



Universiteit
Leiden
The Netherlands

Teacher professional learning and collaboration in secondary schools

Jong, L.A.H. de

Citation

Jong, L. A. H. de. (2021, May 20). *Teacher professional learning and collaboration in secondary schools*. ICLON PhD Dissertation Series. Retrieved from <https://hdl.handle.net/1887/3176646>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3176646>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <https://hdl.handle.net/1887/3176646> holds various files of this Leiden University dissertation.

Author: Jong, L.A.H. de

Title: Teacher professional learning and collaboration in secondary schools

Issue Date: 2021-05-20

References

- Abbate-Vaughn, J. (2004). The things they carry: Ideology in an urban teacher professional community. *The Urban Review*, 36(4), 227-249.
<https://doi.org/10.1007/s11256-004-2082-0>
- Achinstein, B. (2002). Conflict amid community: The micropolitics teacher collaboration. *Teachers College Record*, 104(3), 421-455.
- Admiraal, W., Kruiter, J., Lockhorst, D., Schenke, W., Sligte, H., Smit, B., Tigelaar, D., & de Wit, W. (2016). Affordances of teacher professional learning in secondary schools. *Studies in Continuing Education*, 38(3), 281-298.
<https://doi.org/10.1080/0158037X.2015.1114469>
- Admiraal, W., Schenke, W., de Jong, L., Emmelot, Y., & Sligte, H. (2019). Schools as professional learning communities: What can schools do to support professional development of their teachers? *Professional Development in Education*, 1-15.
<https://doi.org/10.1080/19415257.2019.1665573>
- Akkerman, S., Admiraal, W., Brekelmans, M., & Oost, H. (2008). Auditing quality of research in social sciences. *Quality & Quantity*, 42(2), 257-274.
<https://doi.org/10.1007/s11135-006-9044-4>
- Akiba, M., Murata, A., Howard, C. C., & Wilkinson, B. (2019). Lesson study design features for supporting collaborative teacher learning. *Teaching and Teacher Education*, 77, 352-365. <https://doi.org/10.1016/J.TATE.2018.10.012>
- Alles, M., Seidel, T., & Gröschner, A. (2018). Toward better goal clarity in instruction: How focus on content, social exchange and active learning supports teachers in improving dialogic teaching practices. *International Education Studies*, 11(1), 11-24.
<https://doi.org/10.5539/ies.v11n1p11>
- Andrews-Larson, C., Wilson, J., & Larbi-Cherif, A. (2017). Instructional improvement and teachers' collaborative conversations: The role of focus and facilitation. *Teacher College Record*, 119(2), 1-37.
- Antinluoma, M., Ilomäki, L., Lahti-Nuuttila, P., & Toom, A. (2018). Schools as professional learning communities. *Journal of Education and Learning*, 7(5), 76-91.
<https://doi.org/10.5539/jel.v7n5p76>
- Bae, C. L., Hayes, K. N., Seitz, J., O'Connor, D., & Distefano, R. (2016). A coding tool for examining the substance of teacher professional learning and change with example cases from middle school science lesson study. *Teaching and Teacher Education*, 60, 164-178. <https://doi.org/10.1016/J.Tate.2016.08.016>
- Baecher, L., Rorimer, S., & Smith, L. (2012). Video-mediated teacher collaborative inquiry: Focus on English language learners. *The High School Journal*, 95(3), 49-61.
<https://doi.org/10.1353/hsj.2012.0007>

- Bakkenes, I., Vermunt, J.D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction*, 20(6), 533-548. <https://doi.org/10.1016/j.learninstruc.2009.09.001>
- Bates D., Mächler M., Bolker B., & Walker S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67(1), 1-48. <https://doi.org/10.18637/jss.v067.i01>
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3-15.
- Borko, H., Jacobs, J. K., Eiteljorg, E., & Pittman, M. E. (2008). Video as a tool for fostering productive discussions in mathematics professional development. *Teaching and Teacher Education*, 24(2), 417-436. <https://doi.org/10.1016/j.tate.2006.11.012>
- Borko, H., Jacobs, J., & Koellner, K. (2010). Contemporary approaches to teacher professional development. *International Encyclopedia of Education*, 7(2), 548-556. <https://doi.org/10.1016/B978-0-08-044894-7.00654-0>
- Brodie, K. (2014). Learning about learner errors in professional communities. *Educational Studies in Mathematics*, 85(2), 221-239.
- Brodie, K. (2019). Teacher agency in professional learning communities. *Professional Development in Education*, 1-14. <https://doi.org/10.1080/19415257.2019.1689523>
- Brown, N., & Benken, B. M. (2009). So when do we teach mathematics? Vital elements of professional development for high school mathematics teachers in an urban context. *Teacher Education Quarterly*, 36(3), 55-73.
- Cajkler, W., Wood, P., Norton, J., & Pedder, D. (2014a). Lesson study as a vehicle for collaborative teacher learning in a secondary school. *Professional Development in Education*, 40(4), 511-529. <https://doi.org/10.1080/19415257.2013.866975>
- Cajkler, W., Wood, P., Norton, J., Pedder, D., & Xu, H. (2014b). Teacher perspectives about lesson study in secondary school departments: A collaborative vehicle for professional learning and practice development. *Research Papers in Education*, 30(2), 192-213. <https://doi.org/10.1080/02671522.2014.887139>
- Campbell, M. P., & Lee, H. S. (2017). Examining secondary mathematics teachers' opportunities to develop mathematically in professional learning communities. *School Science and Mathematics*, 117(3-4), 115-126. <https://doi.org/10.1111/ssm.12209>
- Canonigo, A. M. (2016). Using a non-coercive process to engage mathematics teachers in lesson study. *International Journal for Lesson and Learning Studies*, 5(4), 329-347. <https://doi.org/10.1108/IJLLS-02-2016-0004>
- Chandler-Olcott, K., & Hinchman, K. A. (2015). Literacy co-teaching with multi-level texts in an inclusive middle grade humanities class: A teacher-researcher collaboration. *Journal of Inquiry and Action in Education*, 6(3), 42-63.

