

- **Referred Journals:**

- THEMATIC JOURNAL of School Education. technology. (i-manager).June-Aug (2022) ISSN-0973-2217.,Vol 18.No1..Pp 26-32.
- INTERDISCIPLINARY Journal of Community Guidance and Research Nov 2020 Vol.37. No 3.Pp 45 -52
- EDUTRACKS JOURNAL (April-2023). “Constructivist Approach Teaching –Learning Maths.” A monthly Scanner of Trends in Education . Vol.22. No 8. Neelkamal Publication Pvt. Ltd.,Hyderabad.ISSN- 0972-9844. Pp 11-13.
- EDUTRACKS JOURNAL (July-2022). “E- learning me and we learning.” A monthly Scanner of Trends in Education . Vol.21. No 11. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN . Pp 17-20
- EDUTRACKS JOURNAL (Nov-2019). “ Effect of constructivist based approach of Teaching Mathematics in Improving Achievement of IX Standard Students”. A monthly Scanner of Trends in Education . Vol.19. No 3. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN 0972-9844 .Pp 23-32
- THEMATIC JOURNAL of School Education. technology. (i-manager).March-May (2022) E- ISSN-220-7133.,Vol 17.No4..Pp 01- 09.
- INTERDISCIPLINARY Journal of Community Guidance and Research Nov 2020Vol.37. No 3.Pp 45 -52.
- EDUTRACKS JOURNAL (April -2023). “Constructivism- Based Approach: Paradigm Shift in Teaching & Learning of Mathematics in classroom”. Vol.22. No 12. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN . Pp 11-13.
- EDUTRACKS JOURNAL (April -2023). “Blended –Learning Anytime Anywhere”. Vol.22. No 12. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN . Pp 18 - 19.
- EDUTRACKS JOURNAL (October-2023). “STEM Education” –An Innovative Approach to Foster Creativity among 21st Century Learners.Vol.23. No 2. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN- 0972-9844. Pp 21-25.

- EDUTRACKS JOURNAL (October-2023). “Awareness of Open Access Resources.(OAR)” Vol.23. No 2. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN-0972-9844. Pp 26-31.
- EDUTRACKS JOURNAL (November -2023). “Enchancement of Mathematics Learning through CAI”. Vol.13. No 3. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN . Pp 35- 36.
- THEMATIC JOURNAL of School Education. technology. “Students perceptions towards mobile learning and its influence on students learning achievement.” (i-manager).March-May (2024) E- ISSN-2230-7125.,Vol 20.No4..Pp 01- 09.
- THEMATIC JOURNAL on Educational Psychology “Development and validation of emotional competence scale(ECS) for upper primary school students.” (i-manager).March-May (2024) E- ISSN-2230-7125.,Vol 17.No3..Pp 53-61
- THEMATIC JOURNAL on Educational Technology “Investing the effect of instruction designed according to the ARCS model enriched with web 2.0 tools on students mathematics achievement and motivation.” (i-manager).March-May (2024) E- ISSN-2230-7133.,Vol 19.No3..Pp 21-35.
- INTERDISCIPLINARY Journal of Community Guidance and Research Nov 2020 Vol.37. No 3.Pp 45 -52.
- EDUTRACKS JOURNAL (January -2024). “Recent Developments in Education”.Vol.23. No 5. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN :0972-9844. Pp 34-35.
- EDUTRACKS JOURNAL (April -2024). “Holistic Progress Card (HPC)”. Vol.23. No 8. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN:09972-944 . Pp 17 - 21.
- EDUTRACKS JOURNAL (May-2024). “Mathematics& Math Innovations”.Vol.23. No 9. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN- 0972-9844. Pp 05-08.
- EDUTRACKS JOURNAL (June-2024). “Integration of Indian knowledge systems in Indian Education” Vol.23. No 10. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN-0972-9844. Pp 23-31.
- THEMATIC JOURNAL of School Educational Technology. “STEM EDUCATION: EVALUATION AND IMPROVEMENT METHODS.”(i-manager).September (2024) E- ISSN2230-7133.,Vol 20.No1..Pp 37-41.

