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Measuring teacher educators' researcherly disposition: Item development and scale construction

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Overview

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- Theoretical framework
- Problem statement
- Research goal
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- Confirmatory Factor Analysis
- Reliability Analysis
- Comparing different subgroups of teacher educators
- Discussion & Conclusion




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Teacher educators' professional development

- Developing a pedagogy of teacher education
 - *'Enacting a pedagogy of teacher education requires a deep understanding of practice through researching practice'* (Loughran, 2007)
- Focus on the development of becoming a 'teacher of teachers' and a 'researcher' (Lunenberg et al., 2014)
 - *'A rich dialectic of the two [researcher and teacher of teachers] wherein the lines between professional practice in teacher education and research related to teacher education are increasingly blurred'* (Cochran-Smith, 2005)
 - Developing an 'inquiry as stance' (Cochran-Smith, 2005) or 'researcherly disposition' (Tack & Vanderlinde, 2014)




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Problem statement

1. No clear and comprehensive understanding of these concepts available in research literature (Lunenberg et al., 2014);
2. Nor empirical quantitative work on teacher educators' researcherly disposition (Cochran-Smith & Zeichner, 2009; Lunenberg et al., 2014)



- Need for a clear conceptualization, common 'shared' language (Lunenberg et al., 2014; Vanassche, 2014);
- Empirical research on the effects of professionalisation activities on teacher educators' professional development (Lunenberg et al., 2014)




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Teacher educators' researcherly disposition

1. A 'smart' consumer of research (Loughran, 2014)
 - Being research informed
 - Knowing how to read, evaluate, critique, interpret and use research in their own work (Cochran-Smith, 2005)
2. Conduct research into your own practice (Smith, 2003)
 - Twofold goal:
 - To improve your own teaching practice
 - To contribute to the knowledge base on teacher education
3. Value the importance of a research identity as a teacher educator (Cochran-Smith, 2005)

Being a researching teacher educator?



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Teacher educators' researcherly disposition

- Dispositions play a key role in explaining behaviour (Crick & Goldspink, 2014)
- A habit of mind towards particular patterns or behaviour (Katz & Raths, 1985)
 - The tendency to be a researching teacher educator?
 - Still 'superfluous' concept – No analytical value
- Disposition as a triad of inclination, sensitivity and ability (Perkins et al., 1993):
 - Inclination: affective dimension
 - Sensitivity: behavioural dimension
 - Ability: cognitive dimension

Disposition?




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Teacher educators' researcherly disposition

The habit of mind to engage in research as a teacher educator – as both a consumer of research and a producer of research to improve your own practice and contribute to the knowledge base on teacher education (Tack & Vanderlinde, 2014):

- Affective dimension: the extent to which a teacher educator values his/her role as a teacher educator-researcher
- Cognitive dimension: a teacher educator's actual ability to consume and conduct research and to contribute to the knowledge base on teacher education
- Behavioural dimension: a teacher educator's sensitivity or alertness to research opportunities in his/her daily practice.

Teacher educators' researcherly disposition?






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Research goal



Developing a self-reported measurement instrument to assess teacher educators' researcherly disposition

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Methodology (in a nutshell)

- Survey study
- Item and scale development
 - Based on the earlier presented theoretical framework
 - 24 items (8 affective, 8 cognitive, 8 behavioural)
 - Evaluated by experts for content validity and clarity of the items
 - Six-point disagree-agree continuum
- Statistical analysis
 - Exploratory Factor Analysis (EFA) – SPSS 21
 - Confirmatory Factor Analysis (CFA) – Mplus
 - Reliability Analysis – SPSS 21

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Exploratory Factor Analysis



- Sample randomly divided (even and odd split method)
- Sample A for EFA – 461 teacher educators
- Principal Axis Factor Analysis
- Promax Rotation
 - Assumption: factors are correlated
- 4 items were deleted
 - Low communalities and cross-loadings
- Number of factors to retain = 4
 - Eigenvalues > 1
 - Scree test
 - Velicer's MAP and Parallel Test




