditions of Learning Theory, providing a robust theoretical framework for its design. Following this model, content was structured into 12 one-hour sessions conducted over six weeks, with two sessions held weekly. A total of 53 teachers willingly participated in the programme, with data collected at three intervals: before, 7 days after, and 30 days follow-up test of the sensitisation programme was done to find the effectiveness.

The standardisation procedures encompassed various validity and reliability tests, including content validity, principal component analysis, exploratory factor analysis, confirmatory factor analysis (structural equation modelling), and reliability tests such as Cronbach's alpha, test-retest, inter-rater reliability, and sensitivity and specificity tests. Data collected on teachers' Knowledge, Attitude, and Practices (KAP), along with socio-demographic markers, underwent descriptive analysis to compute frequencies and percentages. Statistical analysis was conducted to fulfil research objectives, such as the Mann-Whitney U test, Kruskal-Wallis test, and post-hoc tests to assess associations and influences between variables. The Friedman Test was utilised to examine data before, after, and during the follow-up of the sensitisation programme, evaluating sample responses over time. Pairwise comparisons before and after the sensitisation programme and during follow-up were analysed using the Wilcoxon Signed Ranks Test to assess the program's impact.

iv) Findings:

The standardisation procedures encompassed various validity and reliability tests. Further factor analysis using PCA reduced the items to 48. Exploratory and confirmatory factor analysis results were as follows: KMO Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .959, Bartlett's Test of Sphericity significant at 1% level, with a total variance explained at 65.58%. Confirmatory factor analysis using Structural Equation Modeling (SEM) indicated a good model fit, with values like CFI= 0.90 and RMSEA= .062 in the acceptable range. Cronbach's Alpha test showed excellent reliability, with a value of 0.972 overall. Test-retest reliability showed Pearson correlation at 0.703, and inter-rater reliability (IRR) was 73.3%. Sensitivity and Specificity were at 91.3% and 96.83%, respectively, with a Kappa coefficient of 0.862. The developed HANDY TOOL FOR PRIMARY SCHOOL TEACHERS TO IDENTIFY LEARNING DISABILITIES (HT-LD) emerged as a key outcome, demonstrating its effectiveness in real classroom settings.

KAP analysis revealed that 13.4% of primary school teachers exhibited high knowledge, 33.7% of teachers demonstrated a favourable attitude and 39.1% of teachers employed good/satisfactory teaching practices regarding learning disabilities. A positive correlation was found between teachers' knowledge, attitude, and practice regarding LD.

Looking at the influence of Socio-Demographic markers on KAP. Higher knowledge levels were associated with older age groups (51-60 years), married teachers, those with more children, teachers with over 15 years of experience, ICSE board schools, private schools, joint families, and those with child development/psychology in their curriculum. Regarding attitude, favourable attitudes were seen in older teachers (51-60 years), married teachers, those with more children, teachers with over 15 years of experience, diploma/teacher training qualifications, ICSE board schools, private schools, and those with child development/psychology in the curriculum. Good/satisfactory teaching practices were associated with older age groups (51-60 years), married and widowed teachers, those with children, teachers with over 15 years of experience, ICSE board schools, private schools, and those with child development/psychology in their curriculum. The Sensitisation Programme significantly improved teachers' knowledge from a moderate level (mean score: 34.47) to a higher level (mean scores: 39.62 and 40.87 in follow-up). Attitudes remained neutral with no significant change (mean scores: 84.82 before, 83.15 after, and 82.98 in follow-up). Practices improved from an average level (mean score: 18.96) to satisfactory/good levels (mean scores: 19.42 and 19.87 in follow-up).

Examiners

Internal Examiner :

Dr.Anuradha K

Associate Professor

Department of Human Development

S.V. University, Tirupathi – 517502

External Examiner :

Dr.Jonte Taylor

Associate Professor of Special Education

210, CEDAR, University Park