Boris Koichu – List of Publications

2023

Articles in Refereed Journals

Marmur, O., & Koichu, B. (2023). Between expert and student perspectives: Instructors' heuristic-didactic discourse in the undergraduate classroom. *Mathematical Thinking and Learning*, 5(1), 115-144. The article.

Pinto, A., & Koichu, B. (2023). Diverse views of university mathematics teachers on improving the secondary-tertiary transition. *Educational Studies in Mathematics,* 113(1), 147-164. The article.

Book Chapters

Koichu, B., Papadopoulos, I., Cooper, J., Buchbinder, O., & McCrone, S. (2023). Policies and implementation of digital resources: Theoretical considerations and illustrative cases from Greece, Israel and the US. In B. Pepin, G. Gueudet, & Choppin, J. (Eds.), *Handbook of digital resources in mathematics education.* Springer. Doi: https://doi.org/10.1007/978-3-030-95060-6_53-1

Cooper, J., Koichu, B., Widder, M. Aiber, S. Amir, Y., Badarneh, A., Farber, M., Gorodin, M. Gottlib, O., Gruenhut, E., Hihi, F. (2023). Many chefs in the kitchen – A collaborative model for problem-posing. In D. Sarikaya, L. Baumanns, K. Heuer, & B. Rott (Eds.). *Problem posing and solving for mathematically gifted and interested students – best practices, research and enrichment*, pp. 27-48. Springer.

Editorials

Misfeldt, M., Jankvist, U., Aguilar, M., & Koichu, B. (2023). What happens after implementation? 'Post-implementation' as framing of implementation research in mathematics education. *Implementation and Replication Studies in Mathematics Education,* 3(1), 1-13. The editorial.

Aguilar, M., Ahl, L. M., Koichu, B., Misfeldt, M., & Jankvist, U., & (2023). Contemporary dialogues on implementation research at CERME13. *Implementation and Replication Studies in Mathematics Education,* 3(2), 123-134. The editorial.

Edited Conference Proceedings

Ayalon, M., Koichu, B., Leikin, R., Rubel, L. & Tabach, M (Eds.). (2023) *Proceeding of the 46th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 1, online). University of Haifa, Israel: PME. The Conference. ISBN: 978-965-93112-1-7

Ayalon, M., Koichu, B., Leikin, R., Rubel, L. & Tabach, M (Eds.). (2023) *Proceeding of the 46th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 2, online). University of Haifa, Israel: PME. The Conference. ISBN: 978-965-93112-2-4

Ayalon, M., Koichu, B., Leikin, R., Rubel, L. & Tabach, M (Eds.). (2023) *Proceeding of the 46th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3, online). University of Haifa, Israel: PME. The Conference. ISBN: 978-965-93112-3-1

Ayalon, M., Koichu, B., Leikin, R., Rubel, L. & Tabach, M (Eds.). (2023) *Proceeding of the 46th Conference of the International Group for the Psychology of Mathematics*

Education (Vol. 4, online). University of Haifa, Israel: PME. The Conference. ISBN: 978-965-93112-4-8

Chapters in Refereed Conference Proceedings

Parasha, R., & Koichu, B. (2023). Types and features of dialogical tasks from mathematics teachers' perspective. In M. Ayalon, B. Koichu, R. Leikin, L. Rubel & M. Tabach (Eds.), *Proceedings of the 46th Conference of the International Group for the Psychology of Mathematics Education (Vol. 4, pp. 19-34). PME 46.*

Parasha, R., & Koichu, B. (2023). Design considerations and decisions of mathematics teachers in creating dialogical situations for their students. Presented at the 13th *Congress of the European Society for Research in Mathematics Education.* Budapest, Hungary.

Farber, M., & Koichu, B. (2023). Teaching situations designed by experienced teachers to foster students' mathematical flexibility. Presented at the 13th *Congress of the European Society for Research in Mathematics Education.* Budapest, Hungary.

Koichu, B., Badarneh, A., & Farber, M. (2023). What can researchers and teachers co-learn from data on students' problem-solving experiences? Presented at the 13th *Congress of the European Society for Research in Mathematics Education.* Budapest, Hungary.

2022

Articles in Refereed Journals

Koichu, B., Cooper, J., & Widder, M. (2022). Implementation of problem solving in school: from intended to experienced. *Implementation and Replication Studies in Mathematics Education*, *2*(1), 76-106. The Article.