- Chokshi, S., & Fernandez, C. (2004). Challenges to importing Japanese lesson study: Concerns, misconceptions, and nuances. *Phi Delta Kappan*, 85(7), 520-525. <https://doi.org/10.1177/003172170408500710>
- Chong, W. H., & Kong, C. A. (2012). Teacher collaborative learning and teacher self-efficacy: The case of lesson study. *The Journal of Experimental Education*, 80(3), 263-283. <https://doi.org/10.1080/00220973.2011.596854>
- Christ, T., Arya, P., & Ming Chiu, M. (2014). Teachers' reports of learning and application to pedagogy based on engagement in collaborative peer video analysis. *Teaching Education*, 25(4), 349-374. <https://doi.org/10.1080/10476210.2014.920001>
- Ciampa, K., & Gallagher, T. L. (2016). Teacher collaborative inquiry in the context of literacy education: Examining the effects on teacher self-efficacy, instructional and assessment practices. *Teachers and Teaching*, 22(7), 858-878. <https://doi.org/10.1080/13540602.2016.1185821>
- Cohen, L., Manion, L., Morrison, K., & Morrison, R. B. (2007). *Research methods in education*. Routledge.
- Collins, L. M., Schafer, J. L., & Kam, C. M. (2001). A comparison of inclusive and restrictive strategies in modern missing data procedures. *Psychological Methods*, 6(4), 330-351. <https://doi.org/10.1037/1082-989X.6.4.330>
- Cook, C. M., & Faulkner, S. A. (2010). The use of common planning time: A case study of two Kentucky schools to watch. *RMLE Online*, 34(2), 1-12. <https://doi.org/10.1080/19404476.2010.11462075>
- Curry, M. (2008). Critical friends groups: The possibilities and limitations embedded in teacher professional communities aimed at instructional improvement and school reform. *Teachers College Record*, 110(4), 733-774.
- De Jong, L., Meirink, J., & Admiraal, W. (2019). School-based teacher collaboration: Different learning opportunities across various contexts. *Teaching and Teacher Education*, 86, 102925. <https://doi.org/10.1016/j.tate.2019.102925>
- De Neve, D., & Devos, G. (2017). How do professional learning communities aid and hamper professional learning of beginning teachers related to differentiated instruction? *Teachers and Teaching*, 23(3), 262-283. <https://doi.org/10.1080/13540602.2016.1206524>
- De Neve, D., Devos, G., & Tuytens, M. (2015). The importance of job resources and self-efficacy for beginning teachers' professional learning in differentiated instruction. *Teaching and Teacher Education*, 47, 30-41. <https://doi.org/10.1016/j.tate.2014.12.003>
- De Vries, S., Jansen, E. P., & van de Grit, W. J. (2013). Profiling teachers' continuing professional development and the relation with their beliefs about learning and teaching. *Teaching and Teacher Education*, 33, 78-89. <https://doi.org/10.1016/J.TATE.2013.02.006>

- DeLuca, C., Bolden, B., & Chan, J. (2017). Systemic professional learning through collaborative inquiry: Examining teachers' perspectives. *Teaching and Teacher Education*, 67, 67-78. <https://doi.org/10.1016/j.tate.2017.05.014>
- Derry, S. J., Pea, R. D., Barron, B., Engle, R. A., Erickson, F., Goldman, R., Hall, R., Koschmann, T., Lemke, Y. L., Sherin, M. G., & Sherin, B. L. (2010). Conducting video research in the learning sciences: Guidance on selection, analysis, technology, and ethics. *The Journal of the Learning Sciences*, 19(1), 3-53. <https://doi.org/10.1080/10508400903452884>
- Desimone, L.M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181-199. <https://doi.org/10.3102/0013189X08331140>
- Doppenberg, J. J., den Brok, P. J., & Bakx, A. W. E. A. (2012). Collaborative teacher learning across foci of collaboration: Perceived activities and outcomes. *Teaching and Teacher Education*, 28, 899-910. <https://doi.org/10.1016/j.tate.2012.04.007>
- DuFour, R., Eaker, R., & DuFour R. (1998). *Professional learning communities*. National Educational Service.
- Durksen, T. L., Klassen, R. M., & Daniels, L. M. (2017). Motivation and collaboration: The keys to a developmental framework for teachers' professional learning. *Teaching and Teacher Education*, 67, 53-66. <https://doi.org/10.1016/j.tate.2017.05.011>
- Dutch Ministry of Education, Culture and Science. (2019, December 3). *Percentage mannen in het onderwijs [Percentage of males in education]*. <https://www.onderwijsincijfers.nl/themas/onderwijspersoneel/mannen-in-het-onderwijs/percentage-mannen-in-het-onderwijs>
- Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*, 14(1), 133-156. <https://doi.org/10.1080/13639080020028747>
- Evers, A. T., Kreijns, K., & van der Heijden, B. I. J. M. (2016). The design and validation of an instrument to measure teachers' professional development at work. *Studies in Continuing Education*, 38(2), 162-178. <https://doi.org/10.1080/0158037X.2015.1055465>
- European Commission (2015, June). *Strengthening teaching in Europe: New evidence from teachers compiled by Eurydice and CRELL*. https://ec.europa.eu/assets/eac/education/library/policy/teaching-profession-practices_en.pdf
- Fernandez, C. (2002). Learning from Japanese approaches to professional development: The case of lesson study. *Journal of Teacher Education*, 53(5), 393-405. <https://doi.org/10.1177/002248702237394>
- Furtak, E. M., & Heredia, S. C. (2014). Exploring the influence of learning progressions in two teacher communities. *Journal of Research in Science Teaching*, 51(8), 982-1020. <https://doi.org/10.1002/tea.21156>

