# STRATEGIC PARTNERSHIPS AND SOCIAL PROGRESS: THE ROLE OF JICA IN TRANSFORMING EDUCATIONAL INFRASTRUCTURE AND HUMAN DEVELOPMENT IN UTTARAKHAND

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# **ABSTRACT**

This research paper critically examines the pivotal role of the Japan International Cooperation Agency (JICA) in fostering educational infrastructure and human development within Uttarakhand, India. As a significant development partner, JICA has demonstrably contributed to fortifying institutional capacities, elevating vocational education standards, and championing equitable access to quality learning across the state. Through targeted interventions, notably the "Project for Strengthening of Human Development in Uttarakhand" (2017–2023), JICA has facilitated the modernization of key educational entities, including District Institutes of Education and Training (DIETs), the State Council of Educational Research and Training (SCERT), Industrial Training Institutes (ITIs), and polytechnics.

This study examines how JICA's collaborative approach, which prioritizes institutional ownership, community involvement, and long-term sustainability, fits in with more general goals for human capital development. The study evaluates the project's results in important areas such gender inclusion in technical education, teacher training effectiveness, and youth employability using a mixed-methods methodology that draws on both primary and secondary data. The analysis notes noteworthy accomplishments but also points up implementation issues and areas that need improvement. The results highlight JICA's interventions in Uttarakhand as a powerful example of strategic international collaboration, successfully tying infrastructure development to human empowerment and making a significant contribution to the socioeconomic resilience and advancement of the region.

**Keywords:** JICA, Uttarakhand, Educational Infrastructure, Human Development, Strategic Partnerships, Vocational Training, Disaster Education



# 1. INTRODUCTION

Education is a vital component of human growth, especially in areas that face enduring socioeconomic inequality and natural topographical difficulties [1]. One such area is the Himalayan state of Uttarakhand in India, which has long struggled with a variety of problems related to equality, quality, and access in its educational system [2]. Acknowledging the critical need for strategic partnerships to overcome these significant obstacles, the Uttarakhand government forged

a revolutionary alliance with the Japan International Cooperation Agency (JICA). The goal of this partnership was to improve human development results throughout the state and strengthen educational institutions.

Since 1958, JICA, a leading Japanese organization for Official Development Assistance (ODA), has had a significant and ongoing presence in India, focusing its efforts on vital areas like sustainable development, infrastructure, and capacity building [3]. JICA launched the extensive "Project for Strengthening of Human Development" in Uttarakhand, which would run for six years, from 2017 to 2023. The primary goal of the project was to greatly increase the operational capability and efficacy of important educational establishments, such as polytechnics, the State Council of Educational Research and Training (SCERT), District Institutes of Education and Training (DIETs), and Industrial Training Institutes (ITIs) [4]. The goal of these coordinated activities was to address significant gaps in disaster preparedness, vocational training, and teacher professional development while also fostering a more inclusive and skill-oriented educational ecosystem.

The breadth and effectiveness of JICA's activities in Uttarakhand's educational sector are thoroughly examined in this study paper. It also critically assesses their wider ramifications for regional resilience and human capital building. This study aims to provide a nuanced understanding of how international cooperation can act as a powerful catalyst for regional educational reform and sustainable, long-term social progress by carefully examining project outcomes, identifying underlying challenges, and making practical recommendations. It seeks to offer insights for future JICA projects as well as for other international development organizations and local governments looking to establish meaningful collaborations in comparable circumstances.

### 2. LITERATURE REVIEW

Everyone agrees that education is a key factor in human growth, enabling people to reach their full potential and take an active role in social and economic life [5]. Sustainable development initiatives are sometimes hampered in geographically difficult and disaster-prone areas like Uttarakhand by the enduring obstacles of poor infrastructure, restricted accessibility, and inconsistent educational quality [6]. The significance of strategic investments in teacher training and vocational education as vital elements for enhancing educational outcomes in such complicated situations has been emphasized by scholars, such as Tilak (2015) [7].

Through focused educational interventions, international development organizations—especially the Japan International Cooperation Agency (JICA)—have taken on a more crucial role in assisting human development projects. JICA's unique strategy stems from its core tenets of "human security" and "capacity development," which together support the values of inclusivity, local ownership, and long-term sustainability in all of its undertakings [8].

