Presentación de la Tesis Doctoral: "Modelo evaluativo de formación docente basada en la práctica para potenciar metacognición y aprendizaje a lo largo de la vida"

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Resumen

Esta es la presentación de la Tesis Doctoral de Dña. Kiomi Matsumoto, titulada "Modelo evaluativo de formación docente basada en la práctica para potenciar metacognición y aprendizaje a lo largo de la vida", realizada en el Programa de Doctorado Formación en la Sociedad del Conocimiento de la Universidad de Salamanca, bajo la dirección de la Dra. María Soledad Ramírez-Montoya. La tesis se defendió el 30 de mayo de 2022 en el Edificio Histórico de la Universidad de Salamanca. Esta tesis recibió la máxima calificación de "Sobresaliente Cum Laude".

La adaptación a un mundo cambiante y un futuro incierto, exige replantear el papel de la escuela del futuro y el perfil que debe tener el profesorado. La formación inicial de profesores debe contribuir con este desafío. En particular, abordarlo desde la evaluación del aprendizaje, dada la escasa innovación reportada en estos procesos. El estudio buscó responder a la pregunta ¿En qué forma el modelo formativo basado en la práctica permite desarrollar habilidades de pensamiento metacognitivo y de aprendizaje a lo largo de la vida en los futuros docentes que, a su vez, generen habilidades metacognitivas y capacidad de aprender a aprender?

El estudio se desarrolló en el contexto de las carreras de pedagogía de la Universidad del Desarrollo, en Chile, que han implementado un modelo educativo que ofrece oportunidades explícitas de aprender la práctica pedagógica en el trayecto educativo. Se aplicó un método de investigación mixto. Las fuentes de información fueron estudiantes de pedagogía (231), recursos educativos diseñados y aplicados por formadores de profesores (72 calendarizaciones y 14 tareas evaluativas) y formadores de profesores, expertos en pedagogía y stakeholders (48). Para recoger información se construyeron y aplicaron instrumentos de tipo check-list, cuestionario de tipo Likert y escala de diferencial semántico (cuantitativos) y procedimientos como la observación y las entrevistas en profundidad (cualitativos). Para el análisis de datos cuantitativos se utilizaron medidas estadísticas y para el análisis de datos cualitativos se aplicó el método de análisis de comparación constante y el análisis de contenido. Luego se realizó análisis de ambos tipos de datos triangulando la información a partir de distintos ángulos de interpretación.

Los resultados del estudio evidencian que el modelo formativo basado en la práctica ofrece frecuentes y diversas oportunidades de práctica en las actividades de enseñanza y en las tareas evaluativas. Las oportunidades de práctica son un predictor significativo de la promoción de las habilidades metacognitivas y de las tendencias de lifelong learning. Esto ocurre cuando las tareas evaluativas implican desempeños relevantes que son habituales en el ejercicio de la profesión, cuando el formador de profesores comunica al estudiante de pedagogía las instrucciones y los criterios de evaluación previamente, e informa la relevancia de la tarea en el contexto profesional. Además, cuando hay retroalimentaciones frecuentes durante y al final de la ejecución de las tareas centradas en el desempeño y brindadas por los pares y los formadores.

El modelo evaluativo diseñado, consideró los hallazgos anteriores. Por ello, organiza el proceso en tres etapas (preparación, ejecución y análisis) y establece condiciones asociadas a tres elementos claves (tarea evaluativa, comunicación previa al evaluado y retroalimentación durante y al final de la ejecución) que permiten favorecer la metacognición y el lifelong learning en los estudiantes de pedagogía. El modelo orienta a los formadores de profesores en los procesos de evaluación del aprendizaje de los estudiantes de pedagogía y aporta valor al incorporar elementos novedosos en los procesos evaluativos y en la formación de los estudiantes de pedagogía, abordando el aprendizaje práctico y desarrollando lifelong learning y metacognición, lo que constituye una mejora del estado actual de los procesos de evaluación de aprendizaje en modelos formativos basados en la práctica.

El estudio aporta a la comunidad científica y a las comunidades de formadores de profesores sobre las condiciones de la evaluación del aprendizaje práctico y cómo esto puede incidir en las oportunidades para el desarrollo de habilidades metacognitivas y tendencias de lifelong learning en los procesos evaluativos. A partir de esta investigación, se visualiza la implementación del modelo evaluativo en programas de

formación de profesores basados en la práctica y se proponen líneas de investigación que permitirían complementar, profundizar los hallazgos y ampliar su impacto.

Palabras clave
Formación de profesores, metacognición, aprendizaje a lo largo de la vida, prácticas, modelo, evaluación del aprendizaje, innovación educativa, educación superior

Enlace a la memoria de tesis doctoral
https://bit.ly/3NmveOm

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REFERENCIAS

Aarrevaara, T., Wikström, J., & Maassen, P. (2017). External stakeholders and internal practices in departments of teacher education at European universities. *Higher Education Quarterly*, *71*(3), 251-262. https://doi.org/10.1111/hequ.12128

Abdellah, R. (2015). Metacognitive awareness and its relation to academic achievement and teaching performance of pre-service female teachers in Ajman University in UAE. *Procedia-Social and Behavioral Sciences*, *174*(52), 560-567. https://doi.org/10.1016/j.sbspro.2015.01.707

Adadan, E., & Oner, D. (2018). Examining preservice teachers' reflective thinking skills in the context of web-based portfolios: The role of metacognitive awareness [Article]. *Australian Journal of Teacher Education*, *43*(11), 26-50. https://doi.org/10.14221/ajte.2018v43n11.2

Adalberon, E. (2021). Providing assessment feedback to pre-service teachers: a study of examiners' comments. *Assessment & Evaluation in Higher Education*, *46*(4), 601-614. https://doi.org/10.1080/02602938.2020.1795081

Aguaded, J. I., López, E., & Jaén, A. (2013). Portafolios electrónicos universitarios para una nueva metodología de enseñanza superior. Desarrollo de un material educativo multimedia (MEM). https://doi.org/10.7238/rusc.v10i1.1333

Akyol, B. (2016). Teacher self-efficacy perceptions, learning oriented motivation, lifelong learning tendencies of candidate teachers: A modeling study [Article]. *Egitim Arastirmalari - Eurasian Journal of Educational Research*, *2016*(65), 19-34. https://doi.org/10.14689/ejer.2016.65.02

Allen, J. (2011). Stakeholders' perspectives of the nature and role of assessment during practicum. *Teaching and teacher education*, *27*(4), 742-750. https://doi.org/10.1016/j.tate.2010.12.004

Allen, J., & Wright, S. (2014). Integrating theory and practice in the pre-service teacher education practicum. *Teachers and Teaching*, *20*(2), 136-151. https://doi.org/10.1080/13540602.2013.848568

Alon, L., Sung, S. Y., & Kizilcec, R. (2021). *How Does Active Learning Change Undergraduate Learning Experiences? A Case of a Large Technology Design Course* Innovate Learning Summit Online 2021, United States.

Alston, C. L., Danielson, K. A., Dutro, E., & Cartun, A. (2018). Does a Discussion by Any Other Name Sound the Same? Teaching Discussion in Three ELA Methods Courses. *Journal of Teacher Education*, *69*(3), 225-238. https://doi.org/10.1177/0022487117715227

Álvarez, I. M. (2017). Evaluar para contribuir a la autorregulación del aprendizaje. *Electronic Journal of Research in Education Psychology*, *7*(19), 1007-1030. https://doi.org/10.25115/ejrep.v7i19.1362

Amador, J. M. (2017). Preservice teachers' video simulations and subsequent noticing: a practice-based method to prepare mathematics teachers. *Research in Mathematics Education*, *19*(3), 217-235. https://doi.org/10.1080/14794802.2017.1315317

Amador, M. G. (2010). Ética de la investigación. *Revista iberoamericana de Educación*, *54*(4), 1-2. https://doi.org/10.35362/rie5441666

Ananiadou, K., & Claro, M. (2009). 21st century skills and competences for new millennium learners in OECD countries. *OECD Publishing*, *OECD Education Working Papers, No. 41*. https://doi.org/10.1787/218525261154

Andrade, H., & Brookhart, S. M. (2016). The role of classroom assessment in supporting self-regulated learning. In *Assessment for learning: Meeting the challenge of implementation* (pp. 293-309). Springer. https://doi.org/10.1007/978-3-319-39211-0_17

Andrade, H. L., & Brookhart, S. M. (2020). Classroom assessment as the co-regulation of learning. *Assessment in Education: Principles, Policy & Practice*, *27*(4), 350-372. https://doi.org/10.1080/0969594X.2019.1571992

Anijovich, R. (2017). La evaluación formativa en la enseñanza superior. *Voces de la Educación*, *2*(3), 31.

Anijovich, R., & Camilloni, A. R. W. d. (2010). *La evaluación significativa*. Buenos Aires : Paidós.

Anthony, G., Hunter, J., & Hunter, R. (2015). Prospective teachers development of adaptive expertise. *Teaching and Teacher Education*, *49*, 108-117. https://doi.org/10.1016/j.tate.2015.03.010

Arbaugh, F., Ball, D. L., Grossman, P., Heller, D. E., & Monk, D. (2015). Deans' Corner: Views on the State of Teacher Education in 2015. *Journal of Teacher Education*, *66*(5), 435-445. https://doi.org/10.1177/0022487115602314

Arias, A. M., & Davis, E. A. (2017). Supporting children to construct evidence-based claims in science: Individual learning trajectories in a practice-based program. *Teaching and Teacher Education*, *66*, 204-218. https://doi.org/10.1016/j.tate.2017.04.011

Arzuaga, S., Casablancas, S., & Dari, N. (2021). La pandemia, las universidades y las prácticas de evaluación Virtualidad, Educación y Ciencia. *Virtualidad, Educación y Ciencia*, *24 (12)*, 72-85.

Ashford-Rowe, K., Herrington, J., & Brown, C. (2014). Establishing the critical elements that determine authentic assessment. *Assessment & Evaluation in Higher Education*, *39*(2), 205-222. https://doi.org/10.1080/02602938.2013.819566

Ataş, U., & Balıkçı, G. (2021). Linking theory and practice in an ELT program: An evaluation of materials, testing and practicum courses [Article]. *NALANS: Journal of Narrative and Language Studies*, *19*(17), 211-226.

Ávalos, B. (2003). La formación docente inicial en Chile. *Santiago: Ministerio de Educación*.

Averill, R., Drake, M., Anderson, D., & Anthony, G. (2016). The use of questions within in-the-moment coaching in initial mathematics teacher education: enhancing participation, reflection, and co-construction in rehearsals of practice [Article]. *Asia-Pacific Journal of Teacher Education*, *44*(5), 486-503. https://doi.org/10.1080/1359866X.2016.1169503

Aydin, U., & Ubuz, B. (2010). Turkish Version of the Junior Metacognitive Awareness Inventory: An Exploratory and Confirmatory Factor Analysis. *Egitim ve Bilim*, *35*(157), 30.

Baartman, L. K., Bastiaens, T. J., Kirschner, P. A., & Van der Vleuten, C. P. (2007). Evaluating assessment quality in competence-based education: A qualitative comparison of two frameworks. *Educational research review*, *2*(2), 114-129. https://doi.org/https://doi.org/10.1016/j.edurev.2007.06.001

Baartman, L. K., Prins, F. J., Kirschner, P. A., & Van Der Vleuten, C. P. (2007). Determining the quality of competence assessment programs: a self-evaluation procedure. *Studies in Educational Evaluation*, *33*(3-4), 258-281. https://doi.org/10.1016/j.stueduc.2007.07.004

Bakker, M. E. J., Roelofs, E. C., Beijaard, D., Sanders, P. F., Tigelaar, D. E. H., & Verloop, N. (2011). Video portfolios: The development and usefulness of a teacher assessment procedure. *Studies in Educational Evaluation*, *37*(2), 123-133. https://doi.org/10.1016/j.stueduc.2011.04.007

Balcikanli, C. (2011). Metacognitive awareness inventory for teachers (MAIT). *Electronic journal of research in educational psychology*, *9*, 1309-1332. https://doi.org/10.25115/ejrep.v9i25.1620

Ball, D., Payne, W., & Hill, H. (2009). Measuring teacher quality in practice. In *Measurement Issues and Assessment for Teaching Quality* (pp. 80-98). https://doi.org/10.4135/9781483329857.n6

Ball, D., Sleep, L., Boerst, T., & Bass, H. (2009). Combining the development of practice and the practice of development in teacher education. *The Elementary School Journal*, *109*(5), 458-474. https://doi.org/https://doi.org/10.1086/596996

Ball, D. L., & Forzani, F. M. (2009). The work of teaching and the challenge for teacher education [Article]. *Journal of Teacher Education*, *60*(5), 497-511. https://doi.org/10.1177/0022487109348479

Ball, D. L., & Forzani, F. M. (2010a). Teaching skillful teaching [Article]. *Educational Leadership*, *68*(4), 40-45.

Ball, D. L., & Forzani, F. M. (2010b). What does it take to make a teacher? [Article]. *Phi Delta Kappan*, *92*(2), 8-12. https://doi.org/10.1177/003172171009200203

Ballock, E., McQuitty, V., & McNary, S. (2018). An Exploration of Professional Knowledge Needed for Reading and Responding to Student Writing. *Journal of Teacher Education*, *69*(1), 56-68. https://doi.org/10.1177/0022487117702576

Bandalos, D. L., & Finney, S. J. (2018). Factor analysis: Exploratory and confirmatory. In G. R. Hancock, L. M. Stapleton, & R. O. Mueller (Eds.), *The Reviewer's Guide to Quantitative Methods in the Social Sciences* (2nd ed ed., pp. 98–122). https://doi.org/10.4324/9781315755649-8

Barber, M., & Mourshed, M. (2007). *How the world's best-performing schools systems come out on top*. McKinsey & Company.

Barrera-Pedemonte, F. (2016). High-Quality Teacher Professional Development and Classroom Teaching Practices: Evidence from Talis 2013. *OECD Education Working Papers*. https://doi.org/10.1787/5jlpszw26rvd-en

Barzilai, S., & Zohar, A. (2014). Reconsidering Personal Epistemology as Metacognition: A Multifaceted Approach to the Analysis of Epistemic Thinking [Article]. *Educational Psychologist*, *49*(1), 13-35. https://doi.org/10.1080/00461520.2013.863265

Bau, N., & Das, J. (2017). *The misallocation of pay and productivity in the public sector: Evidence from the labor market for teachers*. The World Bank.

