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## PUBLICATIONS

- Ziegler, E., **Edelsbrunner, P. A.**, & Stern, E. (in press). The relative merits of explicit and implicit learning of contrasted algebra principles. *Educational Psychology Review*. doi:10.1007/s10648-017-9424-4
- Etz, A., Gronau, Q. F., Dablander, F., **Edelsbrunner, P. A.**, & Baribault, B. (2017). How to become a Bayesian in eight easy steps: An annotated reading list. *Psychonomic Bulletin & Review*. doi:10.3758/s13423-017-1317-5 PsyArXiv preprint available from <http://bit.ly/23RWN6y>
- Soyylmaz, D., Griffin, L. M., Hernández Martin, M., Kucharsky, Š., Peycheva, E. D., Vaupotič, N., & **Edelsbrunner, P. A.** (2017). Formal and informal learning and first-year Psychology students' development of scientific thinking: A two-wave panel study. *Frontiers in Psychology*, 8:133. doi:10.3389/fpsyg.2017.00133
- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (2015). Pathways of conceptual change: Investigating the influence of experimentation skills on conceptual knowledge development in early science education. *Proceedings of the 37th Annual Conference of the Cognitive Science Society*, 620-625. Austin: Texas.
- Agan, M. L. F., Costin, A. S., Deutz, M. H. F., **Edelsbrunner, P. A.**, Zalis, L. & Franken, A. (2015). Associations between risk behaviour and social status in European adolescents. *European Journal of Developmental Psychology*, 12, 189-203. doi:10.1080/17405629.2014.975790
- Edelsbrunner, P. A.**, & Schneider, M. (2013). Modelling for prediction vs. modelling for understanding: Commentary on Musso et al. (2013). *Frontline Learning Research*, 2, 99-101. doi:10.14786/flr.v1i2.74

## SUBMITTED/IN PREPARATION

- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (submitted). Variable control and conceptual change: A large-scale quantitative study in primary school. PsyArXiv preprint available from <http://osf.io/preprints/psyarxiv/escqa/>
- Hickendorff, M., **Edelsbrunner, P. A.**, McMullen, J., Schneider, M., & Trezise, K.. (submitted). Informative Tools for Characterizing Individual Differences in Learning: Latent Class, Latent Profile, and Latent Transition Analysis. PsyArXiv preprint available from <http://osf.io/preprints/psyarxiv/jmtcv>
- Schalk, L., **Edelsbrunner, P. A.**, Deiglmayr, A., Schumacher, R., & Stern, E (submitted). Early inquiry-based science education matters beyond content learning.
- Ziegler, E., **Edelsbrunner, P. A.**, & Star, J. R. (submitted). Preventing interference: Reordering complexity in the learning of new concepts.
- Ziegler, E., **Edelsbrunner, P. A.**, & Stern, E. (submitted). Teacher-directed instruction outperforms self-directed learning of contrasted algebra concepts.
- Edelsbrunner, P. A.**, & Deiglmayr, A. (in preparation). Elementary school students' verbal and non-verbal knowledge about experimental design.
- Edelsbrunner, P. A.**, & Dablander, F. (in preparation). Psychometric issues in research on scientific reasoning.
- Kucharsky, Š., Griffin, L. M., Hernández Martin, M., Peycheva, E. D., Soyylmaz, D., Vaupotič, N., & **Edelsbrunner, P. A.** (in preparation). Misconceptions about Statistical Inference: Nature and Nurture in Psychology Students Across Europe.
- Soyylmaz, D., Griffin, L. M., Hernández Martin, M., Kucharsky, Š., Peycheva, E. D., Vaupotič, N., & **Edelsbrunner, P. A.** (in preparation). Developmental Interrelations in Scientific Thinking, Need For Cognition, Science Self-Efficacy, Formal and Informal Learning, and Research Aspirations in First-Year Psychology Students Across Europe.
- Vaci, N., **Edelsbrunner, P. A.**, Bilalic, F., Stern, E., Neubauer, A. C., & Grabner, R. (in preparation). Intelligence and the Development of Chess Expertise.
- Schwichow, M., **Edelsbrunner, P. A.** (in preparation). Associations of the Control-of-Variables Strategy with Science Content throughout Secondary School: An Integrated Variable- and Person-Focused Approach.

