

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Arcury, T. (1990). Environmental Attitude and Environmental Knowledge. *Human Organization*, 49(4), 300–304. <https://doi.org/10.17730/humo.49.4.y6135676n433r880>
- Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499. <https://doi.org/10.1348/014466601164939>
- Bain, P. G., Hornsey, M. J., Bongiorno, R., Kashima, Y., & Crimston, C. R. (2013). Collective Futures: How Projections About the Future of Society Are Related to Actions and Attitudes Supporting Social Change. *Personality and Social Psychology Bulletin*, 39(4), 523–539. <https://doi.org/10.1177/0146167213478200>
- Bamberg, S., Fischer, D., & Geiger, S. M. (2021). Editorial: The Role of the Individual in the Great Transformation Toward Sustainability. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.710897>
- Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27(1), 14–25. <https://doi.org/10.1016/j.jenvp.2006.12.002>
- Bamberg, S., & Rees, J. (2015). Environmental Attitudes and Behavior: Measurement. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (Second Edition) (pp. 699–705). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.91066-3>
- Bamberg, S., & Rees, J. (2017). The impact of voluntary travel behavior change measures – A meta-analytical comparison of quasi-experimental and experimental evidence. *Transportation Research Part A: Policy and Practice*, 100, 16–26. <https://doi.org/10.1016/j.tra.2017.04.004>
- Bandura, A. (1978). Self-efficacy: Toward a unifying theory of behavioral change. *Advances in Behaviour Research and Therapy*, 1(4), 139–161. [https://doi.org/10.1016/0146-6402\(78\)90002-4](https://doi.org/10.1016/0146-6402(78)90002-4)
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman & Company.
- BMBF. (2020, November 17). Die UNESCO veröffentlicht ihre ‘BNE 2030’ Roadmap—BNE-Portal Kampagne. BNE-Portal - BNE-Portal Kampagne. <https://www.bne-portal.de/bne/de/news/die-unesco-veroeffentlicht-ihre-bne-2030-roadmap.html>
- Castiglione, A. (2020). Climate activism: What we know and what more we need to learn. A psychological and sociological review. OSF. <https://doi.org/10.31234/osf.io/7brz3>
- Cattaneo, L. B., Calton, J. M., & Brodsky, A. E. (2014). Status Quo Versus Status Quake: Putting the Power Back in Empowerment. *Journal of Community Psychology*, 42(4), 433–446. <https://doi.org/10.1002/jcop.21619>
- Chen, M.-F. (2015). Self-efficacy or collective efficacy within the cognitive theory of stress model: Which more effectively explains people’s self-reported proenvironmental behavior? *Journal of Environmental Psychology*, 42, 66–75. <https://doi.org/10.1016/j.jenvp.2015.02.002>
- Cocking, C., & Drury, J. (2004). Generalization of Efficacy as a Function of Collective Action and Intergroup Relations: Involvement in an Anti-Roads Struggle. *Journal of Applied Social Psychology*, 34(2), 417–444. <https://doi.org/10.1111/j.1559-1816.2004.tb02555.x>
- de Haan, G. (2006). The BLK ‘21’ programme in Germany: A ‘Gestaltungskompetenz’-based model for Education for Sustainable Development. *Environmental Education Research*, 12(1), 19–32. <https://doi.org/10.1080/13504620500526362>
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology / Psychologie Canadienne*, 49(3), 182–185. <https://doi.org/10.1037/a0012801>

- Döring, N., & Bortz, J. (2016). *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften* (5. Aufl.). <https://doi.org/10.1007/978-3-642-41089-5>
- Dumas, M., & Anderson, G. L. (2014). Qualitative research as policy knowledge: Framing policy problems and transforming education from the ground up. *Education Policy Analysis Archives*, 22, 11–11. <https://doi.org/10.14507/epaa.v22n11.2014>
- Ertz, M., Karakas, F., & Sarigöllü, E. (2016). Exploring pro-environmental behaviors of consumers: An analysis of contextual factors, attitude, and behaviors. *Journal of Business Research*, 69(10), 3971–3980. <https://doi.org/10.1016/j.jbusres.2016.06.010>
- Field, A., & Miles, J. (2010). *Discovering Statistics Using SAS*. 1–752.
