ROBERTO RICCI

e-mail:

Citizenship:

Position: Senior Researcher by Italian National Institute for Educational Measurement (INVALSI)

WORK EXPERIENCE

September 2008 – date:

Head of National Evaluation Service by the Italian National Institute for Educational Measurement (INVALSI):

- Job Duties:
  - Head of national measurement service;
  - Coordinator for Italy of international surveys in educational field (OECD-PISA, IEA-TIMSS and IEA-PIRLS);
  - Coordinator of Italian research group for school evaluation;
  - Head of the research group for the transition of the national testing to Computer Based Testing;
  - Head of the research group for the implementation of Computer Adaptive Testing in sampling surveys;
  - Psychometric coordinator of item author groups (reading comprehension, Mathematics, and English as foreign language);
  - Co-ordination of expert commissions for item selection for the national assessment,
  - Design and organisation of pre-testing phases;
  - Implementation of the national assessment liaising with participants and the contractors;
  - Control of compliance of the implementation with the necessary technical and confidentiality standards;
  - Co-ordinate communication and publicity concerning the tests;
  - Co-ordinate professional contacts with Ministry of Education, regional and local school authorities, and experts;
  - Reporting of the results of the national assessment;
  - Co-ordination of national activities for the communication of test results to the educational community;
  - Scientific consultant for several project in educational field:
    - Reading comprehension and mathematical skills for the first stage of primary school,
    - Testing about second language learning in bilingual areas,
    - Testing for special needs children,
    - Implementation of local school evaluation services,
    - School effect evaluation by using value added models.

- **Research fields of interest:**
    - Item calibration
    - Scaling
    - Anchoring
    - Social-economic-cultural indicators
    - Value-added in Education
    - Multilevel analysis
    - Learning improvement

- **Teaching:**
    - University level:
        - Psychometrics
        - Educational Measurement
        - Computer Adaptive Testing
        - School Evaluation
        - Value added models
    - Professional training:
        - Teacher training in the field of internal and external evaluation
        - School principal training in the field of external evaluation
        - Stakeholders training in the field of external evaluation
        - School practitioners training in the field of external evaluation and school evaluation

September 2005 – September 2008:

Researcher by the National Agency for Educational System Support:

- researcher in the field of educational measurement:
    - regional reports (Emilia Romagna and Lombardia) for OECD-PISA2006 survey,
    - report for the evaluation of the regional (Emilia Romagna) school system,
    - survey in collaboration with IARD Institute (Milan, Italy) committed by "Provincia Autonoma di Trento" about student digital skills and about the "digital divide" in the Trento area,
    - survey for the improvement of scientific subjects in the high school;
    - Scientific coordinator and Statistician in the longitudinal research committed by the city of Modena (Italy) about pupil mathematical skills at the beginning of the primary school.
- teacher and supervisor for regional (Emilia Romagna) project for improvement of the learning of Mathematics;
- teacher and supervisor for regional (Emilia Romagna) project for improvement of the learning performances in the scientific subjects in the vocational schools and for dropout prevention;
- researcher in the competence evaluation in the transition period from kindergarten to primary school;
- Research Interests:
    - Multilevel Analysis in the educational measurement,
    - longitudinal, multilevel, and value added models of student performance,
    - Test theory and its applications to behavioural measurement,

- computerized adaptive testing,
- evaluation of school system,
- school effectiveness research,
- construction of measures in the educational field.

June 2007 – July 2007: Content consultant and statisticians for the international survey committed by Texas Instruments Int. Trade Corp. about the impact of small technologies on the learning of Mathematics.

January 2003 – August 2005: Phd by the Statistics Department of the University of Bologna and member of University research group in the field of measurement of pre-graduate student skills and knowledge (supervisor Prof. Stefania Mignani, Dept. of Statistics, Bologna University)

September 2003 – August 2004: Member of the national group (appointed by National Ministry of Education) for the definition of new Mathematics curricula

September 2002 – August 2003: Responsible of the ministerial research group about the use of technology in the teaching of Mathematics

January 1990 – August 2002: Teacher of Mathematics in the state high school

RELEVANT SKILLS

- Implementation of complex surveys designs
- Implementation of national project in educational field (educational measurement, school improvement, school evaluation)
- Coordination of expert groups
- Relationship skills in official situations
- Relationship capacity
- Communication skills
- Capacity to cooperative working

IT Skills:

- European Computer Driving Licence (ECDL)
- SPSS (professional use)
- STATA (professional use)
- HLM – Multilevel Analysis (professional use)
- Multilog, Bilog – Item Response Theory (professional use)
- Winsteps – Rasch Analysis (professional use)
- R-statistics (self-programming)
- Scientific Work Place

Participation in several national and international conferences about educational measurement, school evaluation, and school improvement.