Rachamim, M., Berman, A., & Koichu, B. (2022). Using scaffolds in support of teachers as task designers. *International Journal of Mathematics Education in Science and Technology. The Article.*

Koichu, B., Schwarz, B., Heyd-Metsuyanim, E., Tabach, M., & Yarden, A. (2022). Design practices and principles for promoting alogic argumentation via interdisciplinarity. *Learning, Culture and Social Interaction,* 37, 100657. The Article.

Editorials

Ahl, L., Aguilar, M., Misfeldt, M., Koichu, B., & Jankvist, U. (2022). Recent discussions on implementation research at CERME12. *Implementation and Replication Studies in Mathematics Education*, *2*(1), 1-19. The Editorial.

Jankvist, U., Aguilar, M., Misfeldt, M., & Koichu, B. (2022). How about fidelity? *Implementation and Replication Studies in Mathematics Education*, *2*(2), 131-148. The Editorial.

Chapters in Refereed Conference Proceedings

Cooper, J., & Koichu, B. (February 2022). Problem-solving implementation chain: From intended to experienced. *Twelfth Congress of the European Society for Research in Mathematics Education.* Bolzano, Italy. Hal-03760081.

Levi Gamlieli, H., Pinto, A., & Koichu, B. (August 2022). Secondary-tertiary transition and effective ways of coping with it: A perspective of lecturers. To be presented at the *16th International Conference of The Mathematics Education for the Future Project*. Kings College, Cambridge University, UK.

Zaks, R., & Koichu, B. (2022). How do teachers adopt autonomous problem solving as a classroom practice? In C. Fernandez, Llinares, S., A. Gutierrez, & N. Planas (Eds.), *Proceedings of the 45th Conference of the International Group for the Psychology of Mathematics Education*, Vol. 4, 147-154. Alicante, Spain.

Keller, N., Koichu, B., & Kohen, Z. (2022). Using online discussion forums for the professional development of mathematics teachers. In C. Fernandez, Llinares, S., A. Gutierrez, & N. Planas (Eds.), *Proceedings of the 45th Conference of the International Group for the Psychology of Mathematics Education*, Vol. 3, 19-26. Alicante, Spain.

Cai, J., Koichu, B., Rott, B., Zazkis, R., Jiang, C. (2022). Mathematical problem posing: Task variables, processes and products. In C. Fernandez, Llinares, S., A. Gutierrez, & N. Planas (Eds.), *Proceedings of the 45th Conference of the International Group for the Psychology of Mathematics Education,* Vol. 1, 119-145. Alicante, Spain.

Koichu, B., Taylor, P. Semanišinová, I., Yao Y.-J., & Dorichenko, S. (in press). TSG46 – Mathematical competitions and other challenging activities. *Proceedings of the 14th International Congress of Mathematics Education*. Springer.

2021

Book

Koichu, B., & Zazkis, R. (2021). *Mathematical encounters and pedagogical detours. Stories of disturbance and learning opportunities in teacher education*. Springer.

Articles in Refereed Journals

Koichu, B., Parasha, R., & Tabach, M. (2021). Who-Is-Right tasks as a means for supporting collective looking-back practices. *ZDM–Mathematics Education*, 53(4), 831–846.

Pinto, A., & Koichu, B. (2021). Implementation of mathematics education research as crossing the boundary between disciplined inquiry and teacher inquiry. *ZDM – Mathematics Education*, 53(5), 1085-1096.

Koichu, B., Aguilar, M. S., & Misfeldt, M. (2021). Implementation-related research in mathematics education: The search for identity. *ZDM – Mathematics Education*, 53(5), 975-989.

Book Chapters (peer reviewed)

Cooper, J., & Koichu, B. (2021). In the pursuit of impact: Design and practice of three innovative professional development programs for mathematics teachers. In A. Hofstein, A. Arcavi, B.-S. Eylon, & A. Yarden (Eds.), *Long-term Research and Development in Science Education: What have we learned?* (pp. 333-359). Brill.

Koichu, B. (accepted). The art of being specific while theorizing for and from practice of mathematics teachers' collaboration. Reaction on a plenary talk and a chapter by Susanne Prediger. In H. Borko, & Potari, D. (Eds.), *Teachers of mathematics working and learning in collaborative groups. The 25th ICMI Study*. Springer.

