Improving Assessment Literacy among Teachers and the General Public Using MOOCs

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In many countries the field of measurement and evaluation is not as developed as it should be **in academic frameworks:**

- The number of training programs is inadequate

- There are too few faculty members at institutions of higher education

- Those who want to study in this field generally do so in the US

In Israel there are:

- very few faculty members in this field
- no advanced degree programs or training frameworks for the next generation of specialists

To redress this situation, a Committee on Advanced Studies in Psychometrics (ICAP) comprised of academics and psychometricians from various testing organizations was set up.

This committee had two main recommendations:

- Providing doctoral scholarships in this field

- Developing a certification program in psychometrics

The financial backing needed to implement the recommendations is being donated by a philanthropic foundation.

The two-year program consists of seven courses, divided into 3 categories:

- Testing theory, statistics, and research methods (CTT, IRT, DIF, Generalizability theory, Equating, Factor analysis, Data mining…)

- **Development of measurement and evaluation tools**
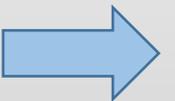
- The effects of testing on society
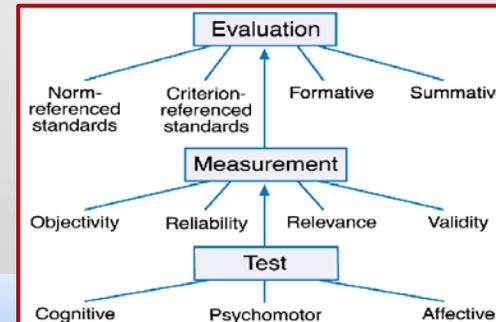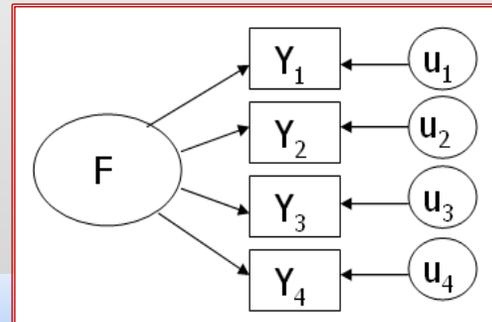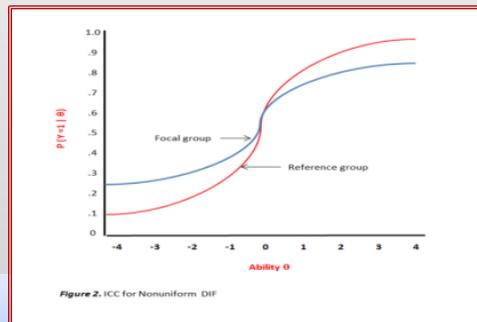
Course Main Objective:

Students will become familiar with **the basic principles of developing measurement and evaluation tools** in the field of psychology and education, including testing, questionnaires and behavioral simulations, and will learn how to assess the quality of these tools.

Secondary Objectives

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Students will learn….

- what factors must be considered in the course of developing the tools, and what advantages and disadvantages are entailed in any decision made.

- how principles learned in the course contribute to the reliability, validity and fairness of measurement and evaluation.

- to identify shortcomings in existing measurement and evaluation tools and recommend ways of correcting them.

- of the limitations of measurement and evaluation tools and how to take these limitations into account when using the tools.

It is expected to attract many students
A large proportion of these will be teachers who have to design tests of various types