EDUCATION

PhD in Methodological Statistics for the Scientific Research by the Statistics Department of the University of Bologna. Dissertation: "Item Response Theory Approach: Sequencing a Computerized Adaptive Test Battery"

Fellowship by the Department of Research Methodology, Measurement and Data Analysis, Faculty of Behavioral Sciences, University of Twente - Enschede (The Netherlands). Scientific Supervisor: Prof. Dr. W.J. van der Linden.

Languages:

Mother tongue: Italian

English: fluent (written and oral)
German: fluent (written and oral)
French: basic knowledge

PUBLICATIONS

55 Falzetti P., Ricci R. (2012), "*Buoni apprendimenti ed equità: una sfida per la scuola italiana*", Atti conferenza "ESPAnet 2012 Italia: risposte alla crisi", Roma 20-22 settembre 2012 (lavoro accettato).

54 Falzetti P., Ricci R. (2012), "*Equity in school: a challenge for regional based educational systems*", Atti conferenza "Improving Education through Accountability and Evaluation Lessons from Around the World" Roma 3-5 settembre 2012 (lavoro accettato).

53 Ricci R., Sestito P. (2012), "Il senso delle prove", *La voce.info*, http://www.lavoce.info/articoli/pagina1003164.html.

52 Ricci R. (2012), "I risultati delle rilevazioni INVALSI nella scuola italiana", *Autonomia & Dirigenza*, 2,

51 Falzetti P., Ricci R. (2011), "I modelli della famiglia di Rasch nelle ricerche sugli apprendimenti", *La Matematica nella Società e nella Cultura*, Serie I, Vol. IV, 2011, 1-27.

50 Falzetti P., Ricci R. (2011), "Un primo esperimento sullo studio diacronico dei risultati della prova nazionali INVALSI al termine del primo ciclo di istruzione in Italia", *Induzioni*, 21-34, 43.

49 Falzetti P., Ricci R. (2011), "Gli esiti della scuola statale e della scuola paritaria nelle rilevazioni del Servizio nazionale di valutazione del 2009-2010", *Induzioni*, 51-66, 42.

48 Martini A., Ricci R., (2011), "Effetti di variabili individuali e di variabili scolastiche sulla comprensione della lettura: analisi multilivello dei dati PISA 2009 dell'Alto Adige", in M. T. Siniscalco e R. Meraner (a cura di), *PISA 2009. Risultati dell'Alto Adige, Provincia Autonoma di Bolzano*, Bolzano, 2011. 185-208.

47 Martini A., Ricci R., (2011), "Caratteristiche individuali, caratteristiche delle scuole e competenze in lettura", in A. M. Benini (a cura di), *Le competenze dei quindicenni in Emilia-Romagna. I risultati OCSE-PISA 2009*, Tecnodid, Napoli, 2011, 177-206.

46 Ricci R. (2011), "Le prove standardizzate", *L'Indice della scuola*, 12, III, 21-23.

45 Ricci R. (2011), "Prove INVALSI primaria 2010. Risultati nazionali", *La vita scolastica*, Giunti, 13, 13-15.

44 Figura E., Ricci R., (2010), "Il Servizio Nazionale di Valutazione: finalità e caratteristiche", in D. Capperucci (Ed.), *La valutazione degli apprendimenti in ambito scolastico. Promuovere il successo formativo a partire dalla valutazione*, Franco Angeli, 152-169.

43 Ricci R. (2010), "La valutazione standardizzata degli apprendimenti di base nella scuola primaria", *Rivista trimestrale di scienza dell'amministrazione scolastica: Casi e questioni tra diritto e organizzazione*, 4, 3-6.

42 Ricci R., (2010), "Il processo di costruzione delle prove INVALSI", L'Educatore, 12, 37-40.

41 Martini A., Ricci R., (2010), "Individual and school variables effects on science learning: a multilevel analysis of PISA 2006 data in Alto-Adige", *Statistica*, 2, 2010, 191-208.

40 Ricci R. (2010), "Rilevazione degli apprendimenti", In Cerini G., Spinosi M. (Ed.), *Voci della Scuola*, Tecnodid, Napoli, IX, 415-424.

39 Ricci R. (2010), "The Economic, Social, and Cultural Background: a continuous index for the Italian Students of the fifth grade ", Atti Convegno SIS-Società Italiana di Statistica Padova-2010, Sessioni specializzate.

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37 Campodifiori E., Figura E., Papini M., Ricci R. (2010), "Un indicatore di status socio-economico-culturale degli allievi della quinta primaria in Italia", Collana Working Papers INVALSI, n. 2/2010, http://www.invalsi.it/download/wp/wp02_Ricci.pdf

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33 Figura E., Ricci R., (2009), "Trasparenti ed affidabili", *L'Ecole Valdôtaine*, 83, 44-47.

32 Ricci R., (2008), "La misurazione del valore aggiunto nella scuola", Collana Working paper della Fondazione Giovanni Agnelli, FGA, 9.