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Participants

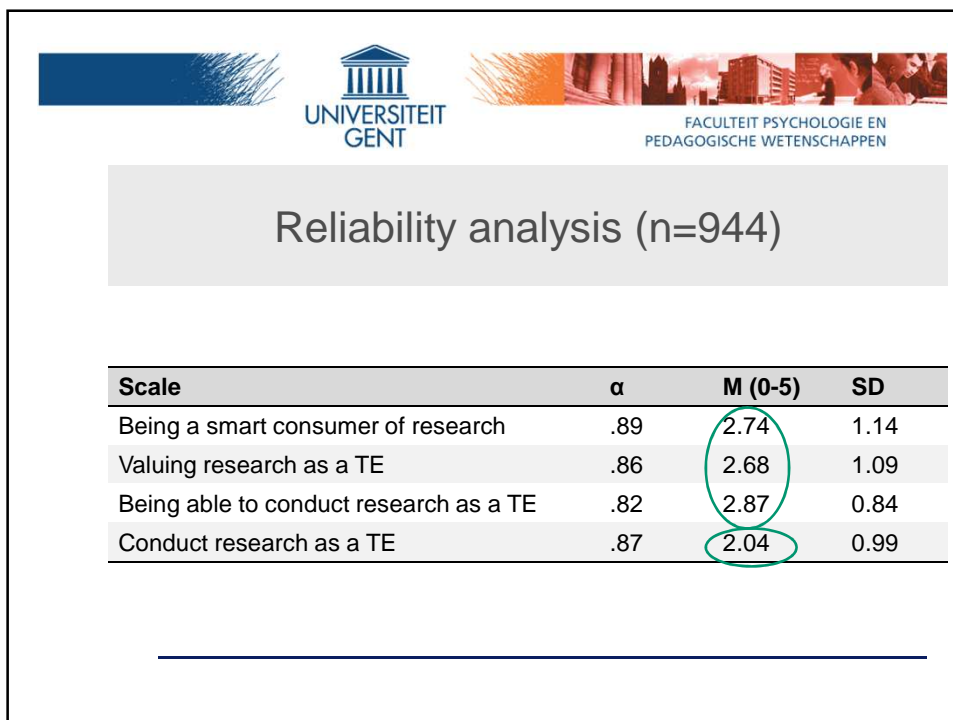
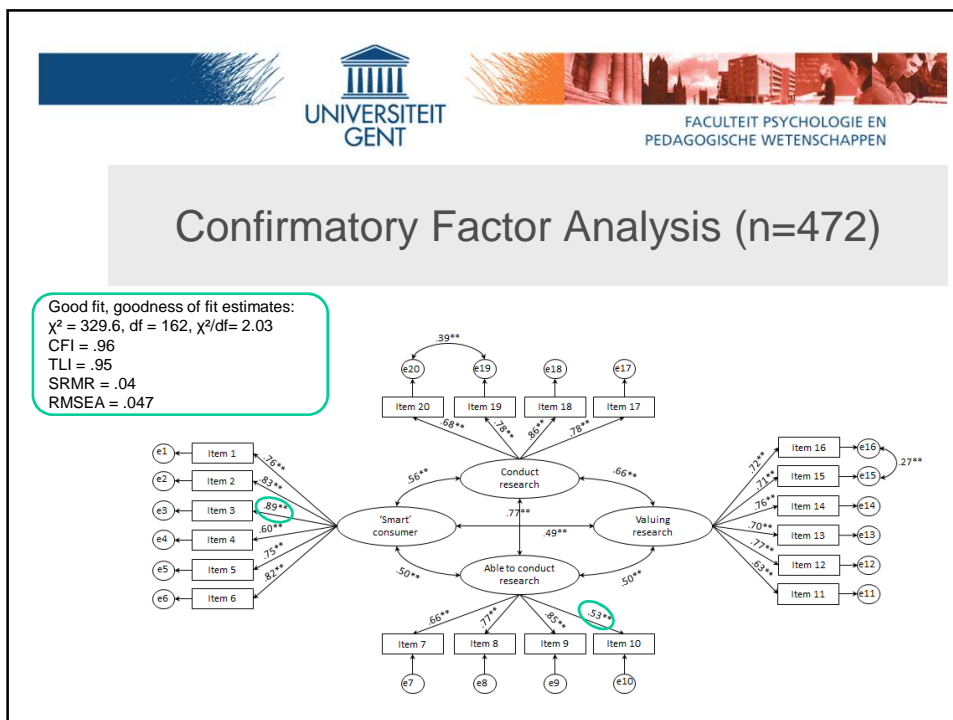
- 944 university-based teacher educators occupied in (1) a Centre for Adult Education (CAE) and/or (2) a College of Higher Education (CHE)
 - 75% females
 - 83% has a Masters' degree, 6% a PhD
 - 42% has a degree in Education
 - 97% has a teaching certificate
 - 11,2 years experience as a TE
 - 18% has a research appointment in the institution
 - 36% has other relevant research experiences





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Exploratory Factor Analysis (n=472)

- 1. Valuing research as a teacher educator**
= the extent to which a teacher educator values his/her role as a teacher educator-researcher
- 2. Being a smart consumer of research as a teacher educator**
= the degree to which a teacher educator is able to and uses existing research to inform his/her own practice
- 3. Being able to conduct research as a teacher educator**
= the extent to which a teacher educator is capable of conducting research into teacher education
- 4. Conducting research as a teacher educator**
= the degree to which a teacher educator is actively conducting research into teacher education





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Comparing subgroups of teacher educators

1. Do teacher educators from different groups interpret our measurement instrument in a similar way and are their scores comparable (measurement invariance)?
2. Do teacher educators **score significantly higher** on each of the subscales if they:
 - have earlier **research experiences**?
 - have been **teaching** in compulsory education?
 - are **experienced teacher educators** (> 3 years of experience)?
 - work in a **College of Higher Education** (vs. Centre for Adult Education)?



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Comparing subgroups of teacher educators

1. Having **research experience** leads to significantly higher scores on each of the subscales (t between 5.65 and 12.89, $p < .05$) (Cohen's $d > .60$)
2. Having **more than 3 years of experience** as a teacher educator leads to significantly higher scores on the scale 'Smart consumer of research' ($t = 2.229$, $p < .05$) (Cohen's $d = .24$)
3. Working in a **Centre for Adult Education** leads to significantly lower scores on the scale 'Conducting research as a TE' ($t = -2.332$, $p < .05$) (Cohen's $d = .25$)
4. Having **teaching experience** leads to significantly lower scores on the scale 'Conducting research as a TE' ($t = -2.332$, $p < .05$) (Cohen's $d = .25$)




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Discussion & Conclusion

- Teacher educators' researcherly disposition as a multidimensional construct
- One of the first large-scale quantitative studies on teacher educators
- Offers a reliable measurement instrument on three levels
 - Research level: comparison between populations, gender, research experiences vs. no research experiences, ...
 - Policy level: assessment instrument, shared language
 - Practical level: self-assessment instrument, instrument for professionalisation courses
- Further validation studies




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