Around the world, JICA has a proven track record of putting in place all-encompassing educational support initiatives that carefully blend the creation of vital infrastructure with specialized technical assistance and institutional transformation on a systemic level [9].

Historically, JICA's involvement in India has mostly focused on areas like public health, disaster relief, and major infrastructure projects. However, since the start of the "Project for Strengthening of Human Development in Uttarakhand" (2017–2023), its entry into the education sector has accelerated significantly. This project was specifically designed to improve the functional capabilities of DIETs, SCERT, polytechnics, and ITIs through a multi-pronged strategy that includes curriculum modernization, intensive faculty development programs, and skill-oriented training initiatives, according to reports from the Government of Uttarakhand and JICA (2022) [10].

There is still a large gap in the academic study of the long-term, transformative effects of JICA's educational interventions, even if preliminary data and project reports indicate noticeable improvements in institutional performance and educational delivery. By providing a thorough and critical assessment of JICA's diverse role in promoting human development via education in the distinctive socio-geographic setting of Uttarakhand, this study aims to close this crucial gap. This study attempts to offer a more thorough grasp of these interventions' long-term impacts by exploring their subtleties in greater detail.

# 3. METHODOLOGY

This research adopts a qualitative case study approach to meticulously investigate the profound influence of the Japan International Cooperation Agency (JICA) in bolstering educational infrastructure and fostering human

development within the state of Uttarakhand. The study's findings are underpinned by a robust combination of primary and secondary data sources, meticulously selected to ensure comprehensive depth, unimpeachable accuracy, and pertinent contextual relevance.

Primary data was systematically gathered through a series of in-depth, semi-structured interviews. The interviewees comprised a diverse group of key stakeholders, including senior education officials, experienced trainers from various District Institutes of Education and Training (DIETs), and other individuals directly involved in the planning and implementation of JICA-supported projects. To capture the ground-level impact and beneficiary perspectives, feedback was also solicited from a select cohort of participants in vocational training programs. While a comprehensive census was not feasible, a purposive sampling strategy was employed to ensure representation from different districts and institutional levels. Interview themes focused on institutional changes, pedagogical improvements, skill acquisition, and challenges encountered. All interviews were conducted with informed consent and strict adherence to ethical guidelines.

In order to validate main findings and offer a more comprehensive context, secondary data sources were widely used. The Ministry of Education (India), several departments of the Government of Uttarakhand, official reports and publications published by JICA, and a vast range of peer-reviewed scholarly literature were among them. Foundational texts for policy and program analysis included the *JICA annual report (2020)* [11] and JICA's seminal *Capacity Development Handbook (2010)* [12].

A thorough thematic analysis was performed on the qualitative information gathered from documents and interviews. Iterative steps in this process included getting to know the data, coding at the beginning to find recurrent themes and patterns, developing broad themes, reviewing and honing these themes, and creating a thorough thematic map. Three main topic areas were carefully examined in the analysis: inclusive education, skill development, and institutional strengthening. This study aims to provide a thorough and perceptive assessment of JICA's revolutionary influence on Uttarakhand's educational and wider developmental landscape, while acknowledging the inherent limitations, such as limited access to long-term longitudinal outcome data and a degree of reliance on self-reported institutional assessments. Future research could benefit from a mixed-methods approach incorporating quantitative impact assessments over a longer timeframe.

# 4. JICA IN INDIA

Beginning with the establishment of Japanese Official Development Assistance (ODA) in 1958, the Japan International Cooperation Agency (JICA) has been a vital bilateral development partner for India. The scope and depth of JICA's collaboration with India have significantly increased during the next decades, covering a wide range of vital industries. These include, but are not restricted to, the construction of strong transportation infrastructure, improvements in the energy sector, a steady supply of water, the encouragement of sustainable forestry, the improvement of public health systems, the support of educational programs, and the strengthening of disaster management capabilities [13]. The fact that India is still among the top recipients of Japanese ODA loans worldwide as of 2022 is evidence of the partnership's ongoing strategic importance and shared commitment [14].