31 Ricci R., (2008), "Le competenze in scienze degli studenti in Emilia-Romagna", In G. Gasperoni (Ed.), *Le competenze degli studenti in Emilia-Romagna. I risultati di PISA 2006*. Il Mulino, Bologna, 2008, 23-51.

30 Mantovani D., Ricci R., (2008), "Caratteristiche individuali, caratteristiche delle scuole e competenza in scienze in Emilia-Romagna", In G. Gasperoni (Ed.), *Le competenze degli studenti in Emilia-Romagna. I risultati di PISA 2006*. Il Mulino, Bologna, 2008, 197-226.

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28 Ricci R. (2008), "Gli studenti quindicenni lombardi e le TIC nella ricerca OCSE-PISA", In G. Gay (Ed.), PISA 2006. Un'analisi statistica secondaria sul posizionamento del sistema di istruzione lombardo (cod. 2008B001), IReR Lombardia, 99-117.

27 Matteucci M., Mignani S., Ricci R. (2008), "Self-evaluation test for student guidance: the case of the University of Bologna", 1-13, AMS, deposito istituzionale dei contribute scientific dell'Ateneo di Bologna, depositato ai sensi di legge il 26.3.2008 (http://amsacta.cib.unibo.it/archive/00002431/).

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23 Garuti R., Orlandoni A., Ricci R., (2007), "Educare all'incertezza: progetti sulle competenze statistiche di base", in *Educare all'incertezza*, R. Garuti, A. Orlandoni, R. Ricci (Eds.), 5-13, IRRE-Emilia Romagna e Alma Mater Studiorum-Università di Bologna.

22 Garuti R., Orlandoni A., Ricci R., (2007), "Analisi del comportamento di studenti di Scuola secondaria in un problema di statistica e probabilità", in *Educare all'incertezza*, R. Garuti, A. Orlandoni, R. Ricci (Eds.), 53-65, IRRE-Emilia Romagna e Alma Mater Studiorum-Università di Bologna.

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17 Orlandoni A., Ricci R., (2006), "Le prove INValSI. Come leggere i risultati: uno sguardo statistico", *Innovazione Educativa*, 15-25, 3, 2006.

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14 Garuti R., Orlandoni A., Ricci R., (2005), "Una ricerca internazionale: il progetto PISA 2003", in *ValMath Valutare in Matematica*, Benini A. M. (Ed.), 91-96, Tecnodid Editrice.

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12 Mignani S., Ricci R., (2005), "Statistical methods for measuring competencies: analysis of mathematical preparation of freshmen", in M. Manaresi (Ed.), *Mathematics and Culture in Europe*, 23-37, Springer-Verlag.

11 Cagnone S., Ricci R., (2005), "Student Ability Assessment Based on Two IRT Models", *Metodološki zvezki*, 205-212, II-1, 2005.

10 Ricci R., (2005), "Interpretazione grafica di alcuni valori medi", *Nuova Secondaria*, 91-94, 10, 2005.

9 Cagnone S., Mignani S., Ricci R., Casadei G., Riccucci S. (2004), "Computer-automated testing: an evaluation of undergraduate student performance", *Atti del Tel'04 e-laboratories 2004*, Kluwer Academic Publishers.

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7 Baruzzo G., Ricci R. (2003), "I forum disciplinari delle T.I.C: quale contributo per la didattica della statistica?", *Induzioni*, 33-99, 27, 2003.

6 Ricci, R. (2002), "Un classico nel programma di matematica?" *Atti del quarto convegno nazionale dell'Associazione didattica e tecnologie*, Monopoli (BA).

5 Orlandoni A., Ricci R. (2002), "Statistica e probabilità con le calcolatrici grafiche", *L'insegnamento della matematica e delle scienze integrate*, 25 A-B, 6, 652-656.

4 Ricci, R. (2002), "Analisi grafica di una distribuzione: un approccio grafico con la TI-92 Plus" , *Cabrirrsae*, 2.

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2 Ricci, R. (2001), "Elementi di probabilità e statistica con l'ausilio delle calcolatrici grafiche", *Atti del terzo convegno nazionale dell'Associazione didattica e tecnologie*, Cattolica (RN).

1 Ricci, R. (2001), "La statistica nella scuola secondaria superiore: un problema culturale e didattico", *Statistica*, LXI, 2, 213-229.

REPORTS (contribution as author and editor)

1. National report of state examination (8th grade) for the school year 2007-2008,
2. National report of state examination (8th grade) for the school year 2008-2009,
3. National report of educational measurement (2th and 5th grades) for the school year 2008-2009,
4. Report about the measurement quality of the tests developed for the national measurement (2th and 5th grades) for the school year 2008-2009,
5. National report of state examination (8th grade) for the school year 2009-2010,
6. National report of educational measurement (2th, 5th, and 6th grades) for the school years 2009-2010.
7. National report of educational measurement (2th, 5th, 6th, 8th, and 10th grades) for the school years 2010-2011 and 2011-12.

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Available on request