

DAFTAR PUSTAKA

- Abell, S. K. (2007). Research on teacher knowledge. In S. K. Abell , & N. G. Lederman, *Handbook of research on science education* (pp. 1105-1150.). Mahwah: Lawrence Erlbaum Associates, Publishers.
- Abell, S. K., Appleton, K., & Hanuscin, D. L. (2010). *Designing and Teaching the Elementary Science Methodes Course*. New York: Routledge, Taylor & Francis Group.
- Adi Putra, M. J. (2009). *Pemanfaatan Peer Coching untuk Meningkatkan Kemampuan dan Pelaksanaan Pembelajaran Inkuiiri Guru Sekolah Dasar*. Bandung: SPS UPI: Tidak diterbitkan.
- Adi Putra, M. J., & Hermita, N. (2015). Refleksi: Upaya Peningkatan Kemampuan Mengajar Calon Guru. Seminar Nasional Pendidikan Dasar Sekolah Pascasarjana Universitas Pendidikan Indonesia Bandung.
- Akerson, V. L., Pongsanon, K., Park Rogers, M. A., Carter, I., & Galindo, E. (2017). Exploring the Use of Lesson Study to Develop Elementary Preservice Teachers' Pedagogical Content Knowledge for Teaching Nature of Science. *International Journal of Science and Mathematics Education*, 15(2), 293–312.
- Anwar, Y. (2014). *Perkembangan Pedagogical Content Knowledge Calon Guru Biologi Pendekatan Konsektif dan Peserta Penekatan Konkuren*. Bandung: Disertasi SPS UPI tidak di terbitkan.
- Appleton, K. (2003). How Do Beginning Primary School Teachers Cope with Science? Toward an Understanding of Science Teaching Practice. *Research in Science Education*, 33(1), 1-25.
- Appleton, K. (2008). Developing Science Pedagogical Content Knowledge Through Mentoring Elementary Teachers. *Jurnal Science Teacher Education*, 19, 523–545.
- Arend, R. (2007). *Learning To Teach*. New York: McGraw Hill Company.
- Arends, R. I. (2013). *Belajar untuk Mengajar: Learning to Teach 9th Ed Buku I*. Jakarta: Salemba Humanika.
- Australian Council for Educational Research. (2003, March 7). *Teaching mathematics in seven countries : results from the TIMSS 1999 video study*. Retrieved from http://research.acer.edu.au/timss_video: http://research.acer.edu.au/cgi/viewcontent.cgi?article=1004&context=timss_video

- Badan Standar Nasional Pendidikan. (2006). *Standar Isi untuk Satuan Pendidikan Dasar dan Menengah: Standar Kompetensi dan Kompetensi Dasar SD/MI*. Jakarta: BSNP.
- Ball, D. L., & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: Knowing and using mathematics. In J. Boaler, *Multiple perspectives on the teaching and learning of mathematics* (pp. 83–104). Westport,: CT: Ablex.
- Baxter, J. A., & Lederman, N. G. (1999). Assessment and measurement of pedagogical content knowledge. In J. Gess-Newsome , & N. G. Lederman, *Examining pedagogical content knowledge: PCK and science education* (pp. 147–161). Dordrecht,: The Netherlands Kluwer.
- Beard, C., & Wilson, J. P. (2013). *Experiential learning : a handbook for education, training and coaching*. Philadelphia: Kogan.
- Bell, A., & Mladenovic, R. (2008). The Benefits of Peer Observation of Teaching for Tutor Development. *Higher Education*, 55(6), 735–752.
- Bell, B., & Gilbert, J. (2005). *Teacher Development: A Model From Science Education*. Washington, D.C: The Falmer Press.
- Bellocchi, A., Mills, K. A., & Ritchie, S. M. (2016). Emotional experiences of preservice science teachers in online learning: the formation, disruption and maintenance of social bonds. *Cultural Studies of Science Education*, 11(3), 629-652.
- Berry, A., & Loughran, J. (2012). Developing Science Teacher Educators' Pedagogy of Teacher Education. In B. J. Fraser, K. Tobin, & C. J. McRobbie, *Second International Handbook of Science Education* (Vols. 401-415). Netherlands: Springer.
- Berry, A., Depaepe, F., & van Driel, J. (2016). Pedagogical Content Knowledge in Teacher Education. In J. Loughran , & M. L. Hamilton, *International Handbook of Teacher Education* (pp. 347-386). Singapore: Springer .
- Bertram, A. (2014). CoRes and PaP-eRs as a strategy for helping beginning primary teachers develop their pedagogical content knowledge. *Educación Química*, 25(3), 292-303.
- Blidi, S. (2017). *Collaborative Learner Autonomy A Mode of Learner Autonomy Development*. Singapore: Springer Singapore.
- Boreen, J., Johnson, M. K., Niday, D., & Potts, J. (2009). *Mentoring Beginning Teachers: Guiding, Reflecting, Coaching*. United States: Stenhouse Publishers.
- Brown, L. H., & Beckett, K. S. (2006). The Role of the School District in Student Discipline: Building Consensus in Cincinnati. *The Urban Review*, 235–256.