- THEMATIC JOURNAL of School Educational Technology. “THE EFFECTIVENESS OF GEOGEBRA ASSISTED LEARNING ON STUDENTS MATHEMATICAL REPRESENTATION: A METAANALYSIS STUDY”(i-manager).March-May (2024) E- ISSN-2230-7125.,Vol 21.No2..Pp 41-57.
- THEMATIC JOURNAL of School Educational Technology. “TURKISH EFL TEACHERS PERCEPTIONS OF THEIR PEDAGOGICAL DIGITAL COMPETENCE IN AN EFL SETTING”(i-manager).March-May (2024) E- ISSN-2230-7125.,Vol 21.No2..Pp 41-57.
- EDUTRACKS JOURNAL (July -2024).“Evaluating Patron Experiences with e-libraries: A case study of B.Ed.college in Madurai District”. Vol.23. No 11. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN :0972-9844. Pp 43-54.
- EDUTRACKS JOURNAL (September -2024). “Transformation of Teacher Education in Viksit Bharat @247: Outlooks and approaches”. Vol.24. No 1. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN :0972-9844. Pp 05- 08.
- EDUTRACKS JOURNAL (September -2024). “Perspectives on National Curriculum Framework for School Education (NCFSE) 2023”. Vol.24. No 1. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN :0972-9844. Pp 33- 40.
- EDUTRACKS JOURNAL (October -2024). “School Teachers Professional Efficacy Assessment”. Vol.24. No 2. Neelkamal Publication Pvt. Ltd., Hyderabad.ISSN:09972-944 . Pp 34 – 40..
- EDUTRACKS JOURNAL (November -2024). “Use of mobile Technology in Professional Education”.Vol.24. No 3. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN- 0972-9844. Pp 15-19.
- EDUTRACKS JOURNAL (December-2024). “Role of Digital Tools in Enhancing Student Participation in Learning” Vol.24. No 4.
- THEMATIC JOURNAL OF SCHOOL EDUCATIONAL TECHNOLOGY.Pua Tripathi (2025) “AI IN CLASSROOMS :IMPACT ON TEACHER IDENTITY AND AUTONOMY”(i-manager).December(2025)E-ISSN2230-7133.,Vol 20.No4..Pp 39-47.
- THEMATIC JOURNAL OF SCHOOL EDUCATIONAL TECHNOLOGY.Karthikeyan P (2025) “EXPLORING AWARENESS AND IMPACT OF NCERT DIKSHA PLATFORM IN INDIAN SCHOOLS”(i-manager). September (2025) E- ISSN2230-7133.,Vol 21.No3.. Pp 33-47.
- EDUTRACKS JOURNAL (September-2025). “The future of Experimental Learning Trends in Educational Technology Integration”.Vol.25. No 1. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN- 0972-9844. Pp 43-45.
- EDUTRACKS JOURNAL (October-2025). “Enhancing Techno Pedagogical skills through Blended Learning Methods” Vol.25. No 2. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN- 0972-9844. Pp 21-23.

- EDUTRACKS JOURNAL (November-2025). “Concept mapping strategies for effective learning” Vol.25. No 3. Neelkamal Publication Pvt. Ltd.,Hyderabad. ISSN-0972-9844. Pp 17-21.

Journal Articles & Research Papers

- **Eisenkraft, A. (2003).** Expanding the 5E model: A proposed 7E model emphasizes "transfer of learning" and the importance of eliciting prior understanding. *The Science Teacher*, 70(6), 56–59.
- **Liu, H. (2025).** The strategies of the 5E instructional model in junior high school grammar teaching from the perspective of teaching-learning-assessment integration. *Frontiers in Education*.
- **Niepel, C., Hausen, J. E., Weber, A. M., & Möller, J. (2025).** Understanding mean-level and intraindividual variability in state academic self-concept: The role of students' trait expectancies and values. *Journal of Educational Psychology*, 117(5), 772–788.

Books Referred: Foundational Research & Theory (Books)

- **10E Model (Emotion & Exchange)** 48- 75.
- **5E Model (Foundational)**
- **7E Model (Elicit & Extend)**
- **9E Model (E-Search & Empowerment)**
- **Agarwal, P. K., & Bain, P. M. (2019).** *Powerful teaching: Unleash the science of learning*. Jossey-Bass.
- **Archer, A. L., & Hughes, C. A. (2011).** *Explicit Instruction: Effective and Efficient Teaching*. Guilford Press. (Foundational for Teacher-Centered Methods).

- Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching*. Guilford Press.
- Assi, K. J., Saad, N. B., & Sankaran, S. (2023). 9E learning and teaching model and its application in higher secondary education school system. *Journal of Intercultural Communication*, 23(1), 45–54. [Source at ResearchGate](#)
- Assi, K. J., Saad, N. B., & Sankaran, S. (2023). 9E learning and teaching model and its application in higher secondary education school system. *Journal of Intercultural Communication*, 23(1), 45–54.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- Bhattacharjee, J. (2015). Constructivist approach to learning – An effective approach of teaching learning. *IRJIMS*, 1(4), 65-74.
- Biological Sciences Curriculum Study (BSCS). (n.d.). *The BSCS 5E instructional model*. [BSCS Science Learning](#)
- Bruner, J. S. (1961). The act of discovery. *Harvard Educational Review*, 31(1), 21–32.
- Bybee, R. W. (2009). *The BSCS 5E instructional model and 21st century skills*
- Bybee, R. W. (2009). *The BSCS 5E Instructional Model and 21st-century skills*. National Academies Press.
- Bybee, R. W., & Landes, N. M. (1990). *Science for life and living: An elementary school science program from Biological Sciences Curriculum Study (BSCS)*. Kendall/Hunt.
- Bybee, R. W., et al. (2006). *The BSCS 5E instructional model*. BSCS. Bybee, R. W. (2015). *The BSCS 5E instructional model: Creating teachable moments*. NSTA Press.
- Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Powell, J. C., Westbrook, A., & Landes, N. (2006). *The BSCS 5E Instructional Model: Origins, effectiveness, and applications*. BSCS.
- Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Powell, J. C., Westbrook, A., & Landes, N. (2006). *The BSCS 5E instructional model: Origins and effectiveness*. BSCS. bscs.org
- Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Powell, J. C., Westbrook, A., & Landes, N. (2006). *The BSCS 5E instructional model: Origins, effectiveness, and applications*. BSCS.
- Cannella G.S., & Reif, J.C. (1994) Constructivist teacher Education: Teachers as empowered learners *Teacher Education Quarterly* .21(3) Pp 27-38.
 - Clive Beck, Clare K. (2012) “ Innovations in Teacher Education”: A Social Constructivist Approach.

Core Theoretical & Pedagogical References (Constructivism & 5E) Instructional Model

- Dewey, J. (1938). *Experience and education*. Macmillan.
 - Dochshanov, A. and Tramonti, M., (2017, May) A Multidisciplinary Approach in STEM Education. In Conference Proceedings. “The Future of Education. 7th edition”, pp. 68-71;

- **Duran, L. B., & Duran, E. (2004).** The 5E instructional model: A learning cycle approach for inquiry-based science teaching. *The Science Education Review*, 3(2), 49–58.
- **Eisenkraft, A. (2003).** Expanding the 5E model: A proposed 7E model emphasizes "transfer of learning" and the importance of eliciting prior understanding. *The Science Teacher*, 70(6), 56–59. [Source at SCIRP](#)
- **Eisenkraft, A. (2003).** Expanding the 5E model: A proposed 7E model emphasizes "transfer of learning" and the importance of eliciting prior understanding. *The Science Teacher*, 70(6), 56–59.
- **Fosnot, C. T. (1996).** *Constructivism: Theory, perspectives, and practice*. New York: Teachers College Press.
- **Google. (2026, May 4).** *6E to 10E pedagogical frameworks and teaching tools* [Generative AI chat]. Google Gemini.
 - **Guha, Abhijit & Paul, Ujjwal. (2014).** Attitude towards Constructivist Approach and SelfEfficacy: Perspective of Secondary School Teachers. *Indian Journal of Educational Research (Peer Reviewed)*, ISSN :2277-3819, Deptt. of Education, University of Calcutta, India. III. 14-24.
- **Hadap, A., & Panse, V. R. (2026).** *B.Ed. teaching of history: Complete teaching method with lesson plans*. Geh Press.
- **Hadap, A., & Panse, V. R. (2026).** *Innovative Pedagogy in STEM Education*. Geh Press. (Available at Amazon.in for approximately 600 INR).
- **Hadap, A., & Panse, V. R. (2026).** *Innovative pedagogy in STEM education*. Geh Press.
- **Hutchison, C. B. (2006).** Cultural constructivism: the confluence of cognition, knowledge creation, multiculturalism, and teaching. *Intercultural Education*, 17(3), 301-310.
- **Hutchison, M. (2016).** The empathy project: Using a project-based learning assignment to increase first-year college students' comfort with interdisciplinarity. *Interdisciplinary Journal of Problem-Based Learning*, pp10(1), 9.
 - **Jonathan S.,(2014)** Lesson Planning :Key concepts and skills for teachers.
- **Kaur, H., & Gakhar, S. C. (2014).** *Constructivism in the classroom: The 9E model*. Twenty-First Century Publications.
 - **Kongwad, N.B.,(2008)** Pedagogical tool technique& Approaches Vidyanidi learning Trigonometry by English medium students of Standard IX of Baroda City, Pp-
 - **Leslie P. (2012)** “ Constructivism in Education” 1st Edition pg.25-38.
 - **Loyens, S. M., & Gijbels, D. (2008).** Understanding the effects of constructivist learning
- **M, K. (2023).** *Educational Technology for Teacher Educators: Enhancing the B.Ed Curriculum*. Amazon.
- **Matthews, M. R. (2000).** *Constructivism in science and mathematics education* National Press.
- **Piaget, J. (1952).** *The origins of intelligence in children*. International Universities Press.