JICA has a complex operational structure in India that mainly uses three different tools: grant aid, technical cooperation, and ODA loans. Its lasting impact on India's growth is demonstrated by important initiatives like the Ganga Action Plan, the strategically significant Western Dedicated Freight Corridor, and the famous Delhi Metro Rail. Although JICA has traditionally had a more limited role in the education sector, it has recently seen significant growth. Important areas such as skill-oriented vocational education, comprehensive teacher training programs, and the overall development of institutional capacities are receiving more attention in current projects [15]. The necessity of long-term sustainability is constantly emphasized in the agency's operational model, which is accomplished through strong local capacity-building programs and truly participatory development strategies that strengthen local communities.

JICA has actively matched India's ambitious national development goals with its programmatic objectives in recent years. These include the larger pursuit of the Sustainable Development Goals (SDGs) of the UN as well as flagship programs like Skill India and Digital India. This strategic alignment demonstrates a synergistic approach to tackling complex socio-economic concerns and clearly displays a common, unwavering commitment to ensuring equitable and sustainable development throughout the country.

# 5. JICA IN UTTARAKHAND

The Japan International Cooperation Agency (JICA) has taken on a crucial role in promoting sustainable development in Uttarakhand's distinct physical and socioeconomic context. This has been made possible by a number of calculated investments that have been carefully focused on catastrophe resilience, education, and the development of human resources in general. One of the most notable of these programs is the Project for Strengthening of Human Development in Uttarakhand (2017–2023), which was painstakingly carried out in close coordination with the Uttarakhand government [16]. The primary objective of this project was to significantly elevate the quality and operational capacity of key educational institutions across the state, including District Institutes of Education and Training (DIETs), the State Council of Educational Research and Training (SCERT), polytechnics, and Industrial Training Institutes (ITIs).

JICA used a multifaceted strategy as part of its all-inclusive support package for Uttarakhand. This included delivering specialist technical help, upgrading educational infrastructure strategically, offering rigorous faculty training programs to improve pedagogical skills, and modernizing old curricula to meet modern demands. These elements were all painstakingly created to increase employability for graduates and advance education that is truly inclusive of a wide range of populations. Additionally, JICA showed its adaptability in the wake of the tragic 2013 Kedarnath floods by prioritizing the integration of disaster education and preparedness into the regular school system [17]. These crucial initiatives are deeply aligned with JICA's overarching goal of strengthening local ownership and building robust institutional resilience, particularly in regions inherently prone to natural disasters.

Anecdotal information from the field and preliminary assessments point to notable gains in the effectiveness of administrative systems, the quality of instruction, and the observable results of vocational training initiatives. A more conclusive image of the project's lasting legacy will be provided by the results of thorough, long-term impact evaluations, which are still in progress. However, with education as its fundamental tenet, JICA's operational model in Uttarakhand stands out as a shining example of a truly community-oriented and sustainable approach to regional development. Other areas dealing with comparable developmental issues can learn a lot from this methodology.

# 6. IMPACT ANALYSIS

A joint initiative between JICA and the Uttarakhand government, the Project for Strengthening of Human Development in Uttarakhand (2017–2023), has clearly had a major positive impact on a number of important areas of the state's educational and human development environment. The development of skills, the encouragement of inclusive education, improved disaster preparedness, and institutional capacity building are important areas where revolutionary advancements have been seen.

**Institutional Strengthening**: 13 District Institutes of Education and Training (DIETs), the State Council of Educational Research and Training (SCERT), and more than 40 Industrial Training Institutes (ITIs) and polytechnics were all fully upgraded thanks to JICA's participation. These institutions are now able to provide modern, skill-based education that is more responsive to the demands of the current world because to this strategic improvement. In order to create a more technologically savvy learning environment, the changes included important infrastructure upgrades, the methodical upgrading of curricula to reflect current industry requirements, and the calculated introduction of digital learning tools [18]. Additionally, demanding teacher preparation programs in Japan and India were crucial in improving the caliber of instruction and expediting administrative procedures in these establishments.[19].

**Skill Development and Employability:** Aligning vocational training programs with the unique needs of the local labor market—with a focus on emerging industries like tourism, hospitality, and agriculture—was one of the project's main goals. Initial reports from the Department of Skill Development, Government of Uttarakhand (2022), show a notable improvement in job placement rates for ITI graduates, reportedly increasing by 15–20% in targeted districts [20], even though precise comprehensive data on long-term employment outcomes is still being compiled. This points to a promising course for closing the gap between industrial demands and educational output.