Baume, D., Yorke*, M., & Coffey, M. (2004). What is happening when we assess, and how can we use our understanding of this to improve assessment? *Assessment & Evaluation in Higher Education*, *29*(4), 451-477. https://doi.org/https://doi.org/10.1080/02602930310001689037

Baz, E. H., Balcikanli, C., & Cephe, P. T. (2018). Introducing an innovative technology integration model: Echoes from EFL pre-service teachers. *Education and Information Technologies*, *23*(5), 2179-2200. https://doi.org/10.1007/s10639-018-9711-9

Beaujean, A. A. (2014). *Latent variable modeling using R: A step-by-step guide*. Routledge.

Becker, E. A., Easlon, E. J., Potter, S. C., Guzman-Alvarez, A., Spear, J. M., Facciotti, M. T., . . . Pagliarulo, C. (2017). The Effects of Practice-Based Training on Graduate Teaching Assistants' Classroom Practices. *Cbe-Life Sciences Education*, *16*(4), Article ar58. https://doi.org/10.1187/cbe.16-05-0162

Belando-Montoro, M. R. (2017). Aprendizaje a lo largo de la vida. Concepto y componentes. *Revista Iberoamericana de Educación*, *75*, 219-234.

Bennet, M., & Moriarty, B. (2016). Lifelong learning theory and pre-service teachers' development of knowledge and dispositions to work with Australian Aboriginal students [Article]. *International Journal of Pedagogies and Learning*, *11*(1), 1-9. https://doi.org/10.1080/22040552.2016.1187645

Bennett, R. E. (2011). Formative assessment: A critical review. *Assessment in Education: Principles, Policy & Practice*, *18*(1), 5-25. https://doi.org/10.1080/0969594X.2010.513678

Bennoun, S., & Holm, T. (2021). Establishing Consistent Active Learning in a Calculus I Course. *PRIMUS*, *31*(3-5), 565-577. https://doi.org/10.1080/10511970.2020.1746453

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, *107*(2), 238. https://doi.org/10.1037/0033-2909.107.2.238

BERA. (2019). Guía Ética para la Investigación Educativa. In (4.ª ed. ed.). London.

Berkhout, J. J., Helmich, E., Teunissen, P. W., van der Vleuten, C. P., & Jaarsma, A. D. C. (2018). Context matters when striving to promote active and lifelong learning in medical education. *Medical education*, *52*(1), 34-44. https://doi.org/10.1111/medu.13463

Berrocoso, J., Domínguez, F., & Sánchez, M. (2012). Modelos de evaluación por competencias a través de un sistema de gestión de aprendizaje. Experiencias en la formación inicial del profesorado. *Revista Iberoamericana de educación*, *60*(1), 51-62. https://doi.org/10.35362/rie600443

Beylefeld, A., & Le Roux, A. (2015). Guided group reflections of first-year pre-service teachers: Moving beyond the rhetoric of "go and reflect" [Article]. *Perspectives in Education*, *33*(3), 1-19.

Beytekin, O. F., & Kadi, A. (2014). Quality of Faculty Life and Lifelong Learning Tendencies of University Students. *Higher Education Studies*, *4*(5), 28-36.

Bien, A., Carlson, J., Kazemi, E., Reisman, A., Scheve, M., & Wells, A. (2018). Taking core practices to the field. In P. Grossman (Ed.), *Teaching Core Practices in Teacher Education*. Harvard Education Press.

Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble, M. (2012). Defining twenty-first century skills. In P. Griffin, B. McGaw, & E. Care (Eds.), *Assessment and teaching of 21st century skills* (pp. 17-66). Springer. https://doi.org/10.1007/978-94-007-2324-5

Birenbaum, M. (2007). Evaluating the assessment: sources of evidence for quality assurance. *Studies in Educational Evaluation*, *33*(1), 29-49. https://doi.org/10.1016/j.stueduc.2007.01.004

Birgin, A. (2015). Formación de maestros (as) en América Latina: algunos problemas y perspectivas para este tiempo. *Nodos y Nudos*, *4*(39), 29-37. https://doi.org/10.17227/01224328.4354

Black, P., & Wiliam, D. (2018). Classroom assessment and pedagogy. *Assessment in Education: Principles, Policy & Practice*, *25*(6), 551-575. https://doi.org/10.1080/0969594X.2018.1441807

Blömeke, S., Paine, L., Houang, R. T., Hsieh, F.-J., Schmidt, W. H., Tatto, M. T., . . . Schwille, J. (2008). Future teachers' competence to plan a lesson: first results of a six-country study on the efficiency of teacher education. *ZDM*, *40*(5), 749-762. https://doi.org/10.1007/s11858-008-0123-y

Bonfield, C. A., Salter, M., Longmuir, A., Benson, M., & Adachi, C. (2020). Transformation or evolution?: Education 4.0, teaching and learning in the digital age. *Higher Education Pedagogies*, *5*(1), 223-246. https://doi.org/10.1080/23752696.2020.1816847

Bonsón, M., & Benito, Á. (2005). Evaluación y aprendizaje. *Nuevas claves para la docencia universitaria en el Espacio Europeo de Educación Superior*, 87-100.

Bottoms, S. A. I., Ciechanowski, K. M., & Hartman, B. (2015). Learning to Teach Elementary Science Through Iterative Cycles of Enactment in Culturally and Linguistically Diverse Contexts. *Journal of Science Teacher Education*, *26*(8), 715-742. https://doi.org/10.1007/s10972-016-9447-6

Bowman, M., & Gottesman, I. (2017). Making the socio-historical visible: A place-conscious approach to social foundations in practice-centered teacher preparation [Article]. *Teaching and Teacher Education*, *68*, 232-240. https://doi.org/10.1016/j.tate.2017.09.001

Boyd, D., Grossman, P., Lankford, H., Loeb, S., Michelli, N. M., & Wyckoff, J. (2006). Complex by design: Investigating pathways into teaching in New York city schools. *Journal of Teacher Education*, *57*(2), 155-166. https://doi.org/10.1177/0022487105285943

Boyd, J., Barnett, S., Bodrova, E., Leong, D., & Gomby, D. (2005). *Promoting children's social and emotional development through preschool education* (Preschool Policy Brief, Issue. https://nieer.org/wp-content/uploads/2017/02/report7.pdf

Brevik, L. M., Gunnulfsen, A. E., & Renzulli, J. S. (2018). Student teachers' practice and experience with differentiated instruction for students with higher learning potential. *Teaching and Teacher Education*, *71*, 34-45. https://doi.org/10.1016/j.tate.2017.12.003

Brown, C. P., & Weber, N. B. (2016). Struggling to Overcome the State's Prescription for Practice: A Study of a Sample of Early Educators' Professional Development and Action Research Projects in a High-Stakes Teaching Context [Article]. *Journal of Teacher Education*, *67*(3), 183-202. https://doi.org/10.1177/0022487116636452

Brown, S. (2005). Assessment for learning. *Learning and teaching in higher education*(1), 81-89.

Brown, T. A., & Moore, M. T. (2012). Confirmatory factor analysis. In *Handbook of structural equation modeling* (pp. 361-379). The Guilford Press.

Brugar, K. A., & Roberts, K. L. (2017). Seeing Is Believing: Promoting Visual Literacy in Elementary Social Studies. *Journal of Teacher Education*, *68*(3), 262-279. https://doi.org/10.1177/0022487117696280

Bryk, A. S. (2015). 2014 AERA Distinguished Lecture: Accelerating How We Learn to Improve. *Educational Researcher*, *44*(9), 467-477. https://doi.org/10.3102/0013189x15621543

Buchholtz, N. F., Krosanke, N., Orschulik, A. B., & Vorholter, K. (2018). Combining and integrating formative and summative assessment in mathematics teacher education [Article]. *Zdm-Mathematics Education*, *50*(4), 715-728. https://doi.org/10.1007/s11858-018-0948-y

Burridge, P., Hooley, N., & Neal, G. (2016). Creating frames of practice for teacher education. *Asia-Pacific Journal of Teacher Education*, *44*(2), 156-171. https://doi.org/10.1080/1359866x.2015.1041877

Burón, J. (1996). Concepto y Estudio de la Metacognición. In *Enseñar a Aprender. Introducción a la Metacognición* (pp. 9-28). Ediciones Mensajero.

Cabello, V. M., & Topping, K. J. (2020). Peer assessment of teacher performance. What works in teacher education? [Review]. *International Journal of Cognitive Research in Science, Engineering and Education*, *8*(2), 121-132. https://doi.org/10.5937/IJCRSEE2002121C

Caena, F. (2019). Developing a European Framework for the Personal, Social & Learning to Learn Key Competence (LifEComp). Literature Review & Analysis of Frameworks. In Y. Punie (Ed.), *Publications Office of the European Union, Luxembourg*. https://doi.org/10.2760/172528

Cambridge University. (2019). Cambridge life competencies framework. Learning to Learn. In: Cambridge University Press.

Campos, G., & Martínez, N. E. L. (2012). La observación, un método para el estudio de la realidad. *Xihmai*, *7*(13), 45-60.

Canrinus, E., Klette, K., & Hammerness, K. (2019). Diversity in coherence: Strengths and opportunities of three programs. *Journal of Teacher Education*, *70*(3), 192-205. https://doi.org/10.1177/0022487117737305

Canrinus, E., Klette, K., Hammerness, K., & Bergem, O. (2019). Opportunities to enact practice in campus courses: Taking a student perspective [Article]. *Teachers and Teaching: Theory and Practice*, *25*(1), 110-124. https://doi.org/10.1080/13540602.2018.1526171

Cartun, A., Shutz, K., Kelley-Petersen, M., & Franke, M. (2018). Core practices and the teacher education curriculum: Stories of practice. In P. Grossman (Ed.), *Teaching Core Practices in Teacher Education* Harvard Education Press.

CDD. (2017). *Anuario 2016. Proyectos de Innovación y desarrollo de la docencia*. https://repositorio.udd.cl/handle/11447/2237

CDD. (2019). *Anuario 2018. Proyectos de Innovación y desarrollo de la docencia*. https://innovaciondocente.udd.cl/files/2019/12/anuario-udd-2018.pdf

CDD. (2020). *Anuario 2019. Proyectos de innovación y desarrollo de la docencia*. https://issuu.com/innovaciondocenteudd/docs/anuario2019-final-web

Chichekian, T., & Shore, B. M. (2016). Preservice and practicing teachers' self-efficacy for inquiry-based instruction. *Cogent Education*, *3*(1), Article 1236872. https://doi.org/10.1080/2331186X.2016.1236872

Chou, P. I., Su, M. H., & Wang, Y. T. (2018). Transforming teacher preparation for culturally responsive teaching in Taiwan. *Teaching and Teacher Education*, *75*, 116-127. https://doi.org/10.1016/j.tate.2018.06.013

Christiansen, I., Bertram, C., & Mukeredzi, T. (2018). Contexts and concepts: analysing learning tasks in a foundation phase teacher education programme in South Africa. *Asia-Pacific Journal of Teacher Education*, *46*(5), 511-526. https://doi.org/10.1080/1359866x.2018.1461804

Cihanoglu, M. O. (2012). Metacognitive awareness of teacher candidates. *Procedia-Social and Behavioral Sciences*, *46*, 4529-4533. https://doi.org/10.1016/j.sbspro.2012.06.290

Cil, O., & Dotger, B. (2017). The emergence of moral, professional, and political geographies in a clinically simulated parent-teacher interaction. *Teaching and Teacher Education*, *67*, 237-245. https://doi.org/10.1016/j.tate.2017.05.018

Ciurana, E. R. (2001). Educación y desarrollo humano. *Tabanque: Revista Pedagógica*(16), 9-18. https://doi.org/10.24197/trp.1.2021

Clarke, A., Triggs, V., & Nielsen, W. (2014). Cooperating Teacher Participation in Teacher Education: A Review of the Literature. *Review of Educational Research*, *84*(2), 163-202. https://doi.org/10.3102/0034654313499618

Claxton, G., Costa, A., & Kallick, B. (2016). Hard thinking about soft skills. *Educational leadership*, *73*(6).

CNA. (2018). Carreras de pedagogía: análisis de fortalezas y debilidades en el escenario actual. In C. N. d. Acreditación (Ed.): Serie Estudios sobre Acreditación.

CNED. (2021). *Informe de tendencias de la matrícula de pregrado de educación superior*. Santiago, Chile Retrieved from https://www.cned.cl/sites/default/files/02_informepregrado2021_final.pdf

Cochran-Smith, M., Villegas, A. M., Abrams, L., Chavez-Moreno, L., Mills, T., & Stern, R. (2015). Critiquing Teacher Preparation Research: An Overview of the Field, Part II [Article]. *Journal of Teacher Education*, *66*(2), 109-121. https://doi.org/10.1177/0022487114558268

Cohen, J. (2015). Challenges in Identifying High-Leverage Practices. *Teachers College Record*, *117*(7), Article 070307. https://doi.org/10.1177/016146811511700702

Collins, K. M., Onwuegbuzie, A. J., & Jiao, Q. G. (2007). A mixed methods investigation of mixed methods sampling designs in social and health science research. *Journal of mixed methods research*, *1*(3), 267-294. https://doi.org/10.1177/1558689807299526

Conklin, H. G., & Hughes, H. E. (2016). Practices of Compassionate, Critical, Justice-Oriented Teacher Education [Article]. *Journal of Teacher Education*, *67*(1), 47-60. https://doi.org/10.1177/0022487115607346

Connolly, M., Hadfield, M., Barnes, Y., & Snook, J. (2018). The accommodation of contested identities: The impact of participation in a practice-based masters programme on beginning teachers' professional identity and sense of agency. *Teaching and Teacher Education*, *71*, 241-250. https://doi.org/10.1016/j.tate.2018.01.010

Conrady, K. (2015). Modeling Metacognition: Making Thinking Visible in a Content Course for Teachers. *Redimat-Revista De Investigacion En Didactica De Las Matematicas*, *4*(2), 132-160. https://doi.org/10.4471/redimat.2015.65

Core Practice Consortium. Retrieved 10-10-2020 from https://www.corepracticeconsortium.com/

Contreras Pérez, G., & Zúñiga González, C. G. (2019). Prácticas y concepciones de retroalimentación en Formación Inicial Docente. *Educação e Pesquisa*, *45*. https://doi.org/10.1590/S1678-4634201945192953

Contreras-Sanzana, G., & Villalobos-Clavería, A. (2010). La formación de profesores en Chile: una mirada a la profesionalización docente.

Corbin, J., & Strauss, A. (2008). *Qualitative Research* (*3rd ed.* ed.). SAGE. https://doi.org/10.4135/9781452230153

Cordero, R. (2015). Las prácticas de evaluación del formador de profesores. Un estudio de caso de la escuela normal. In O. Leyva Cordero, F. Ganga Contreras, J. Tejada Fernández, H. Paz, & A. Alfredo (Eds.), *La formación por competencias en la educación superior: alcances y limitaciones desde referentes de México, España y Chile*. Tirant lo Blanch.