- FMER. (2017). National Action Plan on Education for Sustainable Development—The German contribution to the UNESCO Global Action Programme. Federal Ministry of Education and Research. https://www.unesco.de/sites/default/files/2020-04/NAP_BNE_EN_2019.pdf
- Frick, J., Kaiser, F. G., & Wilson, M. (2004). Environmental knowledge and conservation behavior: Exploring prevalence and structure in a representative sample. *Personality and Individual Differences*, 37(8), 1597–1613. <https://doi.org/10.1016/j.paid.2004.02.015>
- Getzin, S., & Singer-Brodowski, M. (2017). Transformatives Lernen in einer Degrowth-Gesellschaft. *SO-CIENCE - Journal of Science-Society Interfaces*, 1, 33–46.
- Grunenberg, H., Küster, K., & Rode, H. (2012). Greenpeace Nachhaltigkeitsbarometer – Was bewegt die Jugend?
- Hamann, K. R. S., & Reese, G. (2020). My Influence on the World (of Others): Goal Efficacy Beliefs and Efficacy Affect Predict Private, Public, and Activist Pro-environmental Behavior. *Journal of Social Issues*, 76(1), 35–53. <https://doi.org/10.1111/josi.12369>
- Hamann, K. R. S., Wullenkord, M. C., Reese, G., & van Zomeren, M. (2024). Believing That We Can Change Our World for the Better: A Triple-A (Agent-Action-Aim) Framework of Self-Efficacy Beliefs in the Context of Collective Social and Ecological Aims. *Personality and Social Psychology Review: An Official Journal of the Society for Personality and Social Psychology, Inc.*, 28(1), 11–53. <https://doi.org/10.1177/10888683231178056>
- Handley, M. A., Lyles, C. R., McCulloch, C., & Cattamanchi, A. (2018). Selecting and Improving Quasi-Experimental Designs in Effectiveness and Implementation Research. *Annual Review of Public Health*, 39(Volume 39, 2018), 5–25. <https://doi.org/10.1146/annurev-publhealth-040617-014128>
- Hoffmann, D. T. (2020). Bildung für nachhaltige Entwicklung – Begriff, Merkmale, Aufgaben. *Bildung für nachhaltige Entwicklung*.
- Hornsey, M. J., Blackwood, L., Louis, W., Fielding, K., Mavor, K., Morton, T., O'Brien, A., Paasonen, K.-E., Smith, J., & White, K. M. (2006). Why Do People Engage in Collective Action? Revisiting the Role of Perceived Effectiveness. *Journal of Applied Social Psychology*, 36(7), 1701–1722. <https://doi.org/10.1111/j.0021-9029.2006.00077.x>
- Hornsey, M. J., Chapman, C. M., & Oelrichs, D. M. (2022). Why it is so hard to teach people they can make a difference: Climate change efficacy as a non-analytic form of reasoning. *Thinking & Reasoning*, 28(3), 327–345. <https://doi.org/10.1080/13546783.2021.1893222>
- IPCC. (2023). AR6 Synthesis Report: Climate Change 2023 — IPCC. <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>
- Jugert, P., Greenaway, K. H., Barth, M., Büchner, R., Eisentraut, S., & Fritsche, I. (2016). Collective efficacy increases pro-environmental intentions through increasing self-efficacy. *Journal of Environmental Psychology*, 48, 12–23. <https://doi.org/10.1016/j.jenvp.2016.08.003>
- Kagawa, F. (2007). Dissonance in students' perceptions of sustainable development and sustainability: Implications for curriculum change. *International Journal of Sustainability in Higher Education*, 8(3), 317–338. <https://doi.org/10.1108/14676370710817174>

- Kaiser, F. G., Byrka, K., & Hartig, T. (2010). Reviving Campbell's Paradigm for Attitude Research. *Personality and Social Psychology Review*, 14(4), 351–367. <https://doi.org/10.1177/1088868310366452>
- Kaiser, F. G., Doka, G., Hofstetter, P., & Ranney, M. A. (2003). Ecological behavior and its environmental consequences: A life cycle assessment of a self-report measure. *Journal of Environmental Psychology*, 23(1), 11–20. [https://doi.org/10.1016/S0272-4944\(02\)00075-0](https://doi.org/10.1016/S0272-4944(02)00075-0)