- Calderhead, J. (1991). The nature and growth of knowledge in student teaching. *Teaching and Teacher Education*, 7(5-6), 531-535.
- Chen, B., & Wei, B. (2015). Examining Chemistry Teachers' Use of Curriculum Materials: in View of Teachers' Pedagogical Content Knowledge. *Chemistry Education Research and Practice*, 16(2), 260-272.
- Cheng, L. P. (2015). Developing Critical Reflection Through Audio and Video Technology for Some Singapore Primary School Mathematics Teachers. In S. F. Ng , *Cases of Mathematics Professional Development in East Asian Countries Using Video to Support Grounded Analysis* (pp. 39-60). Singapore: Springer.
- Cheng, L. P. (2015). Developing Critical Reflection Through Audio and Video Technology for Some Singapore Primary School Mathematics Teachers. In S. F. Ng , *Cases of Mathematics Professional Development in East Asian Countries Using Video to Support Grounded Analysis* (pp. 39-60). Singapore: Springer.
- Çimer, A. (2007). Effective Teaching in Science: A Review of Literature. *Journal of Turkish Science Education*, 4(1), 20-44.
- Coenders, F., Terlouw , C., Dijkstra , S., & Pieters, J. (2010). The Effects of the Design and Development of a Chemistry Curriculum Reform on Teachers' Professional Growth: A Case Study. *Journal of Science Teacher Education*, 21(5), 535–557.
- Creemers, B., Kyriakides, L., & Antoniou, P. (2013). *Teacher Professional Development for Improving Quality of Teaching* . Netherlands: Springer .
- Creswell, J. W. (2015). *Educational research: Planning, conducting and evaluating quantitative and qualitative research 5th ed (terjemahan)*. Yogyakarta: Pustaka Pelajar.
- Dana, N. F., & Yendol-Hoppey, D. (2008). *The Reflective Educators Guide to Professional development: Coaching Inquiry-oriented Learning Communities* . California: Corwin Press, A SAGE Company.
- Daunert, A. L., & Price , L. (2014). Portfolio: A Practical Tool for Self-Directed, Reflective, and Collaborative Professional Learning. In C. Harteis, J. Seifried, & A. Rausch, *Discourses on Professional Learning On the Boundary Between Learning and Working* (pp. 231-251). Dordrecht: Springer Science+Business Media.
- Davis, E. (2003). Knowledge Integration in Science Teaching: Analysing Teachers' Knowledge Development. *Research in Science Education*, 34(1), 21–53.
- Dekker, W. D. (2016). *Global Mindset and Cross-Cultural Behavior Improving Leadership Effectiveness*. Macmillan: Palgrave.

- DeMeulenaere, E. J., Cann, C. N., Malone, C. R., & McDermott, J. E. (2013). *Reflections from the field : how coaching made us better teachers*. Charlotte, NC: Information Age Publishing Inc.
- Demirdögen, B. (2016). Interaction Between Science Teaching Orientation and Pedagogical Content Knowledge Components. *Journal of Science Teacher Education*, 27(5), 495–532.
- Dharma, L. H. (2007). *Brain Based Teaching: Merancang Kegiatan Belajar Mengajar yang Melibatkan Otak, Emosional, Sosial, Kognitif, Kinestetik dan Reflektif*. Bandung: Kaifa.
- Distad, L. S., & Brownstein, J. C. (2004). *Talking Teaching: Implementing Reflective Practice in Groups*. Maryland: ScarecrowEducation.
- Edwards, A., & Brunton, D. (1995). Supporting Reflection in Teachers' Learning Anne Edwards. In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 154-166). Washington DC: The Falmer Press.
- EL-Deghaidy, H., Mansour, N., & Alshamrani, S. (2015). Science Teachers' Typology Of CPD Activities: a Socio-Constructivist Perspective. *International Journal of Science and Mathematics Education*, 13(6), 1539–1566.
- Etkina, E. (2010). Pedagogical Content Knowledge and Preparation of High School. *Physics Education Research*, 6(2), 1-26.
- Enfield, M., Ashmann, S., & Duggan-Haas, D. (2000). Rethinking the Presentation of the NSTA Standards for Science Teachern Preparation. *Electronic Journal of Science Education*, 4(3).
- Fatemi, A. H., Shirvan, M. E., & Rezvani, Y. (2011). The Effect of Teachers' Self-reflection on EFL Learners' Writing Achievement. *Cross-cultural Communication*, 7(3), 175-181.
- Fernandez-Balboa, J., & Stiehl, J. (1995). The Generic Nature of Pedagogical Content Knowledge among College Professors. *Teaching & Teacher Education*, 11(3), 293–306.
- Fitri, W. (2015). *Profil Kemampuan Pedagogical Kontent Knoledge (PCK) Mahasiswa Calon Guru dan Kecenderungan Hubungannya dengan Pedagogical Knowledge (PK) dan Content Knowledge (CK) Pada Materi Genetika*. Bandung: Tesis Sekolah Pasca Sarjana UPI: Tidak diterbitkan.
- Flick, L. B. (2006). Being an Elementary Science Teacher Education. In A. f. Education, *Elementary Science Teacher Education* (pp. 15-29). New Jersey: Lawrence Erlbaum Associates.
- Fricke, K., Ackeren, I. V., Kauertz, A., & Fischer, H. E. (2012). Students' Perceptions of their Teachers' Classroom Management in Elementary and Secondary Science Lessons and the Impact on Student Achievement. In B. J.