- Gelman, A., & Rubin, D. B. (1992). Inference from iterative simulation using multiple sequences. *Statistical Science*, 7(4), 457-472. <https://doi.org/10.1214/ss/1177011136>
- Giles, C., & Hargreaves, A. (2006). The sustainability of innovative schools as learning organizations and professional learning communities during standardized reform. *Educational Administration Quarterly*, 42(1), 124-156. <https://doi.org/10.1177/0013161X05278189>
- Goodyear, V. A., & Casey, A. (2015). Innovation with change: Developing a community of practice to help teachers move beyond the 'honeymoon' of pedagogical renovation. *Physical Education and Sport Pedagogy*, 20(2), 186-203. <https://doi.org/10.1080/17408989.2013.817012>
- Greeno, J. G., Collins, A. M., & Resnick, L. B. (1996). Cognition and learning. In D. Berliner, and R. Calfee (eds.), *Handbook of educational psychology* (pp. 15-46). New York: Macmillan.
- Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record*, 103, 942-1012.
- Grund, S., Lüdtke, O., & Robitzsch, A. (2016a). Multiple imputation of multilevel missing data: An introduction to the R package pan. *SAGE Open*, 6(4), 1-17. <https://doi.org/10.1177/2158244016668220>
- Grund, S., Robitzsch, A., & Lüdtke, O. (2016b). Mitml: Tools for multiple imputation in multilevel modeling (Version 0.3-2) [Computer software]. <http://CRAN.R-project.org/package=mitml>
- Hadar, L., & Brody, D. (2010). From isolation to symphonic harmony: Building a professional development community among teacher educators. *Teaching and Teacher Education*, 26(8), 1641-1651. <https://doi.org/10.1016/j.tate.2010.06.015>
- Hargreaves, A. (2019). Teacher collaboration: 30 years of research on its nature, forms, limitations and effects. *Teachers and Teaching*, 1(19), 603-621. <https://doi.org/10.1080/13540602.2019.1639499>
- Hargreaves, A., & Macmillan, R. (1995). The balkanization of secondary school teaching. In L. S. Siskin & J. W. Little (Eds.), *Subjects in question: Departmental organization and the high school* (141-171). Teachers College Press.
- Hargreaves, A., & O'Connor, M. T. (2017). Cultures of professional collaboration: Their origins and opponents. *Journal of Professional Capital and Community*, 2(2), 74-85. <https://doi.org/10.1108/JPC-02-2017-0004>
- Hauge, T. E., & Norenes, S. O. (2009). Changing teamwork practices: Videopaper as a mediating means for teacher professional development. *Technology, Pedagogy and Education*, 18(3), 279-297. <https://doi.org/10.1080/14759390903255551>
- Hartwig, S. J., & Schwabe, F. (2018). Teacher attitudes and motivation as mediators between teacher training, collaboration, and differentiated instruction. *Journal for Educational Research Online*, 10, 100-121.

- Heggen, K., Raaen, F. D., & Thorsen, K. E. (2018). Placement schools as professional learning communities in teacher education. *European Journal of Teacher Education*, 41(3), 398-413. <https://doi.org/10.1080/02619768.2018.1448779>
- Hindin, A., Morocco, C. C., Mott, E. A., & Aguilar, C. M. (2007). More than just a group: Teacher collaboration and learning in the workplace. *Teachers and Teaching*, 13(4), 349-376. <https://doi.org/10.1080/13540600701391911>
- Hipp, K. K., Huffman, J. B., Pankake, A. M., & Olivier, D. F. (2008). Sustaining professional learning communities: Case studies. *Journal of Educational Change*, 9(2), 173-195. <https://doi.org/10.1007/s10833-007-9060-8>
- Hodkinson, P., & Hodkinson, H. (2003). Individuals, communities of practice and the policy context: School teachers' learning in their workplace. *Studies in Continuing Education*, 25(1), 3-21. <https://doi.org/10.1080/01580370309284>
- Horn, I. S. (2005). Learning on the job: A situated account of teacher learning in high school mathematics departments. *Cognition and Instruction*, 23(2), 207-236. https://doi.org/10.1207/s1532690xci2302_2
- Horn, I. S. (2010). Teaching replays, teaching rehearsals, and re-visions of practice: Learning from colleagues in a mathematics teacher community. *Teachers College Record*, 112(1), 225-259.
- Horn, I. S. (2007). Fast kids, slow kids, lazy kids: Framing the mismatch problem in mathematics teachers' conversations. *The Journal of the Learning Sciences*, 16(1), 37-79.
- Horn, I. S., & Little, J. W. (2010). Attending to problems of practice: Routines and resources for professional learning in teachers' workplace interactions. *American Educational Research Journal*, 47(1), 181-217. <https://doi.org/10.3102/0002831209345158>
- Horn, I. S., Garner, B., Kane, B. D., & Brasel, J. (2017). A taxonomy of instructional learning opportunities in teachers' workgroup conversations. *Journal of Teacher Education*, 68(1), 41-54. <https://doi.org/10.1177/0022487116676315>
- Hox, J. (2010). *Multilevel analysis: Techniques and applications* (2nd ed.). Routledge.
- Hundal, S., Levin, D. M., & Keselman, A. (2014). Lessons of researcher-teacher co-design of an environmental health afterschool club curriculum. *International Journal of Science Education*, 36(9), 1510-1530. <https://doi.org/10.1080/09500693.2013.844377>
- Imants, J. (2003). Two basic mechanisms for organizational learning in schools. *European Journal of Teacher Education*, 26(3), 293-311. <https://doi.org/10.1080/0261976032000128157A>
- Ioannidou-Koutselini, M., & Patsalidou, F. (2015). Engaging school teachers and school principals in an action research in-service development as a means of pedagogical self-awareness. *Educational Action Research*, 23(2), 124-139. <https://doi.org/10.1080/09650792.2014.960531>