## THESES

**Edelsbrunner, P. A.** (2017). *Domain-General and Domain-Specific Scientific Thinking in Childhood: Measurement and Educational Interplay*. Doctoral thesis, ETH Zurich.

**Edelsbrunner, P. A.** (2012). *The Assessment of Spatial Ability in Adolescence*. Diploma thesis, University of Graz.

## NON-REFEREED PUBLICATIONS

**Edelsbrunner, P. A.** (2017). Introducing jamovi: Free and open statistical software combining ease of use with the power of R. *JEPS Bulletin* (Mar 23rd, 2017). Available from <http://blog.efpsa.org>.

**Edelsbrunner, P. A.,** & Thurn, C. (2015). Structural Equation Modeling: What is it, what does it have in common with hippie music, and why does it eat cake to get rid of measurement error? *JEPS Bulletin* (Dec 14th, 2015). Available from <http://blog.efpsa.org>

**Edelsbrunner, P. A.** (2014). Bayesian Statistics: What is it and Why do we Need it? *JEPS Bulletin* (Nov 7th, 2014). Available from <http://blog.efpsa.org>

**Edelsbrunner, P. A.** (2012). Advice for the Next Generation of Researchers in Psychology from an Experienced Editor. *JEPS Bulletin* (Nov 30th, 2012). Available from <http://blog.efpsa.org>

**Edelsbrunner, P. A.,** & Bohak, S. (2012). EFPSA-Kongress in Dänemark [The EFPSA-Congress in Denmark]. *Psychologie in Österreich*, 32, 224.

**Edelsbrunner, P. A.** (2011). Research as an international project. *JEPS Bulletin* (Dec 1st, 2011). Available from <http://blog.efpsa.org>

## CONTRIBUTIONS TO CONFERENCES

**Edelsbrunner, P. A.,** Soyylmaz, D., Griffin, L. M., Hernández Martin, M., Kucharsky, Š., Psycheva, E. D., & Vaupotič, N., (2017). Misconceptions about Statistical Inference in Psychology Students from Four European Countries: Correlations with relevant Learning Experiences. Talk at the *Pedagogical and Developmental Psychology Meeting*. Munster, Germany.

**Edelsbrunner, P. A.,** & Deiglmayr, A. (2017). Argumentation about the Control of Variables-Strategy: A large-scale Study in Primary School. Talk at the *17th Biennial Conference of the European Association for Research in Learning and Instruction*. Tampere, Finland.

Schalk, L., Stern, E., Kapur, M., Grabner, R. H., Kokkonen, T., **Edelsbrunner, P. A.,** Renkl, A., Greiff, S., & McGrane, J. (2017). From neurons to nations and back: Translating across levels of explanation in educational research. Roundtable at the *17th Biennial Conference of the European Association for Research in Learning and Instruction*. Tampere, Finland.

Ziegler, E., **Edelsbrunner, P. A.,** & Star, J. (2017). Confronting confusion of similar algebraic concepts by teaching multiplication before addition. Talk at the *17th Biennial Conference of the European Association for Research in Learning and Instruction*. Tampere, Finland.

Peteranderl, S., Deiglmayr, A., Stern, E., **Edelsbrunner, P. A.,** & Schumacher, R. (2017). Assessment of misconceptions about experimentation in primary school children. Talk at the *17th Biennial Conference of the European Association for Research in Learning and Instruction*. Tampere, Finland.

Schumacher, R., **Edelsbrunner, P. A.,** Schalk, L., Deiglmayr, A., & Stern, E. (2017). How regular elementary school teachers can boost their student's conceptual knowledge in physics Talk at the *17th Biennial Conference of the European Association for Research in Learning and Instruction*. Tampere, Finland.