It is a massive open online course (MOOC)
Course materials will be made available to all via the Internet (in 2019).
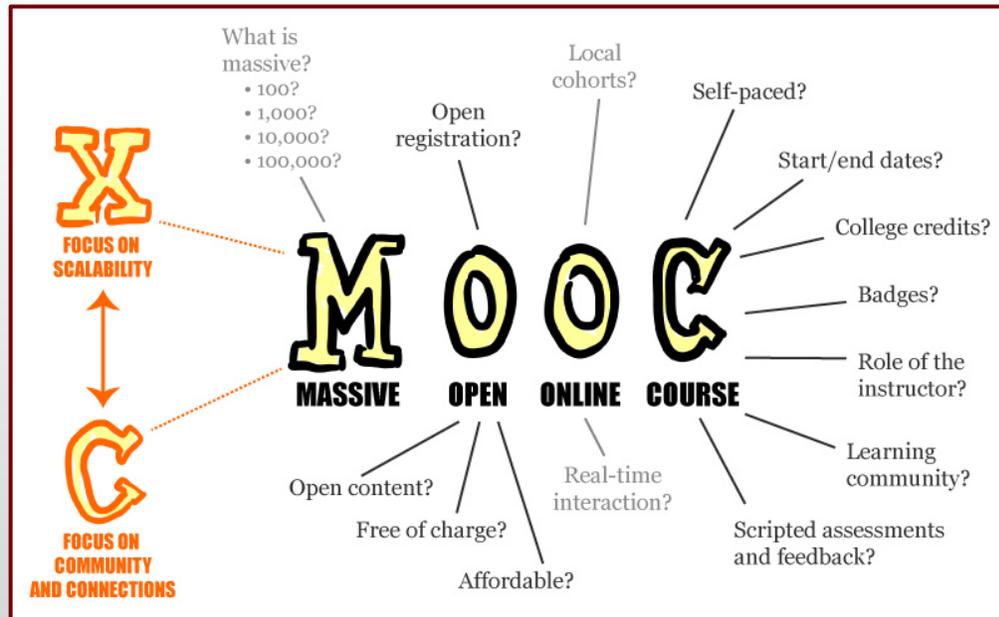
There are many concerns related to the course:

- Which topics should be included?

- How should heterogeneous target audiences be approached?

- In what ways does this MOOC supplement current textbooks on the topic?

- How can such a course be developed with a limited budget?

Which topics should be included?

**How should heterogeneous target audiences be approached?**

The course is designed in such a way that it will be relevant and attractive not just to teachers but to many target audiences – in academe, public institutions, and industry, i.e., recruitment & selection companies – that administer tests.

One of the main targets of this initiative is to increase assessment literacy among the general public.

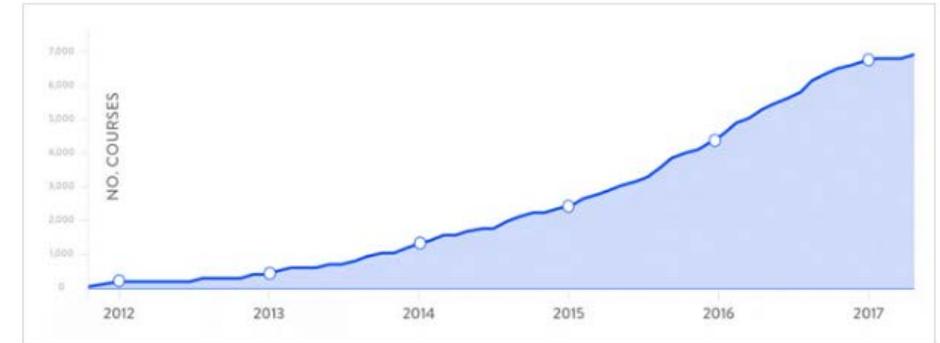**In what ways does this MOOC supplement current textbooks on the topic?**
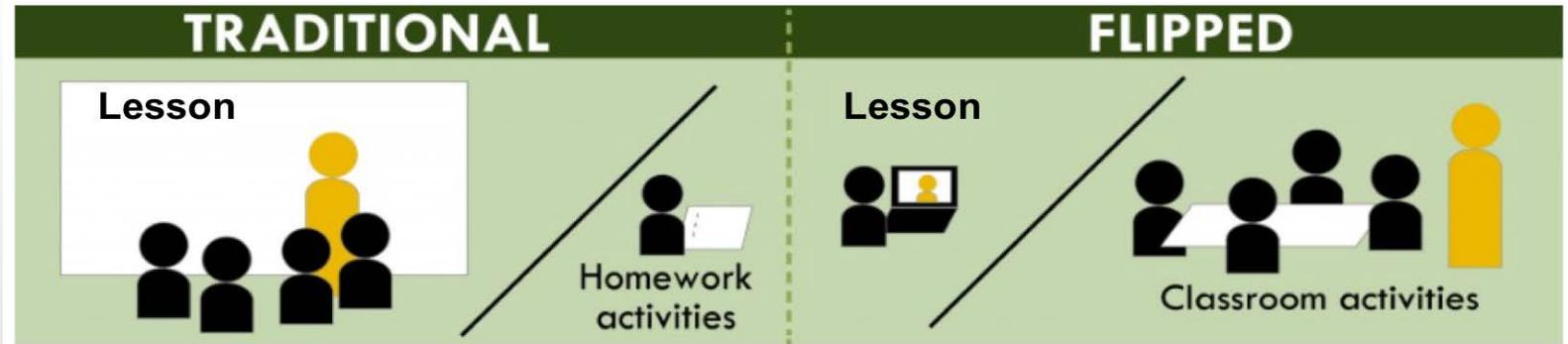
Lane, Raymond &Haladyna, 2016
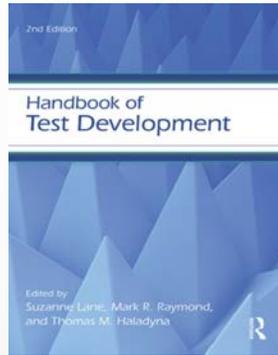
Haladyna & Rodriguez, 2013