Editorials

Jankvist, U. F., Aguilar, M. S., Misfeldt, M., & Koichu, B. (2021). Launching Implementation and Replication Studies in Mathematics Education (IRME), *Implementation and Replication Studies in Mathematics Education*, *1*(1), 1-19.

Jankvist, U. F., Aguilar, M. S., Misfeldt, M., & Koichu, B. (2021). What to replicate? *Implementation and Replication Studies in Mathematics Education*, *1*(2), 1-10

Chapters in Refereed Conference Proceedings

Parasha, R., Koichu, B., & Tabach, M. (2021). A challenge of deciding who is right and why. Presented at TSG46 "Mathematics competitions and other challenging activities" of the 14th *International Congress of Mathematics Education (ICME)*. Shanghai, Republic of China.

Pinto, A., Levi Gamlieli, H., & Koichu, B. (2021). The secondary-tertiary transition: An international perspective on where we are and how to move forward. Presented at TSG2 "Mathematics education at tertiary level" of the 14th *International Congress of Mathematics Education (ICME)*. Shanghai, Republic of China.

Cooper, J., Levi Gamlieli, H., Koichu, B., Karsenty, R., & Pinto, A. (2021). Instructional Innovation in Mathematics Courses for Engineering Programs – A Case Study. In M. Imprasitha, N. Changsri, & N. Boonsena (Eds.), *Proceedings of the 44nd Conference of the International Group for the Psychology of Mathematics Education,* Vol. 2, pp. 189-198. Khon Kaen, Thailand: PME.

Schwarz, B., Heyd-Metzuyanim, E., Koichu, B., Tabach, M., & Yarden, A. (August, 2021). Interdisciplinarity and school-learning in schools that comply with dialogic pedagogies. Accepted for presentation at *19th Biennial EARLI (European Association for Research on Learning and Instruction) Conference* (online).

Widder, M., Tabach, M., & Koichu, B. (September, 2021). Epistemic tensions as springboards to actions: Mathematics teachers' enculturation in an inquiry-based professional development community. Accepted for presentation at *ECER-2021, annual conference of European Educational Research Association*, Geneva (online).

2020

Articles in Refereed Journals

Golumbic, Y., Baram-Tsabari, A., & Koichu, B. (2020). Engagement and communication features of scientifically successful citizen science project, *Environmental Communication*, 14(4), 465-480.

Koichu, B. (2020). Problem posing in the context of teaching for advanced problem solving. *International Journal of Educational Research*, 102, 101428. doi: http://doi.org/10.1016/jijer.2019.05.001

Chapters in Refereed Conference Proceedings

Kohen, Z., Keller, N., & Koichu, B. (2020). Metacognitive processes in online collaborative problem solving forums: mathematics teachers' dual roles. In Borko, H., & Potari, D. (Eds.), *Proceedings of ICMI Study 25 Conference "Teachers of mathematics working and learning in collaborative groups",* pp. 484-491. Lisbon, Portugal.

Koichu, B., Zaks, R., & Farber, M. (2020). Teachers' voices from two communities of inquiry engaged in practices of mathematics education research. In Borko, H., & Potari, D. (Eds.), *Proceedings of ICMI Study 25 Conference "Teachers of mathematics working and learning in collaborative groups",* pp. 364-371. Lisbon, Portugal.

2019

Edited Book

Felmer, P., Liljedahl, P., & Koichu, B. (Eds.). (2019). *Problem solving in mathematics instruction and teacher professional development*. Cham: Springer.

Articles in Refereed Journals

Widder, M., Berman, A., & Koichu, B. (2019). An a priori measure of visual difficulty of 2-d sketches depicting 3-D objects. *Journal of Research in Mathematics Education*, *50*(5), 489-528.

Palatnik, A., & Koichu, B. (2019). Flashes of creativity. *For the Learning of Mathematics, 39(2)*, 8-12.

Boor Chapters (peer reviewed)

Koichu, B. (2019). A discursively oriented conceptualization of mathematical problem solving. In Felmer, P., Liljedahl, P., & Koichu, B. (Eds.), *Problem solving in mathematics instruction and teacher professional development* (pp. 43-66). Cham: Springer.