- Jansen in de Wal, J., den Brok, P. J., Hooijer, J. G., Martens, R. L., & van den Beemt, A. (2014). Teachers' engagement in professional learning: Exploring motivational profiles. *Learning and Individual Differences*, 36, 27-36. <https://doi.org/10.1016/j.lindif.2014.08.001>
- Kelchtermans, G. (2006). Teacher collaboration and collegiality as workplace conditions: A review. *Zeitschrift für Pädagogik*, 52(2), 220-237.
- Kintz, T., Lane, J., Gotwals, A., & Cisterna, D. (2015). Professional development at the local level: Necessary and sufficient conditions for critical colleagueship. *Teaching and Teacher Education*, 51, 121-136. <https://doi.org/10.1016/j.tate.2015.06.004>
- Koestner, R., & Losier, G. F. (1996). Distinguishing reactive versus reflective autonomy. *Journal of Personality*, 64(2), 465-494. <https://doi.org/10.1111/j.1467-6494.1996.tb00518.x>
- Kumar, R. S., & Subramaniam, K. (2015). From 'following' to going beyond the textbook: Inservice Indian mathematics teachers' professional development for teaching integers. *Australian Journal of Teacher Education*, 40(12), 86-103. <https://doi.org/10.14221/ajte.2015v40n12.7>
- Kvam, E. K. (2018). Untapped learning potential: A study of teachers' conversations with colleagues in primary schools in Norway. *Cambridge Journal of Education*, 48(6), 697-714. <https://doi.org/10.1080/0305764X.2017.1418833>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511815355>
- Lawrence, C. A., & Chong, W. H. (2010). Teacher collaborative learning through the lesson study: Identifying pathways for instructional success in a Singapore high school. *Asia Pacific Education Review*, 11(4), 565-572. <https://doi.org/10.1007/s12564-010-9103-3>
- LeChasseur, K., Mayer, A., Welton, A., & Donaldson, M. (2016). Situating teacher inquiry: A micropolitical perspective. *School Effectiveness and School Improvement*, 27(2), 255-274. <https://doi.org/10.1080/09243453.2015.1021818>
- Lefstein, A., Louie, N., Segal, A., & Becher, A. (2020). Taking stock of research on teacher collaborative discourse: Theory and method in a nascent field. *Teaching and Teacher Education*, 88, 102954. <https://doi.org/10.1016/j.tate.2019.102954>
- Levine, T. H., & Marcus, A. S. (2010). How the structure and focus of teachers' collaborative activities facilitate and constrain teacher learning. *Teaching and Teacher Education*, 26(3), 389-398. <https://doi.org/10.1016/j.tate.2009.03.000>
- Little, J. W. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. *Teachers College Record*, 91(4), 509-536.
- Little, J. W. (2003). Inside teacher community: Representations of classroom practice. *Teachers College Record*, 105(6), 913-945.
- Little, R. J., & Rubin, D. B. (2019). *Statistical analysis with missing data*. John Wiley & Sons.