- **Powell, K. C., & Kalina, C. J. (2009).** Cognitive and social constructivism: Developing tools for an effective classroom. *Education*, 130(2), Pp 13-29.
- **Sadaf Rizvi.,(2013)** Multidisciplinary Approach to Educational Research: case studies.
- **Sharma, S. (2012).** *Constructivism*, In Sharma, S (EDs). *Constructivist Approaches To Teaching and Learning Handbook For Teachers of Secondary Stage* , (1st ed, pp,2) National Council of Educational Research and Training (NCERT), New Delhi.
- **Shittu, M., & Alex, J. K. (2025).** The 5E instructional model in mathematics education. *Eurasia Journal*, 21(9).
 - **Spooner, F., Baker, J. N., Harris, A. A., Ahlgrim-Delzell, L., & Browder, D. M. (2007).** Effect of Training in Universal Design for Learning on Lesson Plan Development. 130(2), Pp 13-29.
 - **Stember, M. (1991).** Advancing the social sciences through the interdisciplinary enterprise. *The Social Science Journal*, 28(1), pp 1-14.
 - **Susan Pauline O’Hara.,(2003)** Multidisciplinary Units of Grades 6-8.
 - **Tam, M. (2000).** Constructivism, instructional design, and technology: Implications for transforming distance learning. *Educational Technology & Society*, 3(2), 50-60.
 - **Tramonti M, Tramonti L. (2018),** March. Facilitating Science Learning through a Multidisciplinary Approach. In Conference Proceedings. “New Perspectives in Science Education”, pp. 549-5
- **Trowbridge, L. W., & Bybee, R. W. (1996).** *Teaching secondary school science: Strategies for developing scientific literacy*. Merrill,
- **Vygotsky, L. S. (1978).** *Mind in society: The development of higher psychological processes*. Harvard University Press.

Technology & Digital Scaffolding Pedagogy & Modern Frameworks

-
- **Duhaney,d.d (2001)** “teacher education: Preparing teachers to integrate technology” international journal of instructional media,28(1),23-30.
- **ICT@School Scheme. (2010).** Department of School Education and Literacy, MHRD, Government of India.
- **Jonassen, D. H. (1996).** *Computers in the classroom: Mindtools for critical thinking*.

Prentice Hall. (*Justification for NIRMAAN as a "Cognitive Tool"*).

- **Koehler, M. J., & Mishra, P. (2009).** What is technological pedagogical content knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70.
 - **Manivanna.M, (2006)** “Computer Technology in Teaching and Learning” article from Edutracks Pp.12-12.
- **Mayer, R. E. (2014).** *The Cambridge handbook of multimedia learning* (2nd ed.). Cambridge University Press. (*Reference for your researcher-generated videos*).
 - **Peet, M. (2010).** The integrative knowledge portfolio process: A program guide for educating reflective practitioners and lifelong learners. Vol.1(1), pp56-105.
 - **Peet, M., Lonn, S., Gurin, P., Boyer, K. P., Matney, M., Marra, T., ... & Daley, A. (2011).** Fostering integrative knowledge through ePortfolios. *International Journal of ePortfolio*, 1(1),pp 11-31.
 - **Raghavendra V., Harish T.,(2021).**, Educational Technology.,Jnanadhare prakashan,Gadag .Pp-01-33.
 - **Rajasekar,S (2005)** University students attitude towards computer, Recent researches in Education and Psychology Pp 1-11
 - **Rajasekar,S.,Vaiyapuri Raja,P.(2007)** Development of a test to measure computer knowledge of higher Secondary Teachers(CKT). *Experiments in Education* .Pp 35-48.
- **Siemens, G. (2005).** Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*, 2(1), 3–10.