Koichu, B., & Keller, N. (2019). Creating and sustaining online problem-solving forums: Two perspectives. In P. Liljedahl & L. M. Santos Trigo (Eds.), *Mathematical Problem Solving: ICME 13 Monograph* (pp. 263-287). Springer.

Chapters in Refereed Conference Proceedings

Koichu, B., & Pinto, A. (2019). Implementation through participation: Theoretical considerations and an illustrative case. *Proceedings of the 11th Congress of the European Society for Research in Mathematics Education.* Utrecht, the Netherlands. Available at The Conference.

Tabach. M., & Koichu, B. (2019). Who is right? Theoretical analysis of representational activities. *Proceedings of the 11th Congress of the European Society for Research in Mathematics Education.* Utrecht, the Netherlands. Available at The Conference.

Cooper, J., & Koichu, B. (2019). Reconciling tensions between lecturing and active learning in professional learning communities. In Graven, M., Venkat, H., Essien, A., & Vale, P. (Eds), *Proceedings of the 43th Conference of the International Group for the Psychology of Mathematics Education*, Vol. 2, pp. 169-178. Pretoria, South Arica: PME.

Invited paper

Koichu, B., & Pinto, A. (on behave of EMS Education Committee) (2019). The secondary-tertiary transition in mathematics: What are our current challenges and what can we do about them? *EMS Newsletter,* 112, 34-35.

2018

Articles in Refereed Journals

Koichu, B., & Pinto, A. (2018). Developing education research competencies in mathematics teachers through TRAIL: Teacher-Research Alliance for Investigating Learning. *Canadian Journal of Science, Mathematics and Technology Education, 18,* 68-85.

Koichu, B. (2018). On making epistemological inferences based on linguistic observations: a commentary on Shinno et al. *For the Learning of Mathematics*, *38*(2), 25-26.

Book chapters (peer reviewed)

Zazkis, R., & Koichu, B. (2018). Dialogues on dialogues: The use of classical dialogues in mathematics teacher education. In Zazkis, R. & Herbst, P. (Eds.). *Mathematical Dialogue: Scripting approaches in mathematics education research and practice* (pp. 365-387). Springer: Cham.

Koichu, B., & Zazkis, R. (2018). "I understand" talk in script writing. A case from Euclid's Elements. In Zazkis, R. & Herbst, P. (Eds.). *Mathematical Dialogue: Scripting approaches in mathematics education research and practice* (pp. 163-184). Springer: Cham.

Koichu, B., Biton, Y. Gendler, O., & Keller, N. (2018). Problem-solving forums at social networks that accompany mathematics study in Israeli high school. In N. Movshovitz-Hadar (Ed.), *Israel Mathematics Education K-12* (pp. 198-208). World Scientific.

Biton, Y., Fellus, O., Raviv, D. Feilchenfeld, D., & Koichu, B. (2018). Mathematics at the virtual school: Why? Why not? Who? What? And so what? In N. Movshovitz-Hadar (Ed.), *Israel Mathematics Education K-12* (pp. 145-153). World Scientific.

Koichu, B. (2018). Mathematical problem solving in choice-affluent environments. In Kaiser, G., Forgasz, H, Graven, M., Kuzniak, A., Simmt, E. & Xu, B. (Eds.) *Invited Lectures from the 13th International Congress on Mathematics Education*, ICME-13 Monographs (pp. 307-324). Springer.

Chapters in Refereed Conference Proceedings

Widder, M., Berman, A., & Koichu, B. (2018). Characterizing action strategies in a 3-D dynamic geometry environment. In Eshet-Alkalai, Y., Blau, I., Caspi, A., Etgar, S., Geri, N., Kalman, Y., & Silber-Varod, V. (Eds.), *Proceedings of the 13th Chais Conference for the Study of Innovation and Learning Technologies* (pp. 53-61). Ra'anana: Open University of Israel.

Marmur, O., & Koichu, B. (2018). Which key memorable events are experienced by students during calculus tutorials? In E. Bergqvist, M. Österholm, C. Granberg, & L. Sumpter (Eds.). *Proceedings of the 42nd Conference of the International Group for*

the Psychology of Mathematics Education (Vol. 3, pp. 347-354). Umeå, Sweden: PME.