- Fraser , & J. P. Dorman , *Interpersonal Relationships in Education* (pp. 167-185). Rotterdam: Sense Publishers.
- Friedrichsen, P., Van Driel, J. H., & Abell, S. K. (2010). Taking a Closer Look at Science Teaching Orientations. *Wiley Online Library* (wileyonlinelibrary.com), 95(2), 358-376.
- Fuller, F. (1969). Concerns of teachers: A developmental conceptualization. *American Educational Research Journal*, 6, 207-226.
- Garritz, A., Alvarado, C., Cañada, F., & Mellado, V. (2013). PCK by CoRes and PaPeRs for Teaching Acids and Bases at High School. *NARST-2013 Conference*.
- Gauthier, R. F. (2006). *The Content of Secondary Education Around The World: Present Position and Strategic Choices*. Unesco.
- Gess-Newsome, J. (1999). Secondary Teachers' Knowledge and Beliefs About Subject Matter and Their Impact on Instruction. In J. Gess-Newsome , & N. G. Lederman, *PCK and Science Education*, (pp. 51-94.). Netherlands: Kluwer Academic Publishers.
- Gess-Newsome, J., & Lederman, N. G. (2002). *Pedagogical Content Knowledge: an Introduction and Orientation*. Netherlands: Kluwer Academic Publishers.
- Givvin, K., Hiebert, J., Jacobs, J. K., Hollingsworth, H., & Gallimore, R. (2005). Are There National Patterns of Teaching? Evidence from the TIMSS 1999 Video Study. *Comparative Education Review*, 49(3), 311-342.
- Gomez-Zwiep, S. (2008). Elementary Teachers' Understanding of Students' Science Misconceptions: Implications for Practice and Teacher Education. *Journal of Science Teacher Education*, 19(5), 437–454.
- Goodrum, D., Druhan, A., & Abbs, J. (2012). *The Status and Quality of Year 11 and 12 Science in Australian Schools Prepared for the Office of the Chief Scientist*. Australian Academy of Science.
- Grossman, P. L. (1990). *The making of a teacher: Teacher knowledge & teacher education*. New York: Teachers College Press.
- Gudmundsdottir, S., & Shulman, L. (1987). Pedagogical content knowledge in social studies. *Scandinavian Journal of Educational Research*, 31(2), 59-70.
- Hadiyanti, N. H. (2014). *Pedagogical Content Knowledge (Pck) Guru Berpengalaman dan Calon Guru Biologi*. Bandung: Tesis SPS UPI: Tidak diterbitkan.
- Hagger, H., & Mc Intyre, H. (2006). *Learning Teaching From Teachers: Realizing The Potential of School-based Teacher Education*. New York: Mc Graw-Hill.
- Halai, N. (2012). Developing Understanding of Innovative Strategies of Teaching Science through Action Research: a Qualitative Meta-Synthesis From