Coronado-Hijón, A. (2015). Construcción de una lista de cotejo (checklist) de dificultades de aprendizaje del cálculo aritmético. *Revista española de pedagogía*, 91-104.

Costa, A. L., & Kallick, B. (2008a). Habits of mind in the curriculum. *Learning and leading with habits of mind*, *16*, 42-58.

Costa, A. L., & Kallick, B. (2008b). Learning through reflection. *Learning and leading with habits of mind*, *16*, 221-235.

Cox, C., Meckes, L., & Bascopé, M. (2010). La institucionalidad formadora de profesores en Chile en la década del 2000: velocidad del mercado y parsimonia de las políticas. *Pensamiento Educativo*, *46*(47), 205-245.

Coşkun, Y. D., & Demirel, M. (2010). Lifelong learning tendency scale: the study of validity and reliability. *Procedia-Social and Behavioral Sciences*, *5*, 2343-2350. https://doi.org/10.1016/j.sbspro.2010.07.461

Creative Reasearch Systems. Sample size calculator. Retrieved 3-3-2020 from https://www.surveysystem.com/sscalc.htm

Creswell, J. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Creswell, J. (2014). *A concise introduction to mixed methods research*. Sage Publication.

Creswell, J., & Clark, V. (2017). *Designing and conducting mixed methods research*. Sage publications.

Creswell, J., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Creswell, J., & Garrett, A. (2008). The "movement" of mixed methods research and the role of educators. *South African journal of education*, *28*, 321-333. https://doi.org/10.15700/saje.v28n3a176

Creswell, J., Plano Clark, V., Gutmann, M., & Hanson, W. (2003). An expanded typology for classifying mixed methods research into designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209-240). Sage publications.

Crick, R. D., & Yu, G. (2008). Assessing learning dispositions: is the Effective lifelong learning inventory valid and reliable as a measurement tool? *Educational Research*, *50*(4), 387-402. https://doi.org/10.1080/00131880802499886

Dalinger, T., Thomas, K. B., Stansberry, S., & Xiu, Y. (2020). A mixed reality simulation offers strategic practice for pre-service teachers. *Computers & Education*, *144*, Article 103696. https://doi.org/10.1016/j.compedu.2019.103696

Daniel, S. M. (2015). Empathetic, Critical Integrations of Multiple Perspectives: A Core Practice for Language Teacher Education? [Article]. *TESOL Journal*, *6*(1), 149-176. https://doi.org/10.1002/tesj.184

Daniel, S. M. (2016). Grappling with Culturally Responsive Pedagogy: A Study of Elementary-Level Teacher Candidates' Learning across Practicum and Diversity Coursework Experiences [Article]. *Urban Review*, *48*(4), 579-600. https://doi.org/10.1007/s11256-016-0369-6

Daniel, S. M., & Pray, L. (2017). Learning to Teach English Language Learners: A Study of Elementary School Teachers' Sense-Making in an ELL Endorsement Program [Article]. *TESOL Quarterly*, *51*(4), 787-819. https://doi.org/10.1002/tesq.347

Danielson, K., Shaughnessy, M., & Peter Jay, L. (2018). Use of representation in teacher education. In P. Grossman (Ed.), *Teaching Core Practices in Teacher Education*. Harvard Education Press.

Darling-Hammond, L. (2006a). Assessing teacher education - The usefulness of multiple measures for assessing program outcomes. *Journal of Teacher Education*, *57*(2), 120-138. https://doi.org/10.1177/0022487105283796

Darling-Hammond, L. (2006b). Constructing 21st-century teacher education. *Journal of Teacher Education*, *57*(3), 300-314. https://doi.org/10.1177/0022487105285962

Darling-Hammond, L. (2014). Strengthening Clinical Preparation: The Holy Grail of Teacher Education. *Peabody Journal of Education*, *89*, 547-561. https://doi.org/10.1080/0161956X.2014.939009

Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? [Article]. *European Journal of Teacher Education*, *40*(3), 291-309. https://doi.org/10.1080/02619768.2017.1315399

Darling-Hammond, L., & Snyder, J. (2000). Authentic Assessment of Teaching in Context. *Teaching and Teacher Education*, *16*, 523-545. https://doi.org/10.1016/S0742-051X(00)00015-9

Davin, K. J., & Heineke, A. J. (2016). Preparing Teachers for Language Assessment: A Practice-Based Approach [Article]. *TESOL Journal*, *7*(4), 921-938. https://doi.org/10.1002/tesj.253

Davis, E., Kloser, M., Wells, A., Windschitl, M., Carlson, J., & Marino, J. C. (2017). Teaching the practice of leading sense-making discussions in science: science teacher educators using rehearsals [Article]. *Journal of Science Teacher Education*, *28*(3), 275-293. https://doi.org/10.1080/1046560X.2017.1302729

Davis, E. A., & Boerst, T. (2014). Designing elementary teacher education to prepare well-started beginners. *Ann Arbor, MI: TeachingWorks, University of Michigan School of Education*.

Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *International journal of market research*, *50*(1), 61-104. https://doi.org/10.1177/147078530805000106

De Jong, T., Lane, J., & Sharp, S. (2012). The efficacy of simulation as a pedagogy in facilitating pre-service teachers' learning about emotional self-regulation and its relevance to the teaching profession. *Australian Journal of Teacher Education*, *37*(3), 4. https://doi.org/10.14221/ajte.2012v37n3.6

de Kleijn, R. A. M. (2021). Supporting student and teacher feedback literacy: an instructional model for student feedback processes. *Assessment & Evaluation in Higher Education*, 1-15. https://doi.org/10.1080/02602938.2021.1967283

DeGraff, T. L., Schmidt, C. M., & Waddell, J. H. (2015). Field-based teacher education in literacy: preparing teachers in real classroom contexts. *Teaching Education*, *26*(4), 366-382. https://doi.org/10.1080/10476210.2015.1034677

DeMink-Carthew, J., Grove, R., & Peterson, M. (2017). The Influence of the Core Practices Movement on the Teaching and Perspectives of Novice Teacher Educators [Article]. *Studying Teacher Education*, *13*(1), 87-104. https://doi.org/10.1080/17425964.2017.1289083

Depaepe, F., & Konig, J. (2018). General pedagogical knowledge, self-efficacy and instructional practice: Disentangling their relationship in pre-service teacher education. *Teaching and Teacher Education*, *69*, 177-190. https://doi.org/10.1016/j.tate.2017.10.003

Dignath, C., & Veenman, M. V. J. (2021). The Role of Direct Strategy Instruction and Indirect Activation of Self-Regulated Learning—Evidence from Classroom Observation Studies. *Educational Psychology Review*, *33*(2), 489-533. https://doi.org/10.1007/s10648-020-09534-0

Dochy, F., Dierick, S., Segers, M., & Cascallar, E. (2003). *Optimising New Modes of Assessment: In Search of Quality and Standards* (Vol. 1). Springer, Dordrecht. https://doi.org/10.1007/0-306-48125-1

Dotger, B. H. (2015). Core Pedagogy: Individual Uncertainty, Shared Practice, Formative Ethos. *Journal of Teacher Education*, *66*(3), 215-226. https://doi.org/10.1177/0022487115570093

Drake, M. R. A. (2016). Learning to Coach in Practice-Based Teacher Education: A Self-Study. *Studying Teacher Education*, *12*(3), 244-266. https://doi.org/10.1080/17425964.2016.1237871

Dunlap, J., & Grabinger, S. (2003). Preparing students for lifelong learning: A review of instructional features and teaching methodologies. *Performance Improvement Quarterly*, *16*(2), 6-25.

Dunst, C. J., Hamby, D. W., Howse, R. B., Wilkie, H., & Annas, K. (2019). Metasynthesis of preservice professional preparation and teacher education research studies [Article]. *Education Sciences*, *9*(1), Article 50. https://doi.org/10.3390/educsci9010050

Dutro, E., & Cartun, A. (2016). Cut to the core practices: Toward visceral disruptions of binaries in PRACTICE-based teacher education. *Teaching and Teacher Education*, *58*, 119-128. https://doi.org/10.1016/j.tate.2016.05.001

Dyches, J. (2017). Shaking Off Shakespeare: A White Teacher, Urban Students, and the Mediating Powers of a Canonical Counter-Curriculum [Article]. *Urban Review*, *49*(2), 300-325. https://doi.org/10.1007/s11256-017-0402-4

Erdogan, D. G., & Arsal, Z. (2016). The development of lifelong learning trends scale (LLLTS). *Sakarya University Journal of Education*, *6*(1), 114-122. https://doi.org/10.19126/suje.32361

Escobar-Pérez, J., & Cuervo-Martínez, Á. (2008). Validez de contenido y juicio de expertos: una aproximación a su utilización. *Avances en medición*, *6*(1), 27-36.

Escudero-Nahón, A. & Ramírez-Montoya, M. S. (2021). El modelo y sus marcos. In C. Vicario- Solórzano , R. Huerta-Cuervo, A. Escudero-Nahón, M. S. Ramírez-Montoya, E.-D. Y., S.-M. M., & G. Trejo-Parada (Eds.), *Modelo de continuidad de servicios educativos ante un contexto de emergencia y sus etapas de crisis*. CUDI-ANUIES.

European Commission. (2001). *Making a European area of lifelong learning a reality*. Author Brussels.

European Commission. (2019). Key competences for Lifelong Learning In.

Evens, M., Elen, J., Larmuseau, C., & Depaepe, F. (2018). Promoting the development of teacher professional knowledge: Integrating content and pedagogy in teacher education [Article]. *Teaching and Teacher Education*, *75*, 244-258. https://doi.org/10.1016/j.tate.2018.07.001

Faulkner, J., & Latham, G. (2016). Teacher Qualities for 21st Century Learning. *Australian Journal of Teacher Education*, *41*(4), 137-150. https://doi.org/10.14221/ajte.2016v41n4.9

Favieri, A. G. (2013). Inventario de estrategias meta-cognitivas generales (IEMG) e Inventario de estrategias meta-cognitivas en integrales (IEMI). *Electronic Journal of Research in Educational Psychology*, *11*(3), 831-850. https://doi.org/10.14204/ejrep.31.13067

Fernández, J. M., Reyes, M., & Piñero, R. (2022). Competencia digital docente universitaria ante el alumnado con discapacidad. In J. A. Marín, V. Boffo, M. Navas-Parejo, & J. C. De la Cruz Campos (Eds.), *Retos de la investigación y la innovación en la*. Dykinson.

Fernández, M. (2017). *¿Hacia dónde avanza el sistema educativo en Chile? Análisis de las recomendaciones OCDE contenidas en Evaluaciones de Políticas Nacionales de Educación: Educación en Chile (2004-2016) en el contexto de la Reforma en marcha*. Santiago, Chile Retrieved from https://bibliotecadigital.mineduc.cl/bitstream/handle/20.500.12365/4475/evidencias-37.pdf?sequence=1&isAllowed=y

Fidalgo-Blanco, Á., & Sein-Echaluce, M. L. (2018). Método MAIN para planificar, aplicar y divulgar la innovación educativa. *Education in the Knowledge Society*, *19*(2), 83-101. https://doi.org/10.14201/eks201819283101

Field, A. (2013). Discovering statistics using IBM SPSS statistics. Sage Publications Inc.

Finsterwald, M., Wagner, P., Schober, B., Lüftenegger, M., & Spiel, C. (2013). Fostering lifelong learning - Evaluation of a teacher education program for professional teachers [Article]. *Teaching and Teacher Education*, *29*(1), 144-155. https://doi.org/10.1016/j.tate.2012.08.009

Fishman, E. J., Borko, H., Osborne, J., Gomez, F., Rafanelli, S., Reigh, E., . . . Berson, E. (2017). A Practice-Based Professional Development Program to Support Scientific Argumentation From Evidence in the Elementary Classroom. *Journal of Science Teacher Education*, *28*(3), 222-249. https://doi.org/10.1080/1046560x.2017.1302727

Flavell, J. H. (1976). Metacognitive aspects of problem solving. *The nature of intelligence*, 231-235.

Flores-Lueg, C., & Turra-Díaz, O. (2019). Contextos socioeducativos de prácticas y sus aportes a la formación pedagógica del futuro profesorado. *Educar em Revista*, *35*(73), 267-285. https://doi.org/10.1590/0104-4060.62381

Forzani, F. M. (2014). Understanding "core practices" and "practice-based" teacher education: Learning from the past. *Journal of teacher education*, *65*(4), 357-368. https://doi.org/10.1177/0022487114533800

Francis, A. T., Olson, M., Weinberg, P. J., & Stearns-Pfeiffer, A. (2018). Not Just for Novices: The Programmatic Impact of Practice-Based Teacher Education [Article]. *Action in Teacher Education*, *40*(2), 119-132. https://doi.org/10.1080/01626620.2018.1424053

Frels, R. K., & Onwuegbuzie, A. J. (2013). Administering quantitative instruments with qualitative interviews: A mixed research approach. *Journal of Counseling & Development*, *91*(2), 184-194. https://doi.org/10.1002/j.1556-6676.2013.00085.x

Frey, B., Schmitt, V., & Allen, J. (2012). Defining authentic classroom assessment. *Practical assessment, research & evaluation*, *17*(2). https://doi.org/10.7275/sxbs-0829

Gaines, R. E., Osman, D. J., Maddocks, D. L. S., Warner, J. R., Freeman, J. L., & Schallert, D. L. (2019). Teachers' emotional experiences in professional development: Where they come from and what they can mean [Article]. *Teaching and Teacher Education*, *77*, 53-65. https://doi.org/10.1016/j.tate.2018.09.008

Gairín Sallan, J. (2011). Formación de profesores basada en competencias. *Bordón. Revista de pedagogía*, *63*(1), 93-108.

Gallagher, M. W., & Brown, T. A. (2013). Introduction to confirmatory factor analysis and structural equation modeling. In *Handbook of quantitative methods for educational research* (pp. 287-314). Brill Sense. https://doi.org/10.1007/978-94-6209-404-8

Gallardo-Fuentes, F. J., Carter-Thuillier, B., López- Pastor, V., Ojeda- Nahuelcura, R., & Fuentes- Nieto, T. (2022). Sistemas de evaluación en la formación del profesorado de Educación Física: un estudio de casos en contexto chileno. *Retos: nuevas tendencias en educación física, deporte y recreación*(43), 117-126. https://doi.org/10.47197/retos.v43i0.88570

Gallardo-Fuentes, F. J., López-Pastor, V. M., & Carter Thuillier, B. (2017). Hay evaluación formativa y compartida en la formación inicial del profesorado en Chile? Percepción de alumnado, profesorado y egresados de una Universidad [Article]. *Psychology, Society and Education*, *9*(2), 227-238. https://doi.org/10.25115/psye.v9i2.699

García-González, A., & Ramírez-Montoya, M. S. (2019). Systematic Mapping of Scientific Production on Open Innovation (2015–2018): Opportunities for Sustainable Training Environments. Sustainability. In.

