



Bibliografía

- Balgopal, M. M., Weinberg, A. E., Sample McMeeking, L. B., Lin Hunter, D. E., & Wright, D. S. (2022). A sense of belonging: The role of higher education in retaining quality STEM teachers. *PLOS ONE*, 17(8), e0272552. <https://doi.org/10.1371/journal.pone.0272552>
- Baumeister, R. F., & Leary, M. R. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Interpersonal Development*, 57–89.
- Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge Journal of Education*, 39(2), 175–189.
- Beijaard, D., Verloop, N., & Vermunt, J. (2000). Teachers' perceptions of professional identity: an exploratory study from a personal knowledge perspective. *Teaching and Teacher Education*, 16, 749–764.
- Bollen, K. A., & Hoyle, R. H. (1990). Perceived cohesion: A conceptual and empirical examination. *Social Forces*, 69(2), 479–504.
- Chestnut, E., Lei, R., Leslie, S. J., & Cimpian, A. (2018). The myth that only brilliant people are good at math and its implications for diversity. *Education Sciences*, 8(2), 65. DOI:10.3390/educsci8020065
- Corp, A., Fields, M., & Naizer, G. (2020). Elementary STEM teacher education: Recent practices to prepare general elementary teachers for STEM. In C. C. Johnson, M. J. Mohr-Schroeder, T. J. Moore, & L. D. English (Eds.), *The handbook of research on STEM education* (pp. 337–348). Routledge. <https://doi.org/10.4324/9780429021381-32>
- Deneroff, V. (2016). Professional development in person: Identity and the construction of teaching within a high school science department. *Cultural Studies of Science Education*, 11(2), 213–233. <https://doi.org/10.1007/s11422-013-9546-z>
- Ferguson, S. L., & Lezotte, S. M. (2020). Exploring the state of science stereotypes: Systematic review and meta-analysis of the Draw-A-Scientist Checklist. *School Science and Mathematics*, 120(1), 55–65. <https://doi.org/10.1111/ssm.12382>
- Flores, M. A., & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education*, 22(2), 219–232.
- Galanti, T. M., & Holincheck, N. (2022). Beyond content and curriculum in elementary classrooms: Conceptualizing the cultivation of integrated STEM teacher identity. *International Journal of Stem Education*, 9(1), 43.
- Goodenow, C. (1993). Classroom belonging among early adolescent students: relationships to motivation and achievement. *The Journal of Early Adolescence*, 13(1), 21–43.



Guo, Y., Piasta, S. B., & Bowles, R. P. (2015). Exploring preschool children's science content knowledge. *Early Education and Development*, 26(1), 125–146.

Haney, J. J., Lumpe, A. T., Czerniak, C. M., & Egan, V. (2002). From beliefs to actions: The beliefs and actions of teachers implementing change. *Journal of Science Teacher Education*, 13(3), 171–187.

Karaolis, A., & Philippou, G. N. (2019). Teachers' professional identity. In M. Hannula, G. Leder, F. Morselli, M. Vollstedt, & Q. Zhang (Eds.), *Affect and mathematics education: Fresh perspectives on motivation, engagement, and identity* (pp. 397–416). Springer.
<https://doi.org/10.1007/978-3-030-13761-8>

Kersey, A. J., Braham, E. J., Csumitta, K. D., Libertus, M. E., & Cantlon, J. F. (2018). No intrinsic gender differences in children's earliest numerical abilities. *Science of Learning*, 3(12). DOI: 10.1038/s41539-018-0028-7

Master, A., Cheryan, S., Moscatelli, A., & Meltzoff, A. N. (2017). Programming experience promotes higher STEM motivation among first-grade girls. *Journal of Experimental Child Psychology*, 160, 92–106.

McClure, E. R., Guernsey, L., Clements, D. H., Bales, S. N., Nichols, J., Kendall-Taylor, N., & Levine, M. H. (2017). *STEM starts early: Grounding science, technology, engineering, and math education in early childhood*. Joan Ganz Cooney Center at Sesame Workshop.

O'Dea, R. E., Lagisz, M., Jennions, M. D., & Nakagawa, S. (2018). Gender differences in individual variation in academic grades fail to fit expected patterns for STEM. *Nature Communications*, 9(1), 1–8.

Pew Research Center, April, 2021, "STEM Jobs See Uneven Progress in Increasing Gender, Racial and Ethnic Diversity".

Pew Research Center, June 2022, "Hispanic Americans' Trust in and Engagement With Science".

Rodgers, C. R., & Scott, K. H. (2008). The development of the personal self and professional identity in learning to teach. In *Handbook of research on teacher education* (pp. 732–755). Routledge.

Sachs, J. (2005). Teacher education and the development of professional identity: learning to be a teacher 1. In *Connecting policy and practice* (pp. 5–21). Routledge.

Shernoff, D. J., Sinha, S., Bressler, D. M., & Ginsburg, L. (2017). Assessing teacher education and professional development needs for the implementation of integrated approaches to STEM education. *International Journal of STEM Education*, 4, Article 13.
<https://doi.org/10.1186/s40594-017-0068-1>



- Spaepen, E., Bowman, B., Day, C. B., Chen, J., Cunningham, C., Donohue, C., & Worth, K. (2017). *Early STEM matters: Providing high-quality STEM experiences for all young learners*. Retrieved from Early Childhood STEM Working Group.
- Thomas, J. A., Pedersen, J. E., & Finson, K. (2001). Validating the Draw-A-Science-Teacher-Test Checklist (DASTT-C): Exploring Mental Models and Teacher Beliefs. *Journal of Science Teacher Education*, 12(4), 295–310. <https://doi.org/10.1023/A:1014216328867>
- Todd Brown, E. (2005). The influence of teachers' efficacy and beliefs regarding mathematics instruction in the early childhood classroom. *Journal of Early Childhood Teacher Education*, 26(3), 239–257. <https://doi.org/10.1080/10901020500369811>
- Van Veen, K., & Slegers, P. (2006). How does it feel? Teachers' emotions in a context of change. *Journal of Curriculum Studies*, 38(1), 85–111.
- Vincent-Ruz, P., & Schunn, C. D. (2018). The nature of science identity and its role as the driver of student choices. *International Journal of STEM Education*, 5(1), 48. <https://doi.org/10.1186/s40594-018-0140-5>
- Voyer, D. & Voyer, S. D. (2014). Gender differences in scholastic achievement: a meta-analysis. *Psychological Bulletin*, 140, 1174–1204.
- Watson, C. (2006). Narratives of practice and the construction of identity in teaching. *Teachers and Teaching: Theory and Practice*, 12(5), 509–526.
- Wilkins, J. L. M. (2008). The relationship among elementary teachers' content knowledge, attitudes, beliefs, and practices. *Journal of Mathematics Teacher Education*, 11(2), 139–164. <https://doi.org/10.1007/s10857-007-9068-2>
- Zembylas, M. (2003). Emotions and teacher identity: A poststructural perspective. *Teachers and Teaching*, 9(3), 213–238.