- Liu, Y. (2019). Situated teacher learning as externalising and mobilising teachers' tacit knowledge through talk in a language teacher professional community. *Research Papers in Education*, 34(3), 330-351. <https://doi.org/10.1080/02671522.2018.1452956>
- Logan, K., & Mountain, L. (2018). Writing instruction in chemistry classes: Developing prompts and rubrics. *Journal of Chemical Education*, 95(10), 1692-1700. <https://doi.org/10.1021/acs.jchemed.8b00294>
- Lomos, C., Hofman, R. H., & Bosker, R. J. (2011). Professional communities and student achievement: A meta-analysis. *School Effectiveness and School Improvement*, 22(2), 121-148. <https://doi.org/10.1080/09243453.2010.550467>
- Louie, N. L. (2017). Supporting teachers' equity-oriented learning and identities: A resource-centered perspective. *Teachers College Record*, 119(3), 1-42.
- Louws, M. L., Meirink, J. A., van Veen, K., & van Driel, J. H. (2017). Teachers' self-directed learning and teaching experience: What, how, and why teachers want to learn. *Teaching and Teacher Education*, 66, 171-183. <https://doi.org/10.1016/j.tate.2017.04.004>
- Louws, M. L., Meirink, J. A., van Veen, K., & van Driel, J. H. (2018). Understanding teachers' professional learning goals from their current professional concerns. *Teachers and Teaching*, 24(1), 63-80. <https://doi.org/10.1080/13540602.2017.1383237>
- Marsh, J. A., Bertrand, M., & Huguette, A. (2015). Using data to alter instructional practice: The mediating role of coaches and professional learning communities. *Teachers College Record*, 117(4), 1-40.
- McLaughlin, M. W., & Talbert, J. E. (2001). *Professional communities and the work of high school teaching*. University of Chicago Press.
- Meijer, P. (1999). *Teachers' practical knowledge. Teaching reading comprehension in secondary education* [Doctoral dissertation, Leiden University].
- Meirink, J. A., Imants, J., Meijer, P. C., & Verloop, N. (2010). Teacher learning and collaboration in innovative teams. *Cambridge Journal of Education*, 40(2), 161-181. <https://doi.org/10.1080/0305764X.2010.481256>
- Meirink, J. A., Meijer, P. C., & Verloop, N. (2007). A closer look at teachers' individual learning in collaborative settings. *Teachers and Teaching: Theory and Practice*, 13(2), 145-164. <https://doi.org/10.1080/13540600601152496>
- Meirink, J., van Der Want, A., Louws, M., Meijer, P., Oolbekkink-Marchand, H., & Schaap, H. (2020). Beginning teachers' opportunities for enacting informal teacher leadership: Perceptions of teachers and school management staff members. *European Journal of Teacher Education*, 43(2), 243-257. <https://doi.org/10.1080/02619768.2019.1672654>
- Meng, C. (2014). Learning to do action research through reflection: A longitudinal study of rural EFL teachers. *Chinese Journal of Applied Linguistics*, 37(3), 292-308. <https://doi.org/10.1515/cjal-2014-0019>
- Mercer, N. (2007). Sociocultural discourse analysis: Analysing classroom talk as a social mode of thinking. *Journal of Applied Linguistics and Professional Practice*, 1(2), 137-168. <https://doi.org/10.1558/japl.2004.1.2.137>
- Mitchell, C., & Sackney, L. (2006). Building schools, building people: The school principal's role in leading a learning community. *Journal of School Leadership*, 16(5), 627-640. <https://doi.org/10.1177/105268460601600512>
- Mon, C. C., Dali, M. H., & Sam, L. C. (2016). Implementation of lesson study as an innovative professional development model among Malaysian school teachers. *Malaysian Journal of Learning and Instruction*, 13(1), 83-111.
- Ni Shuilleabhain, A., & Seery, A. (2018). Enacting curriculum reform through lesson study: A case study of mathematics teacher learning. *Professional Development in Education*, 44(2), 222-236. <https://doi.org/10.1080/19415257.2017.1280521>
- OECD (2014, October 28). *Education Policy Outlook Netherlands*. <http://www.oecd.org/education/highlightsnetherlands.htm>
- OECD (2017). *How can professional development enhance teachers' classroom practices? Teaching in Focus*, No. 16. <https://doi.org/10.1787/2745d679-en>
- OECD (2019a). *Teachers' professional learning: Study design and implementation plan*. <http://www.oecd.org/education/school-resources-review/TPL-Study-Design-and-Implementation-Plan.pdf>
- OECD (2019b). *How teachers update their teaching skills to cope with the rapidly changing world. Teaching in Focus*, No. 28. https://www.oecd-ilibrary.org/education/how-teachers-update-their-teaching-skills-to-cope-with-the-rapidly-changing-world_282b9edd-en
- OECD (2020). *TALIS 2018 results (volume II): Teachers and school leaders as valued professionals*. <https://www.oecd.org/publications/talis-2018-results-volume-ii-19cf08df-en.htm>
- Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, 81(3), 376-407. <https://doi.org/10.3102/0034654311413609>
- Opfer, V. D., & Pedder, D. J., & Lavicza, Z. (2011a). The influence of school orientation to learning on teachers' professional learning change. *School Effectiveness and School Improvement*, 22(2), 193-214. <https://doi.org/10.1080/09243453.2011.572078>
- Opfer, V. D., Pedder, D. G., & Lavicza, Z. (2011b). The role of teachers' orientation to learning in professional development and change: A national study of teachers in England. *Teaching and Teacher Education*, 27(2), 443-453. <https://doi.org/10.1016/j.tate.2010.09.014>
- Oude Grote Beverborg, A. O. G., Slegers, P. J., & van Veen, K. (2015). Promoting VET teachers' individual and social learning activities: The empowering and purposeful role of transformational leadership, interdependence, and self-efficacy. *Empirical Research in Vocational Education and Training*, 7(5), 5-25. <https://doi.org/10.1186/s40461-015-0018-4>