**Edelsbrunner, P. A.,** Soyylmaz, D., Griffin, L. M., Hernández Martin, M., Kucharsky, Š., Psycheva, E. D., & Vaupotič, N., & (2017). Scientific Thinking in Psychology Students: A two-wave panel study. Poster & Talk at the *6st Junior Researcher Programme Conference*, Cambridge, UK.

Soyylmaz, D., Griffin, L. M., Hernández Martin, M., Kucharsky, Š., Psycheva, E. D., Vaupotič, N., & **Edelsbrunner, P. A.** (2017). Dare to Think Scientifically: A two-wave panel study. Poster at the *1st Junior Researcher Programme Meeting*, Madrid, Spain.

**Edelsbrunner, P. A.,** Deiglmayr, A., Schalk, L., Schumacher, R., & Stern, E. (2016). Eine grossangelegte Untersuchung des Verständnisses und der Argumentation zu experimentellen Designs bei Grundschulkindern [A large-scale investigation of primary school students' understanding and argumentation about experimental designs]. Talk at the *50th Conference of the German Association of Psychology*, Leipzig, Germany.

**Edelsbrunner, P. A.,** & Dablander, F. (2016). Psychometric Issues in Research on Scientific Thinking: What can the Rasch model tell us? Talk at the *50th Conference of the German Association of Psychology*, Leipzig, Germany.

- Stern, E., Schumacher, R., **Edelsbrunner, P. A.**, Schalk, L., & Deiglmayr, A. (2016). The impact of domain-specific learning in physics on scientific reasoning skills in elementary school children. Talk at the *31st International Congress of Psychology*, Yokohama, Japan.
- Edelsbrunner, P. A.** (2016). Quantitative Approaches to Scientific Thinking and Conceptual Change in Childhood. Talk at the *1st PhD Summer School on Conceptual Change*, Florina, Greece.
- Ziegler, E., **Edelsbrunner, P. A.**, & Stern, E. (2016). Instruction or discovering of crucial principles in mathematics learning. Talk at the *11th Biennial Conference EARLI SIG11- Teaching and Teacher Education: Diversity and Inclusion as a Challenge for Teacher Education*. Zurich, Switzerland.
- Edelsbrunner, P. A.**, & Dablander, F. (2016). Zugänge zur Rasch Modellierung in der Forschung zum Wissenschaftlichen Denken: Eine Review- und Simulationsstudie [Approaches to Rasch Modeling in research on scientific thinking: A review and simulation study]. Poster at the *12th Conference of the Austrian Association for Psychology*. Innsbruck, Austria.
- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (2015). Experimentation Skills and Conceptual Knowledge Development in Early Science Education: A Latent Transition Analysis. Talk at the *12th Meeting of the Interest Group Methods & Evaluation of the German Psychological Society*. Jena, Germany.
- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (2015). The influence of experimentation skills on the development of physics knowledge in primary school. Talk at the *16th Biennial Conference of the European Association for Research in Learning and Instruction*. Limassol, Cyprus.
- Stern, E., **Edelsbrunner, P. A.**, Schumacher, R., Schalk, L., & Deiglmayr, A. (2015) Physics instruction in elementary school can boost general experimentation skills. Talk at the *16th Biennial Conference of the European Association for Research in Learning and Instruction*. Limassol, Cyprus.
- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (2015). Pathways of Conceptual Change: Investigating the Influence of Experimentation Skills on Conceptual Knowledge Development in Early Science Education. Talk at the *37th Annual Conference of the Cognitive Science Society*. Pasadena, USA.
- Dablander, F., & **Edelsbrunner, P. A.** (2015). Item Response Theory Harming Research Progress? The Influence of Uninformed Statistical Practices on a Blooming Research Field. Poster at the *4th Junior Researcher Programme Conference*. Cambridge, UK.
- Edelsbrunner, P. A.**, & Dablander, F. (2015). Statistical and theoretical reductionism in research on scientific thinking: How much can the Rasch model tell us? Talk at the *13th European Conference on Psychological Assessment*. Zurich, Switzerland.
- Edelsbrunner, P. A.**, Deiglmayr, A., Schalk, L., Schumacher, R., & Stern, E. (2015). The Development of Physics Knowledge in Elementary School: Relations with Cognitive Skills. Poster at the *1st REASON Spring School on the Assessment of Scientific Reasoning and Argumentation*. Munich, Germany.
- Edelsbrunner, P. A.**, Schalk, L., & Stern, E. (2014). Abstract Reasoning in Maths and Non-Maths Students. Poster at the *15th Conference of the International Society for Intelligence Research*. Graz, Austria.
- Edelsbrunner, P. A.** (2014). Sustainability of Science Instruction in Childhood: Teaching Children About Air and Air Pressure. Poster at the *3rd EFPSA Junior Researcher Programme Conference*. Cambridge, UK.
- Edelsbrunner, P. A.** (2014). Psychometric Evaluation of a Questionnaire for Large-Scale Assessment of Basic Experimentation Skills in Childhood. Talk at the *18th Conference of the Junior Researchers of EARLI*. Nicosia, Cyprus.
- Edelsbrunner, P. A.** (2014). Development of an Instrument for Large-Scale Assessment of Experimentation Skills in Childhood. Talk at the *18th Conference of the Junior Researchers of EARLI*. Nicosia, Cyprus.
- Edelsbrunner, P. A.** (2014). Design und Interpretation von Versuchsplänen im Kindes- und Jugendalter: Entwicklung eines multiple-choice-Instruments [Design and interpretation of experimental designs in childhood and adolescence: Development of a multiple-choice instrument]. Talk at the *11th Conference of the Austrian Association for Psychology*. Vienna, Austria.
- Edelsbrunner, P. A.**, Deiglmayr, A., & Schalk, L. (2014). Experimentation skills: Shares of general and specific abilities. Poster at the *2<sup>nd</sup> Conference of the Society for Empirical Educational Research*. Frankfurt, Germany.
- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (2013). Short-term benefits of learning physics in elementary schools. Talk at the *15<sup>th</sup> Biennial Conference of the European Association for Research in Learning and Instruction*. Munich, Germany.
- Franken, A., Agan, M. L. F., Buzila, A. S., Deutz, M. H. F., **Edelsbrunner, P. A.**, & Zalis, L. (2013). Risk behaviour, classroom behaviour and social status in a european sample of late adolescents. Talk at the *2<sup>nd</sup> EFPSA Junior Researcher Programme Conference*. Cambridge, UK.