- Kaiser, F. G., Frick, J., & Stoll-Kleemann, S. (2001). Zur Angemessenheit selbstberichteten Verhaltens: Eine Validitätsuntersuchung der Skala Allgemeinen Ökologischen Verhaltens. *Diagnostica*, 47(2), 88–95. <https://doi.org/10.1026//0012-1924.47.2.88>
- Kaiser, F. G., Hübner, G., & Bogner, F. X. (2005). Contrasting the Theory of Planned Behavior With the Value-Belief-Norm Model in Explaining Conservation Behavior. *Journal of Applied Social Psychology*, 35(10), 2150–2170. <https://doi.org/10.1111/j.1559-1816.2005.tb02213.x>
- Klieme, E., & Hartig, J. (2008). Kompetenzkonzepte in den Sozialwissenschaften und im erziehungswissenschaftlichen Diskurs. In M. Prenzel, I. Gogolin, & H.-H. Krüger (Eds.), *Kompetenzdiagnostik: Zeitschrift für Erziehungswissenschaft* (pp. 11–29). VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-90865-6_2
- KMK. (2023). Informationen zum deutschen Bildungssystem. <https://www.kmk.org/dokumentation-statistik/informationen-zum-deutschen-bildungssystem.html>
- Koletsou, A., & Mancy, R. (2011). Which efficacy constructs for large-scale social dilemma problems? Individual and collective forms of efficacy and outcome expectancies in the context of climate change mitigation. *Risk Management*, 13(4), 184–208. <https://doi.org/10.1057/rm.2011.12>
- Kollmuss, A., & Agyeman, J. (2002). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239–260. <https://doi.org/10.1080/13504620220145401>
- Kormos, C., & Gifford, R. (2014). The validity of self-report measures of proenvironmental behavior: A meta-analytic review. *Journal of Environmental Psychology*, 40, 359–371. <https://doi.org/10.1016/j.jenvp.2014.09.003>
- Krettenauer, T. (2017). Pro-Environmental Behavior and Adolescent Moral Development. *Journal of Research on Adolescence*, 27(3), 581–593. <https://doi.org/10.1111/jora.12300>
- KRS website. (2024). KRS Project description. 1643125883s Webseite! <https://www.klimaratschule.de/das-projekt/>
- Krüger, D., Parchmann, I., & Schecker, H. (2014). Methoden in der naturwissenschaftsdidaktischen Forschung. <https://doi.org/10.1007/978-3-642-37827-0>
- Kruglanski, A., & Higgins, E. (2007). The Goal Construct in Social Psychology. In *Social Psychology of Education* (Vol. 1, pp. 334–352). <https://doi.org/10.1007/BF02333407>
- Lambrechts, W., Mulà, I., Ceulemans, K., Molderez, I., & Gaeremynck, V. (2013). The integration of competences for sustainable development in higher education: An analysis of bachelor programs in management. *Journal of Cleaner Production*, 48, 65–73. <https://doi.org/10.1016/j.jclepro.2011.12.034>
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705–717. <https://doi.org/10.1037/0003-066X.57.9.705>
- Ministry of Education Baden Württemberg. (2016). Bildung und Kultur – Statistisches Landesamt Baden-Württemberg. <https://www.statistik-bw.de/BildungKultur/>
- Moustakas, C. (1994). *Phenomenological research methods*. SAGE Publications, Inc. <https://doi.org/10.4135/9781412995658>
- O'Flaherty, J., & Liddy, M. (2018). The impact of development education and education for sustainable development interventions: A synthesis of the research. *Environmental Education Research*, 24(7), 1031–1049. <https://doi.org/10.1080/13504622.2017.1392484>

- Pauli, L. S. (2023). Wirkungsevaluation des BNE-Projekts „KlimaRatSchule“: Eine quantitative Analyse mithilfe der Theory of Planned Behavior. (unpublished Master thesis). Katholische Universität Eichstätt-Ingolstadt.