- Pakistan. *International Journal of Science and Mathematics Education*, 10(2), 387–415.
- Halim, L., Meerah, T. S., & Buang, N. A. (2010). Developing Pre-Service Science Teachers' Pedagogical Content Knowledge through Action Research. *A Procedia - Social and Behavioral Sciences*, 9, 507-511.
- Hamidah, D. (2011). *Pengembangan Profesional Guru Biologi SMA Melalui Program Pelatihan Pedagogical Content Knowledge Pada Materi Genetika*. Bandung: Disertasi SPS UPI: Tidak diterbitkan.
- Hanuscin, D. J. (2013). Critical Incidents in the Development of Pedagogical Content Knowledge for Teaching the Nature of Science: A Prospective Elementary Teacher's Journey. *Journal of Science Teacher Education*, 24(6), 933–956.
- Harlen, W., & Qualter, A. (2004). *The Teaching of Science in Primary Schools*. London: David Fulton Publishers.
- Hasweh, M. (2005). Teacher Pedagogical Construction: a Reconfiguration of Pedagogical Content Knowledge. *Teacher and Teaching: Theory and Practice*, 11(3), 273-292.
- Hatcha, T., Shuttleworthb, J., Jaffeeec, A. T., & Marria, A. (2016). Videos, Pairs, and Peers: What Connects Theory and Practice in Teacher Education? *Teaching and Teacher Education*, 59, 274–284.
- Herlina, L. (2015). *Perkembangan Pedagogical Content Knowledge Mahasiswa Calon Guru Biologi Peserta Program Pengalaman Lapangan*. Bandung: Tesis Sekolah Pasca Sarjana UPI: Tidak diterbitkan.
- Houston, L. S., Fraser, B. J., & Ledbetter, C. E. (2008). An Evaluation of Elementary School Science Kits in Terms Of Classroom Environment and Student Attitudes. *Journal of Elementary Science Education*, 20(4), 29–47.
- Howard, D. M. (2015). Reflection: Draw a Line—Turn the Page. In J. R. Jones, *Under the Bleachers Teachers' Reflections of What They Didn't Learn in College* (pp. 73-78). Macon: Sense Publishers.
- Hudson, P. (2013). Strategies for mentoring pedagogical knowledge. *Teachers and Teaching: Theory and Practice.*, 19(4), 363–381.
- Ibrahim, N. H., Surif, J., Arshad, M. Y., & Mokhtar, M. (2012). Self Reflection Focusing on Pedagogical Content Knowledge. *Procedia - Social and Behavioral Sciences*, 56, 474-482.
- Jackson, R. R. (2011). *How to plan rigorous instruction*. Washington D.C.: MindStep.
- Jiang, Y. (2017). *A Study on Professional Development of Teachers of English as a Foreign Language in Institutions of Higher Education in Western China*. Heidelberg: Springer Berlin.

- Johnston, J., Halocha, J., & Chater, M. (2007). *Developing Teaching Skills in the Primary School*. New York: McGraw-Hill Education.
- Jones, J., Jenkin, M., & Lord, S. (2006). *Developing Effectif Teacher Performance*. London: SAGE Publication Company.
- Kafyulilo, A., Fisser, P., & Voogt, J. (2016). Teacher design in Teams as a Professional Development Arrangement for Developing Technology Integration Knowledge and Skills of Science Teachers in Tanzania. *Education and Information Technologies*, 21(2), 301–318.
- Kamboj, P., & Singh, S. K. (2015). Effectiveness of Selected Teaching Strategies in Relation to the Learning Styles of Secondary School Students in India. *Interchange*, 46(3), 289–312.
- Kartal, T., Oztruk, N., & Ekici, G. (2012). Developing Pedagogical Content Knowledge in Preservice Science Teachers Through Microteaching Lesson Study. *Procedia-Social and Behavioral Sciences*, 46, 2753-2758.
- Kementerian Pendidikan dan Kebudayaan Republik Indonesia. (2016, Februari 1). *Kemdikbud*. Retrieved from Kemdikbud.go.id: <https://www.kemdikbud.go.id/main/blog/2016/01/7-provinsi-raih-nilai-terbaik-uji-kompetensi-guru-2015>
- Kim, D., & Lee, S. (2002). Designing Collaborative Reflection Supporting Tool in e-Project-Base Learning Environments. *Journal of Interactive Learning Research*, 13(4), 375-392.
- Kim, M., Lavonen, J., Juuti, K., Holbrook, J., & Rannikmäe, M. (2013). Teacher'S Reflection of Inquiry Teaching in Finland Before and During an In-Service Program: Examination by a Progress Model of Collaborative Reflection. *International Journal of Science and Mathematics Education*, 359-383.
- Knowles, J. G. (1995). 5 Life-History Accounts as Mirrors: A Practical Avenue for the Conceptualization of Reflection in Teacher Education. In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 70-92). Washington DC: The Falmer Press.
- Küçükaydin , M. A., & Sağır, S. U. (2016). An Investigation of Primary School Teachers' PCK towards Science Subjects Using an Inquiry-Based Approach. *International Electronic Journal of Elementary Education*, 9(1), 87-108.
- Kyriacou, C. (2009). *Effective Teaching in Schools: Theory and Practice, 3rd Edition*. London: Nelson Thornes Ltd.
- LaBoskey, V. K. (1995). A Conceptual Framework for Reflection in Preservice Teacher Education. In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 23-39). Washington DC: The Falmer Press.
- Lange, K., Kleickmann, T., & Möller, K. (2012). Elementary Teachers' Pedagogical Content Knowledge and Student Achievement In Science Education. In A. T.

