

# QUALITY EDUCATION FOR ALL IN ASIA-PACIFIC COUNTRIES

Research Insights,  
Reflections and  
Initiatives on SDG 4

A watercolor illustration on a textured, light-colored background. The central focus is a globe showing the continents of Asia and Oceania in shades of teal and green. Below the globe, an open book is depicted with its pages fanned out, rendered in similar teal and blue tones. The entire composition is surrounded by soft, splattered watercolor washes and small dark dots, creating a sense of artistic depth and movement.

EDITED BY  
JOHN JOSEPH PUTHENKALAM, JOSEPH CHACKO CHENNATTUSERRY,  
G S PRAKASHA & MIKI SUGIMURA

# **Quality Education for All in Asia-Pacific Countries**

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# Quality Education for All in Asia-Pacific Countries: Research Insights, Reflections and Initiatives on SDG-4

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INVESTOR IN PEOPLE

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# Preface

United Nations Sustainable Development Goals (UN SDGs) has a universal and transformative goal to achieve peace and prosperity for people by 2030. This volume discusses one of the 17 SDGs that is SDG-4 the Quality education for all with a special focus to Asia-Pacific countries of the world. The volume focuses on SDG-4 quality education (status report) among Asia-Pacific countries viz., India, Japan, Australia, Malaysia, Sri Lanka, Philippines and South Korea. What steps have these countries taken with respect to SDG-4 from 2015 to 2024? The plans are in place to ensure equitable quality education and reinforcing lifelong learning opportunities for all by 2030. The glimpse of SDG-4 implementation progress in these countries captured in this volume would help global readers understand what kind of programmes were conducted and what is the way forward. The ideas presented will be helpful to other countries to create best opportunities as a measure to achieve the goal by 2030. As we are halfway through 15 years plan of UN SDGs, it is important to understand the status of SDG-4 especially in southern part of the globe, which is mostly developing countries. If they need any support from the global funding authorities to ensure quality education? Would they be able to achieve the goal by 2030? The volume looks at the world from the educational perspective and vision of men and women for others and with others. As students, study and graduate, they enter this world where they will confront many questions on the socio-economic and environmental frontiers. We hope this volume would answer to their questions. Global Development SDG-4 Analysis is an attempt to bring before our students and members of civil society the scenario of the developing world, in particular. It further aims at presenting the vulnerable reality of developing countries. There are more developing countries in Asia Pacific than developed countries. These countries represent the magnitude of problems that are faced by the developing world. Basic data of the country is presented for a grasp of that country's positioning in the world. Economic development problems related to quality education are presented to show the depth of turmoil faced by these countries.

Apart from reporting the status of SDG-4 among Asia-Pacific countries, the volume will also provide recent research insights on the topic, creates awareness modules, lists best practices, draws attention to the challenges faced by Asia-Pacific countries in implementing SDG-4 and provides the way forward. The lesson learned will help other countries to take innovative steps and to know how these countries went about achieving UN target. The implications would be, the target reached by these countries, the variety of policies and schemes implemented, and how to go about the next curve in the developmental ladder.

—G S Prakasha and John Joseph Puthenkalam

## Chapter 1

# Introduction to Quality of Education: SDG-4 Perspective

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### Abstract

The chapter discusses the understanding of SDG-4 as per the United Nations perspective, along with the rationale for Millennium Development Goals (MDGs) to Sustainable Development Goals (SDGs). It discusses the targets and indicators under SDG-4, the quality of education. The chapter emphasizes the critical role of education in achieving all 17 SDGs. The chapter justifies that the SDG-4 focus on the Asia-Pacific (APAC) region through the discussion of diversity, economy, population, demographics, educational disparities, and innovation. The chapter discusses the education in the APAC region by providing an overview of the current status, trends, challenges, equity, quality, success stories, and regional innovations. The chapter highlights the progress toward SDG-4 in the APAC region in terms of Early Childhood Care and Education (ECCE), secondary, higher education, technical and vocational education, and teacher education. The chapter presents the objectives, scope, operational definitions, best practices, and chapter summaries. It further presents the overview of the volume along with its unique contribution to the policy and knowledge domain.

*Keywords:* Human development; inclusive growth; right-to-education; SDG-4; education and human capital

## **Introduction**

SDGs of the United Nations' vision for 2015 to 2030 are a natural transition from the MDGs, which were implemented from 2000 to 2015 (Parotto & Pablos-Méndez, 2023). MDGs focused on increasing the global number (quantity) of children in primary education, while the SDGs have shifted the emphasis from quantity to SDG-4 Quality of Education (Unterhalter, 2019). SDG-4 Quality of Education has led to the formation of human capital as a productivity-augmenting factor for sustainable development. For any country to experience economic development, there are various strategies that need to be explored. In general, a country can accumulate wealth by investing in physical capital, technological innovation, human capital, research and development, and social capital (Dakhli & De Clercq, 2004). Specifically, if we follow the approach of human development, then we need to invest in education to raise the literacy level of a nation as well as in health-related institutions to extend the longevity of its people.