- ProBiKlima. (2024). <https://www.ph-freiburg.de/recce/projekte/forschungsprojekte/probiklima.html>
- Qualtrics. (2024). Sample Size Calculator (Stichprobenrechner) I Qualtrics. Qualtrics. <https://www.qualtrics.com/de/erlebnismanagement/marktforschung/sample-size-calculator/>
- R Core Team. (2021). R: The R Project for Statistical Computing. R: A Language and Environment for Statistical Computing. <https://www.r-project.org/>
- Reese, G., & Junge, E. A. (2017). Keep on Rockin' in a (Plastic-)Free World: Collective Efficacy and Pro-Environmental Intentions as a Function of Task Difficulty. *Sustainability*, 9(2), Article 2. <https://doi.org/10.3390/su9020200>
- Rieckmann, M. (2021). Reflexion einer Bildung für nachhaltige Entwicklung aus bildungstheoretischer Perspektive. *Religionspädagogische Beiträge*, 44(2), Article 2. <https://doi.org/10.20377/rpb-153>
- Rieckmann, M., & Barth, M. (2016). Kompetenzentwicklungsprozesse in der Bildung für nachhaltige Entwicklung erfassen – Überblick über ein heterogenes Forschungsfeld.
- Rieckmann, M., & Barth, M. (2022). Educators' Competence Frameworks in Education for Sustainable Development (pp. 19–26). https://doi.org/10.1007/978-3-030-91055-6_3
- Rieß, W. (2011). *Bildung für nachhaltige Entwicklung: Theoretische Analysen und empirische Studien*. Waxmann Verlag.
- Riess, W., Martin, M., Mischo, C., Kotthoff, H.-G., & Waltner, E.-M. (2022). How Can Education for Sustainable Development (ESD) Be Effectively Implemented in Teaching and Learning? An Analysis of Educational Science Recommendations of Methods and Procedures to Promote ESD Goals. *Sustainability*, 14(7), Article 7. <https://doi.org/10.3390/su14073708>
- Rieß, W., Mischo, C., & Waltner, E.-M. (2018). Ziele einer Bildung für nachhaltige Entwicklung in Schule und Hochschule: Auf dem Weg zu empirisch überprüfbaren Kompetenzen. *GAIA - Ecological Perspectives for Science and Society*, 27(3), 298–305. <https://doi.org/10.14512/gaia.27.3.10>
- Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment*, 8(4), 350–353. <https://doi.org/10.1037/1040-3590.8.4.350>
- Skinner, E. A. (1991). Development and perceived control: A dynamic model of action in context. In *Self processes and development* (pp. 167–216). Lawrence Erlbaum Associates, Inc.
- Ssossé, Q., Wagner, J., & Hopper, C. (2021). Assessing the Impact of ESD: Methods, Challenges, Results. *Sustainability*, 13, 2854. <https://doi.org/10.3390/su13052854>
- Tajfel, H. (1978). *Differentiation Between Social Groups: Studies in the Social Psychology of Intergroup Relations*. European Association of Experimental Social Psychology by Academic Press.