Widder, M., Berman, A., & Koichu, B. (2018). Action strategies in spatial geometry problem solving supported by dynamic geometry software. In E. Bergqvist, M. Österholm, C. Granberg, & L. Sumpter (Eds.). *Proceedings of the 42nd Conference of the International Group for the Psychology of Mathematics Education* (Vol. 4, pp. 435-442). Umeå, Sweden: PME.

2017

Articles in Refereed Journals

Leikin, R., Koichu, B., Berman, A., & Dinur, S. (2017). Does general giftedness play a role in classes of students motivated to study mathematics at a high level? Focus on students' questions. *ZDM Mathematics Education, 49*, 65-80.

Palatnik, A., & Koichu, B. (2017). Sense making in the context of algebraic activities. *Educational Studies in Mathematics*, *95*, 245-262.

Koichu, B. (2017). On mathematics with distinction, a learner-centered conceptualization of challenge and choice-based pedagogies. *The Mathematics Enthusiast*, *14*(1-3), 517-540.

Koichu, B., Katz, E., & Berman, A. (2017). Stimulating student aesthetic response to mathematical problems by means of manipulating the extent of surprise. *Journal of Mathematical Behavior*, *46*, 42-57.

Book chapters (peer reviewed)

Keller, N., & Koichu, B. (2017). A dialogue about integrating a class environment and an online environment in mathematics education. In Schwarz, B. B., Rosenberg, H. & Asterhan, C. S. C. (Eds.), *Breaking down barriers? Teachers, students and social network sites* (pp. 156-180). MOFET, Israel (in Hebrew).

Chapters in Refereed Conference Proceedings

Koichu, B., Atrash, E., & Marmur, O. (2017). Problem solving opportunities in frontal classes: Inquiry in teaching practices and learning strategies. In Göller, R., Biehler, R., Hochmuth, R., Rück, H.-G. (Eds.). *Didactics of Mathematics in Higher Education as a Scientific Discipline – Conference Proceedings* (pp. 281-285). Kassel, Germany: Universitätsbibliothek Kassel.

Koichu, B., & Keller, N. (2017). Implementation enterprise through the lens of a theory of diffusion of innovations: A case of online problem-solving forums. In Dooley, T. & Gueudet, G. (Eds.), *Proceedings of the 10th Congress of the European Society for Research in Mathematics Education.* Institute of Education, Dublin City University, Ireland and ERME. Available at The Conference.

Palatnik, A., & Koichu, B. (2017). Sense making through algebraic activities. In Dooley, T. & Gueudet, G. (Eds.), *Proceedings of the 10th Congress of the European Society for Research in Mathematics Education.* Institute of Education, Dublin City University, Ireland and ERME. Available at The Conference.

Marmur, O., & Koichu, B. (2017). What can calculus students like about and learn from a challenging problem they did not understand? In Dooley, T., & Gueudet, G. (Eds.), *Proceedings of the 10th Congress of the European Society for Research in*

Mathematics Education (pp. 2193-2200). Dublin, Ireland: DCU Institute of Education and ERME.

2016

Articles in Refereed Journals

Kontorovich, I., & Koichu, B. (2016). A case study of an expert problem poser for mathematics competitions. *International Journal of Science and Mathematics Education*, *14*(1), 81-99.

Marmur, O., & Koichu, B. (2016). Surprise and the aesthetic experience of university students: A design experiment. *Journal of Humanistic Mathematics*, *6*(1), 127-151.

Raveh, I., Koichu, B., Peled, I., & Zaslavsky, O. (2016). Four (algorithms) in one (bag): An integrative framework of knowledge for teaching the standard algorithms of the basic arithmetic operations. *Research in Mathematics Education*, *18*(1), 43-60.

Koichu, B., Zaslavsky, O. & Dolev, L. (2016). Effects of variations in task design on mathematics teachers' learning experiences: A case of a sorting task. *Journal of Mathematics Teacher Education*, *19*(4), 349-370.

Invited papers

Koichu, B. (on behave of EMS Education Committee) (2016). Practices for identifying, supporting and developing mathematical giftedness in school children: The scene in Israel. *EMS Newsletter*, 99, 53-54. The extended version of the paper is available at http://euro-math-soc.eu/reports.

Koichu, B. (2016). Response paper: What is reflected in the special issue about the development of the commognitive theory via its implications? *Research and Its Consideration in Mathematics Education*, *4*, 194-208 (in Hebrew).

