

# Progress Testing of Information Literacy versus Information Literacy Self-Efficacy in Medical Students



# 20 Minutes of Talk

Introduction

Research Question

Support

Study Environment

Methods

Results

Further Research

Conclusion



Picture from <http://chucks-fun.blogspot.com/2013/11/mcpherson-cartoons.html> (19/10/2014)



Is there a relationship between the items of the Progress Test of Information Literacy and items of the Information Literacy Self-efficacy Scale within the context of a medical curriculum?



Picture from <http://modeltuinezwanenburg.nl/mieren-bestrijden> (19/10/2014)





# Study Environment

- Medical curriculum Ghent University
- Results academic year 2012-2013
- n= 1253 students (90% participated)
- 6 years
- Integrated courses of IL
- Entrance Exam – Limited number of students
- Secondary school: Scientific background





Picture Enrique Simonet – La autopsia (1890) from [http://en.wikipedia.org/wiki/History\\_of\\_medicine](http://en.wikipedia.org/wiki/History_of_medicine) (19/10/2014)

## Overview

- Progress testing in medical curriculum
- Progress Testing IL (PTIL)
- 38- item IL Self-efficacy (ILSE) scale:
  - 28-item ILSE-scale of Kurbanoglu (2006)
  - 10-item ILSE-scale for medical context (MEDILSE)
- Background questions
- Anonymous – Longitudinal
- “R” for statistical analysis



Picture from <http://www.ivtg.nl/> (19/10/2014)



## PTIL

30 items

Questionnaire in Dutch

PT: Basic - advanced skills

Medical context

4 possible answers are proposed,  
only one correct answer

**Level of Certainty (0-5)**

Examples of questions :

- What is an institutional repository ?
- Wat is PubChemCompound ?
- What is publication bias ?
- What is a meta-analysis ?
- Journal Citation Reports.
- Boolean search
- Some practical questions after reading an abstract (in English)
- ...

## ILSE-Scale Kurbanoglu

7 factors and 28 items

Scale of 0-100% of  
confidence

Questionnaire in English

Factors:

1. Defining the need for information
2. Initiating the search strategy
3. Locating and accessing the resources
4. Assessing and comprehending the information
5. Interpreting, synthesizing, and using the information
6. Communicating the information
7. Evaluating the product and process

