Master of Education (M. Ed.)

Title of the Course: S.Exp. 1(L) Educational Evaluation and Tool Development

(Semester: I, II, III & IV)

Credits: 4

MM: 100 (External: 70 Internal: 30)

Contact Week 15

Introduction of the Course

An expert in the field of education can't be a real expert without having knowledge of measurement and evaluation. For having an in-depth knowledge and understanding of the field of evaluation, one needs to develop critical understanding of the concept and designs of test items and test along with their applications for various purposes of evaluation. In addition to ensuring good characteristics of test items and test, it is essential to learn about the standardization process.

Learning Outcomes

After completion of the course student will be able to:

1. develop critical understanding about the concept of measurement and evaluation in a broad and contemporary educational framework
2. analyze and comprehend various types of items and their development with reference to their objective domains and applications
3. critically look into various characteristics of test items and tests and develop procedural understanding for standardizing a test

Number of Units (4) **Weeks 15 = 60 hours**

Unit 1: Educational Measurement and Evaluation **(4 weeks = 16 hours)**

- Types of Evaluation, Taxonomy of Educational Objectives (with special reference to Bloom's, NCERT and other contemporary ideas); Scales of Measurement. Types of tests

Unit 2: Test Development **(4 weeks = 16 hours)**

- Construction of different types of test items: Objective, Short Answer and Essay answer type questions, Item Analysis, Item selection, Pilot Try-out, Finalizing the Test, Scoring of test items and test.

Unit 3: Standardization of a Test **(4 weeks = 16 hours)**

- Concepts, types and different procedures; current developments in reliability and validity and finding out reliability and validity.

Unit 4: Interpreting Test Scores **(3 weeks = 12 hours)**

- Concept, significance, and procedure. Measurement Norms: Concept, types (age, grade, percentile, sigma scores, T-scores, Sten scores and Stanines).

Practicum/ Suggested Projects / Assignments (Any Two)

1. Constructing a test
2. Developing appropriate norms
3. Establishing reliability and validity of Tool
4. Analyze existing research tools and their development process

Note: On the basis of the above, the teacher may design his/her own relevant projects/ assignments.

Head/Dean
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Essential/ Recommended Readings

- Allen, M.J. & Yen, W.M. (2004). Introduction to Measurement Theory. Illinois: Waveland Press, INC.
- Garrett, H. E. (2005). Statistics in psychology and education. New Delhi: Paragon International Publishers.
- Guba, E.G. & Lincon, Y.S. (1989). Fourth Generation Evaluation. London: Sage Publications.
- Guilford, J. P. & Fruchter, B. (1978). Fundamental statistics in psychology and education. New York: McGraw Hill.
- Guilford, J.P. (1979). Psychometric Methods. New Delhi: Tata McGraw-Hill Publishing Company Ltd.
- Gupta, S. P. & Gupta, A. (2004). Statistical methods. New Delhi: Sultan Chand and Sons.
- Hinkle, D.E., Wiersma, W. & Jurs, S.G. (1994). Applied Statistics for Behavioural Sciences. Boston: Houghton Mifflin Company.
- Kanvaria, V. K. (2011). Developing a Standardized Achievement Test. Germany: LAP.
- Kault, D. (2003). Statistics with common sense. Westport: Greenwood Press.
- Mangal, S. K. (2009). Statistics in psychology and education. New Delhi: PHI Learning Pvt. Ltd.
- Nunnally, J.C. (1981). Psychometric Theory (Second Edition). New Delhi: Tata McGraw-Hill Publishing Company Ltd.
- Popham, J.W. & Sirotnik, K.A. (1996). Understanding Statistics in Education. Illinois: F.E. Peacock Publishers, Inc.
- Raghu, A (2016). Research Tools in Computers In Teaching. German: Lambert Academic Publishing. 978-3-659- 91386-0.
- Raghu, A (2022). Psycho-social competency scale. New Delhi: Psycho Matrix. 978-81-956829-0-4
- Robson, C. (1994). Experiment, design and statistics in psychology (3rd ed.). England: Penguin Books.
- Sani, F. & Todman, J. (2006). Experimental design and statistics for psychology: A first course. MA, USA: Blackwell Publishing.
- Sharma, R. A. (2004). Essentials of scientific behavioural research. Meerut: Surya Publication.
- Singh, A. K. (1992). Research methods in psychology, sociology and education. Delhi: Motilal Banarasidas.
- Singh, A. K. (2001). Test, measurements and research methods in behavioural sciences. Delhi: Bharati Bhawan.
- Singh, K. (2007). Quantitative social research methods. Los Angeles: SAGE Publications.
- Thorndike, R. L. (1951). Reliability. In E. F. Lindquist (Ed), Educational measurement. Washington DC: American Council on Education.
- Wiersma, W. (1991). Research methods in education. Boston: Allyn and Bacon.

Teaching Learning Resources (Digital and others):

UNESCO Website, NCERT Website, MoE Website, UGC Website, NCTE Website and various other relevant websites

Teaching Learning Process

The course will be taught through interactive pedagogic methods such as classroom discussion, debates, film discussions, critical media analysis, collaborative learning tasks which enhance reading comprehension of core writings in the area and innovative projects. Reflective expression and learning will be encouraged.

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Assessment Method

The assessment will be formative in nature and will factor in student participation. Individual and group tasks and assignments will be given. Summative evaluation will be done through the end-semester examination.

Key words: Educational Measurement and Evaluation, Tool Development, Item Analysis, Reliability, Validity, Standardization

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