- C. Bruguiere, *Science Learning and Citizenship*. Lyon: Proceedings of the Ninth ESERA-Conference.
- Lannin, J. K., Chval, K., Webb, M., Arbaugh, F., Hicks, S., Taylor, C., & Bruton, R. (2013). The Development of Beginning Mathematics Teacher Pedagogical Content Knowledge. *Journal of Mathematics Teacher Education*, 403–426.
- Larrivee, B. (2006). *An Educator's Guide to Teacher Reflection*. USA: Cengage Learning.
- Lee, O., Llosa, L., Jiang, F., O'Connor, C., & Haas, A. (2016). School Resources in Teaching Science to Diverse Student Groups: An Intervention's Effect on Elementary Teachers' Perceptions. *Journal of Science Teacher Education*, 769–794.
- Lee, Y. C. (2011). Enhancing pedagogical content knowledge in a collaborative school-based professional development program for inquiry-based science teaching. *Asia-Pacific Forum on Science Learning and Teaching*, 12(2), 1-29.
- Lemberger, J., Hewson, P. W., & Park, H. (1999). Relationships between Prospective Secondary Teachers' Classroom Practice and Their Conceptions of Biology and of Teaching Science. *John Wiley & Sons, Inc. Sci Ed*, 347–371.
- Li, Y., & Huang, R. (2008). Chinese elementary mathematics teachers' knowledge in mathematics and pedagogy for teaching: the case of fraction division. *ZDM Mathematics Education*, 40(5), 845–859.
- Liao, C. W., Lin, S. Y., Tien, L. C., & Chang, Y. C. (2012). The Impact of Integrating Information Technology into Teaching on Teacher Education of Taiwan's Secondary Education. In L. Uden, E. Corchado Rodríguez, J. De Paz Santana, & F. De la Prieta (Ed.), *Workshop on Learning Technology for Education in Cloud (LTEC'12)*. 173, pp. 131-143. Berlin, Heidelberg: Springer.
- Limba, A. (2014). *Model Penyiapan Pedagogical Content Knowledge (PCK) Calon Guru Untuk Meningkatkan Kemampuan Merancang dan Mengimplementasikan Pengajaran Fisika*. Bandung: Disertasi SPS UPI: Tidak Diterbitkan.
- Loibl, K., & Rummel, N. (2014). The impact of guidance during problem-solving prior to instruction on students' inventions and learning outcomes. *Instructional Science*, 42(3), 305–326.
- Longran, J., Mulhall, P., & Berry , A. (2004). In Search of Pedagogical Content Knowledge in Science: Developing Ways of Articulating and Documentating Professional Practice. *Journal of Research in Science Teaching*, 41(4), 370-391.

- Loughran, J., Berry, A., & Mulhall, P. (2006). *Understanding and Developing Science Teachers' Pedagogical Content Knowledge*. Rotterdam: Sense Publishers.
- Loughran, J., Berry, A., & Mulhall, P. (2007). Pedagogical Content Knowledge: What Does it Mean to Science Teachers? In R. Pintó, & D. Couso, *Contributions from Science Education Research* (pp. 93-105). Dordrecht: Springer.,
- Loughran, J., Berry, A., & Mulhall, P. (2012). *Understanding and Developing Science Teachers' Pedagogical Content Knowledge*. Rotterdam: Sense Publishers.
- Loughran, J., Milroy, P., Berry, A., Mulhall, P., & Gunstone, R. (2001). Documenting Science Teachers' Pedagogical Content Knowledge through PaP-eRs. *Research in Science Education*, 31(2), 289–307.
- Loughran, J., Mulhall, P., & Berry, A. (2008). Exploring pedagogical content knowledge in science teacher education: A case study. *International Journal of Science Education*, 30(10), 1301–1320.
- Lounghran, J., & Nielson, p. (2012). Exploring The Development of Pre-service Science Elementary Teachers' Pedagogical Content Knowledge. *Journal Science Teacher Education*, 23, 699-721.
- Magnuson, S., Krajcik, J., & Borko, H. (2002). Nature, Source, and Development of Pedagogical Content Knowledge for Science Teaching. In J. G. Newsome, & N. G. Lederman, *Examining Pedagogical Content Knowledge* (pp. 95-132). New York: Kluwer Academic Publishers.
- Mansvelder-Longayroux, D., Beijaard, D., & Verloop, N. (2007). (). The portfolio as a tool for stimulating reflection by student teachers. *Teaching and Teacher Education*, 47–62.
- Marina, G., & Newsom. (1983). Effect of Instruction Using Students' Prior Knowledge and Conceptual Change Strategies on Science Learning. *Journal of Research in Science Teaching* , 20(3), 731-743.
- McDiarmid , G. W. (1995). Changes in Beliefs about Learners among Participants in Eleven Teacher Education Programs. In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 113-143). Washington DC: The Falmer Press.
- McNeill, K. L., & Knight, A. M. (2013). Teachers' Pedagogical Content Knowledge of Scientific Argumentation: The Impact of Professional Development on K–12 Teachers. *Science Education*, 97(6), 936–972.
- McNew-Birren, J., & van den Kieboom, L. A. (2017). Exploring the development of core teaching practices in the context of inquiry-based science instruction: An interpretive case study. *Teaching and Teacher Education*, 66, 74-87.