García-González, A., Ramírez-Montoya, M. S., de León, G., & Aragón, S. (2020). El emprendimiento social como una competencia transversal: construcción y validación de un instrumento de valoración en el contexto universitario. *REVESCO. Revista de Estudios Cooperativos*. https://doi.org/10.5209/reve.71862

García-Holgado, A., García-Peñalvo, F. J., & Ramírez-Montoya, M. S. (2016). Education in the knowledge society doctoral consortium. Proceedings of the Fourth International Conference on Technological Ecosystems for Enhancing Multiculturality.

García-Jiménez, E. (2015). La evaluación del aprendizaje: de la retroalimentación a la autorregulación. El papel de las tecnologías. *RELIEVE-Revista Electrónica de Investigación y Evaluación Educativa*, *21*(2).

García-Peñalvo, F. J. (2014). Formación en la sociedad del conocimiento, un programa de doctorado con una perspectiva interdisciplinar. Teoría de la Educación. Educación y Cultura en la Sociedad de la Información, 15(1), 4-9.

García-Peñalvo, F. J. (2015). Map of trends in educational innovation. Education in the knowledge society, 16(4), 6-23. https://doi.org/10.14201/eks2015164623

García-Peñalvo, F. J. (2017). Mapeos sistemáticos de literatura, revisiones sistemáticas de literatura y benchmarking de programas formativos. (Grupo GRIAL). https://repositorio.grial.eu/handle/grial/1056.

García-Peñalvo, F. J. (2021). *Los retos de la Universidad ante su transformación digital*

García-Peñalvo, F. J.(2022). Developing robust state-of-the-art reports: Systematic Literature Reviews. Education in the Knowledge Society, 23, Article e28600. https://doi.org/10.14201/eks.28600

García-Ruiz, M. R., & González Fernández, N. (2012). El aprendizaje cooperativo en la universidad. valoración de los estudiantes respecto a su potencialidad para desarrollar competencias / Cooperative Learning at University. Assessment of Students Regarding its Potential to Develop Skills. *RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, *4*(7).

García-Ruiz, R., Caldeiro-Pedreira, M., & Aguaded, I. (2015). Prácticas innovadoras y estrategias educomunicativas en contextos múltiples. *Organización y gestión educativa: Revista del Fórum Europeo de Administradores de la Educación*, *23*(2), 31-33.

García-Ruiz, R., & Contreras-Pulido, P. (2018). La escuela prosumidora: del recurso didáctico al contenido curricular. In R. García-Ruiz, A. Pérez-Rodríguez, & A. Torres (Eds.), *Educar para los nuevos medios. Claves para el desarrollo de la competencia mediática en el entorno digital*. Universidad Politécnica Salesiana.

Gardiner, W. (2018). Rehearsals in Clinical Placements: Scaffolding Teacher Candidates' Literacy Instruction [Article]. *Teacher Educator*, *53*(4), 384-400. https://doi.org/10.1080/08878730.2018.1441348

Gatti, B. A., Barretto, E. S. d. S., & André, M. (2011). *Políticas docentes no Brasil: um estado da arte*.

Gaudin, C., & Chaliès, S. (2015). Video viewing in teacher education and professional development: A literature review [Review]. *Educational Research Review*, *16*, 41-67. https://doi.org/10.1016/j.edurev.2015.06.001

Gazem, N., Rahman, A. A., & Saeed, F. (2016). Factors that facilitate systematic problems solving process in small and medium enterprises. *Indian Journal of Science and Technology*, *9*(34), 1-10. https://doi.org/10.17485/ijst/2016/v9i34/100849

Ghousseini, H. (2015). Core practices and problems of practice in learning to lead classroom discussions [Article]. *Elementary School Journal*, *115*(3), 334-357. https://doi.org/10.1086/680053

Ghousseini, H., Beasley, H., & Lord, S. (2015). Investigating the Potential of Guided Practice With an Enactment Tool for Supporting Adaptive Performance [Article]. *Journal of the Learning Sciences*, *24*(3), 461-497. https://doi.org/10.1080/10508406.2015.1057339

Gibbs, G. (1999). *Using assessment strategically to change the way students* (Vol. 41). Brown and Glasner.

Gibbs, G. (2003). Uso estratégico de la educación en el aprendizaje. In S. Brown & A. Glasner (Eds.), *Evaluar en la universidad: problemas y nuevos enfoques* (pp. 61-74). Narcea.

Gitomer, D. H., & Duschl, R. A. (2007). Chapter 12 Establishing Multilevel Coherence in Assessment. In P. Moss (Ed.), *Yearbook of the National Society for the Study of Education* (Vol. 106, pp. 288-320).

Glaser, B., & Strauss, A. (1967). The discovery of grounded theory: Strategies for qualitative research. 139. In: Chicago: Aldine, USA.

Gleeson, J., Sugrue, C., & O'Flaherty, J. (2017). Research capacity and initial teacher education reform: Irish experiences, international perspectives [Article]. *Teaching and Teacher Education*, *62*, 19-29. https://doi.org/10.1016/j.tate.2016.11.001

Goh, P. S. C., & Abdul-Wahab, N. (2020). Paradigms to drive higher education 4.0. *International Journal of Learning, Teaching and Educational Research*, *19*(1), 159-171. https://doi.org/10.26803/ijlter.19.1.9

Goh, P. S. C., & Yusuf, Q. (2017). Validation of the Malaysian version of the teacher education program coherence questionnaire [Article]. *Australian Journal of Teacher Education*, *42*(12), 42-59. https://doi.org/10.14221/ajte.2017v42n12.3

Goldin, S., Flynn, E. E., & Egan, C. M. (2017). "Our greatest songs are still unsung": Educating citizens about schooling in a multicultural society [Article]. *SAGE Open*, *7*(4). https://doi.org/10.1177/2158244017739070

González Fernández, N., García Ruiz, R., & Ramírez García, A. (2015). Aprendizaje cooperativo y tutoría entre iguales en entornos virtuales universitarios. *Estudios pedagógicos (Valdivia)*, *41*, 111-124. https://doi.org/10.4067/S0718-07052015000100007

Gore, J., Lloyd, A., Smith, M., Bowe, J., Ellis, H., & Lubans, D. (2017). Effects of professional development on the quality of teaching: Results from a randomised controlled trial of Quality Teaching Rounds [Article]. *Teaching and Teacher Education*, *68*, 99-113. https://doi.org/10.1016/j.tate.2017.08.007

Gotwals, A. W., & Birmingham, D. (2016). Eliciting, Identifying, Interpreting, and Responding to Students' Ideas: Teacher Candidates' Growth in Formative Assessment Practices [Article]. *Research in Science Education*, *46*(3), 365-388. https://doi.org/10.1007/s11165-015-9461-2

Gotwals, A. W., & Cisterna, D. (2022). Formative assessment practice progressions for teacher preparation: A framework and illustrative case. *Teaching and Teacher Education*, *110*, 103601. https://doi.org/10.1016/j.tate.2021.103601

Grainger, P. (2021). Enhancing assessment literacies through development of quality rubrics using a triad based peer review process [Review]. *Journal of University Teaching and Learning Practice*, *18*(4), Article 4. https://doi.org/10.53761/1.18.4.4

Granberg, C., Palm, T., & Palmberg, B. (2021). A case study of a formative assessment practice and the effects on students' self-regulated learning. *Studies in Educational Evaluation*, *68*, 100955. https://doi.org/10.1016/j.stueduc.2020.100955

Griffith, R. (2017). Preservice teachers' in-the-moment teaching decisions in reading [Article]. *Literacy*, *51*(1), 3-10. https://doi.org/10.1111/lit.12097

Grossman, P. (2018). *Teaching Core Practices in Teacher Education*. ERIC.

Grossman, P., Compton, C., Igra, D., Ronfeldt, M., Shahan, E., & Williamson, P. (2009). Teaching practice: A cross-professional perspective. *Teachers College Record*, *111*(9), 2055-2100.

Grossman, P., Dean, C. G. P., Kavanagh, S. S., & Herrmann, Z. (2019). Preparing teachers for project-based teaching [Article]. *Phi Delta Kappan*, *100*(7), 43-48. https://doi.org/10.1177/0031721719841338

Grossman, P., & Dean, P. (2019). Negotiating a common language and shared understanding about core practices: The case of discussion [Article]. *Teaching and Teacher Education*, *80*, 157-166. https://doi.org/10.1016/j.tate.2019.01.009

Grossman, P., Hammerness, K., & McDonald, M. (2009). Redefining teaching, re-imagining teacher education [Article]. *Teachers and Teaching: Theory and Practice*, *15*(2), 273-289. https://doi.org/10.1080/13540600902875340

Grossman, P., Hammerness, K. M., McDonald, M., & Ronfeldt, M. (2008). Constructing coherence: Structural predictors of perceptions of coherence in NYC teacher education programs [Article]. *Journal of Teacher Education*, *59*(4), 273-287. https://doi.org/10.1177/0022487108322127

Grossman, P., & McDonald, M. (2008). Back to the future: Directions for research in teaching and teacher education. *American Educational Research Journal*, *45*(1), 184-205. https://doi.org/10.3102/0002831207312906

Guajardo, B., García, N., & Valenzuela, J. (2019). Innovación educativa en psicología educativa: implicaciones prácticas. In M. S. Ramírez-Montoya & J. Valenzuela (Eds.), *Innovación educativa: tendencias globales de investigación e implicaciones prácticas*. Octaedro.

Gulikers, J., Bastiaens, T., Kirschner, P., & Kester, L. (2006). Relations between student perceptions of assessment authenticity, study approaches and learning outcome. https://doi.org/10.1016/j.stueduc.2006.10.003

Gulikers, J. T., Bastiaens, T. J., & Kirschner, P. A. (2004). A five-dimensional framework for authentic assessment. *Educational technology research and development*, *52*(3), 67.

Gunn, A. C., & Gilmore, A. (2014). Early childhood initial teacher education students' learning about assessment. *Assessment Matters*, *7*(2). https://doi.org/10.18296/am.0124

Hahl, K., & Mikulec, E. (2018). Student reflections on teacher identity development in a year-long secondary teacher preparation program [Article]. *Australian Journal of Teacher Education*, *43*(12), 42-58. https://doi.org/10.14221/ajte.2018v43n12.4

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5). Prentice hall Upper Saddle River, NJ.

Halamish, V. (2018). Pre-service and In-service Teachers' Metacognitive Knowledge of Learning Strategies. *Frontiers in Psychology*, *9*. https://doi.org/org/10.3389/fpsyg.2018.02152

Hammerness, K., & Kennedy, B. (2019). Teaching Practices Grounded in Foundational Knowledge, Visions, and Contexts [Article]. *New Educator*, *15*(1), 66-83. https://doi.org/10.1080/1547688X.2018.1506070

Hammerness, K., & Klette, K. (2015). Indicators of quality in teacher education: Looking at features of teacher education from an international perspective. *Promoting and sustaining a quality teaching workforce*, *27*, 239-277.

Hammerness, K., Klette, K., & Bergem, O. (2014). Coherence and assignments in teacher education: Teacher education survey. *Oslo, Norway: University of Oslo Department of Teacher Education and School Research*.

Hammerness, K., Klette, K., Jenset, I. S., & Canrinus, E. T. (2020). Opportunities to Study, Practice, and Rehearse Teaching in Teacher Preparation: An International Perspective. *Teachers College Record*, *122*(11).

Hamodi, C., López Pastor, V. M., & López Pastor, A. T. (2015). Medios, técnicas e instrumentos de evaluación formativa y compartida del aprendizaje en educación superior. *Perfiles educativos*, *37*(147), 146-161.

Harrington, D. (2009). *Confirmatory factor analysis*. Oxford university press.

Hascher, T., & Hagenauer, G. (2016). Openness to theory and its importance for pre-service teachers' self-efficacy, emotions, and classroom behaviour in the teaching practicum [Article]. *International Journal of Educational Research*, *77*, 15-25. https://doi.org/10.1016/j.ijer.2016.02.003

Hattie, J., & Clarke, S. (2018). *Visible learning: Feedback* [Book]. https://doi.org/10.4324/9780429485480

Hattie, J., & Timperley, H. (2007). The power of feedback [Review]. *Review of Educational Research*, *77*(1), 81-112. https://doi.org/10.3102/003465430298487

Heikkinen, H. L. T., de Jong, F., & Vanderlinde, R. (2016). What is (good) practitioner research? *Vocations and Learning*, *9*(1), 1-19. https://doi.org/10.1007/s12186-016-9153-8

Heiss Bendersky, C. (2018). El Chile de las movilizaciones: ¿giro a la izquierda o catarsis antisistémica? In J. Brenna & F. Carballo (Eds.), *América Latina: de ruinas y horizontes. La política de nuestros días, un balance provisorio.* (pp. 329-344). Bonilla Artigas Editores / Universidad Autónoma Metropolitana.

Henderson, M., Phillips, M., Ryan, T., Boud, D., Dawson, P., Molloy, E., & Mahoney, P. (2019). Conditions that enable effective feedback. *Higher Education Research & Development*, *38*(7), 1401-1416. https://doi.org/10.1080/07294360.2019.1657807

Heredia Escorza, Y., Heydy Selene, R. N., Irais Monserrat, S. R., Jean Gabriel, G. D., & Acebo Gutiérrez, J. (2019). Innovación educativa en estudios socioculturales: una revisión sistemática de la literatura. In M. S. Ramírez-Montoya & J. Valenzuela (Eds.), *Innovación educativa: tendencias globales de investigación e implicaciones prácticas*

Heredia, S. C., Furtak, E. M., Morrison, D., & Renga, I. P. (2016). Science Teachers' Representations of Classroom Practice in the Process of Formative Assessment Design [Article]. *Journal of Science Teacher Education*, *27*(7), 697-716. https://doi.org/10.1007/s10972-016-9482-3

Hernando Gómez, Á., Aguaded Gómez, J. I., & Pérez Rodríguez, A. (2011). Técnicas de comunicación creativas en el aula: escucha activa, el arte de la pregunta, la gestión de los silencios. *Educación y futuro: revista de investigación aplicada y experiencias educativas*(24), 153-180.

Himmetoglu, B., Aydug, D., & Bayrak, C. (2020). Education 4.0: Defining the teacher, the student, and the school manager aspects of the revolution. *Turkish Online Journal of Distance Education*, *21*(Special Issue-IODL), 12-28. https://doi.org/10.17718/tojde.770896

Huang, S.-C. (2018). A GEARed peer feedback model and implications for learning facilitation. *Assessment & Evaluation in Higher Education*, *43*(7), 1194-1210. https://doi.org/10.1080/02602938.2018.1439881

Husbye, N. E., Powell, C. W., Vander Zanden, S., & Karalis, T. (2018). Coaching in Practice-Based Literacy Education Courses. *Reading Teacher*, *72*(2), 191-200. https://doi.org/10.1002/trtr.1692

Ibarra, M. S., & Rodríguez, G. (2010). Aproximación al discurso dominante sobre la evaluación del aprendizaje en la universidad1 An approach to the dominant discourse of learning assessment in higher education. *Revista de educación*, *351*, 385-407.