2015

Articles in Refereed Journals

Zazkis, R., & Koichu, B. (2015). A fictional dialogue on infinitude of primes: Introducing virtual duoethnography. *Educational Studies in Mathematics*, *88*, 163-181.

Palatnik, A., & Koichu, B. (2015). Exploring insight: Focus on shifts of attention. *For the Learning of Mathematics*, *2*, 9-14.

Koichu, B., & Leron, U. (2015). Proving as problem solving: The role of cognitive decoupling. *Journal of Mathematical Behavior*, *40*, 233-244.

Widder, M., Berman, A., & Koichu, B. (2015). Dismantling visual obstacles to comprehension of 2-D sketches depicting 3-D objects in spatial geometry instruction. *Alon LeMorej HaMatematika* (*Bulletin for Mathematics Teachers*), 52, 19-28 (in Hebrew).

Book chapters (peer reviewed)

Klinshtern, M., Koichu, B., & Berman, A. (2015). What do high school teachers mean by saying "I pose my own problems"? In F. M. Singer, N. Ellerton & J. Cai (Eds.). *Problem posing: From research to effective practice*. (pp. 449-467). New York, NY: Springer.

Chapters in Refereed Conference Proceedings

Koichu, B. (2015).Towards a confluence framework of problem solving in educational contexts. In K. Krainer and N. Vondrová (Eds.), Proceedings of the *9th Conference of the European Society for Research in Mathematics Education* (pp. 2668-2674). Charles University in Prague, Czech Republic.

Koichu, B. (2015). Problem solving and choice-based pedagogies. In Singer, F. M., Toader, F., & Voica, C. (Eds.), *Electronic Proceedings of the 9th International Conference Mathematical Creativity and Giftedness* (pp. 68-73). Sinaia, Romania (ISBN: 978-606-727-100-3). Available here.

Invited paper

Koichu, B. (2015). Challenging mathematics for all and choice-based pedagogies. Plenary address. In D. Desli, I. Papadopoulus and M. Tzekaki (Eds.), *Electronic Proceedings of the 6th Conference of the Greek Association for Research in Mathematics Education* (pp. 20-34). Thessaloniki, Greece: GARME.

2014

Articles in Refereed Journals

Koichu, B. (2014). Networking theories by iterative unpacking. *PNA,* 151-161 (reprint).

Lachmy, R., & Koichu, B. (2014). The interplay of empirical and deductive reasoning in proving "if" and "only if" statements in a Dynamic Geometry environment. *Journal of Mathematical Behavior*, *36*, 150-165.

Raveh, I., & Koichu, B. (2014). Mathematical knowledge for teaching the standard algorithms of the four basic arithmetic operations. *Mispar Hazak* (*Strong Number*), 25, 51-61 (in Hebrew).

Book chapters (peer reviewed)

Koichu, B. (2014) (with contributions by Gerald Goldin, Izzie Weinzweig, Shlomo Vinner and Roza Leikin). Reflections on problem solving. In M. N. Fried & T. Dreyfus (Eds.), *Mathematics & Mathematics Education: Searching for Common Ground. Advances in Mathematics Education* (pp. 113-135). Dordrecht, Netherlands: Springer.

Chapters in Refereed Conference Proceedings

Palatnik, A., & Koichu, B. (2014). What counts for being creative?
A mathematically gifted student's perspective. Proceedings of the *8th International Conference on Creativity in Mathematics Education and the Education of the Gifted Students* (pp. 96-103). Denver, USA. Available here.

Widder, M., Berman, A., & Koichu, B. (2014). Dismantling visual obstacles to comprehension of 2-D sketches depicting 3-D objects. In P. Liljedahl, C. Nicol, S. Oesterle, & D. Allan (Eds.), *Proceedings of the 38th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 5, pp. 369-376). Vancouver, Canada: PME.

Palatnik. A., & Koichu, B. (2014). Reconstruction of one mathematical invention: Focus on structures of attention. In P. Liljedahl, C. Nicol, S. Oesterle, & D. Allan (Eds.), *Proceedings of the 38th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 4, pp. 377-384). Vancouver, Canada: PME.

2013

Articles in Refereed Journals

Koichu, B., & Kontorovich, I. (2013). Dissecting success stories on mathematical problem posing: A case of the Billiard Task. *Educational Studies in Mathematics*, *83*(1), 71-86.