TPACK

- **AACTE (Ed.). (2008).** Handbook of technological pedagogical content knowledge (TPCK) for educators. New York
- **Archambault, L., & Crippen, K. (2009).** Examining TPACK among K-12 online distance educators in the United States *Contemporary Issues in Technology and Teacher Education*, 9(1). Retrieved from <http://www.citejournal.org/vol9/iss1/general/article2.cfm>
- **Bos, B. (2011).** Professional development for elementary teachers using TPACK. *Contemporary Issues in Technology and Teacher Education*, 11(2). Retrieved from <http://www.citejournal.org/vol11/iss2/mathematics/article1.cfm>
- **Graham, Charles R.; Nicolette Burgoyne, Pamela Cantrell, Leigh Smith, Larry St. Clair, and Ron Harris (2009).** TPACK Development in Science Teaching: Measuring the TPACK Confidence of Inservice Science Teachers. *Techtrends*, 53 (5), 70-79. DOI:10.1007/s11528-009-0328-0

- **Hammond, T. C., & Manfra, M. M. (2009).** Giving, prompting, making: Aligning technology and pedagogy within TPACK for social studies instruction. *Contemporary Issues in Technology and Teacher Education* [Online serial], 9(2). Retrieved from <http://www.citejournal.org/vol9/iss2/socialstudies/article1.cfm>
- **Harvey, D. M., & Caro, R. A. (2017).** Review of Herring, M.C., Koehler, M.J., and Mishra, P. (Eds.) (2016). *Handbook of Technological Pedagogical Content Knowledge (TPACK) for Educators*. (2nd edition). New York: Routledge. *TechTrends*, 61(4), 404–405. <https://doi.org/10.1007/s11528-017-0176-2>
- **Hofer, M., & Swan, K. O. (2006).** Technological Pedagogical Content Knowledge in Action : A Case Study of a Middle School Digital Documentary Project. *Journal of Research on Technology in Education*, 41(2), 179-200.
- **Koehler, M. J., & Mishra, P. (2008).** Introducing TPCK. In AACTE Committee on Innovation and Technology (Ed.), *Handbook of technological pedagogical content knowledge (TPCK) for educators* (pp. 3-29). New York: Routledge.
- **Lim, C. P. (2009).** Formulating guidelines for instructional planning in technology enhanced learning environments. *Journal Of Interactive Learning Research*, 20(1), 55-74. AACE. Retrieved from <http://www.editlib.org/p/24462>
- **Mishra, P. (2019):** Considering Contextual Knowledge: The TPACK Diagram Gets an Upgrade. *Journal of Digital Learning in Teacher Education*. DOI: <https://doi.org/10.1080/21532974.2019.1588611>
- **Mishra, P., & Koehler, M. J. (2006).** Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054. <http://dx.doi.org/10.1111/j.1467-9620.2006.00684.x>
- **N., Shafer, Niess, M. L., Ronau, R. K. G., Driskell, S. O., Harper, S. R., & Johnston, C. (2009).** Mathematics Teacher TPACK Standards and Development Model. *Contemporary Issues in Technology and Teacher Education*, 9, 4-24.
- **Nkwenti Ndongfack, M. (2015).** Mastery of Active and Shared Learning Processes for Techno-Pedagogy (MASLEPT): A Model for Teacher Professional Development on Technology Integration. *Creative Education*, 6, 345. <http://dx.doi.org/10.4236/ce.2015.61003>
- **Polly, Drew & Laurie Brantley-Dias (2009).** TPACK: Where do we go now?, *Techtrends*, 53 (5), 46-47. DOI:10.1007/s11528-009-0324-4

- **Shulman, L. S. (1986).** Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.

Teacher Efficacy & Professional Development

- **Bandura, A. (1997).** *Self-efficacy: The exercise of control*. W. H. Freeman. (*The psychological anchor for your study*).
- **Bandura, A. (1997).** *Self-efficacy: The exercise of control*. W. H. Freeman. (*Primary source for your Teaching Efficacy variable*).
- **Koehler, M. J., & Mishra, P. (2009).** What is technological pedagogical content knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70. (*NIRMAAN operates at the intersection of these three domains*).
- **Ministry of Education. (2020).** *National Education Policy 2020*. Government of India. education.gov.in
- **National Research Council. (2000).** *Inquiry and the National Science Education Standards: A guide for teaching and learning*. National Academies Press
- **Tschannen-Moran, M., & Hoy, A. W. (2001).** Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805.
- **Tschannen-Moran, M., & Hoy, A. W. (2001).** Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783–805.
- **Vygotsky, L. S. (1978).** *Mind in society: The development of higher psychological processes*. Harvard University Press. (*Support for Social Interaction and Scaffolding*).
- **Zee, M., & Koomen, H. M. (2016).** Teacher self-efficacy and its effects on classroom processes: A synthesis of 40 years of research. *Review of Educational Research*, 86(4), 981–1015.