Jao, L. M., Wiseman, D., Kobiela, M., Gonsalves, A., & Savard, A. (2018). Practice-Based Pedagogy in Mathematics and Science Teaching Methods: Challenges and Adaptations in Context. *Canadian Journal of Science Mathematics and Technology Education*, *18*(2), 177-186. https://doi.org/10.1007/s42330-018-0009-0

Jato Seijas, E., Cajide Val, J., Muñoz Cadavid, M., & García Antelo, B. (2016). La formación del profesorado universitario en competencias lifelong learning a partir de las demandas de empleadores y egresados. *Revista de Investigación Educativa*, *34*(1), 69-85. https://doi.org/10.6018/rie.34.1.215341

Jenaro, C., Flores, N., & Lopez-Lucas, J. (2018). Using the Semantic Differential Technique to Assess Stereotypes toward Individuals with Disabilities: The Relevance of Warmth and Competence. *Universitas Psychologica*, *17*(4). https://doi.org/10.11144/Javeriana.upsy17-4.usdt

Jenset, I. (2017). Researching practice-based teacher education: Research questions, designs, and issues concerning validity and generalizability. Lessons learned and ways ahead. Department of teacher education and school research. Oslo.

Jenset, I., Klette, K., & Hammerness, K. (2014). Coding book: Teacher education observation protocol. In. Oslo, Norway: Department of Teacher Education and School Research, University of Oslo.

Jenset, I., Klette, K., & Hammerness, K. (2018). Grounding Teacher Education in Practice Around the World: An Examination of Teacher Education Coursework in Teacher Education Programs in Finland, Norway, and the United States. *Journal of Teacher Education*, *69*(2), 184-197. https://doi.org/10.1177/0022487117728248

Jiang, Y., Ma, L., & Gao, L. (2016). Assessing teachers' metacognition in teaching: The teacher metacognition inventory. *Teaching and Teacher Education*, *59*, 403-413.

Johnson Lachuk, A., Gísladóttir, K. R., & DeGraff, T. (2019). Using collaborative inquiry to prepare preservice teacher candidates who have integrity and trustworthiness [Article]. *Teaching and Teacher Education*, *78*, 75-84. https://doi.org/10.1016/j.tate.2018.11.003

Johnson, R., & Onwuegbuzie, A. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, *33*(7), 14-26. https://doi.org/10.3102/0013189X033007014

Jones, M., Hobbs, L., Kenny, J., Campbell, C., Chittleborough, G., Gilbert, A., . . . Redman, C. (2016). Successful university-school partnerships: An interpretive framework to inform partnership practice [Article]. *Teaching and Teacher Education*, *60*, 108-120. https://doi.org/10.1016/j.tate.2016.08.006

Kademian, S. M., & Davis, E. A. (2018). Supporting Beginning Teacher Planning of Investigation-Based Science Discussions [Article]. *Journal of Science Teacher Education*, *29*(8), 712-740. https://doi.org/10.1080/1046560X.2018.1504266

Kallio, H., Virta, K., & Kallio, M. (2018). Modelling the components of metacognitive awareness. *International Journal of Educational Psychology*, *7*(2), 94-122. https://doi.org/10.17583/ijep.2018.2789

Kang, H., & Windschitl, M. (2018). How does practice-based teacher preparation influence novices' first-year instruction? [Article]. *Teachers College Record*, *120*(8). https://doi.org/10.1177/016146811812000803

Kavanagh, S. S. (2016). The promise of anonymity: An investigation of the practices of ELA teachers facilitating discourse about LGBTQ topics [Article]. *Teachers College Record*, *118*(12), 1-36. https://doi.org/10.1177/016146811611801208

Kavanagh, S. S., & Rainey, E. C. (2017). Learning to Support Adolescent Literacy: Teacher Educator Pedagogy and Novice Teacher Take Up in Secondary English Language Arts Teacher Preparation.

American Educational Research Journal, *54*(5), 904-937. https://doi.org/10.3102/0002831217710423

Kayaoglu, M. N. (2015). Teacher researchers in action research in a heavily centralized education system. *Educational Action Research*, *23*(2), 140-161. https://doi.org/10.1080/09650792.2014.997260

Kazemi, E., Franke, M., & Lampert, M. (2009). Developing pedagogies in teacher education to support novice teachers' ability to enact ambitious instruction. Crossing divides: Proceedings of the 32nd annual conference of the Mathematics Education Research Group of Australasia.

Kazemi, E., Ghousseini, H., Cunard, A., & Turrou, A. C. (2016). Getting Inside Rehearsals: Insights From Teacher Educators to Support Work on Complex Practice. *Journal of Teacher Education*, *67*(1), 18-31. https://doi.org/10.1177/0022487115615191

Kennedy, M. (2016). Parsing the Practice of Teaching. *Journal of Teacher Education*, *67*(1), 6-17. https://doi.org/10.1177/0022487115614617

Kickbusch, S., Wright, N., Sternberg, J., & Dawes, L. (2020). Rethinking learning design: Reconceptualizing the role of the learning designer in pre-service teacher preparation through a design-led approach [Review]. *International Journal of Design Education*, *14*(4), 29-45. https://doi.org/10.18848/2325-128X/CGP/V14I04/29-45

Kirby, J., Knapper, C., Lamon, P., & Egnatoff, W. (2010). Development of a scale to measure lifelong learning. *International Journal of Lifelong Education*, *29*(3), 291-302. https://doi.org/10.1080/02601371003700584

Kitchenham, B., & Charters, S. (2007). Guidelines for performing systematic literature reviews in software engineering.

Kitchenham, B., Pretorius, R., Budgen, D., Brereton, O. P., Turner, M., Niazi, M., & Linkman, S. (2010). Systematic literature reviews in software engineering–a tertiary study. *Information and software technology*, *52*(8), 792-805. https://doi.org/10.1016/j.infsof.2010.03.006

Klassen, A. C., Creswell, J., Clark, V. L. P., Smith, K. C., & Meissner, H. I. (2012). Best practices in mixed methods for quality of life research. *Quality of Life Research*, *21*(3), 377-380. https://doi.org/10.1007/s11136-012-0122-x

Klette, K., Hammerness, K., & Jenset, I. (2017). Established and evolving ways of linking to practice in teacher education: Findings from an international study of the enactment of practice in teacher education. *Acta Didactica Norge*, *11*(3), 9-sider. https://doi.org/10.5617/adno.4730

Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.

Kloser, M., Wilsey, M., Madkins, T. C., & Windschitl, M. (2019). Connecting the dots: Secondary science teacher candidates' uptake of the core practice of facilitating sensemaking discussions from teacher education experiences [Article]. *Teaching and Teacher Education*, *80*, 115-127. https://doi.org/10.1016/j.tate.2019.01.006

Knackstedt, K. M., Leko, M. M., & Siuty, M. B. (2018). The Effects of Secondary Special Education Preparation in Reading: Research to Inform State Policy in a New Era. *Teacher Education and Special Education*, *41*(1), 70-85. https://doi.org/10.1177/0888406417700960

Knight, R. (2015). Postgraduate student teachers' developing conceptions of the place of theory in learning to teach: 'more important to me now than when I started' [Article]. *Journal of Education for Teaching*, *41*(2), 145-160. https://doi.org/10.1080/02607476.2015.1010874

Kovarik, M. L., Robinson, J. K., & Wenzel, T. J. (2022). Why Use Active Learning? In *Active Learning in the Analytical Chemistry Curriculum* (Vol. 1409, pp. 1-12). American Chemical Society. https://doi.org/10.1021/bk-2022-1409.ch001

Kressler, B., & Kressler, J. (2020). Diverse Student Perceptions of Active Learning in a Large Enrollment STEM Course. *Journal of the Scholarship of Teaching and Learning*, *20*(1). https://doi.org/10.14434/josotl.v20i1.24688

Kroll, J., Richardson, I., Prikladnicki, R., & Audy, J. L. N. (2018). Empirical evidence in follow the Sun software development: A systematic mapping study [Article]. *Information and Software Technology*, *93*, 30-44. https://doi.org/10.1016/j.infsof.2017.08.011

Kubanyiova, M., & Feryok, A. (2015). Language Teacher Cognition in Applied Linguistics Research: Revisiting the Territory, Redrawing the Boundaries, Reclaiming the Relevance [Article]. *Modern Language Journal*, *99*(3), 435-449. https://doi.org/10.1111/modl.12239

Kunzman, R. (2002). Pre-Service Education for Experienced Teachers: What STEP Teaches Those Who Have Already Taught. *Issues in Teacher Education*, *11*(1), 99-112.

la Velle, L., Newman, S., Montgomery, C., & Hyatt, D. (2020). Initial teacher education in England and the Covid-19 pandemic: challenges and opportunities. *Journal of Education for Teaching*, *46*(4), 596-608. https://doi.org/10.1080/02607476.2020.1803051

Lachner, A., Jarodzka, H., & Nückles, M. (2016). What makes an expert teacher? Investigating teachers' professional vision and discourse abilities [Article]. *Instructional Science*, *44*(3), 197-203. https://doi.org/10.1007/s11251-016-9376-y

Lalor, J., Lorenzi, F., & Rami, J. (2015). Developing professional competence through assessment: Constructivist and reflective practice in teacher-training [Article]. *Egitim Arastirmalari - Eurasian Journal of Educational Research*, *15*(58), 45-66. https://doi.org/10.14689/ejer.2015.58.6

Lampert, M. (2010). Learning teaching in, from, and for practice: What do we mean? *Journal of teacher education*, *61*(1-2), 21-34. https://doi.org/10.1177/0022487109347321

Larkin, D. (2017). Planning for the elicitation of students' ideas: A lesson study approach with preservice science teachers [Article]. *Journal of Science Teacher Education*, *28*(5), 425-443. https://doi.org/10.1080/1046560X.2017.1352410

Lauder, H. (2020). The roles of higher education, further education and lifelong learning in the future economy. *Journal of Education and Work*, *33*(7-8), 460-467. https://doi.org/10.1080/13639080.2020.1852499

Laurillard, D. (2013). *Rethinking university teaching: A conversational framework for the effective use of learning technologies*. Routledge.

Lee, K., & Fanguy, M. (2022). Online exam proctoring technologies: Educational innovation or deterioration? [Article]. *British Journal of Educational Technology*. https://doi.org/10.1111/bjet.13182

Leech, N., & Onwuegbuzie, A. (2007). An array of qualitative data analysis tools: A call for data analysis triangulation. *School psychology quarterly*, *22*(4), 557. https://doi.org/10.1037/1045-3830.22.4.557

Leech, N., & Onwuegbuzie, A. (2009). A typology of mixed methods research designs. *Quality & quantity*, *43*(2), 265-275. https://doi.org/10.1007/s11135-007-9105-3

Leeferink, H., Koopman, M., Beijaard, D., & Ketelaar, E. (2015). Unraveling the Complexity of Student Teachers' Learning in and From the Workplace [Article]. *Journal of Teacher Education*, *66*(4), 334-348. https://doi.org/10.1177/0022487115592163

Leko, M., Brownell, M., & Sindelar, P. K., M. (2015). Envisioning the Future of Special Education Personnel Preparation in a Standards-Based Era. *Exceptional Children*, *82*(1), 25-43. https://doi.org/10.1177/0014402915598782

Levin, T., & Wagner, T. (2009). Mixed-methodology research in science education: Opportunities and challenges in exploring and enhancing thinking dispositions. In *Quality Research in Literacy and Science Education* (pp. 213-243). Springer.

Ley 20903: Crea el sistema de desarrollo profesional docente y modifica otras normas, (2016). https://www.bcn.cl/leychile/navegar?idNorma=1087343

León-Parada, F. (2022). Autovalidación: alternativa de evaluación asincrónica en el aprendizaje virtual. *NOVUM*, *1(12)*, 95 - 107.

Likert, R. (1932). A technique for the measurement of attitudes. *Archives of psychology*.

Lloret-Segura, S., Ferreres-Traver, A., Hernández-Baeza, A., & Tomás-Marco, I. (2014). El análisis factorial exploratorio de los ítems: una guía práctica, revisada y actualizada. *Anales de Psicología/Annals of Psychology*, *30*(3), 1151-1169. https://doi.org/10.6018/analesps.30.3.199361

López, H., Ponce, P., Molina, A., Ramírez-Montoya, M. S., & Lopez-Caudana, E. (2021). Design framework based on TEC21 educational model and Education 4.0 implemented in a Capstone Project: A case study of an electric vehicle suspension system. *Sustainability*, *13*(11), 5768. https://doi.org/10.3390/su13115768

López- Pastor, V. (2009). Fundamentación teórica y revisión del estado de la cuestión. In V. López- Pastor (Ed.), *Evaluación formativa y compartida en Educación Superior: Propuestas, técnicas, instrumentos y experiencias* (pp. 45-64). Narcea.

López-Gómez, E. (2018). The Delphi method in current educational research: A theoretical and methodological review. *EDducacion XXI1*, *21*(1), 17-40. https://doi.org/10.5944/educxx1.20169

López-Pastor, V., Pérez-Pueyo, Á., Barba, J., & Lorente-Catalán, E. (2016). Percepción del alumnado sobre la utilización de una escala graduada para la autoevaluación y coevaluación de trabajos escritos en la formación inicial del profesorado de educación física (FIPEF). *Cultura, Ciencia y Deporte, 2016, vol. 11, num. 31, p. 37-50*.

López-Pastor, V., & Sicilia-Camacho, A. (2017). Formative and shared assessment in higher education. Lessons learned and challenges for the future. *Assessment & Evaluation in Higher Education*, *42*(1), 77-97. https://doi.org/10.1080/02602938.2015.1083535

Lorente, L. M., Juan, M. G., Requena, L. C., & Iborra, A. T. (2022). Los objetivos de desarrollo sostenible y la agenda 2030 en la formación inicial del profesorado. *Atenas*, *1*(57), 1-17.

Louzano, P., & Moriconi, G. (2014). Visión de la Docencia y Características de los Sistemas de Formación Docente. In l. C. y. l. C. Organización de las Naciones Unidas para la Educación (Ed.), *Temas críticos para formular nuevas políticas docentes en América Latina y el Caribe: el debate actual*.