## MEDILSE-Scale

10 items

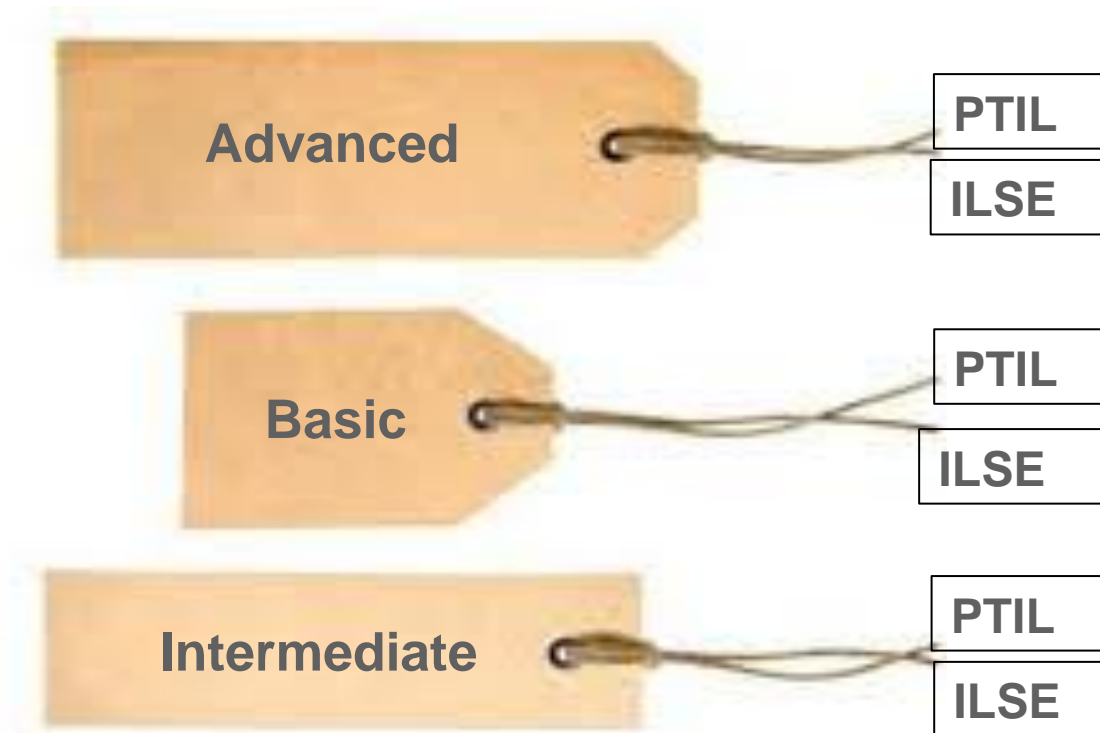
Medical context

Scale of 0-100% of  
confidence

Questionnaire in English

29. Use PICO
30. Search for EBM Information
31. Use a factual database
32. Use Mesh
33. Use PubMed
34. Retrieve an article of an institutional repository
35. Evaluate Bias
36. Find Cited References
37. Find Citing Authors
38. Reference the sources I use in a reference style used in medicine

# Mapping PTIL - ILSE



## Mapping PTIL - ILSE

PTIL question	38-item ILSE question	Mapping PTIL-ILSE
The medical literature uses standard one of following reference styles:	I feel competent to reference the sources I use in a reference style used in medicine	Basic skill
When do we speak about “Outcome Reporting Bias”?	I feel confident to evaluate bias	Intermediate skill
What is a meta-analysis?	I feel confident to identify a variety of potential sources of information	Advanced skill





Picture from <http://www.documentcapture.co.uk/2012/12/data-analysis-when-does-speculation-become-fact/>  
(19/10/2014)

ILSE PTIL

# Level of certainty

- overall significant difference ( $P < 0.001$ ) between the different years
- Y1: lower scores for PTIL and level of certainty
- Y3: integrated courses; Y4: start master thesis → ILSE ↗
- Y6: internship → ILSE, PTIL, level of certainty ✓

## Looking into detail...

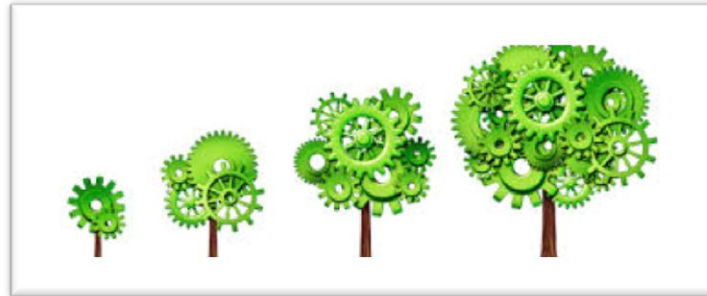
→ Y1, Y2: for 6 PTIL items → more correct answers compared to Y4-Y6

- Catalogue searching, Federated search, Reliability of sources
- Institutional Depository, Outcome reporting bias, Web of knowledge

→ for 9 PTIL-items → higher ILSE-values for those answering correctly

→ Y1: association between lower ILSE-values and incorrect PTIL-answer for 4 items

- Citation-index, Mesh, Structure of an abstract, Clinical trial



Picture from [http:// Social.enterprise.nl](http://Social.enterprise.nl) (27/09/2013)

- Longitudinal analysis evolution ILSE in curriculum
- Validation of the 38-item scale for a medical context
- Link Secondary End Terms – Goals Medical Curriculum
- Prior studies
- More thorough understanding of the ‘level of certainty’
- Qualitative study

## Conclusion

1. PTIL for longitudinal use = challenge
2. Mapping PTIL-ILSE = delicate – context related
3. A relation between PTIL and specific ILSE-items = possible
4. Level of Certainty = better evaluation of PTIL item
5. Integrated IL courses – impact on ILSE
6. Need for different teaching methods
7. Impact support Faculty – Curriculum changes
8. New generation more flexible and reflective with digital content