

Master of Education (M.Ed.)

Title of the Course: S. Inc. 6 (f): Inclusive Education and Technology

(Semester: I, II, III & IV)

Credits: 4

MM: 100 (External: 70 Internal: 30)

Contact Week 15

Introduction of the Course

Access to flexible learning choices and effective ways for to the learners for achievement of individual and educational aims are core to Inclusive Learning in any atmosphere. Possibilities of flexible learning environment and curriculum which gives opportunity for relevant pedagogical opportunities for individuals through diverse modes and platforms are critical to engagement of all. E-learning platforms and technological developments in the field of education can be critical for the changing scenario of learning. This course focuses on facilitating scholar towards in interplay between, Inclusion, Education and Technology. It intends to enable them with understanding of critical issues related to access and engagement of learners from diverse context and with diverse abilities. Pedagogical possibilities and Universal Design for learning at different level using technological developments would be the centre of discussions with emphasis on reflections related to involving stakeholders at different stages.


Learning Outcomes

After completion of the course student will be able to: (Number is not fixed)

1. Critique theoretical frameworks underpinning inclusion, education, and technology
2. Evaluate the interplay of social and psychological factors within technology-enhanced inclusive education
3. Strategize how technology can enable access and promote engagement for diverse learners.
4. Differentiate assistive technologies suitable for a range of disabilities (vision, hearing, communication, mobility, and learning)
5. Apply Universal Design for Learning (UDL) principles within a technology-supported learning environment.
6. Critically evaluate educational technology tools through a lens of inclusive education.
7. Analyze the potential benefits and ethical considerations of Artificial Intelligence-powered technologies in inclusive education settings.

Number of Units: 4

Weeks 15 = 60 hours


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Unit 1: Inclusion, Education and Technology: Exploring theoretical Paradigm

(3 weeks = 12 hours)

- Theoretical paradigm for inclusion, education and technology
- Social and Psychological Premise of Using Technology for Inclusive Education

Unit 2: Enabling Access and Engagement through Technology (4 weeks = 16 hours)

- Issues and possibilities related to access
- Context of engagement with learner and way ahead
- Assistive technologies: exploring tools for vision, hearing, communication, mobility, and learning disabilities.
- Stakeholder collaboration and professional development.

Unit 3: Inclusive Education and Technology

(4 weeks = 16 hours)

- Universal Design for Learning and technology
- Curriculum, Technology and Inclusion
- Pedagogy, Content, Knowledge and Innovative Technology: In context of Inclusive Education
- Building Bridges and Nurturing Possibilities among Stakeholders
- Adaptive Learning Platforms: Potential of personalized learning systems to address individual needs and learning styles.
- Online Learning and Blended Learning Models
- Critical Evaluation of Tech Tools: Developing frameworks to assess the inclusivity and effectiveness of educational technologies.

Unit 4: Technological Innovations and Inclusive Education

(4 weeks = 16 hours)

- Artificial Intelligence(AI): Addressing diversity in education
- Personalized Learning, Intelligent Tutoring Systems, Translation and Language Support, Automated Assessment and Feedback, Early Identification of Learning Difficulties, Adaptive Learning Platforms
- Virtual and Augmented Reality (VR/AR) for Immersive Learning
- Equitable AI Development, Privacy and Ethical Considerations

Practicum/ Suggested Projects / Assignments (Any Two)

1. Partner with an inclusive school to identify students with diverse learning needs. Research and recommend appropriate assistive technologies (AT) for each student.

- Participate in training teachers and support staff on AT implementation and best practices.
2. Collaborate with an NGO or government program working on inclusive education initiatives. Design and develop UDL-compliant learning materials (e.g., worksheets, presentations) using readily available technology tools.
 3. Analyze and evaluate existing educational technology tools from an inclusion lens, using the framework developed in the course. Provide recommendations for improvement and suggest features that promote accessibility and diverse learning styles.
 4. Develop an online module/framework for module, for educators on the topic of inclusive education and technology integration. Utilize multimedia elements (videos, interactive activities) and ensure accessibility for diverse learners.

Note: On the basis of the above, the teacher may design his/her own relevant projects/ assignments.

Essential/ Recommended Readings

- Andreja Istenic (2010). Educational Technology For The Inclusive Classroom. TOJET: The Turkish Online Journal of Educational Technology – July 2010, volume 9 Issue 3.
- <http://tojet.net/articles/v9i3/933.pdf>
- Ahmad, Fouzia Khurshed (2016). Use of Assistive Technology in Inclusive Education: Making Room for Diverse Learning Needs. Transcience (2015) Vol. 6, Issue 2.
- https://www2.hu-berlin.de/transcience/Vol6_No2_62_77.pdf
- Banks, J. A., & Banks, C. A. M. (Eds.). (2004). Handbook of Research on Multicultural Education (2nd ed.). San Francisco, CA: Jossey-Bass.
- Chander S. and Patra G. (2021). Education of Children with Disabilities: Exploring Possibilities with Artificial Intelligence. Pedagogy of Learning, 7 (3), 29-35.
- Chander, S. and Chetna Arora (2020). Integrating Technology into Classroom Learning. Indian Journal of Educational Technology. CIET, NCERT. Volume 2. Issue 1.
- Chander, S. and Arora, C. (2019). Connectivism Pedagogy and Virtual Learning Environment-Two Sides of the Same Coin. Distance and Open Learning: Challenges and Opportunities in the current Scenario. Published by Jamia Millia Islamia. 978-81-943147-4-5