Lozano, A., & Gallardo, K. E. (2017). Taxonomía de competencias para la innovación educativa. . In M. S. Ramírez-Montoya & J. R. Valenzuela (Eds.), *Innovación Educativa: investigación, formación, vinculación y visibilidad* (pp. 85-108). Síntesis.

Lozano, L. M., García-Cueto, E., & Muñiz, J. (2008). Effect of the number of response categories on the reliability and validity of rating scales. *Methodology*, *4*(2), 73-79.

Maclellan, E. (2004). How convincing is alternative assessment for use in higher education? *Assessment & Evaluation in Higher Education*, *29*(3), 311-321.

Maclellan, E. (2012). The psychological dimension of transformation in teacher learning. *Teaching education*, *23*(4), 411-428. https://doi.org/10.1080/10476210.2012.685710

Maclellan, E. (2014). How might teachers enable learner self-confidence? A review study. *Educational Review*, *66*(1), 59-74. https://doi.org/10.1080/00131911.2013.768601

Maclellan, E. (2017). Shaping agency through theorizing and practicing teaching in teacher education. In *The SAGE handbook of research on teacher education* (pp. 253-269). Sage Publications.

Mair, P. (2018). *Modern psychometrics with R*. Springer.

Makarova, O. Y., Andreeva, M. I., Baratova, O. A., & Zelenkova, A. V. (2017). Supplementary professional education as a socially relevant component of lifelong learning. International Conference on Linguistic and Cultural Studies.

Mannion, J. (2021). Beyond the grade: the planning, formative and summative (PFS) model of self-assessment for higher education. *Assessment & Evaluation in Higher Education*, 1-13. https://doi.org/10.1080/02602938.2021.1922874

Manso, J., & Valle, J. M. (2013). La formación inicial del profesorado de secundaria en la Unión Europea. *Revista española de educación comparada*, *22*, 1 65–184. https://doi.org/10.5944/reec.22.2013.9328

Martin, A. K., & Russell, T. (2018). Supervising the Teacher Education Practicum: A Self-Study with a Critical Friend [Article]. *Studying Teacher Education*, *14*(3), 331-342. https://doi.org/10.1080/17425964.2018.1541286

Martín-Rodero, H. (2014). *La búsqueda bibliográfica, pilar fundamental de la medicina basada en la evidencia: evaluación multivariante de las enfermedades nutricionales y metabólicas* Universidad Miguel Hernández]. Alicante, España. http://dspace.umh.es/bitstream/11000/1639/1/Tesis_Helena_VFI.pdf

Marzano, R. J., & Pickering, D. J. (2005). Dimensiones del aprendizaje: Manual para el maestro In (ITESO ed.). Jalisco, México.

Mateo, J. (2006). *La evaluación educativa, su práctica y otras metáforas* (Vol. 33). Horsiri editorial, SL.

McCray, E., Kamman, M., Brownell, M., & Robinson, S. (2017). High-leverage practices and evidence-based practices: A promising pair. *High-leverage practices in special education*.

McDonald, M., Kazemi, E., & Kavanagh, S. S. (2013). Core Practices and Pedagogies of Teacher Education: A Call for a Common Language and Collective Activity [Article]. *Journal of Teacher Education*, *64*(5), 378-386. https://doi.org/10.1177/0022487113493807

McGrew, S., Alston, C., & Fogo, B. (2018). Modeling as an example of representation. In P. Grossman (Ed.), *Teaching core practices in teacher education*. Harvard education press.

McLeskey, J., & Brownell, M. (2015). *High-leverage practices and teacher preparation in special education*. http://ceedar.education.ufl.edu/tools/best-practice-review/

McLeskey, J., Children, C. f. E., & Collaboration for Effective Educator Development, A. a. R. (2017). *High-leverage practices in special education*. Council for Exceptional Children Arlington, VA.

Medina, M. S., Castleberry, A. N., & Persky, A. M. (2017). Strategies for improving learner metacognition in health professional education. *American Journal of Pharmaceutical Education*, *81*(4). https://doi.org/10.5688/ajpe81478

Meuwissen, K. W., & Choppin, J. M. (2015). Preservice teachers' adaptations to tensions associated with the edTPA during its early implementation in new york and washington states [Article]. *Education Policy Analysis Archives*, *23*. https://doi.org/10.14507/epaa.v23.2078

Meuwissen, K. W., & Thomas, A. L. (2016). Can Studying Adolescents' Thinking Amplify High-Leverage Social Studies Teaching Practice? Challenges of Synthesizing Pedagogies of Investigation and Enactment in School–Institutional Contexts [Article]. *Theory and Research in Social Education*, *44*(3), 385-415. https://doi.org/10.1080/00933104.2016.1201445

Miranda, J., Navarrete, C., Noguez, J., Molina-Espinosa, J.-M., Ramírez-Montoya, M.-S., Navarro-Tuch, S. A., . . . Molina, A. (2021). The core components of education 4.0 in higher education: Three case studies in engineering education. *Computers & Electrical Engineering*, *93*, 107278. https://doi.org/10.1016/j.compelecen g.2021.107278

Mitchell, D. M., & Reid, J. A. (2017). (Re)turning to practice in teacher education: embodied knowledge in learning to teach. *Teachers and Teaching*, *23*(1), 42-58. https://doi.org/10.1080/13540602.2016.1203775

Molander, B. O., & Hamza, K. (2018). Transformation of Professional Identities From Scientist to Teacher in a Short-Track Science Teacher Education Program [Article]. *Journal of Science Teacher Education*, *29*(6), 504-526. https://doi.org/10.1080/1046560X.2018.1473749

Molina, M., & López-Pastor, V. M. (2019). ¿Evalúo cómo me Evaluaron en la Facultad? Transferencia de la Evaluación Formativa y Compartida Vivida durante la Formación Inicial del Profesorado a la Práctica como Docente. *RIEE. Revista Iberoamericana de Evaluación Educativa*. https://doi.org/10.15366/riee2019.12.1.005

Montecinos, C., Walker, H., & Maldonado, F. (2015). School administrators and university practicum supervisors as boundary brokers for initial teacher education in Chile [Article]. *Teaching and Teacher Education*, *49*, 1-10. https://doi.org/10.1016/j.tate.2015.02.011

Montes, N., & Ziegler, S. (2018). Los desafíos de la formación de los docentes del futuro. Entrevista a Cristian Cox Donoso. *Propuesta educativa*(49), 57-60.

Morales, V. (2012). La ética profesional de los investigadores en tecnología de la información. *Fundación Universitaria Andaluza Inca Garcilaso*.

Moshman, D. (2018). Metacognitive theories revisited. *Educational Psychology Review*, *30*(2), 599-606. https://doi.org/10.1007/s10648-017-9413-7

Muller, M., Álamos, P., Meckes, L., Sanyal, A., & Cox, P. (2016). Teacher candidates' perceptions of opportunities to develop core practices in a teacher education program [Article]. *Estudios Pedagogicos*, *42*(4), 145-163. https://doi.org/10.4067/S0718-07052016000500009

Muskin, J. A. (2015). Student Learning Assessment and the Curriculum: Issues and Implications for Policy, Design and Implementation. In-Progress Reflections No. 1 on" Current and Critical Issues in the Curriculum and Learning". *UNESCO International Bureau of Education*.

Mutambuki, J. M., Mwavita, M., Muteti, C. Z., Jacob, B. I., & Mohanty, S. (2020). Metacognition and Active Learning Combination Reveals Better Performance on Cognitively Demanding General Chemistry Concepts than Active Learning Alone. *Journal of Chemical Education*, *97*(7), 1832-1840. https://doi.org/10.1021/acs.jchemed.0c00254

Nadler, J. T., Weston, R., & Voyles, E. C. (2015). Stuck in the Middle: The Use and Interpretation of Mid-Points in Items on Questionnaires. *The Journal of General Psychology*, *142*(2), 71-89. https://doi.org/10.1080/00221309.2014.994590

Nandy, M., Lodh, S., & Tang, A. (2021). Lessons from COVID-19 and a resilience model for higher education. *Industry and Higher Education*, *35*(1), 3-9, Article 0950422220962696. https://doi.org/10.1177/0950422220962696

Nava, I., Park, J., Dockterman, D., Kawasaki, J., Schweig, J., Quartz, K. H., & Martinez, J. F. (2019). Measuring Teaching Quality of Secondary Mathematics and Science Residents: A Classroom Observation Framework [Article]. *Journal of Teacher Education*, *70*(2), 139-154. https://doi.org/10.1177/0022487118755699

Neel, M. A. (2017). Making sense and facing tensions: an investigation of core practice complexities. *Teaching Education*, *28*(3), 257-278. https://doi.org/10.1080/10476210.2017.1296826

Nicholson Perry, K., Donovan, M., Knight, R., & Shires, A. (2017). Addressing professional competency problems in clinical psychology trainees. *Australian Psychologist*, *52*(2), 121-129. https://doi.org/10.1111/ap.12268

Niemi, H. (2002). Active learning—a cultural change needed in teacher education and schools. *Teaching and Teacher Education*, *18*(7), 763-780. https://doi.org/10.1016/S0742-051X(02)00042-2

Noreña, A. L., Alcaraz-Moreno, N., Rojas, J. G., & Rebolledo-Malpica, D. (2012). Aplicabilidad de los criterios de rigor y éticos en la investigación cualitativa. *Aquichan*, *12*(3), 263-274.

Núñez Prieto, I. (2007). La profesión docente en Chile: Saberes e identidades en su historia. *Revista pensamiento educativo*, *150*.

Núñez Prieto, I. (2010). Escuelas normales: una historia larga y sorprendente. Chile (1842-1973). *Pensamiento Educativo*, *46*, 133-150.

Nutov, L. (2019). Learning experiences of pre-service teachers and the lecturer's role in a qualitative research methods course [Article]. *Qualitative Report*, *24*(1), 31-54, Article 1. https://doi.org/10.46743/2160-3715/2019.3343

OECD. (2015). *OECD Economic Surveys: Chile 2015*. https://doi.org/10.1787/eco_surveys-chl-2015-en

OECD. (2018a). *Educación en Chile*. https://doi.org/10.1787/9789264288720-es

OECD. (2018b). Effective Teacher Policies. https://doi.org/https://doi.org/https://doi.org/10.1787/9789264301603-en

OECD. (2018c). *Políticas docentes efectivas: Conclusiones del informe PISA*.

OECD. (2018d). The future of education and skills: Education 2030. *OECD Education 2030*.

Olin, A., & Ingerman, A. (2016). Features of an Emerging Practice and Professional Development in a Science Teacher Team Collaboration with a Researcher Team. *Journal of Science Teacher Education*, *27*(6), 607-624. https://doi.org/10.1007/s10972-016-9477-0

Oliveri, M. E., & Markle, R. (2017). Continuing a culture of evidence: Expanding skills in higher education. *ETS Research Report Series*, *2017*(1), 1-8. https://doi.org/doi:10.1002/ets2.12137

Onwuegbuzie, A., & Collins, K. (2007). A typology of mixed methods sampling designs in social science research. *Qualitative Report*, *12*(2), 281-316. https://doi.org/10.46743/2160-3715/2007.1638

Onwuegbuzie, A., & Leech, N. (2006). Linking Research Questions to Mixed Methods Data Analysis Procedures., *11(3)*, 474-498. https://doi.org/10.46743/2160-3715/2006.1663

Ord, K., & Nuttall, J. (2016). Bodies of knowledge: The concept of embodiment as an alternative to theory/practice debates in the preparation of teachers [Article]. *Teaching and Teacher Education*, *60*, 355-362. https://doi.org/10.1016/j.tate.2016.05.019

Organización de Naciones Unidas. (2015). Resolución aprobada por la Asamblea General el 25 de septiembre de 2015. Resolución 70/1. Transformar nuestro mundo: la Agenda 2030 para el Desarrollo Sostenible. In O. N. Unidas (Ed.): ONU New York.

Orsmond, P., Merry, S., & Callaghan, A. (2013). Communities of practice and ways to learning: charting the progress of biology undergraduates. *Studies in Higher Education*, *38*(6), 890-906. https://doi.org/10.1080/03075079.2011.606364

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1976). La medida del significado. In. Madrid: Editorial Gredos.

Osinski, I. C., & Bruno, A. S. (1998). Categorías de respuesta en escalas tipo Likert. *Psicothema*, *10*(3), 623-631.

O'Flaherty, J., & Beal, E. M. (2018). Core competencies and high leverage practices of the beginning teacher: a synthesis of the literature [Article]. *Journal of Education for Teaching*, *44*(4), 461-478. https://doi.org/10.1080/02607476.2018.1450826

Özen, R., & Öztürk, D. S. (2016). The Relationship between Pre-Service Teachers' Lifelong Learning Tendencies and Teaching Profession Anxiety Levels. . *Universal Journal of Educational Research*, *4 (n12A)*, 7-15.

Pardo, A. (2018). A feedback model for data-rich learning experiences. *Assessment & Evaluation in Higher Education*, *43*(3), 428-438. https://doi.org/10.1080/02602938.2017.1356905

Pardo, Q. M. (2019). *Formación de educadoras de párvulos en Chile: profesionalismo y saber identitario en la evolución de los planes de estudios, 1981-2015* http://hdl.handle.net/1887/74053

Paris, S. G., & Paris, A. H. (2001). Classroom applications of research on self-regulated learning. *Educational Psychologist*, *36*(2), 89-101. https://doi.org/10.1207/S15326985EP3602_4

Pastore, S., Manuti, A., & Scardigno, A. F. (2019). Formative assessment and teaching practice: the point of view of Italian teachers. *European Journal of Teacher Education*, *42*(3), 359-374. https://doi.org/10.1080/02619768.2019.1604668

Payarez, I. J. M. (2017). Desafíos de las políticas educativas frente a la formación inicial y desarrollo profesional docente. *Hojas y Hablas*(14), 81-92. https://doi.org/10.29151/hojasyhablas.n14a6

Peercy, M. M., & Troyan, F. J. (2017). Making transparent the challenges of developing a practice-based pedagogy of teacher education [Article]. *Teaching and Teacher Education*, *61*, 26-36. https://doi.org/10.1016/j.tate.2016.10.005

Peredrienko, T., Belkina, O., & Yaroslavova, E. (2020). New Language Learning Environment: Employers'-Learners' Expectations and the Role of Teacher 4.0. *International Journal of Instruction*, *13*(3), 105-118. https://doi.org/10.29333/iji.2020.1338a

Pereira, D., Flores, M. A., & Niklasson, L. (2016). Assessment revisited: a review of research in Assessment and Evaluation in Higher Education. *Assessment & Evaluation in Higher Education*, *41*(7), 1008-1032. https://doi.org/10.1080/02602938.2015.1055233

Peón, F. V. (2014). Un acto metodológico básico de la investigación social: la entrevista cualitativa. In M. T. Tarrés (Ed.), *Observar, escuchar y comprender sobre la tradición cualitativa en la investigación social*. El Colegio de México/FLACSO México.