Professional Reference Books for B.Ed (Subject-Specific Pedagogical References)

- **Akpinar, Y., & Bayramoglu, Y. (2008)** Promoting teachers positive attitude towards web use; a study in website development. *The Turkish online Journal of Educational Technology-TOJET*, 7(3) Pp 46-55.
- **APA Style Blog:** For guidance on citing educational software and websites. [apa.org](https://www.apa.org)
- **APA Style Online:** The definitive source for [APA 7th edition formatting](#) to ensure your research citations are accurate.
- **Archer, A. L., & Hughes, C. A. (2011).** *Explicit instruction: Effective and efficient teaching*. Guilford Press. (Key for the Explain phase techniques)
 - **Ausubel, D. P., & Robinson, F. G. (1969).** *School learning: An introduction to educational psychology*. Holt, Rinehart and Winston. Pp 5-14.
- B.Ed Teaching of History | NEP 2020 Edition: A specialized manual that includes lesson plans and teaching methods updated for modern frameworks. Available at Amazon and Bookscape.
- **Bloom, B. S. (1956).** *Taxonomy of educational objectives: The classification of educational goals*. Longmans, Green. (Foundational for the Evaluate phase).
 - **Bradley, G., & Russell, G. (1997).** Computer experience, school support and computer anxieties. *Educational Psychology*, 17, 267-284.
- **Bruner, J. S. (1960).** *The process of education*. Harvard University Press. (Covers Scaffolding & Discovery).
- **BSCS Science Learning:** The official home of the [BSCS 5E Instructional Model](#), providing foundational research and implementation guides.
 - **Buch, M.B., {1986}:** Third survey of research in education, .Deep and Deep publication NCERT New Delhi (P.No. 20 to 53).
- Contemporary India and Education: A comprehensive [University Module](#) covering constructivist philosophies and historical perspectives in B.Ed. [[1](#), [2](#)]
 - **Das Muralidhar, {1994}:** Educational Research, Deep and Deep publication ,New Delhi.
 - **Das, R.C., Passi, (2007)** Five decades of development in teacher education in India. ISBN; 81-836-133-2. Pp- 1-21., 52-88., 116-125.
- **Dewey, J. (1938).** *Experience and education*. Macmillan. (Foundational to "Learning by Doing").
- **Edutopia (George Lucas Educational Foundation):** High-quality articles on 5E implementation. edutopia.org
- **Edutopia:** Offers practical articles on [using the 5E model in classrooms](#) with real-world examples.
- **ERIC (Education Resources Information Center):** Search for peer-reviewed papers on [extended learning cycles](#) like the 7E and 10E models.
- **ERIC (Education Resources Information Center):** Use this for finding peer-reviewed studies on multi-phase models. ed.gov

- **Hadap, A., & Panse, V. R. (2026).** *B.Ed. Teaching of History: Complete Teaching Method with Lesson Plans*. Geh Press. (Essential for practical 5E–10E implementation).
- **Language Teaching (English/Hindi/Kannada)**
 - **luery, (2001).** Wiki Book: The Practice of Learning Theories/ Individual Knowledge
 - **M J Prince, and Richard M Felder(2007)** ,”The Many Faces of Inductive Teaching and Learning”, *Journal Of College Science Teaching* Vol. 36, No. 5, pp-54-68.
 - **Mansilla, V. B., & Duraising, E. D. (2007).** Targeted assessment of students’ interdisciplinary work: An empirically grounded framework proposed. *The Journal of Higher Education*, 78(2), pp215-237.
- **Ministry of Education. (2020).** *National Education Policy 2020*. Government of India. education.gov.in
 - **Mohanty, J. (2003).** *Teacher Education*. New Delhi: Deep and Deep Publication Pvt.
 - **NCERT, Innovations in Teacher Education and school Education- All India competition, Information Bulletin, New Delhi, 1998.**
 - **NCERT. (2005).** *National Curriculum Framework 2005*. New Delhi, India: Author
- **NCERT. (2005).** *National Curriculum Framework: Position paper on teaching of Social Sciences*. ncert.nic.in
 - **NCERT. (2005).** *Position Paper: National Focus Group on Teacher Education for Curriculum Renewal 2005*. New Delhi, India: Author
 - **NCTE, Curriculum Framework for Quality Teacher Education, New Delhi, 1998.**
 - **NCTE. (2009).** *National Curriculum Framework for Teacher Education*. New Delhi, India: Author
- **Nirmal, P. B. (2024).** Multidisciplinary approach of NEP-2020: A transformation in the Indian education system. *Techno World Interdisciplinary Journal for Science and Technology (TWIST)*, 19(3), 336–338.
- **Piaget, J. (1952).** *The origins of intelligence in children*. International Universities Press. (*Foundational to Cognitive Constructivism*).

