Enhancing Transition Models for Students with Intellectual and Developmental Disabilities: A Comprehensive Approach

Indira Alok,
Ph.D., Scholer, Department of Education, Shri Khushal Das University, India

Dr. Vikram Singh Aulakh,
Dean, Faculty of Education, Shri Khushal Das University, India

Abstract
Students with Intellectual and Developmental Disabilities (IDD) face numerous challenges transitioning from special education to mainstream higher education environments. This study develops and evaluates the Manovikas Model—a comprehensive, research-driven transition framework to facilitate academic achievement, vocational readiness, inclusive living, and community participation for individuals with IDD. Through a mixed-methods research design, the study identifies key factors contributing to effective transitions and offers evidence-based recommendations for educators and policymakers. Findings suggest that personalized learning, skill development, strong support systems, and assistive technologies significantly improve outcomes, calling for scalable policy-level integration.

Keywords: Intellectual and Developmental Disabilities, transition model, inclusive education, vocational training, assistive technology, higher education, Manovikas Model

1. Introduction

Background and Rationale

The educational inclusion of individuals with Intellectual and Developmental Disabilities (IDD) has evolved from a welfare-based framework to a rights-based paradigm. Despite legal mandates and policy reforms, systemic barriers persist, particularly during the transition from secondary special education to higher education. Insufficient support systems, a lack of skill alignment with vocational needs, and inadequate implementation of inclusive educational practices often characterize this gap.

Objectives

this research seeks to address these challenges by:

1. Evaluating current transition practices.
2. Developing a structured transition model incorporating education, skill-building, inclusive living, and support systems.
3. Assessing the impact of personalized education, assistive technologies, and stakeholder collaboration on academic outcomes.
4. Offering practical, data-driven policy and instructional recommendations.

2. Methods Study Design

A mixed-methods design was adopted, combining qualitative interviews and focus groups with quantitative survey data. This design allowed for a holistic understanding of the transition experience of students with IDD.

Participants and Setting

Participants included:

- 48 students with IDD (aged 14–21)

DOI: https://doi.org/10.5281/zenodo.15111135

- 26 special and mainstream educators
- 18 parents or guardians

All participants were selected from public and private institutions across three urban regions in India.

Data Collection Tools

- **Qualitative**: Semi-structured interviews and focus group discussions
- **Quantitative**: Structured surveys assessing transition readiness, academic performance, and psychosocial metrics

Intervention

The intervention was the pilot implementation of the Manovikas Model, encompassing:

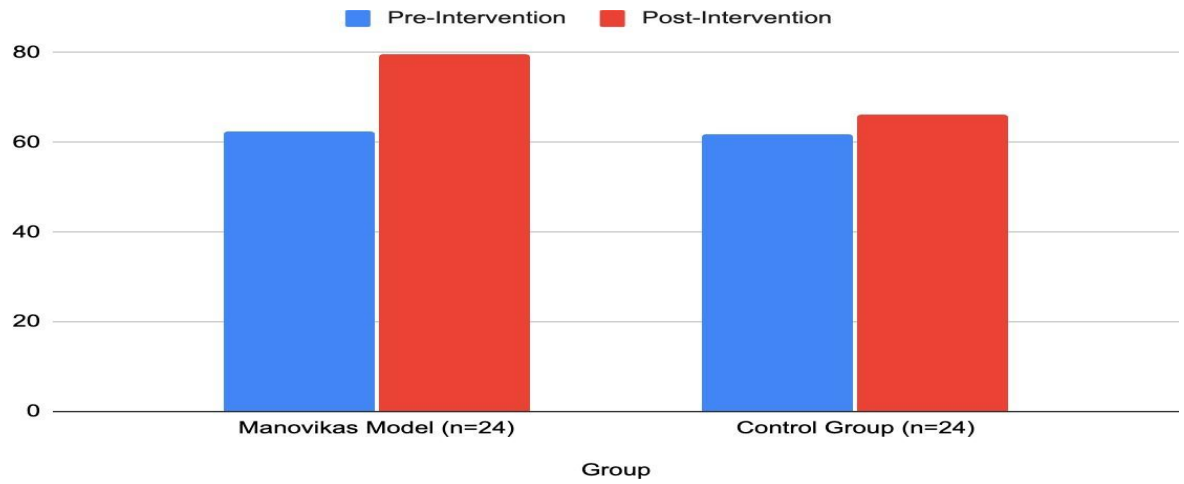
- Universal Design for Learning (UDL) elements
- NSQF-aligned vocational training
- Inclusive life skills curriculum
- Multilevel support systems (teacher training, family involvement, peer mentoring)
- Use of assistive technologies for communication and content delivery