**Disaster Resilience Education:** JICA aggressively incorporated disaster education into Uttarakhand's school curricula following the devastating 2013 floods. This important project included educating educators on emergency

preparedness procedures and raising community awareness of catastrophe risk reduction tactics [21]. The goal of the integration was to create a more resilient population by giving communities and students the knowledge and abilities they need to lessen the effects of future natural disasters.

**Gender Inclusion:** Increased female enrollment in technical education programs was actively promoted by the project. This was accomplished by implementing focused outreach initiatives aimed at promoting involvement and by offering crucial infrastructure assistance, like the creation of hostels specifically for girls. In order to enable more women to pursue skill-based occupations, these initiatives sought to remove obstacles to access and advance greater parity in technical and vocational training.

The development of a more robust, inclusive, and skill-oriented educational environment across Uttarakhand has been greatly aided by JICA's multifaceted initiatives taken together. These initiatives promote comprehensive socioeconomic development in the area by directly supporting and advancing the accomplishment of a number of Sustainable Development Goals (SDGs) set forth by the UN, particularly SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth).

#### 7. CHALLENGES AND OBSERVATIONS

Notwithstanding the noteworthy accomplishments and constructive changes brought about by the JICA-backed human development initiative in Uttarakhand, there were some serious difficulties in putting it into practice. Although not insurmountable, these challenges frequently highlighted the difficulties that come with doing extensive international development projects in a variety of sociopolitical contexts.

Inter-departmental coordination problems and bureaucratic delays were two widespread challenges. Due to clumsy administrative procedures and a lack of smooth coordination between different government offices, project implementation regularly encountered delays, especially in the more isolated and geographically difficult hill districts. For example, there have occasionally been lengthy delays in the timely availability of money for infrastructure renovations or the approval of new curriculum modules, which have affected project timetables and the effective use of resources. This frequently required extra liaison work between the state government and JICA, taking up valuable staff time.

Furthermore, the best use of recently introduced educational technologies was hampered by the lack of local technical skills in many sectors and the limited digital infrastructure. Although JICA made it easier for digital learning tools and resources to be introduced, the full potential of these innovations was not always realized because distant schools lacked dependable internet connectivity or had insufficiently qualified local IT support workers. This led to a gap in the quality and accessibility of digital education between urban and rural institutions, underscoring the necessity of both technology interventions and the development of basic infrastructure.

The sporadic opposition of certain faculty members to pedagogical innovations was another noteworthy finding. A portion of teachers showed resistance to implementing skill-based curricula or innovative teaching approaches in spite of extensive training programs. This resistance frequently resulted from a mix of reasons, such as a strong attachment to conventional teaching methods, a belief that ongoing training and assistance were insufficient, or just a natural reluctance to change. It took consistent involvement, proving the real advantages of novel strategies, and offering continuous mentoring as opposed to one-time training sessions to overcome this.

Misunderstandings and communication breakdowns occasionally resulted from the cultural differences in administrative approaches between Indian institutions and Japanese specialists. Despite their shared commitment to the project's success, there were occasionally conflicts due to different methods of reporting, problem-solving, and decision-making. For instance, the more adaptable, flexible methods that are common in some local administration situations are contrasted with the Japanese emphasis on careful preparation and thorough documentation. It took constant communication, understanding, and a readiness to change tactics to bridge these cultural differences.

Lastly, a crucial issue that surfaced was making sure that interventions would continue after the project was finished. This includes continuing skill-based curricula and teacher training programs after JICA's direct engagement ended, as well as the long-term upkeep of renovated facilities. The substantial improvements made throughout the project period run the risk of gradually eroding in the absence of specialized local funding methods, strong institutional structures, and ongoing political will. Together, these difficulties highlight how crucial it is to keep increasing capacity,

encourage greater local ownership right away, and put up strong follow-up support systems to guarantee the long-term effects of such developmental projects.