Professional & Academic Websites

- **Richards, J. C., & Rodgers, T. S. (2014).** *Approaches and methods in language teaching*. Cambridge University Press.
 - **Riddle, E. M., & Dabbagh, N. (1999).** Lev Vygotsky’s social development theory. Pp- 89-98.
- **Science Education (Physical & Bio Science)**
- **Social Science (History/Geography)**

- **Trowbridge, L. W., Bybee, R. W., & Powell, J. C. (2008).** *Teaching secondary school science: Strategies for developing scientific literacy.* Pearson/Merrill Prentice Hall.
- **Van de Walle, J. A., Karp, K. S., & Bay-Williams, J. M. (2019).** *Elementary and middle school mathematics: Teaching developmentally.* Pearson.
- **Von Glasersfeld, E. (1984).** An introduction to radical constructivism. In P. Watzlawick (Ed.), *The invented reality* (pp. 17–40). W. W. Norton.
- **Vygotsky, L. S. (1978).** *Mind in society: The development of higher psychological processes.* Harvard University Press. (*Foundational to Social Constructivism & ZPD*).

APA 7th Edition Reference List

- **7E Model (Elicit & Extend)**
- **Ahmad, S., Shaheen, A., & Gohar, M. (2019).** 5E Instructional model: Enhancing students academic achievement in the subject of general science at primary level. *Global Regional Review*, 4(4), 1–10. [View on ResearchGate](#)
- **APA Style Examples:** [apa.org](https://www.apa.org)
- **BSCS 5E Model** (Foundational)
- **BSCS Science Learning:** [bscs.org](https://www.bscs.org) (*For history of Bybee's work*).
- Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Powell, J. C., Westbrook, A., & Landes, N. (2006). *The BSCS 5E Instructional Model: Origins, effectiveness, and applications.* BSCS.
- **Eisenkraft, A. (2003).** Expanding the 5E model: A proposed 7E model emphasizes "transfer of learning" and the importance of eliciting prior understanding. *The Science Teacher*, 70(6), 56–59. Source at ERIC
- **ERIC Database:** [ed.gov](https://eric.ed.gov) (*Use this to search for "multidisciplinary lesson planning" and "teaching efficacy"*).
- **Liu, H. (2025).** The strategies of the 5E instructional model in junior high school grammar teaching from the perspective of teaching-learning-assessment integration. *Frontiers in Education*. [View on ResearchGate](#)
- **UAlberta Library.** (2026). *Curriculum - APA Citation Style (7th Edition)*. [Instructional Guide](#)
- **UNESCO ICT Competency Framework for Teachers:** unesco.org

Web Resources & External Links

- **APA Style Blog.** (n.d.). *Reference examples.* apa.org
- **APA Style Online:** Use the [APA Reference Page Tutorial](#) to ensure your citations for web pages and digital tools are formatted correctly.
- **APA Style References:** apa.org [assessment packs](#) (word, links, etc.)
- **Biological Sciences Curriculum Study.** (n.d.). *The BSCS 5E instructional model.*
- **BSCS Science Learning.** (n.d.). *The BSCS 5E instructional model.* bscs.org
- **Edutopia:** A platform for finding practical [High-Impact Teaching Strategies](#) and their classroom applications.
- **ERIC (Education Resources Information Center).** (n.d.). ed.gov (*Use this to search for recent studies on B.Ed. student teachers*).
- **ERIC (Education Resources Information Center):** A vital database for finding peer-reviewed papers on extended learning cycles.
- **ERIC Database:** ed.gov (*Recommended search terms: "5E lesson planning software" and "B.Ed. teacher efficacy"*).
- **Google for Education.** (n.d.). [Google Workspace for Education.](#)
- **Kahoot!** (n.d.). *Learning through games.*
- [Mendely TPACK group.](#)
- **PhET Interactive Simulations.** (n.d.). [Science and math simulations.](#)
- **Purdue Online Writing Lab (OWL):** purdue.edu
- [Scribbr.](#) (2020, November 5). *How to cite a website in APA style | Format & examples.*
- **TPACK – Technological Pedagogical and Content Knowledge** by Matthew J. Koehler (also linked through <http://www.tpack.org>)
- **TPACK (was TPCK)** by Puny Mishra.
- **UNESCO. (2018).** *ICT competency framework for teachers.*
- [Victoria University.](#) (2025, October 11). *Webpages - APA 7th referencing.*

