

C.V. – Ron Salden

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Date of birth: 22-12-1976
Sex: Male
Nationality: Dutch

EDUCATION & JOB HISTORY

1989-1996: Groenewald high school in Stein (the Netherlands) at the preparatory scientific education level
1996-2000: University of Maastricht (the Netherlands), graduated with Master's degree in cognitive psychology
2000-2004: PhD-student at the Open University of the Netherlands
2005-2009: Postdoctoral Fellow at Carnegie Mellon University
2010-2011: Research Assistant Professor at Worcester Polytechnic Institute
2010-present: Research Fellow at Madeira Interactive Technologies Institute

PUBLICATIONS

Journal articles

- Salden, R. J. C. M., Weitz, R., Kim, R. S., & Heffernan, N. T. (2012). *Comparing worked examples and tutored problem solving in the ASSISTment system*. Manuscript submitted for publication.
- Schwonke, R., Ertelt, A., Otieno, C., Renkl, A., Alevén, V., & Salden, R. J. C. M. (2013). Metacognitive support promotes an effective use of instructional resources in intelligent tutoring. *Learning & Instruction, 23*, 136-150.
- Schwonke, R., Renkl, A., Salden, R. J. C. M., & Alevén, V. (2011). Effects of different ratios of worked solution steps and problem solving opportunities on cognitive load and learning outcomes. *Computers in Human Behavior, 27*, 58-62.
- Mihalca, L., Salden, R. J. C. M., Corbalan, G., Paas, F., & Miclea, M. (2011). Effectiveness of cognitive-load based adaptive instruction in genetics education. *Computers in Human Behavior, 27*, 82-88.
- Salden, R. J. C. M., Koedinger, K. R., Renkl, A., Alevén, V., & McLaren, B. M. (2010). Accounting for beneficial effects of worked examples in tutored problem solving. *Educational Psychology Review, 22*, 379-392.
- Salden, R. J. C. M., Alevén, V., Schwonke, R., & Renkl, A. (2010). The expertise reversal effect and worked examples in tutored problem solving. *Instructional Science, 38*, 289-307.

- Salden, R. J. C. M., Aleven, V., Renkl, A., & Schwonke, R. (2009). Worked examples and tutored problem solving: Redundant or synergistic forms of support? *Topics in Cognitive Science, 1*, 203-213.
- Schwonke, R., Renkl, A., Krieg, C., Wittwer, J., Aleven, V., Salden, R. J. C. M. (2009). The worked-example effect: Not an artefact of lousy control conditions. *Computers in Human Behavior, 25*, 258-266.
- Salden, R. J. C. M., Paas, F., & van Merriënboer, J. J. G. (2006). A comparison of approaches to learning task selection in the training of complex cognitive skills. *Computers in Human Behavior, 22*, 321-333.
- Salden, R. J. C. M., Paas, F., & van Merriënboer, J. J. G. (2006). Personalised adaptive task selection in Air Traffic Control: Effects on training efficiency and transfer. *Learning & Instruction, 16*, 350-362.
- Salden, R. J. C. M., Paas, F., van der Pal, J., & van Merriënboer, J. J. G. (2006). Dynamic task selection in Flight Management System training. *The International Journal of Aviation Psychology, 16*, 157-174.
- Salden, R. J. C. M., Paas, F., Broers, N. J., & van Merriënboer, J. J. G. (2004). Mental effort and performance as determinants for the dynamic selection of learning tasks in Air Traffic Control training. *Instructional Science, 32*, 153-172.

Doctoral Thesis

- Salden, R. J. C. M. (2005). *Dynamic task selection in aviation training*. Doctoral dissertation. Maastricht, the Netherlands: Datawyse.

Conference papers

- Salden, R. J. C. M. (2012). *Innovating scuba diving education through enhanced immersion and authenticity within the eDiving[®] environment*. Poster presented at the 34st Annual Meeting of the Cognitive Science Society, August 1-4. Sapporo, Japan.
- Otieno, C., Schwonke, R., Renkl, A., Aleven, V., & Salden, R. J. C. M. (2011). Measuring learning progress via self-explanations versus problem solving - A suggestion for optimizing adaptation in Intelligent Tutoring Systems. In L. Carlson, C. Hoelscher, & T.F. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 84-89). Austin, TX: Cognitive Science Society.
- Weitz, R., Salden, R. J. C. M., Kim, R. S., & Heffernan, N. T. (2010). Comparing worked examples and tutored problem solving: Pure vs. mixed approaches. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 2876-2881). Austin, TX: Cognitive Science Society.
- Salden, R. J. C. M., Aleven, V., Schwonke, R., & Renkl, A. (2009). *Does learning from examples improve tutored problem solving?* Paper presented at the 15th Biannual Conference of the European Association for Research on Learning and Instruction, August 25-29. Amsterdam, the Netherlands.
- Mihalca, L., Salden, R. J. C. M., Corbalan, G., Paas, F., & Miclea, M. (2009). *Comparing different instructional control strategies in learning genetics for novices: effects on*