## **Rationale MDGs to SDGs**

The birth of new nations, as an aftermath of the global war, WWII, was heralded with joy. But the joy did not last long because the newborn could not make it to an infancy stage due to the economic malnutrition in which it was born. The war-damaged economies were trying hard to reconstruct fast (Harrison, 1998), the underdeveloped countries were attempting to initiate economic development, the advanced capitalist countries being relatively free from periodic slumps, were trying to concentrate on raising the long-run rate of growth, and the socialist countries were determined to overtake the richer capitalist economies by fast economic expansion (Bergson, 1971). Macro-economic theories of economic growth explain the determinants of the wealth of nations and try to analyze why the fortunes of nations change over time. Classical economists, such as Adam Smith, Malthus, and Ricardo, treated the problem of development as part of a general inquiry into the causes and consequences of economic growth (Zweig, 1979). The rationale for the sustainable future is discussed through the economic growth model, human capital formation, and human development.

## **Economic Growth Models**

Rostow's concept of unidirectional economic growth proceeding in stages had a widespread appeal (Rostow, 1990), but also encountered criticism (Itagaki, 1963). Rostow had pinpointed the raising of the savings ratio as the key to understanding the process of development and the "take-off" into sustained growth. Development economists needed a more dynamic approach, which would also consider the longer-term effects of increases in investment, which add to the capital stock and hence accelerate economic growth. This was provided by the Harrod-Domar growth model (Sato, 1964). In response to the basic question of what determines the rate of growth of an economy's output, Harrod and Domar came up with a clear two-part answer: the savings rate and the incremental capital/output ratio.

Harrod-Domar growth theory sanctioned the overriding importance of capital accumulation in the quest for enhanced growth. Given the various variables of growth, an economy can grow. The first economic growth model with an emphasis on physical capital ( $PK$ ) and human labor ( $HL$ ) can be stated as follows:

Harrod-Domar Model: *Growth Formula One*:  $G_1 = f(PK_1, HL_1)$ . The second economic growth model with an emphasis on technological progress ( $TP$ ) can be stated as follows: Solow Growth Model: *Growth Formula Two*:  $G_2 = f(PK_2, HL_2, TP_2)$ .

Technology has become a crucial determinant in the economic growth model (Brock & Taylor, 2010). The introduction of the neo-classical growth model, especially in the contributions of Solow and Swan, provided the necessary antidote to the excessive claims made for capital accumulation. The findings of Robert Solow showed that increases in the stock of labor and capital could explain only a relatively small fraction of observed economic growth (Solow, 1957). The Solow growth formula focused attention firmly upon the role of technological progress. Advocates of technological progress pointed to the possible role of education and training, where government policy might be expected to exert a major impact. The third economic growth model with an emphasis on human capital ( $HC$ ) can be stated as follows: Schultz Growth Model (Schultz, 1961): *Growth Formula Three*:  $G_3 = f(PK_3, HL_3, TP_3, HC_3)$ .

## Human Capital as Productivity-Augmenting Factor

All the endogenous growth models share with the neo-classical model the view that physical capital accumulation, by itself, is insufficient to produce growth since all production (Alcala, 2023), including investment in physical capital, is subject to diminishing returns in the capital input alone. Consequently, the catalyst of growth is traced to other productivity-augmenting factors. The endogenous growth models identify that catalyst as knowledge in either its embodied form (human capital) or its disembodied manifestations (technological innovations). The shift of emphasis from exogenous technical innovation to human capital accumulation as the key source of growth and development is one of the major themes of the new economic development literature. The fourth economic growth model with an emphasis on the research and development sector ( $RS$ ) can be stated as follows: Romer Growth Model (Jones, 2019): *Growth Formula Four*:  $G_4 = f(PK_4, HL_4, TP_4, HC_4, RS_4)$ .

While considering the *research sector* as a determinant or engine of economic growth, we can formulate a hypothesis with reference to the Romer-Barro type models of endogenous growth, which states explicitly that

though the rate of technological change is sensitive to the rate of interest, a subsidy to physical capital accumulation may be a very poor substitute for direct subsidies that increase the incentive to undertake research, in order to promote economic growth. (Mourmouras & Lee, 1999)

The New Growth Theory (NGT) distinguishes between physical capital ( $K$ ), labor ( $L$ ), human capital ( $H$ ), and knowledge or technology ( $A$ ) (Jones, 2019). These four factors are inputs in the aggregate production function  $Y = F(K, L, H, A)$ , where  $Y$  is national output. The crucial point in the NGT is its treatment of knowledge as an input that is different from the others. Economic growth is a dynamic process. They are not competing against each other; rather they are complementing each other in the process. To further deepen the understanding of human capital in the process of development, we would like to introduce another concept, namely, human development, which deals with the variable of literacy.