- Owen, S. (2016). Professional learning communities: building skills, reinvigorating the passion, and nurturing teacher wellbeing and “flourishing” within significantly innovative schooling context. *Educational Review*, 68(4), 403-419. <https://doi.org/10.1080/00131911.2015.1119101>
- Pedder, D., & Opfer, D. G. (2013). Professional learning orientations: Patterns of dissonance and alignment between teachers’ values and practices. *Research Papers in Education*, 28(5), 539-570. <https://doi.org/10.1080/02671522.2012.706632>
- Penuel, W. R., Roschelle, J., & Shecht, N. (2007). Designing formative assessment software with teachers: An analysis of the co-design process. *Research and Practice in Technology Enhanced Learning*, 2(1), 51-74. <https://doi.org/10.1142/S1793206807000300>
- Popp, J. S., & Goldman, S. R. (2016). Knowledge building in teacher professional learning communities: Focus of meeting matters. *Teaching and Teacher Education*, 59, 347-359. <https://doi.org/10.1016/j.tate.2016.06.007>
- Prenger, R., Poortman, C. L., & Handelzalts, A. (2017). Factors influencing teachers’ professional development in networked professional learning communities. *Teaching and Teacher Education*, 68, 77-90. <https://doi.org/10.1016/j.tate.2017.08.014>
- Puchner, L. D., & Taylor, A. R. (2006). Lesson study, collaboration and teacher efficacy: Stories from two school-based math lesson study groups. *Teaching and Teacher Education*, 22(7), 922-934. <https://doi.org/10.1016/j.tate.2006.04.011>
- Putnam, R. T., & Borko, H. (1997). Teacher learning: Implications of new views of cognition. In B. J. Biddle (Eds.), *International handbook of teachers and teaching* (pp. 1223-1296). Springer.
- R Core Team (2016). R: A language and environment for statistical computing. R foundation for statistical computing, Vienna, Austria. <https://www.R-project.org/>
- Raes, E., Kyndt, E., Decuyper, S., van den Bossche, P., & Dochy, F. (2015). An exploratory study of group development and team learning. *Human Resource Development Quarterly*, 26(1), 5-30. <https://doi.org/10.1002/hrdq.21201>
- Rismark, M., & Sølvyberg, A. M. (2011). Knowledge sharing in schools: A key to developing professional learning communities. *World Journal of Education*, 1(2), 150-160. <https://doi.org/10.5430/wje.v1n2p150>
- Roy, A., Guay, F., & Valois, P. (2013). Teaching to address diverse learning needs: Development and validation of a differentiated instruction scale. *International Journal of Inclusive Education*, 17(11), 1186-1204. <https://doi.org/10.1080/13603116.2012.743604>
- Rubin, D. B. (1976). Inference and missing data. *Biometrika*, 63(3), 581-592. <https://doi.org/10.2307/2335739>
- Rubinson, F. (2002). Lessons learned from implementing problem-solving teams in urban high schools. *Journal of Educational and Psychological Consultation*, 13(3), 185-217. https://doi.org/10.1207/S1532768XJEP1303_03
- Runhaar, P. (2017). How can schools and teachers benefit from human resources management? Conceptualising HRM from content and process perspectives. *Educational Management Administration & Leadership*, 45(4), 639-656. <https://doi.org/10.1177/1741143215623786>
- Runhaar, P., Sanders, K., & Yang, H. (2010). Stimulating teachers’ reflection and feedback asking: An interplay of self-efficacy, learning goal orientation, and transformational leadership. *Teaching and Teacher Education*, 26(5), 1154-1161. <https://doi.org/10.1016/j.tate.2010.02.011>
- Runhaar, P., Ten Brinke, D., Kuijpers, M., Wesselink, R., & Mulder, M. (2014). Exploring the links between interdependence, team learning and a shared understanding among team members: The case of teachers facing an educational innovation. *Human Resource Development International*, 17(1), 67-87. <https://doi.org/10.1080/13678868.2013.856207>
- Schaap, H., Leeferink, H., & Meijer, P. (2018). Professionele leergemeenschappen in het voortgezet onderwijs: Ervaren professionele ruimte voor professionele ontwikkeling en schoolontwikkeling. *Pedagogische Studiën*, 95(3), 132-152.
- Schafer, J. L., & Zhao, J. H. (2014). Pan: Multiple imputation for multivariate panel or clustered data (Version 0.9) [Computer software]. <https://CRAN.R-project.org/package=pan>
- Scheerens, J. (2010). *Teachers’ professional development: Europe in international comparison. An analysis of teachers’ professional development based on the OECD’s Teaching and Learning International Survey (TALIS)*. Luxembourg: Office for Official Publications of the European Union. <https://op.europa.eu/en/publication-detail/-/publication/7454deec-f2ec-4537-845c-ce01f8c1317b/language-en>
- Schipper, T., Goei, S. L., de Vries, S., & van Veen, K. (2017). Professional growth in adaptive teaching competence as a result of Lesson Study. *Teaching and Teacher Education*, 68, 289-303. <https://doi.org/10.1016/j.tate.2017.09.015>
- Schipper, T. M., de Vries, S., Goei, S. L., & van Veen, K. (2019). Promoting a professional school culture through lesson study? An examination of school culture, school conditions, and teacher self-efficacy. *Professional Development in Education*, 46(1), 1-18. <https://doi.org/10.1080/19415257.2019.1634627>
- Schipper, T. M., van Der Lans, R. M., de Vries, S., Goei, S. L., & van Veen, K. (2020). Becoming a more adaptive teacher through collaborating in lesson study? Examining the influence of lesson study on teachers’ adaptive teaching practices in mainstream secondary education. *Teaching and Teacher Education*, 88, 102961. <https://doi.org/10.1016/j.tate.2019.102961>
- Schenke, W., Sligte, H., Admiraal, W., Buisman, M., Emmelot, Y., Meirink, J., Smit, B. (2015). Scan school als professionele leergemeenschap [scan school as professional learning community] (Report No. 938, ISBN 94-6321-000-3). Retrieved from Kohnstamm Instituut website: <https://kohnstammstituut.nl/wp-content/uploads/2019/08/938-Scan-School-als-Professionele-Leergemeenschap.pdf>

- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. Doubleday.
- Senge, P. M. (2000). *Schools that learn*. Currency/Doubleday.
- Slavit, D., & Nelson, T. H. (2010). Collaborative teacher inquiry as a tool for building theory on the development and use of rich mathematical tasks. *Journal of Mathematics Teacher Education*, 13(3), 201-221. <https://doi.org/10.1007/s10857-009-9136-x>
- Sleegers, P., den Brok, P., Verbiest, E., Moolenaar, N. M., & Daly, A. J. (2013). Toward conceptual clarity: A multidimensional, multilevel model of professional learning communities in Dutch elementary schools. *The Elementary School Journal*, 114(1), 118-137. <https://doi.org/10.1086/671063>
- Sjoer, E., & Meirink, J. (2016). Understanding the complexity of teacher interaction in a teacher professional learning community. *European Journal of Teacher Education*, 39(1), 110-125. <https://doi.org/10.1080/02619768.2014.994058>
- Staessens, K. (1993). Identification and description of professional culture in innovating schools. *International Journal of Qualitative Studies in Education*, 6(2), 111-128. <https://doi.org/10.1080/0951839930060202>
- Stanton, K., Cawthon, S., & Dawson, K. (2018). Self-efficacy, teacher concerns, and levels of implementation among teachers participating in drama-based instruction professional development. *Teacher Development*, 22(1), 51-77. <https://doi.org/10.1080/13664530.2017.1308430>
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221-258. <https://doi.org/10.1007/s10833-006-0001-8>
- Stoll, L., & Kools, M. (2017). The school as a learning organisation: A review revisiting and extending a timely concept. *Journal of Professional Capital and Community*, 2(1), 2-17. <https://doi.org/10.1108/JPC-09-2016-0022>
- Strong, L. E. G., & Yoshida, R. K. (2014). Teachers' autonomy in today's educational climate: Current perceptions from an acceptable instrument. *Educational Studies: A Journal of the American Educational Studies Association*, 50(2), 123-145. <https://doi.org/10.1080/00131946.2014.880922>
- Tam, A. C. F. (2015a). The role of a professional learning community in teacher change: A perspective from beliefs and practices. *Teachers and Teaching*, 21(1), 22-43. <https://doi.org/10.1080/13540602.2014.928122>
- Tam, A. C. F. (2015b). Exploring teachers' beliefs about teacher learning in professional learning communities and their influence on collegial activities in two departments. *Compare: A Journal of Comparative and International Education*, 45(3), 422-444. <https://doi.org/10.1080/03057925.2013.872025>
- Thomas, G., Wineburg, S., Grossman, P., Myhre, O., & Woolworth, S. (1998). In the company of colleagues: An interim report on the development of a community of teacher learners. *Teaching and Teacher Education*, 14(1), 21-32. [https://doi.org/10.1016/S0742-051X\(97\)00058-9](https://doi.org/10.1016/S0742-051X(97)00058-9)
- Thoonen, E. E., Sleegers, P. J., Oort, F. J., Peetsma, T. T., & Geijsel, F. P. (2011). How to improve teaching practices: The role of teacher motivation, organizational factors, and leadership practices. *Educational Administration Quarterly*, 47(3), 496-536. <https://doi.org/10.1177/0013161X11400185>
- Thurlings, M., & den Brok, P. (2017). Learning outcomes of teacher professional development activities: A meta-study. *Educational Review*, 69(5), 554-576. <https://doi.org/10.1080/00131911.2017.1281226>
- Tomlinson, C. A. (2014). *Differentiated classroom: Responding to the needs of all learners*. Ascd.
- Tomlinson, C. A., & Jarvis, J. (2009). Differentiation: Making curriculum work for all students through responsive planning and instruction. In J. S. Renzulli, E. J., Gubbins, K. S. McMillen, R. D. Eckert, & C. A. Little (Eds.), *Systems and models for developing programs for the gifted and talented* (pp. 599-628). Creative Learning Press.
- Tronsmo, E., & Nerland, M. (2018). Local curriculum development as object construction: A sociomaterial analysis. *Teaching and Teacher Education*, 72, 33-43. <https://doi.org/10.1016/j.tate.2018.02.008>
- Van Driel, J. H., Meirink, J. A., van Veen, K., & Zwart, R. C. (2012). Current trends and missing links in studies on teacher professional development in science education: A review of design features and quality of research. *Studies in Science Education*, 48(2), 129-160. <https://doi.org/10.1080/03057267.2012.738020>
- Van Gasse, R., Vanlommel, K., Vanhoof, J., & van Petegem, P. (2016). Teacher collaboration on the use of pupil learning outcome data: A rich environment for professional learning? *Teaching and Teacher Education*, 60, 387-397. <https://doi.org/10.1016/j.tate.2016.07.004>
- Van Gasse, R., Vanlommel, K., Vanhoof, J., & van Petegem, P. (2017). Unravelling data use in teacher teams: How network patterns and interactive learning activities change across different data use phases. *Teaching and Teacher Education*, 67, 550-560. <https://doi.org/10.1016/j.tate.2017.08.002>
- Van Waes, S., Moolenaar, N. M., Daly, A. J., Heldens, H. H., Donche, V., van Petegem, P., & van den Bossche, P. (2016). The networked instructor: The quality of networks in different stages of professional development. *Teaching and Teacher Education*, 59, 295-308. <https://doi.org/10.1016/j.tate.2016.05.022>
- Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational Research Review*, 15, 17-40. <https://doi.org/10.1016/j.edurev.2015.04.002>
- Vangrieken, K., Grosemans, I., Dochy, F., & Kyndt, E. (2017a). Teacher autonomy and collaboration: A paradox? Conceptualising and measuring teachers' autonomy and collaborative attitude. *Teaching and Teacher Education*, 67, 302-315. <https://doi.org/10.1016/j.tate.2017.06.021>
- Vangrieken, K., Meredith, C., Packer, T., & Kyndt, E. (2017b). Teacher communities as a context for professional development: A systematic review. *Teaching and Teacher Education*, 61, 47-59. <https://doi.org/10.1016/j.tate.2016.10.001>

- Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2009). Motivational profiles from a self-determination perspective: The quality of motivation matters. *Journal of Educational Psychology*, 101(3), 671-688. <https://doi.org/10.1037/a0015083>
- Vedder-Weiss, D., Segal, A., & Lefstein, A. (2019). Teacher face-work in discussions of video-recorded classroom practice: Constraining or catalyzing opportunities to learn? *Journal of Teacher Education*, 70(5), 538-551. <https://doi.org/10.1177/0022487119841895>
- Vermunt, J. D., Vrikk, M., van Halem, N., Warwick, P., & Mercer, N. (2019). The impact of lesson study professional development on the quality of teacher learning. *Teaching and Teacher Education*, 81, 61-73. <https://doi.org/10.1016/j.tate.2019.02.009>
- Waitoller, F. R., Kozleski, E. B., & Gonzalez, T. (2016). Professional inquiry for inclusive education: Learning amidst institutional and professional boundaries. *School Effectiveness and School Improvement*, 27(1), 62-79. <https://doi.org/10.1080/09243453.2014.908929>
- Wardrip, P. S., Gomez, L. M., & Gomez, K. (2015). We modify each other's lessons: The role of literacy work circles in developing professional community. *Teacher Development*, 19(4), 445-460. <https://doi.org/10.1080/13664530.2015.1051186>
- Warwas, J., & Helm, C. (2018). Professional learning communities among vocational school teachers: Profiles and relations with instructional quality. *Teaching and Teacher Education*, 73, 43-55. <https://doi.org/10.1016/j.tate.2018.03.012>
- Warwick, P., Vrikk, M., Vermunt, J. D., Mercer, N., & van Halem, N. (2016). Connecting observations of student and teacher learning: An examination of dialogic processes in lesson study discussions in mathematics. *Zdm*, 48(4), 555-569. <https://doi.org/10.1007/s11858-015-0750-z>
- Watson, A., & de Geest, E. (2014). Department-initiated change. *Educational Studies in Mathematics*, 87(3), 351-368. <https://doi.org/10.1007/s10649-014-9549-z>
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge University Press.
- Weinstein, R. S., Madison, S. M., & Kuklinski, M. R. (1995). Raising expectations in schooling: Obstacles and opportunities for change. *American Educational Research Journal*, 32(1), 121-159. <https://doi.org/10.3102/00028312032001121>
- Wermke, W., & Höstfält, G. (2014). Contextualizing teacher autonomy in time and space: A model for comparing various forms of governing the teaching profession. *Journal of Curriculum Studies*, 46(1), 58-80. <https://doi.org/10.1080/00220272.2013.812681>
- Westheimer, J. (1999). Communities and consequences: An inquiry into ideology and practice in teachers' professional work. *Educational Administration Quarterly*, 35(1), 71-105. <https://doi.org/10.1177/00131619921968473>

- Westheimer, J. (2008). Learning among colleagues: Teacher community and the shared enterprise of education. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed., pp. 756-783). Routledge.
- Whitworth, B. A., & Chiu, J. L. (2015). Professional development and teacher change: The missing leadership link. *Journal of Science Teacher Education*, 26(2), 121-137. <https://doi.org/10.1007/s10972-014-9411-2>
- Wolthuis, F., van Veen, K., de Vries, S., & Hubers, M. D. (2020). Between lethal and local adaptation: Lesson study as an organizational routine. *International Journal of Educational Research*, 100, 101534. <https://doi.org/10.1016/j.ijer.2020.101534>
- Wong, J. L. (2010a). Searching for good practice in teaching: A comparison of two subject-based professional learning communities in a secondary school in Shanghai. *Compare*, 40(5), 623-639. <https://doi.org/10.1080/03057920903553308>
- Wong, J. L. (2010b). What makes a professional learning community possible? A case study of a mathematics department in a junior secondary school of China. *Asia Pacific Education Review*, 11(2), 131-139. <https://doi.org/10.1007/s12564-010-9080-6>
- Zwart, R. C., Wubbels, T., Bolhuis, S., & Bergen, T. C. (2008). Teacher learning through reciprocal peer coaching: An analysis of activity sequences. *Teaching and Teacher Education*, 24(4), 982-1002. <https://doi.org/10.1016/j.tate.2007.11.003>