- Metz , K. E. (2006). The Knowledge Building Enterprises In Science And Elementary School Science Classrooms . In Flick L. B. , & Lederman N.G., *Scientific Inquiry and Nature of Science: Implications for Teaching,Learning, and Teacher Education* (pp. 105-130). Netherlands: Springer.
- Mojica, G. F., Confrey, J., & Wilsona, P. H. (2013). Learning trajectories in teacher education: Supporting teachers'. *The Journal of Mathematical Behavior*, 32, 103–121.
- Morais, A. S., Olsson, H., & Schooler, L. J. (2010). Ways of probing situated concepts. *Behavior Research Methods*, 302-310.
- Morais, A. S., Olsson, H., & Schooler, L. J. (2010). Ways of probing situated concepts. *Behavior Research Methods*, 42(1), 302-310.
- Mueller, R. (2016). Change and Improvement in Post-Secondary Education. In P. Newton , & D. Burgess, *The Best Available Evidence; Decision Making for Educational Improvement* (pp. 129-146). Sense Publishers.
- Muijs, D., & Reynolds, D. (2008). *Effective Teaching: Teori dan Aplikasi*. Yogyakarta: Pustaka Pelajar.
- Mulhall, P., Berry, A., & Loughran, J. (2003). Frameworks for representing science teachers' pedagogical content knowledge. *Asia-Pasific Forum on Science Learning and Teaching*.
- National Research Council. (1999). *Selecting Instructional Materials: A Guide for K-12 Science*. Washington, DC: The National Academies Press.
- National Research Council (NRC). (1996). *National Science Educational Standards*. Washington: National Academy Press.
- Ng, S. F. (2014). How Researchers and Teachers Could Use Videos:. In S. F. Ng, *Cases of Mathematics Professional Development in East Asian Countries: Using Video to Support Grounded Analysis* (pp. 39-60). Singapore: Springer Singapore.
- Ng, S. F. (2014). Into Part I: How Videos and Audio Technology Support. In S. F. Ng, *Cases of Mathematics Professional Development in East Asian Countries: Using Video to Support Grounded Analysis* (pp. 11-14). Singapore: Springer .
- Nicholson, S. A., & Bond, N. (2003). Collaborative Reflection and Professional Community Building: an Analysis of Preservice Teachers Use an Of Electronic Discussion Board. *Jurnal Of Technology and Teacher Education*, 11(2), 259-279.
- Nicol, C. (1998). Learning to Teach Mathematics: Questioning, Listening, and Responding. *Educational Studies in Mathematics*, 45–66.
- Nicol, C. (1998). Learning to Teach Mathematics: Questioning, Listening, and Responding. *Educational Studies in Mathematics*, 37(1), 45–66.