- Tejedor, G., Segalàs, J., Barrón, Á., Fernández-Morilla, M., Fuertes, M. T., Ruiz-Morales, J., Gutiérrez, I., García-González, E., Aramburuzabala, P., & Hernández, Á. (2019). Didactic Strategies to Promote Competencies in Sustainability. *Sustainability*, 11(7), Article 7. <https://doi.org/10.3390/su11072086>
- Terlau, W., & Hirsch, D. (2015). Sustainable Consumption and the Attitude-Behaviour-Gap Phenomenon—Causes and Measurements towards a Sustainable Development. *Proceedings in Food System Dynamics*, 0, Article 0. <https://doi.org/10.18461/pfsd.2015.1516>
- UNCED. (1992). United Nations Conference on Environment & Development Rio de Janeiro, Brazil, 3 to 14 June 1992, Agenda 21. 1992. <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>
- University of Zürich. (2024). Datenanalyse mit SPSS | Methodenberatung | UZH. https://www.methodenberatung.uzh.ch/de/datenanalyse_spss.html

- van Zomeren, M., Pauls, I. L., & Cohen-Chen, S. (2019). Is hope good for motivating collective action in the context of climate change? Differentiating hope's emotion- and problem-focused coping functions. *Global Environmental Change*, 58, 101915. <https://doi.org/10.1016/j.gloenvcha.2019.04.003>
- van Zomeren, M., Saguy, T., & Schellhaas, F. M. H. (2013). Believing in “making a difference” to collective efforts: Participative efficacy beliefs as a unique predictor of collective action. *Group Processes & Intergroup Relations*, 16(5), 618–634. <https://doi.org/10.1177/1368430212467476>
- VerbundFDB. (2022). Genehmigungen für Erhebungen an Schulen – eine länderspezifische Übersicht. Verbund Forschungsdaten Bildung. <https://www.forschungsdaten-bildung.de/genehmigungen>
- Wals, A. E. J. (2006). The end of ESD... The beginning of transformative learning. Emphasizing the ‘E’ in ESD. In *Proceedings of the Seminar on Education for Sustainable Development* (pp. 42–59). <https://library.wur.nl/WebQuery/wurpubs/353568>
- Wals, A. E. J. (2012). Learning Our Way Out of Unsustainability: The Role of Environmental Education. In S. D. Clayton (Ed.), *The Oxford Handbook of Environmental and Conservation Psychology* (p. 0). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199733026.013.0032>
- Wals, A. E. J., & Benavot, A. (2017). Can we meet the sustainability challenges? The role of education and lifelong learning. *European Journal of Education*, 52(4), 404–413. <https://doi.org/10.1111/ejed.12250>
- Waltner, E.-M., Overbeck, A., & Rieß, W. (2022). Application-Oriented Development of Outcome Indicators for Measuring Students’ Sustainability Competencies: Turning from Input Focus to Outcome Orientation. In G. Karaarslan-Semiz (Ed.), *Education for Sustainable Development in Primary and Secondary Schools: Pedagogical and Practical Approaches for Teachers* (pp. 205–219). Springer International Publishing. https://doi.org/10.1007/978-3-031-09112-4_15
- Waltner, E.-M., Rieß, W., & Mischo, C. (2019). Development and Validation of an Instrument for Measuring Student Sustainability Competencies. *Sustainability*, 11, 1717. <https://doi.org/10.3390/su11061717>
- Waltner, E.-M., Rieß, W., Mischo, C., Hörsch, C., & Scharenberg, K. (2021). Abschlussbericht: Bildung für nachhaltige Entwicklung – Umsetzung eines neuen Leitprinzips und seine Effekte auf Schüler/-innenseite. <https://phfr.bsz-bw.de/frontdoor/index/index/docId/877>
- Wiek, A., Withycombe, L., & Redman, C. L. (2011). Key competencies in sustainability: A reference framework for academic program development. *Sustainability Science*, 6(2), 203–218. <https://doi.org/10.1007/s11625-011-0132-6>
- Wullenkord, M. C., Tröger, J., Hamann, K. R. S., Loy, L. S., & Reese, G. (2021). Anxiety and climate change: A validation of the Climate Anxiety Scale in a German-speaking quota sample and an investigation of psychological correlates. *Climatic Change*, 168(3), 20. <https://doi.org/10.1007/s10584-021-03234-6>