#### 8. RECOMMENDATIONS

Several important suggestions come to light in order to guarantee the long-term viability and lasting influence of JICA's revolutionary interventions in Uttarakhand's educational and human development landscape. These suggestions are grouped to offer an organized method for upcoming preparation and execution:

- **1. Continuous Capacity Building and Professional Development:** Institutionalizing continuous capacity building programs is absolutely necessary. This entails setting up regular, organized training courses for educators, school officials, and career trainers. These programs should be created to overcome any remaining resistance to new approaches in addition to updating their abilities in accordance with changing educational standards and pedagogical advances. This kind of ongoing professional development is essential for integrating reforms and making sure that human capital is competent and adaptable to shifting needs.
- **2. Policy Integration and Institutionalization of Skill-Based Curricula**: The incorporation of skill-based curricula into the state's larger education policy needs to be properly institutionalized in order to ensure continuity beyond the project's specified timelines. This entails creating precise legislative frameworks that require vocational and skill-oriented training to be offered at all appropriate educational levels. By guaranteeing that skill development stays a fundamental part of the educational system regardless of particular project cycles, such institutionalization will protect the progress that has been made.
- **3. Strengthening Blended Learning and Digital Infrastructure**: It is critical to address the inequalities in digital access. Digital infrastructure needs to be strengthened, especially in underserved and remote locations. This entails supplying the required gear and enhancing internet connectivity. In addition to closing current access gaps, improved infrastructure will greatly increase the efficacy of blended learning strategies implemented during the project, enabling a broader audience and more equal access to education.
- **4. Sturdy Monitoring, Evaluation, and Accountability Frameworks:** To enhance accountability and offer datadriven direction for upcoming initiatives, it is crucial to set up strong monitoring and evaluation (M&E) frameworks at the district level. Clear, quantifiable indicators for monitoring project results, institutional performance, and beneficiary effect should be included in these frameworks. Frequent, impartial assessments will shed important information on the success of initiatives and identify areas in need of flexible approaches.
- **5. Fostering Community Participation and Local Ownership:** In order to improve local ownership and guarantee the relevance and durability of educational projects, it is essential to encourage greater community participation, especially through active engagement with School Management Committees (SMCs). Encouraging local communities to participate more actively in school governance and decision-making would increase commitment to educational outcomes and a sense of shared responsibility.
- **6. Dedicated Funding and Scaling of effective Models:** Lastly, the state government ought to think about setting aside specific, long-term finances for the upkeep of renovated facilities and the expansion of JICA-initiated models that have proven effective. In order to keep project advantages from eroding and to make sure that these revolutionary reforms can be extended to benefit more people and future generations throughout Uttarakhand, this financial commitment is essential. This kind of investment highlights a long-term goal for the advancement of education.

If carefully followed, these suggestions will not only build on the successes of the JICA-backed initiative but also create a strong basis for ongoing human development and educational progress in Uttarakhand.

# 9. CONCLUSION

In terms of strategically utilizing international collaboration to significantly improve regional educational infrastructure and promote holistic human development, JICA's partnership with the Government of Uttarakhand marks an important turning point. JICA has successfully led the modernization of teacher training institutions, greatly enhanced the caliber and applicability of vocational education, and smoothly incorporated essential disaster resilience education into the curriculum of schools through the painstakingly carried out Project for Strengthening of Human Development. Together, these multifaceted interventions have improved educational institutions' efficiency, increased employability

among graduates, and expanded access to high-quality education for all, especially for vulnerable and remote communities throughout the state.

But the trip wasn't without its difficulties. Issues with cultural alignment, long-term sustainability, and implementation delays highlight the need for flexible approaches and a stronger development of local ownership in subsequent projects. These findings offer insightful guidance for improving the procedures of global development collaborations.

All things considered, JICA's strategy in Uttarakhand is a powerful example of how capacity-driven, targeted foreign aid can be carefully matched with particular regional requirements to provide significant and enduring developmental impact. Other Indian states and underdeveloped nations throughout the world that hope to improve their educational systems through international collaborations might learn a great deal from the Uttarakhand situation, which is a prime example. Such partnerships, when rooted in principles of mutual respect, a shared commitment to sustainability, and a human-centered development philosophy, hold the key to unlocking transformative social progress and building resilient communities for the future.

### **CONFLICT OF INTERESTS**

None.

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