Consulted Web Sites:

- <https://www.youtube.com/watch?v=RJtSse0-vbY> (e content of constructivism)
- <https://www.youtube.com/watch?v=fkfe1VFVPGM> (constructivist class room)
- <https://research-methodology.net > ..types of literature review-research>
- <http://hdl.handle.net/10603/449211>
- <http://www.ignou.ac.in>
- <http://hdl.handle.net/10603/458139>
- <https://www.researchgate.net/publication/329417059> Multimedia and its Applications.
- <http://www.egyankosh.ac.in>
- https://en.wikipedia.org/wiki/Literature_review
- <https://research-methodology.net > ..types of literature review-research methodology>
- <https://www.sciencedirect.com>
- <http://www.wikibooks.org/wiki>

- http://upload.wikimedia.org/wikibooks/en/0/06/constructivism_Hierarchy.jpg
- <https://student.unsw.edu.au/writing-critical-review>
- <https://www.researchgate.net/publication/329417059> Multimedia and its Applications
- <http://www.csi.unian.it/educa/inglese/matthews.html>
- <http://hdl.handle.net/10603/361958>
- <http://hdl.handle.net/10603/541946>
- <https://research-methodology.net> > ..types of literature review-research methodology.
- <https://www.scribbr.com/dissertation/literature-review>
- <https://ictschools.ncert.gov.in/wpcontent/uploads/2017/08/ICTscheme.pdf>
- <https://student.unsw.edu.au/writing-critical-review>
- https://doi.org/10.15766/mep_2374-8265.7892
- <http://www.wikibooks.org/wiki>
- http://upload.wikimedia.org/wikibooks/en/0/06/constructivism_Hierarchy.jpg
- <https://student.unsw.edu.au/writing-critical-review>
- https://doi.org/10.15766/mep_2374-8265.7892
- https://en.wikipedia.org/wiki/Literature_review
- <https://www.education.gov.in> > sites > mhrd > files (National Education Policy 2020)
- education.gov.in
- edutopia.org
- ed.gov
- apa.org
- <http://www.citejournal.org/vol9/iss1/general/article2.cfm>
- <http://www.citejournal.org/vol11/iss2/mathematics/article1.cfm>
- <http://www.editlib.org/p/24462>
- DOI:10.1007/s11528-009-0324-4
- bscs.org
- purdue.edu
- [Scribbr](https://www.scribbr.com)
- <https://www.ugc.ac.in> > pdfnews > 5294663_Salie..(salient features of nep 2020: higher edu)
- <https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1580&context=ijpbl>
- <https://doi.org/10.1080/00221546.2007.11780874>
- https://doi.org/10.15766/mep_2374-8265.7892
- <https://files.eric.ed.gov/fulltext/EJ1107600.pdf>
- [https://doi.org/10.1016/0362-3319\(91\)90040-B](https://doi.org/10.1016/0362-3319(91)90040-B)
- <https://www.scribbr.com/dissertation/literature-review/>
- <https://doi.org/10.1177/07419325070280020101>

- <http://www.wikibooks.org/wiki>
- http://upload.wikimedia.org/wikibooks/en/0/06/constructivism_Hierarchy.jpg
- <https://student.unsw.edu.au/writing-critical-review>
- <https://research-methodology.net> > ..types of literature review-research methodology.
- https://en.wikipedia.org/wiki/Literature_review
- <http://www.csi.unian.it/educa/inglese/matthews.html>
- <https://textbooks.karnataka.gov.in/textbooks/en>
- <https://ncert.nic.in/textbook.php?fesc1=0-16>
- <http://www.iste.org/>