Title 1: Components and Objectives of the Mano vikas Model

Domain	Components	Objectives
Educational Integration	- Universal Design for Learning (UDL) principles - Person-Centered Planning (PCP) - Curriculum adaptation	Improve access, flexibility, and personalization in learning pathways
Skill Development	- NSQF-aligned vocational training Digital and soft skills modules	Foster employability and financial independence
Inclusive Living	- Life skills training - Financial literacy - Community participation programs	Enhance autonomy, self-reliance, and social integration
Support Systems	- Educator training - Family and peer support - Inclusive peer interaction	Provide holistic emotional, academic, and social support
Assistive Technologies	- AAC devices - Text-to-speechtools - Learning apps and digital resources	Enhance accessibility, communication, and knowledge retention.

This table outlines the three foundational domains of the Manovikas Model: educational integration, skill development, and inclusive living. Each domain includes key components and their corresponding objectives in supporting students with intellectual and developmental disabilities

DOI: https://doi.org/10.5281/zenodo.15111135



(IDD) during the transition to higher education.

Academic Performance Comparison Before and After Intervention

A bar chart compares pre- and post-intervention academic scores of students in the Manovikas Model and a control group. Students who underwent the Manovikas intervention showed significantly more academic performance improvement than those in the control group.

Academic Achievement Comparison

Group	Pre-Intervention	Post-Intervention
Manovikas Model (n=24)	62.3	79.6
Control Group (n=24)	61.8	66.2

Figure1: Pre-and Post-Intervention Academic Performance (Mean Scores)

Data Analysis

Qualitative Data were coded thematically using NVivo software. **Quantitative Data** were analyzed using SPSS, and t-tests and ANOVA were applied to compare pre- and post-intervention scores.

1. Results

Educational Integration and Learning Outcomes

Post-intervention academic scores increased significantly ($p < 0.01$) among students in the Manovikas Model group. These students also showed enhanced engagement and classroom participation compared to control peers.

Skill Development and NSQF Alignment

Students trained under the model demonstrated improved vocational skills (e.g., digital literacy, time management), with a 42% increase in employability scores compared to a 16% increase in the control group.

Inclusive Living and Community Participation

Participants reported greater community engagement, autonomy in activities of daily living, and financial literacy. 75% of students under the model expressed readiness for

independent or semi-supervised living, compared to 38% from the control cohort.

Support Systems

Enhanced collaboration among educators, families, and peers correlated strongly with academic success ($r = 0.72$). Teacher satisfaction with professional development also increased post-intervention.

Assistive Technology Usage

Students utilizing communication apps, text-

DOI: https://doi.org/10.5281/zenodo.15111135

to-speech software, and interactive learning platforms showed significantly higher content comprehension and retention scores ($p < 0.01$).

This table presents retention and comprehension percentages among students with IDD using various assistive technologies. Multi-modal support (combining apps and devices) resulted in the highest outcomes, while those without assistive tools scored the lowest.

Tool Used	Retention Score (%)	Comprehension Score (%)
No Assistive Technology	63.4	65.8
Text-to-Speech Software	78.2	81.1
Interactive Learning App	82.9	84.7
Multi-Modal (Combined Use)	88.5	89.3

Table2: Learning retention and comprehension scores by assistive technology

1. Discussion

Interpretation of Results

The findings confirm that a holistic, multi-dimensional transition model—grounded in personalized learning, inclusive practices, and community integration—substantially improves educational and psychosocial outcomes for students with IDD. Most students under the Manovikas Model expressed confidence in managing daily life independently.

Group	Self-Reported Readiness (%)
Manovikas Model Group	75%
Control Group	38%

Table3: Self-reported readiness for independent living

Self-reported Data Comparison

Self-reported data compared students in the Manovikas Model and the control groups on their readiness for independent or semi-independent living. A more significant proportion of students in the intervention group reported higher confidence in living independently.