- Chander, S. (2022). Adolescents and Issues Related to Learning and Academic Achievement. in *Adolescence in India: Issues, Challenges and Possibilities*. Ed.by Swati Patra. Springer Link.
- <https://link.springer.com/book/10.1007/978-981-16-9881-1/>
- Dovidio, J.F., Hewstone, M., Glick, P. & Esses, V.M. (2010). *Handbook of Prejudice, Stereotyping and Discrimination*. India: Sage Publication.
- Florian L. & Hawkins K. B. (2011): Exploring inclusive pedagogy, *British Educational Research Journal*, 37:5, 813- 828
- Maitra, K. & Saxena, V. (Ed.). (2008). *Inclusion: Issues and Perspectives for Teachers, policy planners and parents*. India: Kanishka Publishers.
- Silverman, S.K., (2010). What is Diversity? : An Inquiry into Pre-Service Teacher Beliefs. *American Educational Research Journal*, vol.47 (2), pp292-329.
- Stilz, M. and Wissenbach, K.R.(2016). *ICT-BASED INCLUSIVE EDUCATION Bridging the gap: Raising digital accessibility for all*. Bonn.
- <https://www.giz.de/fachexpertise/downloads/giz2016-ict-based-inclusive-education.pdf>
- Singal, N. (2008): "Working towards inclusion: Reflections from the classroom" *Teaching and Teacher Education*, vol. 24, no. 6, pp. 1516-1529.
- The Quality Indicators for Assistive Technology (QIAT) Available at: <http://www.qiat.org/>
- UNESCO (2003). *Overcoming Exclusion through Inclusive Approaches in Education- A Challenge and a Vision*. Conceptual paper.
- UNESCO (1994): *The UNESCO Salamanca Statement and Framework for Action on Special Needs Education*. UNESCO, Paris.

Additional Readings:

- Chander, S, Kumar, R. and Bharti(2018). *Teacher Education in the 21st Century*. SAGE text. New Delhi
- Saxena, V. (2016). Counteracting the inertia to balance gender equation in science. In D. Upadhayay Joshi & C. K. Permpoonwivat (Eds.), *Equating Gender Explorations* (pp. xx-xx). Rawat Publication.
- Dimmock, C., & Walker, A. (2005). *Educational leadership: Culture and diversity*. SAGE.
- Saxena, V. (2007). Empowering teachers to advocate for inclusion. *EENET Asia*, Issue 4.
- Maitra, K., & Saxena, V. (2008). *Inclusion: Issues and challenges*. Kanishka.

- Naraian, S. (2011). Pedagogic voicing: The struggle for participation in an inclusive classroom. *Anthropology & Education Quarterly*, 42(3), 245-262.
- Saxena, V. (2012). Process of inclusion and education-A critique. *Educationia Confab*, 1(4), 30-33.
- Perrone, V. (1997). Towards an education of consequence: Connecting assessment, teaching and learning. In A. Lin Goodwin (Ed.), *Assessment for equity and inclusion* (pp. xx-xx). Routledge.
- Ellsworth, E. (1989). Why doesn't this feel empowering? Working through the repressive myths of critical pedagogy. *Educational Theory*, 59(3), 297-325.

Teaching Learning Method:

This course attempts to immerse the learners in the challenges and possibilities of inclusive education with technology. The learners will do the following:


- **Analyse and discuss Case Studies and Simulations:** They will analyze real-world scenarios of how schools and educators approach technology for inclusion. They will explore with the complexities, debate strategies, and propose your own solutions. Simulations will put you in the shoes of teachers and learners, deepening your understanding.
- **Get Hands-On with Project-Based Learning:** Theory is important, but the best way to learn is by doing. They will design UDL-aligned lessons with the right tech tools, propose assistive solutions for schools, and even prototype your own inclusive apps.
- **Learn from Experts:** Our classroom will host guests from people specializing in inclusive design, seasoned teachers who excel with technology, and researchers at the forefront of the field. Ask questions, learn from their triumphs and challenges, and expand your professional network.
- **Blend Online and In-Person Learning:** We'll utilize a dynamic mix of in-class sessions with online resources, discussions, and video examples. This way, students will have flexible access to knowledge, reflect at your own pace, and collaborate with your peers continuously.

Assessment Method

The students will be assessed with formative and summative methods keeping the given structure in mind. The students will be given flexibility in terms of expressing their work. The learners will be given opportunity to work on issues and cases and present their work.

Keywords: Inclusion, Learning Model, Technology.

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