- efficiency, effectiveness and motivation.* Poster presented at the 15th Biannual Conference of the European Association for Research on Learning and Instruction (EARLI) 2009, August 25-29. Amsterdam, the Netherlands.
- Salden, R. J. C. M., Aleven, V., Schwonke, R., & Renkl, A. (2009). *Exploring worked examples in tutored problem solving.* Poster presented at the 31st Annual Meeting of the Cognitive Science Society, July 29-August 1. Amsterdam, the Netherlands.
- Salden, R. J. C. M., Koedinger, K., Aleven, V., & McLaren, B. (2009). *Does cognitive load theory account for beneficial effects of worked examples in tutored problem solving?* Paper presented at the Third International Cognitive Load Theory Conference 2009, March 2-4. Heerlen, the Netherlands.
- Mihalca, L., Salden, R. J. C. M., Corbalan, G., Paas, F., & Miclea, M. (2009). *Using cognitive load for adaptive instruction in genetics education.* Poster presented at the Third International Cognitive Load Theory Conference 2009, March 2-4. Heerlen, the Netherlands.
- Schwonke, R., Ertelt, A., Renkl, A., Aleven, V., & Salden, R. J. C. M. (2009). *Reducing extraneous demands in learning from tutored problem solving and embedded worked examples.* Paper presented at the Third International Cognitive Load Theory Conference 2009, March 2-4. Heerlen, the Netherlands.
- Salden, R. J. C. M., Aleven, V., & Renkl, A., & Schwonke, R. (2008). Worked examples and tutored problem solving: Redundant or synergistic forms of support? In *Proceedings of the 30th Annual Meeting of the Cognitive Science Society* (pp. 589-594), July 23-26. Washington DC, USA. (**Paper won the “Cognition and Student Learning” Prize**)
- Salden, R. J. C. M., Aleven, V., Schwonke, R., & Renkl, A. (2008). *Are Worked examples and tutored problem solving synergistic forms of support?* Paper presented at the 8th International Conference of the Learning Sciences (ICLS), June 23-28. Utrecht, the Netherlands.
- Salden, R. J. C. M., Aleven, V., & Renkl, A., & Schwonke, R. (2008). *Worked examples and the Assistance Dilemma.* Paper presented at The American Educational Research Association 2008, March 23-27. New York, USA.
- Salden, R. J. C. M., Aleven, V., Renkl, A., Schwonke, R., Wittwer, J., & Krieg, C. (2007). *Does learning from examples improve tutored problem solving?* Paper presented at the 14th Biannual Conference of the European Association for Research on Learning and Instruction (EARLI) 2007, August 28-September 1. Budapest, Hungary.
- Salden, R. J. C. M., Aleven, V., & Renkl, A. (2007). Can tutored problem solving be improved by learning from examples? In *Proceedings of the 29th Annual Conference of the Cognitive Science Society* (p. 1847), August 1-4. Nashville, USA.
- Schwonke, R., Wittwer, J., Aleven, V., Salden, R. J. C. M., Krieg, C., & Renkl, A. (2007). *Can tutored problem solving benefit from faded worked-out examples?* Paper presented at The European Cognitive Science Conference 2007, May 23-27. Delphi, Greece.
- Salden R. J. C. M., Aleven, V., Renkl, A., & Wittwer, J. (2006). Does learning from examples improve tutored problem solving? In *Proceedings of the 28th Annual*