Koichu, B., Harel. G., & Manaster, A. (2013). Ways of thinking associated with mathematics teachers' problem posing in the context of division of fractions. *Instructional Science*, *41*(4), 681-698.

Koichu, B., & Zazkis, R. (2013). Decoding a proof of Fermat's Little Theorem via script writing. *Journal of Mathematical Behavior, 32*, 364-376.

Chapters in Refereed Conference Proceedings

Berman, A., Koichu, B., & Shvartsman, L. (2013). Understanding understanding equivalence of matrices. Electronic Proceedings of the *8th Conference of the European Society for Research in Mathematics Education,* Antalya, Turkey. Available here.

Raveh, I., & Koichu, B. (2013). A reference framework for teaching the standard algorithms of the four basic arithmetic operations: From theoretical analysis to task design. Electronic Proceedings of the *8th Conference of the European Society for Research in Mathematics Education,* Antalya, Turkey. Available here.

Koichu, B. (2013). Networking theories by iterative unpacking. Electronic Proceedings of the *8th Conference of the European Society for Research in Mathematics Education,* Antalya, Turkey. Available here.

Koichu, B., & Zazkis, R. (2013). A dialogic method of presenting proofs: Focus on Fermat's Little Theorem. Presented at the 15th Conference of SIGMAA on RUME (Special Interest Group of MAA on Research in Undergraduate Mathematics Education), Denver, Colorado. Available here.

Koichu, B., Zaslavsky, O., & Dolev, L. (2013). Effects of variations in task design using different representations of mathematical objects on learning: A case of a sorting task. In Margolinas, C., Ainley, J., Frant, J. B., Doorman, M., Kieran, C., Leung, A., Ohtani, M., Sullivan, P., Thompson, D., Watson, A., & Yang, Y. (Eds.). *Proceedings of ICMI Study 22 Task Design in Mathematics Education* (pp. 463-372). Oxford, UK.

Klinshtern, M., Koichu, B., & Berman, A. (2013). What do high school teachers mean by saying "I pose my own problems"? In Lindmeier, A. M. & Heinze, A. (Eds.). *Proceedings of the 37th Conference of the International Group for the Psychology of Mathematics Education* (Vol. 3, pp. 185-192). Kiel, Germany: PME.

2012

Articles in Refereed Journals

Kontorovich, I. & Koichu, B. (2012). Feeling of innovation in expert problem posing. *Nordic Studies in Mathematics Education*, *17*(3-4), 199-212.

Kontorovich, I., Koichu, B., Leikin, R., & Berman, A. (2012). An exploratory framework for handling the complexity of students' mathematical problem posing in small groups. *Journal of Mathematical Behavior*, *31*(1), 149-161.

Koichu, B. (2012). Enhancing an intellectual need for defining and proving: A case of impossible objects. *For the Learning of Mathematics*, *32*(1), 2-7.

Book chapters (peer reviewed)

Koichu, B. (2012). Some gold is found - much more is in the mine. A commentary on Gilah Leder's chapter "Looking for gold: Catering for mathematically gifted students within and beyond ZDM". In Forgasz, H. & Rivera, F. (Eds.). *Toward equity: Gender, culture, and diversity* (pp. 407-410). Advances in Mathematics Education series, Part 3. Dordrecht, Netherlands: Springer.

Tall, D., Yevdokimov, O., Koichu, B., Whiteley, W., Kondratieva, M., & Cheng, Y.-H. (2012). Cognitive development of proof. In M. De Villiers & G. Hanna (Eds.), *Proof and proving in mathematics education* (pp. 13-49). New York, NY: Springer.

Chapters in Refereed Conference Proceedings

Koichu, B. (2012). On attaining devolution in an inquiry-based activity focused on defining and proving. Presented at the *International Colloquium "The didactics of mathematics: approaches and issues" in honor of Prof. Michele Artigue*, Paris, France.

Kontorovich, I. & Koichu, B. (2012). Achieving the feeling of innovation in expert problem posing. *Presented at the 17th MAVI (Mathematical Views) Conference*. Helsinki: Finland.

2011

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Koichu, B. (2011). Overcoming a pitfall of circularity in research on problem solving by mathematically gifted schoolchildren. *Canadian Journal of Science, Mathematics and Technology Education*, *11*(1), 67-77.

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