Pérez-Tejada, C. D., & Macías-Ordoñes, R. (2004). 'El que no transa no avanza': La ciencia mexicana en el espejo. In M. B. Aluja Schuneman, Andrea (Ed.), *El papel de la ética en la investigación científica y la educación superior. Ciudad de México: Fondo de Cultura Económica* (Primera edición ed., pp. 219-243).

Picos, A. P., & López-Pastor, V. M. (2013). Haz lo que yo digo pero no lo que yo hago: Sistemas de evaluación del alumnado en la formación inicial del profesorado. *Do what I say, not what I do: Student assessment systems in initial teacher education*(361), 279-305. https://doi.org/10.4438/1988-592X-RE-2011-361-143

Pino, A. A. D. (2019). La evaluación de la acción docente desde un enfoque metacognitivo. *Revista Infancia, Educación y Aprendizaje*, *5*(2), 398-402. https://doi.org/10.22370/ieya.2019.5.2.1662

Piro, J., & O'Callaghan, C. (2019). Journeying Towards the Profession: Exploring Liminal Learning within Mixed Reality Simulations [Article]. *Action in Teacher Education*, *41*(1), 79-95. https://doi.org/10.1080/01626620.2018.1534221

Ponce, R. S., Sarmiento, Á. S., & Bertolín, A. G. (2020). La Educación para la Ciudadanía: Una Urgencia Educativa para el Siglo XXI. *Educação & Sociedade*, *41*. https://doi.org/10.1590/ES.225347

Postareff, L., Virtanen, V., Katajavuori, N., & Lindblom-Ylänne, S. (2012). Academics' conceptions of assessment and their assessment practices. *Studies in Educational Evaluation*, *38*(3), 84-92. https://doi.org/10.1016/j.stueduc.2012.06.003

Price, E., Lau, A. C., Goldberg, F., Turpen, C., Smith, P. S., Dancy, M., & Robinson, S. (2021). Analyzing a faculty online learning community as a mechanism for supporting faculty implementation of a guided-inquiry curriculum [Article]. *International Journal of STEM Education*, *8*(1), Article 17. https://doi.org/10.1186/s40594-020-00268-7

Quinlan, K. M., & Pitt, E. (2021). Towards signature assessment and feedback practices: a taxonomy of discipline-specific elements of assessment for learning. *Assessment in Education: Principles, Policy & Practice*, *28*(2), 191-207. https://doi.org/10.1080/0969594X.2021.1930447

Ramírez-Montoya, M. S., Castillo-Martínez, I. M., Sanabria-Zepeda, J. C., & Miranda, J. (2022). Complex Thinking in the Framework of Education 4.0 and Open Innovation—A Systematic Literature Review. *Journal of Open Innovation:Technology, Market, and Complexity 8(4)*. https://doi.org/https://doi.org/10.3390/joitmc8010004

Ramírez-Montoya, M. S. (2011). Cuadro de triple entrada e instrumentos para OAs. In.

Ramírez-Montoya, M. S. (2019). Seminario Cultura de investigación: indicadores, triangulación y análisis de datos. In. Salamanca, España.

Ramírez-Montoya, M. S., & García-Peñalvo, F. J. (2018). Co-creación e innovación abierta: Revisión sistemática de literatura= Co-creation and open innovation: Systematic literature review. *Co-creación e innovación abierta: Revisión sistemática de literatura= Co-creation and open innovation: Systematic literature review*, 9-18. https://doi.org/doi:10.3916/C54-2018-01

Randi, J. (2017). Exploring options: From preparation to placements [Article]. *Teachers College Record*, *119*(14), Article 140306. https://doi.org/10.1177/016146811711901402

Rangel, F. G., Cano, R. V., & Vallaeys, F. (2022). Ética, Desarrollo Sostenible y Responsabilidad Social desde la docencia en instituciones de educación superior latinoamericanas: Ethics, Sustainable Development and Social Responsability from university teaching in Latin American higher education institutions. *Emerging Trends in Education*, *4*(8). https://doi.org/10.19136/etie.a4n8.4729

Reguant Álvarez, M., & Torrado Fonseca, M. (2016). El método Delphi. *REIRE. Revista d'Innovació i Recerca en Educació, 2016, vol. 9, num. 2, p. 87-102*. https://doi.org/10.1344/reire2016.9.1916

Reisman, A., Kavanagh, S. S., Monte-Sano, C., Fogo, B., McGrew, S. C., Cipparone, P., & Simmons, E. (2018). Facilitating Whole-Class Discussions in History: A Framework for Preparing Teacher Candidates. *Journal of Teacher Education*, *69*(3), 278-293. https://doi.org/10.1177/0022487117707463

Richmond, G., Salazar, M. D., & Jones, N. (2019). Assessment and the Future of Teacher Education. *Journal of Teacher Education*, *70*(2), 86-89. https://doi.org/10.1177/0022487118824331

Riley, K., & Solic, K. (2017). "Change Happens Beyond the Comfort Zone"*: Bringing Undergraduate Teacher-Candidates Into Activist Teacher Communities [Article]. *Journal of Teacher Education*, *68*(2), 179-192. https://doi.org/10.1177/0022487116687738

Riordain, M. N., Paolucci, C., & O'Dwyer, L. M. (2017). An examination of the professional development needs of out-of-field mathematics teachers. *Teaching and Teacher Education*, *64*, 162-174. https://doi.org/10.1016/j.tate.2017.02.001

Robertson, P. M., McFarland, L. A., Sciuchetti, M. B., & García, S. B. (2017). Connecting the dots: An exploration of how pre-service special education teachers make sense of disability and diversity [Article]. *Teaching and Teacher Education*, *65*, 34-47. https://doi.org/10.1016/j.tate.2017.02.020

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American economic review*, *94*(2), 247-252. https://doi.org/10.1257/0002828041302244

Rodgers, C. R. (2002). Seeing student learning: Teacher change and the role of reflection. *Harvard educational review*, *72*(2), 230. https://doi.org/10.17763/haer.72.2.5631743606m15751

Rodríguez Gómez, G., Ibarra Sáiz, M. S., & García Jiménez , E. (2013). Autoevaluación, evaluación entre iguales y coevaluación: conceptualización y práctica en las universidades españolas. *Revista de investigación en educación*, *11*(2), 198-210.

Rogers, K. C., & Steele, M. D. (2016). Graduate teaching assistants' enactment of reasoning-and-proving tasks in a content course for elementary teachers [Article]. *Journal for Research in Mathematics Education*, *47*(4), 372-419.

Roosevelt, D., & Garrison, J. (2018). "Yet the Root of the Matter is Not in Them": Reclaiming the Lost Soul of Inspirational Teaching [Article]. *Educational Theory*, *68*(2), 177-195. https://doi.org/10.1111/edth.12305

Roseman, J. E., Herrmann-Abell, C. F., & Koppal, M. (2017). Designing for the Next Generation Science Standards: Educative Curriculum Materials and Measures of Teacher Knowledge. *Journal of Science Teacher Education*, *28*(1), 111-141. https://doi.org/10.1080/104656x.2016.1277598

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). *Journal of statistical software*, *48*(2), 1-36. https://doi.org/10.18637/jss.v048.i02

Ruffinelli Vargas, A. (2016). Ley de desarrollo profesional docente en Chile: de la precarización sistemática a los logros, avances y desafíos pendientes para la profesionalización. *Estudios pedagógicos (Valdivia)*, *42*(4), 261-279. https://doi.org/10.4067/S0718-07052016000500015

Ruiz, G., García, M. V., & Pico, M. L. (2013). La formación docente analizada en perspectiva comparada: convergencias y divergencias en las transformaciones de la formación inicial del profesorado para el nivel secundario en el Mercosur. *Revista Española de Educación Comparada*(21), 221-248. https://doi.org/10.5944/reec.21.2013.7621

Ruiz-Velasco, E., & Ortega, C. F. (2014). Tecnologías de la información y la comunicación para la innovación educativa. *Perfiles educativos*, *36*(144), 214-218. https://doi.org/10.1016/S0185-2698(14)70633-6

Russel Bernard, H. (1988). *Research methods in cultural anthropology*. SAGE Publications.

Sadler, D. R. (2002). Learning Dispositions: Can we really assess them? *Assessment in Education: Principles, Policy & Practice*, *9*(1), 45-51. https://doi.org/10.1080/09695940220119166

Saez-Lopez, J. M., Cozar-Gutierrez, R., Gonzalez-Calero, J. A., & Carrasco, C. J. G. (2020). Augmented Reality in Higher Education: An Evaluation Program in Initial Teacher Training. *Education Sciences*, *10*(2), Article 26. https://doi.org/10.3390/educsci10020026

Sahin, M., Akbasli, S., & Yelken, T. Y. (2010). Key competences for lifelong learning: The case of prospective teachers. *Educational Research and Reviews*, *5*(10), 545-556. https://doi.org/10.5897/ERR.9000216

Sánchez, B., & Huerta, M. (2012). Análisis de los sistemas de evaluación del alumnado en la formación del profesorado: estudio comparativo entre lo que opinan profesores y egresados. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, *15*(3), 133-144.

Sánchez, V. V., & Esteban, P. G. (2016). Desafíos en la formación inicial del profesorado. Un análisis desde las voces de sus protagonistas. *Revista Internacional de Formação de Professores*, *1*(3), 45-58.

Sanz-Ponce, R., & González-Bertolín, A. (2018). La educación sigue siendo un "tesoro". Educación y docentes en los informes internacionales de la UNESCO. *Revista iberoamericana de educación superior*, *9*(25), 157-174. https://doi.org/10.22201/iisue.20072872e.2019.25.347

Schenke, W., van Driel, J. H., Geijsel, F. P., Sligte, H. W., & Volman, M. L. L. (2016). Characterizing cross-professional collaboration in research and development projects in secondary education. *Teachers and Teaching*, *22*(5), 553-569. https://doi.org/10.1080/13540602.2016.1158465

Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary educational psychology*, *19*(4), 460-475.

Schraw, G., & Moshman, D. (1995). Metacognitive theories [Article]. *Educational Psychology Review*, *7*(4), 351-371. https://doi.org/10.1007/BF02212307

Schultz, R. B. (2012). Active pedagogy leading to deeper learning: Fostering metacognition and infusing active learning into the GIS&T classroom. In D. Unwin , K. Foote , N. Tate , & D. DiBiase (Eds.), *Teaching geographic information science and technology in higher education* (pp. 133-143). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781119950592

Schutz, K. M., Danielson, K. A., & Cohen, J. (2019). Approximations in English language arts: Scaffolding a shared teaching practice [Article]. *Teaching and Teacher Education*, *81*, 100-111. https://doi.org/10.1016/j.tate.2019.01.004

Schwartz, A. C., McDonald, W. M., Vahabzadeh, A. B., & Cotes, R. O. (2018). Keeping up with changing times in education: fostering lifelong learning of millennial learners. *Focus*, *16*(1), 74-79. https://doi.org/10.1176/appi.focus.20170004

Şentürk, Ş., & Duran, V. (2020). Lifelong learning tendencies of trainers in adult education [Article]. *International Journal of Evaluation and Research in Education*, *9*(1), 1-9. https://doi.org/10.11591/ijere.v9i1.20365

Shaughnessy, M., & Boerst, T. A. (2018). Uncovering the Skills That Preservice Teachers Bring to Teacher Education: The Practice of Eliciting a Student's Thinking. *Journal of Teacher Education*, *69*(1), 40-55. https://doi.org/10.1177/0022487117702574

Shaughnessy, M., Ghousseini, H., Kazemi, E., Franke, M., Kelley-Petersen, M., & Hartmann, E. S. (2019). An investigation of supporting teacher learning in the context of a common decomposition for leading mathematics discussions [Article]. *Teaching and Teacher Education*, *80*, 167-179. https://doi.org/10.1016/j.tate.2019.01.008

Shepard, L. A., Penuel, W. R., & Pellegrino, J. W. (2018). Using Learning and Motivation Theories to Coherently Link Formative Assessment, Grading Practices, and Large-Scale Assessment [Article]. *Educational Measurement: Issues and Practice*, *37*(1), 21-34. https://doi.org/10.1111/emip.12189

Shulman, L. (2005). Conocimiento y enseñanza: Fundamentos de la nueva reforma. *Revista de currículum y formación del profesorado*, *9*.

Shute, V. (2008). Focus on formative feedback. *Review of educational research*, *78*(1), 153-189. https://doi.org/10.3102/0034654307313795

Shutz, K., Grossman, P., & Shaughnessy, M. (2018). Approximations of practice in teacher education. In P. Grossman (Ed.), *Teaching Core Practices in Teacher Education*. Harvard Education Press.

Silva-Peña, I., & Peña-Sandoval, C. (2019). Desregulación de la formación inicial docente. Una experiencia neoliberal. *Revista historia de la educacion latinoamericana*, *21*(32). https://doi.org/1019053/1227238.8724

Sjöberg, L. (2018). The shaping of pre-service teachers' professional knowledge base through assessments [Article]. *European Journal of Teacher Education*, *41*(5), 604-619. https://doi.org/10.1080/02619768.2018.1529751

Snead, L. O., & Freiberg, H. J. (2019). Rethinking student teacher feedback: Using a self-assessment resource with student teachers. *Journal of Teacher Education*, *70*(2), 155-168. https://doi.org/10.1177/0022487117734535

Sokhanvar, Z., Salehi, K., & Sokhanvar, F. (2021). Advantages of authentic assessment for improving the learning experience and employability skills of higher education students: A systematic literature

review. *Studies in Educational Evaluation*, *70*, 101030. https://doi.org/10.1016/j.stueduc.2021.101030

Solmaz, D. (2017). Relationship between Lifelong Learning Levels and Information Literacy Skills in Teacher Candidates. *Universal journal of educational research*, *5*(6), 939-946. https://doi.org/10.13189/ujer.2017.050605

Solmazand, D. Y., & Aydin, G. (2016). Evaluation of lifelong learning tendencies of pre-service teachers. *The Anthropologist*, *24*(1), 55-63. https://doi.org/10.1080/09720073.2016.11891989

Soslau, E., Kotch-Jester, S., Scantlebury, K., & Gleason, S. (2018). Coteachers' huddles: Developing adaptive teaching expertise during student teaching [Article]. *Teaching and Teacher Education*, *73*, 99-108. https://doi.org/10.1016/j.tate.2018.03.016

Stake, R. E. (1998). *Investigación con estudio de casos*. Ediciones Morata.