- Edelsbrunner, P. A.**, & Schalk, L. (2013). Exploring children's knowledge about hypothesis testing and control of variables. Poster at the 2<sup>nd</sup> *EFPSA Junior Researcher Programme Conference*. Cambridge, UK.
- Franken, A., Agan, M. L. F., Buzila, A. S., Deutz, M. H. F., **Edelsbrunner, P. A.**, & Zalis, L. (2013). Risk Behaviour, Classroom Behaviour, and Social Status in European Adolescents. Poster presented at the 2<sup>nd</sup> *EFPSA Junior Researcher Programme Conference*. Cambridge, UK.
- Edelsbrunner, P. A.**, Schalk, L., Schumacher, R., & Stern, E. (2013). Knowledge Structure Changes Towards Understanding Buoyancy Force. Poster at the 10<sup>th</sup> *Congress of Licentiate- Master- and Doctorate Students (LiMaDoKo)*. University of Zurich, Switzerland.
- Franken, A., Agan, M. L. F., Buzila, A. S., Deutz, M. H. F., **Edelsbrunner, P. A.**, & Zalis, L. (2012). What Moderates the Association between Risk Behavior and Popularity in Adolescence? Talk at the 1<sup>st</sup> *EFPSA Junior Researcher Programme Conference*. Cambridge, UK.
- Franken, A., Agan, M. L. F., Buzila, A. S., Deutz, M. H. F., **Edelsbrunner, P. A.**, Ralic, L., & Zalis, L. (2012). Associations between Popularity and Risk Behaviour in Adolescence: A European Study. Talk at the 26<sup>th</sup> *Congress of the European Federation of Psychology Students' Associations (EFPSA)*. Lolland, Denmark.