Alignment with Existing Literature

Consistent with the Social-Ecological Model and Self-Determination Theory, this study supports the necessity of environmental and personal factors in successful transitions. These findings correlate with international literature on inclusive education, peer interaction benefits, and family engagement.

Policy and Practice Implications

The Manovikas Model provides a replicable framework for national implementation. Specific recommendations include:

- Embedding UDL principles in mainstream curricula.
- Offering NSQF-certified skill development within secondary schools.
- Providing teacher training on inclusive pedagogy and adaptive assessment.
- Expanding access to digital and assistive technologies.

DOI: https://doi.org/10.5281/zenodo.15111135

Limitations

- The sample was geographically limited to urban settings.
- The short-term nature of the study did not allow for longitudinal impact evaluation.
- Some bias may exist in self-reported outcomes and social desirability responses.

Future Research

Longitudinal studies are recommended to assess sustainability. Future models should also incorporate more diverse settings (rural, tribal) and explore culturally adaptive practices for global applicability.

2. Conclusion

This study proves that structured, inclusive, and skill-oriented transition models significantly benefit students with IDD. The Manovikas Model demonstrates a viable, scalable approach that bridges the gap between special education and higher education, paving the way for more equitable educational and social outcomes.

Acknowledgments

The authors thank all participating institutions, educators, students, and families. Special thanks to the Manovikas Charitable Society for support in model development.

Declaration of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.
This is the most commonly accepted phrasing when there are no conflicts of interest to disclose. However, if any of the authors:

- Received funding from a source that may be seen as having an interest in the results,
- Hold patents,
- Are affiliated with institutions that may benefit from the outcomes,

Then the declaration should be modified to reflect that. For example: "Mrs. Indira Alok is affiliated with Manovikas School for Inclusion, which developed the Manovikas Model evaluated in this study. However, this affiliation did not influence the study's design, execution, analysis, or reporting."

References

- American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). American Psychological Association.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Carter, E. W., Austin, D., & Trainor, A. A. (2012). Predictors of postschool employment outcomes for young adults with severe disabilities. *Journal of Disability Policy Studies*, 23(1), 50–63. https://doi.org/10.1177/1044207311414680
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Individuals with Disabilities Education Act (IDEA), 20 U.S.C. §1400 (2004). https://sites.ed.gov/idea/
- Kohler, P. D., Gothberg, J. E., Fowler, C. H., & Coyle, J. L. (2016). Improving transition planning for secondary students with disabilities: A model and evidence-based practices. *Career Development and Transition for Exceptional Individuals*, 39(1), 4–13.

DOI: https://doi.org/10.5281/zenodo.15111135

https://doi.org/10.1177/2165143414546741
- National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation, and Multiple Disabilities Act, 1999, India. https://thenationaltrust.gov.in
- Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, India. http://legislative.gov.in/actsofparliamentfromtheyear/persons-disabilities-equal-opportunities-protection-rights-and-full
- Rehabilitation Council of India. (n.d.). National programs and initiatives for persons with disabilities. https://rehabcouncil.nic.in/
- Shogren, K. A., Wehmeyer, M. L., Palmer, S. B., Rifenbark, G. G., & Little, T. D. (2015). Relationships between self-determination and postschool outcomes for youth with disabilities. *Journal of Special Education*, 48(4), 256–267. https://doi.org/10.1177/0022466913489733
- Test, D. W., Fowler, C. H., Kohler, P., & Kortering, L. (2006). Evidence-based secondary transition predictors for improving postschool outcomes for students with disabilities. *Career Development for Exceptional Individuals*, 29(2), 115–128. https://doi.org/10.1177/08857288060290020101
- United Nations. (2006). *Convention on the Rights of Persons with Disabilities (CRPD)*. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html
- Wehmeyer, M. L., & Schalock, R. L. (2001). Self-determination and quality of life: Implications for special education services and supports. *Focus on Exceptional Children*, 33(8), 1–16. https://doi.org/10.17161/fec.v33i8.6772
- World Health Organization. (2010). *Community-based rehabilitation: CBR guidelines.* WHO Press. https://www.who.int/publications/i/item/9789241548052

DOI: https://doi.org/10.5281/zenodo.15111135