Stephanou, G., & Mpiontini, M.-H. (2017). Metacognitive knowledge and metacognitive regulation in self-regulatory learning style, and in its effects on performance expectation and subsequent performance across diverse school subjects. *Psychology*, *8*(12), 1941. https://doi.org/10.4236/psych.2017.812125

Steurer, J. (2011). The Delphi method: an efficient procedure to generate knowledge. *Skeletal radiology*, *40*(8), 959-961. https://doi.org/10.1007/s00256-011-1145-z

Stillman, J., & Anderson, L. (2016). Minding the Mediation: Examining One Teacher Educator's Facilitation of Two Preservice Teachers' Learning [Article]. *Urban Education*, *51*(6), 683-713. https://doi.org/10.1177/0042085914566096

Stroupe, D., & Gotwals, A. W. (2018). "It's 1000 Degrees in Here When I Teach": Providing Preservice Teachers With an Extended Opportunity to Approximate Ambitious Instruction [Article]. *Journal of Teacher Education*, *69*(3), 294-306. https://doi.org/10.1177/0022487117709742

Sugrue, C., & Solbrekke, T. D. (2017). Policy rhetorics and resource neutral reforms in higher education: their impact and implications? [Article]. *Studies in Higher Education*, *42*(1), 130-148. https://doi.org/10.1080/03075079.2015.1036848

Swartz, R. J., Reagan, R., Costa, A. L., Beyer, B. K., & Kallick, B. (2014). *El aprendizaje basado en el pensamiento* (Vol. 4). Ediciones SM España.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Pearson Boston, MA.

Takahashi, L., & Nebe, K. (2019). Observed Differences Between Lab and Online Tests Using the AttrakDiff Semantic Differential Scale. *Journal of Usability Studies*, *14*(2), 65-75.

TeachingWorks. *TeachingWorks*. Retrieved 3-3-2019 from http://www.teachingworks.org/

Teddlie, C., & Tashakkori, A. (2006). A general typology of research designs featuring mixed methods. *Research in the Schools*, *13*(1), 12-28.

Tejedor, F., García-Valcárcel, A., & Prada, S. (2009). Medida de actitudes del profesorado universitario hacia la integración de las TIC. *Comunicar: Revista científica iberoamericana de comunicación y educación*(33), 115-124. https://doi.org/10.3916/c33-2009-03-002

Tejedor, F., & García-Varcárcel, A. (2010). Evaluación del desempeño docente. *Revista española de pedagogía*, 439-459.

Thompson, J., Hagenah, S., Lohwasser, K., & Laxton, K. (2015). Problems Without Ceilings: How Mentors and Novices Frame and Work on Problems-of-Practice. *Journal of Teacher Education*, *66*(4), 363-381. https://doi.org/10.1177/0022487115592462

Tiana, A. (2013). Los cambios recientes en la formación inicial del profesorado en España: una reforma incompleta. *Revista española de educación comparada*(22), 39-58. https://doi.org/10.5944/reec.22.2013.9322

Tillema, H., Leenknecht, M., & Segers, M. (2011). Assessing assessment quality: Criteria for quality assurance in design of (peer) assessment for learning – A review of research studies. *Studies in Educational Evaluation*, *37*(1), 25-34. https://doi.org/10.1016/j.stueduc.2011.03.004

Tinoco-Giraldo, H., Sanchez, E., & García-Peñalvo, F. (2021). *Evaluation of competencies for academic internship students*. https://doi.org/10.1109/JICV53222.2021.9600265

Tinoco-Giraldo, H., Torrecilla-Sánchez, E. M., & García-Peñalvo, F. J. (2020). Evaluación de la percepción de los niveles de dominio competencial en práctica laboral. *Estudios pedagógicos (Valdivia)*, *46*, 127-144. https://doi.org/10.4067/S0718-07052020000100127.

Tirado-Olivares, S., Cózar-Gutiérrez, R., García-Olivares, R., & González-Calero, J. A. (2021). Active learning in history teaching in higher education: The effect of inquiry-based learning and a student response system-based formative assessment in teacher training. *Australasian Journal of Educational Technology*, *37*(5), 61-76. https://doi.org/10.14742/ajet.7087

Torres, J., Strong, Z. H., & Adesope, O. O. (2020). Reflection through assessment: A systematic narrative review of teacher feedback and student self-perception. *Studies in Educational Evaluation*, *64*, 100814. https://doi.org/10.1016/j.stueduc.2019.100814

Torres-Toukoumidis, A., Romero-Rodríguez, L. M., & Pérez-Rodríguez, A. (2018). Ludificación y sus posibilidades en el entorno de blended learning: revisión documental. *Revista Iberoamericana de Educación a Distancia*, *21(1)*, 95-111. https://doi.org/10.5944/ried.21.1.18792

Toscano Alonso, M., Aguaded, I., Salcedo, E., & Farías-Gaytán, S. (2021). *Producción audiovisual universitaria: espacios de innovación docente en Iberoamérica* (Vol. 25). https://doi.org/10.5944/ried.25.1.30611

Traxler, J. (2012). Ethics and ICTD research. In A. Chib & R. W. Harris (Eds.), *Linking research to practice: Strengthening ICT for development research capacity in Asia*. Institute of Southeast Asian Studies.

Troyan, F. J., & Peercy, M. M. (2016). Novice Teachers' Perspectives on Learning in Lesson Rehearsals in Second Language Teacher Preparation. *International Multilingual Research Journal*, *10*(3), 188-200. https://doi.org/10.1080/19313152.2016.1185908

Úcar, X., Llena, A., Pescador, R., & Jiménez, J. (2018). Evaluación participativa de los "procesos de evaluación del acompañamiento socioeducativo de jóvenes en medio abierto". *RES. Revista de Educación Social*(27), 322-354.

UDD. (2016). Modelo de formación práctica 2017-2021 . Facultad de Educación.

UDD. (2019). Plan de Desarrollo 2019-2021. Consolidación del proyecto educativo UDD Futuro. In V. d. Pregrado (Ed.): Universidad del Desarrollo.

UDD. (2020). Perfil de competencias tutor de prácticas de la Facultad de Educación de la UDD y Plan de formación.

UNESCO. El derecho a la educación. In.

UNESCO. (2017). *Rendir cuentas en el ámbito de la educación: cumplir nuestros compromisos; Informe de seguimiento de la educación en el mundo 2017/8*.

UNESCO. (2019). *Annual report 2018 UNESCO Institute for lifelong learning*

UNESCO-OREALC. (2014). Temas críticos para formular nuevas políticas docentes en América Latina y el Caribe: El debate actual. In: Centro de Estudios de Políticas Educativas. Universidad Católica Santiago, Chile.

UNESCO-OREALC. (2017). *Reporte: Educación y habilidades para el siglo XXI. Reunión Regional de Ministros de Educación de América Latina y el Caribe. Buenos Aires, Argentina, 24 y 25 de enero 2017.* P. p. l. O. R. d. E. p. A. L. y. e. C. O. U. Santiago).

University of Oslo. *Coherence and Assignment study in Teacher Education (CATE)*. Department of Teacher Education and School Research. https://www.uv.uio.no/ils/english/research/projects/cate/

Uzunboylu, H., & Hürsen, Ç. (2011). Lifelong learning competence scale (LLLCS): The study of validity and reliability. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *41*(41), 449-460.

Vaillant, D. (2013). Formación inicial del profesorado en América Latina: dilemas centrales y perspectivas. *Revista española de educación comparada*(22), 185-206.

Vaillant, D. (2019). Formación Inicial del Profesorado de Educación Secundaria en América Latina-Dilemas y Desafíos. *Profesorado, Revista de Currículum y Formación del Profesorado*, *23*(3), 35-52. https://doi.org/10.30827/profesorado.v23i3.9516

Vargas Quispe, G., Sito Justiniano, L. M., Toledo Espinoza, S. L., Toledo Espinoza, M. L., & Mendoza Hidalgo, M. L. (2022). Evaluación formativa y las tecnologías del aprendizaje y conocimiento. *Revista Universidad y Sociedad*, *14(1)*, 339-348.

Vartuli, S., Snider, K., & Holley, M. (2016). Making it Real: A Practice-Based Early Childhood Teacher Education Program. *Early Childhood Education Journal*, *44*(5), 503-514. https://doi.org/10.1007/s10643-015-0733-2

Vázquez, S., Latorre, C., Liesa, M., & Rivera-Torres, P. (2021). El sistema de evaluación mutua en el trabajo en equipo: el valor de la calificación individual. *Evaluación práctica, investigación y evaluación 26*. https://doi.org/10.7275/wfkz-md55

Veenman, M. (2017). Assessing metacognitive deficiencies and effectively instructing metacognitive skills. *Teachers College Record*, *119*(13), 1-20. https://doi.org/10.1177/016146811711901303

Veenman, M. V. J. (2013). Training metacognitive skills in students with availability and production deficiencies. In H. Bembenutty, T. Cleary, & K. A. (Eds.), *Applications of self-regulated learning across diverse disciplines: a tribute to Barry J. Zimmerman* (pp. 299-294). Information Age Publishing.

Velásquez-Durán, A., & Ramírez-Montoya, M. S. (2018). Research management systems: Systematic mapping of literature (2007-2017) [Article]. *International Journal on Advanced Science, Engineering and Information Technology*, *8*(1), 44-55. https://doi.org/10.18517/ijaseit.8.1.3307

Verhagen, T., Hooff, B. V. D., & Meents, S. (2015). Toward a better use of the semantic differential in IS research: An integrative framework of suggested action. *Journal of the Association for Information Systems*, *16*(2), 1. https://doi.org/10.17705/1jais.00388

Villarroel, V., Bruna, D., Brown, G. T., & Bustos, C. (2021). Changing the Quality of Teachers' Written Tests by Implementing an Authentic Assessment Teachers' Training Program. *International Journal of Instruction*, *14*(2), 987-1000.

Villarroel, V., Bruna, D., Bruna, C., Herrera, C., & Márquez, C. (2017). Implementación de la metodología de evaluación auténtica en educación superior. *Innovando en Educación Superior: Experiencias Claves en Latinoamericana y Caribe*, *2*.

Virtanen, P., Niemi, H. M., & Nevgi, A. (2017). Active learning and self-regulation enhance student teachers' professional competences. *Australian Journal of Teacher Education*, *42*(12), 1. https://doi.org/10.14221/ajte.2017v42n12.1

Von Esch, K. S., & Kavanagh, S. S. (2018). Preparing Mainstream Classroom Teachers of English Learner Students: Grounding Practice-Based Designs for Teacher Learning in Theories of Adaptive Expertise Development. *Journal of Teacher Education*, *69*(3), 239-251. https://doi.org/10.1177/0022487117717467

Vrieling, E., Bastiaens, T., & Stijnen, S. (2011). Promoting self-regulated learning in primary teacher education. Society for Information Technology & Teacher Education International Conference.

Wall, K., & Hall, E. (2016). Teachers as metacognitive role models [Article]. *European Journal of Teacher Education*, *39*(4), 403-418. https://doi.org/10.1080/02619768.2016.1212834

Weinberger, A., Patry, J. L., & Weyringer, S. (2016). Improving Professional Practice through Practice-Based Research: VaKE (Values and Knowledge Education) in University-Based Teacher Education. *Vocations and Learning*, *9*(1), 63-84. https://doi.org/10.1007/s12186-015-9141-4

Wetzel, M., Hoffman, J. V., Maloch, B., Vlach, S. K., Taylor, L. A., Svrcek, N. S., . . . Lavender, H. (2018). Coaching elementary preservice teachers Hybrid spaces for cooperating teachers and university field supervisors to collaborate. *International Journal of Mentoring and Coaching in Education*, *7*(4), 357-372. https://doi.org/10.1108/ijmce-12-2017-0074

Whittaker, C., & van Garderen, D. (2009). Using a Metacognitive Approach with Case-Based Instruction to Enhance Teacher Reflection and Promote Effective Educational Practices for Diverse Learners [Article]. *Action in Teacher Education*, *31*(2), 5-16. https://doi.org/10.1080/01626620.2009.10463514

Willemse, T. M., Boei, F., & Pillen, M. (2016). Fostering Teacher Educators' Professional Development on Practice-Based Research Through Communities of Inquiry. *Vocations and Learning*, *9*(1), 85-110. https://doi.org/10.1007/s12186-015-9142-3

Williamson, P., & Hodder, L. (2015). Unpacking practice with clinical instructional rounds in the San Francisco Teacher Residency program [Article]. *International Journal of Educational Research*, *73*, 53-64. https://doi.org/10.1016/j.ijer.2015.07.004

Windschitl, M., Lohwasser, K., & Tasker, T. (2021). Learning to plan during the clinical experience: how visions of teaching influence novices' opportunities to practice. *Journal of Teacher Education*, *72*(4), 405-418. https://doi.org/10.1177/0022487120948049

Windschitl, M., Thompson, J., Braaten, M., & Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science [Review]. *Science Education*, *96*(5), 878-903. https://doi.org/10.1002/sce.21027

Wood, J. (2021). A dialogic technology-mediated model of feedback uptake and literacy. *Assessment & Evaluation in Higher Education*, *46*(8), 1173-1190. https://doi.org/10.1080/02602938.2020.1852174

World-Economic-Forum. (2020). *The Future of Jobs Report 2020*. https://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf

Worrell, F. C., Brabeck, M., Dwyer, C., Geisinger, K., Marx, R., Noell, G., & Pianta, R. (2014). Assessing and evaluating teacher education programs. *Washington, DC: American Psychological Association*.

Yerdelen-Damar, S., Özdemir, O. F., & Ünal, C. (2015). Pre-service physics teachers' metacognitive knowledge about their instructional practices [Article]. *Eurasia Journal of Mathematics, Science and Technology Education*, *11*(5), 1009-1026. https://doi.org/10.12973/eurasia.2015.1370a

Yilmaz, E., & Kaygin, H. (2018). The relation between lifelong learning tendency and achievement motivation. *Journal of Education and Training Studies*, *6*(3a), 1-7. https://doi.org/10.11114/jets.v6i3a.3141

Zeichner, K., Bowman, M., Guillen, L., & Napolitan, K. (2016). Engaging and Working in Solidarity With Local Communities in Preparing the Teachers of Their Children [Article]. *Journal of Teacher Education*, *67*(4), 277-290. https://doi.org/10.1177/0022487116660623

Zeichner, K., & Peña-Sandoval, C. (2015). Venture philanthropy and teacher education policy in the U.S.: The role of the new schools venture fund [Article]. *Teachers College Record*, *117*(5), 1-44. https://doi.org/10.1177/016146811511700508

Zion, M., & Sadeh, I. (2007). Curiosity and open inquiry learning. *Journal of Biological Education*, *41*(4), 162-169. https://doi.org/10.1080/00219266.2007.9656092

Zohar, A., & Barzilai, S. (2013). A review of research on metacognition in science education: current and future directions [Article]. *Studies in Science Education*, *49*(2), 121-169. https://doi.org/10.1080/03057267.2013.847261