- Meeting of the Cognitive Science Society* (pp. 2099-2104), July 26-29. Vancouver, Canada.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2006). Dynamic Task selection in aviation training. In *Proceedings of the 28th Annual Meeting of the Cognitive Science Society* (p. 2602), July 26-29. Vancouver, Canada.
- Salden, R. J. C. M., Paas, F., & van Merriënboer, J. J. G. (2006). *Dynamic task selection in aviation training*. Paper presented at the Technology & Instruction Symposium, April 5-6. New York, USA.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2004). *To personalise or not to personalise? Mental efficiency as a determinant for dynamic task selection in aviation training*. Paper presented at the EARLI Junior Researchers (JURE) conference, July 5-9. Istanbul, Turkey.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2004). *To personalise or not to personalise? Mentale efficiëntie als determinant voor het dynamisch selecteren van leertaken in luchtvaarttraining*. Paper presented at the 31st Onderwijs Research Dagen, June 9-11. Utrecht, the Netherlands.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2003). *Mental Efficiency as a determinant for the dynamic selection of learning tasks in aviation training*. Paper presented at the European Association for Research on Learning and Instruction (EARLI), August 26-30. Padova, Italy.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2003). *Mentale efficiëntie als determinant voor het dynamisch selecteren van leertaken in luchtvaarttraining*. Paper presented at the 30th Onderwijs Research Dagen, May 7-9. Kerkrade, the Netherlands.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2002). *Mental efficiency as a determinant for the dynamic selection of learning tasks in aviation training*. Paper presented at the ICO Summerschool, September 1-7. Rethymnon, Crete, Greece.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2002). *Mentale efficiëntie als determinant voor het dynamisch selecteren van leertaken in luchtvaarttraining* [Mental efficiency as a determinant for the dynamic selection of learning tasks in aviation training]. Paper presented at the 29th Onderwijs Research Dagen, May 29-31. Antwerpen, Belgium.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2002). *Mental Efficiency as a determinant for the dynamic selection of learning tasks in aviation training*. Paper presented at the International Workshop “Cognitive Load Theory”, January 17-18. Erfurt, Germany.
- Salden, R. J. C. M., Paas, F., & Van Merriënboer, J. J. G. (2001). Selection of learning tasks based on performance and cognitive load scores as a way to optimize the learning process. In *2001 Annual Proceedings of the Association for Educational Communications and Technology 5* (pp. 219-225). Atlanta, USA.

LANGUAGES

Mother tongue: Dutch.

Excellent knowledge of spoken and written English, good knowledge of spoken and written German, basic knowledge of spoken and written French, Portuguese.

EXPERIENCES

Mentoring & Teaching

September 3-December 19, 2012: Teaching Human Factors course for undergraduate students at University of Madeira, Portugal and for M.Sc. students at Madeira Interactive Technologies Institute, Portugal

February 20-June 23, 2012: Taught Cognitive Psychology II course for undergraduate students at University of Madeira, Portugal

September 12-December 20, 2011: Taught Research Methods course for PhD students at Madeira Interactive Technologies Institute, Portugal

February 21-June 25, 2011: Taught Cognitive Psychology II course for undergraduate students at University of Madeira, Portugal

September 1, 2008-August 31, 2010: Mentored Loredana Mihalca (Babes-Bolyai University, Romania) on PhD project ‘Comparing different instructional control strategies in genetics education: effects on efficiency, effectiveness and motivation’

Between September 1, 2007 and August 31, 2009:

-Taught 8th, 9th and 10th grade geometry classes at Steel Valley Middle School

-Taught 10th grade geometry classes at Steel Valley, Saltsburg, Hampton, Central Westmoreland Career and Technology Center (CWCTC), Wilkinsburg and Greenville high schools

Reviewer

- Conferences
 - AERA, CHI, CogSci, CSCL, EuroCogSci, ICLS, JURE
- Journals
 - Cognitive Science, Educational Psychology Review, Instructional Science, Journal of Experimental Psychology: Applied, Learning & Instruction
- PhD Theses
 - PhD Thesis Paul Owen (2005: University of New South Wales) – Cognitive Load Theory and Music Instruction
 - PhD Thesis Mark R. Kissane (2008: University of New South Wales) – Managing Levels of Instructional Guidance in Financial Service Training: A Cognitive Load Approach
 - PhD Thesis Annishka Oksa (2009: University of New South Wales) – Expertise Reversal Effect in Explanatory Notes for Readers of Shakespearean Text

Awards

Recipient of the Cognition and Student Learning Prize sponsored by the Institute of Education Sciences (IES) at the Cognitive Science Society conference 2008.

Radio interview

March 20, 2002: Interview in German with reporter of the radio program 'Leonardo' from the German WDR 5 radio channel.