- Nolan, A., & Molla, T. (2017). Teacher confidence and professional capital. *Teaching and Teacher Education*, 62, 10-18.
- Nuangchalerm, P. (2011). In-service Science Teachers' Pedagogical Content Knowledge. *Studies in Sociology of Science*, 2(2), 33-37.
- Nugraha, I. (2014). *Peran Refleksi Diri Dan Video Coaching Dalam Pengembangan Pedagogical Content Knowledge (PCK) Guru Biologi SMP Pada Materi Sistem Pernapasan Manusia*. Bandung: Tesis SPS UPI: Tidak Diterbitkan.
- Ovens, P. (2000). *Reflective Teacher Development in primary science*. London: Falmer Press.
- Paratore, J. R., O'Brien, L. M., Jimenez, L., Salinas, A., & Ly, C. (2016). Engaging preservice teachers in integrated study and use of educational media and technology in teaching reading. *Teaching and Teacher Education*, 59, 247-260.
- Petchtone, P. (2014). The Development of Instructional Model Integrated with Thinking Skills and Knowledge Constructivism for Undergraduate Students. *Procedia - Social and Behavioral Sciences*, 116, 4283-4286.
- Pongsanon, K., Akerson, V. L., Roger, M. P., & Weiland, I. (2011). Exploring the Use of Lesson Study to Develop Elementary Preservice Teachers' Pedagogical Content Knowledge for Teaching Nature of Science. *The National Association for Research in Science Teaching*, 15(2).
- Prashnig, B. (1998). *The Power Of Learning Styles: Memacu Anak Melejitkan Prestasi Dengan Mengenali Gaya Belajarnya*. Bandung: PT. Mizan Pustaka.
- Pritchard, A., & Woppard, J. (2010). *Psychology for the Classroom: Constructivism and Social Learning*. London: Routledge Taylor & Francis Group.
- Proctor, K. A. (1995). Tutors' Professional Knowledge of Supervision and the Implications for Supervision Practice. In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 93-112). Washington DC: The Falmer Press.
- Purwanti. (2013). *Pengembangan Model Pembelajaran Profesi Kependidikan Dengan Teknik Reflektif untuk Meningkatkan Kompetensi Kepribadian Guru*. Bandung: Universitas Pendidikan Indonesia.
- Purwianingsih, W. (2011). *Pengembangan Program Pembekalan Pedagogical Content Knowledge (PCK) Bioteknologi Melalui Perkuliahan Kapita Selekta IPA SMA*. Bandung: Disertasi, Universitas Pendidikan Indonesia: Tidak diterbitkan.
- Qhobela, M., & Moru, E. K. (2014). Examining Secondary School Physics Teachers' Beliefs about Teaching And Classroom Practices in Lesotho As A Foundation For Professional Development. *International Journal of Science and Mathematics Education*, 12(6), 1367-139.

- Rasmussen, K. J. (2016). Lesson Study in Prospective Mathematics Teacher Education: Didactic and Paradidactic Technology In The Post-Lesson Reflection. *Journal of Mathematics Teacher Education*, 19(4), 301-324.
- Rennie, L. J., Goodrum,, D., & Hackling, M. (2001). Science Teaching and Learning in Australian Schools: Results of a National Study. *Research in Science Education*, 31(4), 455–498.
- Rich, P. J., & Hannafin, M. (2009). Video Annotation Tools: Technologies to Scaffold, Structure, and Transform Teacher Reflection. *Journal of Teacher Education*, 60(1), 52-67.
- Ritchie, S. (1988). The Teacher's Role in The Transformation of Students' Understanding. *Research in Science Education*, 28(2), 169-185.
- Rusmana, N. E. (2014). *Perkembangan Pedagogical Content Knowledge (PCK) Guru Peserta Kegiatan Musyawarah Guru Mata Pelajaran MGMP IPA di Kota Sumedang*. Bandung: Tesis Sekolah Pasca Sarjana UPI: Tidak diterbitkan.
- Russell, T. (1995). Critical Attributes of a Reflective Teacher: Is Agreement Possible? In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 144-153). Washington DC: The Falmer Press.
- Sanders, W. L., Wright, S. P., & Horn, S. P. (1997). Teacher and Classroom Context Effects on Student Achievement: Implications for Teacher Evaluation. *Journal of Personnel Evaluation in Education*, 11(1), 57-67.
- Schön, D. A. (1983). *The Refflective practitioner: How Professional Think in Action*. Basic Book, Inc: United State of America.
- Schukajlow, S., Krug, A., & Rakoczy, K. (2015). Effects of prompting multiple solutions for modelling problems on students' performance. *Educational Studies in Mathematics*, 89(3), 393–417.
- Schwandt, D. R., & Marquardt, M. J. (2000). *Organizational learning : from world-class theories to global best practices*. Boca Raton, Florida: Taylor & Francis Group, LLC.
- See, N. M. (2013). Mentoring And Developing Pedagogical Content Knowledge in Begining Teachers. *Procedia - Social and Behavioral Sciences* , 53(62), 1877-0428.
- Shulman, L. S. (1986). Those Who Understand: Knowledge growth in Teaching. *Educational Research*, 15(2), 1-22.
- Simon, S., & Campbell, S. (2012). Teacher Learning and Professional Development in Science Education. In B. J. Fraser, K. Tobin, & M. J. McRobbie, *Second International Handbook of Science Education* (Vol. 24). Netherlands: Springer.