Global MOOC enrolment jumped again last year

Number of MOOC courses available worldwide, 2012-2016. Source: Class Central

The **WordsWorthLearning Flipped Classroom** is a pedagogical model where a typical lesson for reading and spelling with homework elements is reversed. Short video lessons are viewed, along with some interactive exercises, by the students at home before the next class session. In-class the teacher can devote more time to peer-group exercises, projects and discussions, to give each student an even better and balanced understanding of the topic.

How can such a course be developed with a limited budget?

Table 8: Range of Estimated Personnel Costs per MOOC for Design, Production, and Delivery at a Large Midwestern University

	Low	High
Design and support team	$70,000	$125,000
Computer programming unit	$0	$15,000
Management (avg. across 3 MOOCs)	$77,200	$77,200
Faculty member	$5,630	$13,770
TA	$0	$13,029
Total personnel costs	**$ 152,830**	**$244,000**

200,000

This is not simple matter. Many professionals and many work hours are needed. The infrastructure is expensive. Our course budget is about 100,000 Euro, half of the estimated budget for a course of this size.

https://onlinelearninginsights.wordpress.com/tag/costs-of-developing-a-mooc/

The course comprises:

- Fifty videotaped teaching modules, each lasting about 15 minutes

- Five frontal sessions, involving mostly exercises , and many assignments

- A cadre of some 25 lecturers who teach subjects in their area of expertise

The course is divided into seven sections

Introduction, theory and practice

Cornerstones for building closed and open test items

Tests and tools in the education system

Assessment in the professional context; assessment centers & non-cognitive tests

Intelligence and specific abilities

Attitude and values questionnaires

New areas of development

The Course Structure [A]

Introduction, theory and practice
- Introduction to the course; basic concepts
- Test types, reliability and validity
- Planning of test structure

Cornerstones for building closed and open test items
- Writing closed items and answer alternatives
- Writing open questions; preparing a scoring rubric
- Item analysis
- Building a complete test
- Tools and accommodations for those with learning disabilities

Tests and tools in the education system
- Tests and observation in school and classroom
- Standard tests in the education system
- International comparison tests

The Course Structure [B]

Assessment in the professional context; assessment centers & non-cognitive tests

- Job analysis
- Assessment centers
- Scenario-based assessment using actors
- Interviews and biographical questionnaires
- Self-report personality tests
- Assessment of teamwork
- Peer assessment
- Vocational interests questionnaires

Intelligence and specific abilities

- Assessment of writing by means of composition and closed test
- Assessment of second language proficiency
- Assessment of artistic skills
- Intelligence tests

The Course Structure [C]

Attitude and values questionnaires
- Theory and development of attitude questionnaires
- Theory and development of values questionnaires

New areas of development
- Computer-based tests
- Computer mediated assessment in the classroom

We hope that presenting the course at this conference will **enhance international cooperation** with regard to the development of appropriate teaching tools and will foster a greater awareness of these issues among teachers, policymakers, and the general public.

A few examples

From the AEA

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Thank you!