- Smith, C. J., & Laslett, R. (2002). *Effective Clasroom Management: A Teacher's Guide*. Canada: Routledge Taylor and Francis Group.
- Smith, D. C. (2000). Content and Pedagogical Content Knowledge for Elementary Science Teacher Educators: Knowing our Students. *Journal of Science Teacher Education*, 11(1), 27-46.
- Smith, G. E., & Throne, S. (2007). *Differentiating Instruction with Technology in K-5 Classrooms*. Washington D.C.: International Society for Technology in Education (ISTE).
- Stigler, J. W., Gallimore, R., & Hiebert, J. (2000). Using Video Surveys to Compare Classroom and Teaching Across Cultures: Examples and Lessons from the TIMMS Video Studies. *Educational Psychologis*, 35(2), 87-100.
- Tamir, P. (1988). Subject Matter and Related Pedagogical Knowledge in Teacher Education. *Teaching and Teacher Education*, 4(2), 99-110.
- Tigelaar, D. E., Dolmans, D. H., de Grave, W. S., Wolfhagen, I. H., & van der Vleuten, C. P. (2006). Portfolio as a tool to stimulate teachers' reflections. *Med Teach.*, 28(3), 277-82.
- Tippins, D. J., Nichols, S. E., & Dana, T. M. (1999). Exploring novice and experienced elementary teachers' science teaching and learning referents through videocases. *Research in Science Education*, 29(3), 331-352.
- Tomlinson , C. A., & Imbeau., M. B. (2010). *Leading and managing a diff erentiated classroom*. Alexanderia: ASCD.
- Tondeur, J., Braak, J. v., Siddiq, F., & Scherer, R. (2015). Time For a New Approach to Prepare Future Teachers for Educational Technology Use: Its Meaning and Measurement. *Computer and education*, 94, 134-150.
- Tridanea, M., Belaaouad, S., Benmokhtarb, S., Gourjaa, B., & Radidb, M. (2015). The Impact of Formative Assessment on the Learning Process and the Unreliability of the Mark for the Summative Evaluation. *Procedia - Social and Behavioral Sciences*, 197, 680-685.
- Urhahne, D. (2015). Teacher behavior as a mediator of the relationship between teacher judgment and students' motivation and emotion. *Teaching and Teacher Education*, 45, 73-82.
- Valli, L. R. (1993). Reflective Teacher Education Programs: An Analysis of Case Studies. In J. Calderhead, & P. Gates, *Conceptualizing Reflection in Teacher Development* (pp. 11-22). Bristol: The Falmer Press, Taylor & Francis Inc.
- Valtonen, T., Kukkonen, J., Kontkanen, S., Sormunen, K., Dillon, P., & Sointu, E. (2015). The Impact of Authentic Learning Experiences with ICT on Pre-Service Teachers' Intentions to use ICT for Teaching and Learning. *Computers & Education*, 81, 49-58.

- Van den Hurk, H. G., Houtveen, A. M., & Van de Grift, W. C. (2017). Does teachers' pedagogical content knowledge affect their fluency instruction? *Reading and Writing*, 30, 1–19.
- Van Driel, J. H., Beijaard, D., & Verloop, N. (2001). Professional Development and Reform in Science Education: The Role of Teachers' Practical Knowledge. *Journal of Research in Science Teaching*, 38(2), 137–158.
- van Drill, J. H., De Jong, O., & Verloop, N. (2002). The Development of Preservice Chemistry Teachers' PCK. *Science Education*, 86(4), 572 – 590.
- Veal, W. R., & MaKinster, J. G. (1999). Pedagogical Content Knowledge Taxonomies. *Electronic Journal Of science Education*, 3(4).
- Wallace, J., & Loughran, J. (2012). Science teacher learning. In F. J. Fraser, K. G. Tobin, & C. J. McRobbie, *Second international handbook of science education* (pp. 295-306). Dordrecht,: The Netherlands: Springer.
- Widodo, A. (2017). Teacher Pedagogical Content Knowledge (PCK) and Students' Reasoning and Wellbeing. *Journal of Physics: Conference Series*, 812(1), 1-7.
- Widodo, A., Riandi, & Supriatno, B. (2007). Video-based coaching to improve teachers' teaching skills: Developing a coaching package. *Paper disajikan dalam Seminar Nasional Pendidikan IPA*, (pp. 1-10). Bandung.
- Widodo, A., Sumarmo, U., Nurjhani, M., & Riandi. (2007). Peranan "Lesson Study" dalam Peningkatan ... *Varidika*, 15-28.
- Wiyarsi, A. (2015). *Pengembangan Model Pembekalan Kemampuan Merancang Pembelajaran sesuai Konteks Kejuruan Berbasis Pedagogical Content Knowledge dan Collaborative Learning Bagi Calon Guru Kimia*. Bandung: SPS UPI: Tidak diterbitkan.
- Wragg, E. C. (2001). *Questioning in Primary School*. New York: Routledge Falmer Taylor & Francis Group.
- Zembal-Saul, C., Starr, M. L., & Krajcik, J. S. (2002). Constructing A Frame Work For Elementary Science Teaching Using Pedagogical Content Knowledge. In J. Gess-Newsome, & N. G. Lederman, *Examining Pedagogical Content Knowledge* (pp. 237-256). New York: Kluwer Academic Publishers.