## Human Development

The first Human Development Report in 1990 opened with the simply stated premise that has guided all subsequent reports: “People are the real wealth of a nation” (*Human Development Report 1990*, n.d.). The basic purpose of development is to enlarge people’s choices. In principle, these choices can be infinite and can change over time. People often value achievements that do not show up at all, or not immediately, in income or growth figures: greater access to knowledge, better nutrition and health services, more secure livelihoods, security against crime and physical violence, satisfying leisure hours, political and cultural freedoms, and a sense of participation in community activities. The objective of development is to create an enabling environment for people to enjoy long, healthy, and creative lives,” stated Mahbub ul Haq (1934–1998). According to Amartya Sen,

Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it. (Ranis et al., 2000)

The United Nations Development Programme (UNDP) Report addresses, as its main issue, the question of how economic growth translates – or fails to translate – into human development. The focus is on people and on how development enlarges their choices. Human development thus concerns more than the formation of human capabilities, such as improved health or knowledge. It also concerns the use of these capabilities, be it for work, leisure, or political and cultural activities. And if the scales of human development fail to balance the formation and use of human capabilities, much human potential will be frustrated. As we have analyzed the variables of economic growth and human development, let us enter into the scene of India, where the concept of “inclusive growth” is becoming a keyword in Indian economic policies (Rasool et al., 2022).

## Contextualizing India: SDG-4 Perspective

India’s policy makers are striving toward the concept of inclusive growth and how it can change the lives of millions of people who suffer from an unequal distribution of wealth. India’s development path is based on the policies and

allocation of resources through its Five-Year Plans until 2017. Let us focus on the policies and programs that aim at the concept of inclusive growth of the 11th Five-Year Plan, which drew a vision toward the 12th Five-Year Plan of India 2012–2017 (Twelfth Five-Year Plan (2012–2017), n.d.). As the world's population crossed the 8th billion, India's total population was 1,462,158,325 as of May 14, 2025, based on World meter (*Worldometer*, n.d.). For growth to be inclusive, it must create adequate livelihood opportunities and add to decent employment commensurate with the expectations of a growing labor force. India's young age structure offers a potential demographic dividend for growth, but this potential will be realized only if the extent and quality of education and skill development among new entrants to the workforce are greatly enhanced (Sanghi et al., 2012). One of the most remarkable things brought out by the 66th round of the National Sample Survey Organization (NSSO) on Employment (2009–2010) is that the number of young people in education, and therefore, out of the workforce, has increased dramatically causing a drop in the labor participation rate (*Key Indicators of Employment & Unemployment in India 2009-10*, n.d.). The total number of young working-age (15–24) people who continued in educational institutions doubled from about 30 million in 2004–2005 to over 60 million in 2009–2010. The survey also shows that between 2004–2005 and 2009–2010, the overall labor force expanded by only 11.7 million. The service sector must continue to be a place for the creation of decent jobs/livelihood opportunities in both rural and urban areas (Frey & MacNaughton, 2016).

## **Inclusive Growth in India**

Developing countries aim to improve the low indices of development goals by targeting high economic growth rates as we have seen in recent decades in the emerging economies of the world (Chatterjee, 2024). Globalization opened the doors of markets, and economies started to taste the fruits of liberalization. It has long been known that spurts of rapid economic growth can increase inequality, as we notice in emerging BRICS countries, and a debate has arisen out of this scenario: growth versus equality. Joseph Stiglitz, the Nobel Prize-winning economist, believes that low growth and inequality are interconnected, but he believes that the causal arrow moves in the opposite direction (Stiglitz, 2012). As he put it in a recent interview, “I think it's inequality that's causing low growth.” The Indian economy, which has over the last six decades passed through various phases of growth, is now all set to enter an altogether different orbit: one marked by a high rate of expansion, combined with “inclusive growth.” The term, inclusive growth, is finding its way increasingly in to the lexicon of government leaders, economists, planners, academicians and businessmen, not just in India but even internationally. Former Indian Prime Minister Manmohan Singh (*PM's Address at the Meeting of National Development Council 2006*, n.d.) noted that his government recognizes that high national income growth alone does not address the challenge of employment promotion, poverty reduction and balanced regional development. Nor does growth improve human development. Consequently, all the major initiatives of his government – in agricultural and rural development,

in industry and urban development, in infrastructure and services, and in education and health care – sought to promote “inclusive growth.” According to Singh, the key components of the “inclusive growth” strategy included a sharp increase in investment in rural areas, rural infrastructure and agriculture; a spurt in credit for farmers; an increase in rural employment through a unique social safety net; and a sharp increase in public spending on education and health care (Bagla & Stone, 2012). The government also went in for a variety of legislative interventions to empower the disadvantaged. Addressing the annual general meeting of the Confederation of Indian Industry (CII), Singh once urged Indian industry to make growth processes both efficient and inclusive. He also drew up a 10-point social charter to ensure that “our growth process is both inclusive and broad-based.” Former Indian Finance Minister P. Chidambaram wanted to take India from “a high rate of growth” era to one of “more inclusive growth” (Puthenkalam, 2013). “Growth is necessary but not sufficient,” points out Chidambaram. “Growth must be inclusive. Growth with equity is the only road that India can take.” According to him, growth is not an end, but the means to an end – which is the participation of all Indians in the growth story. But even during the early years of 2000, 26% Indians lived in “abject poverty,” and many, who had enough to eat, did not have access to water, sanitation, healthcare, and education. The government has taken measures to increase the allocation to social sectors; for instance, allocations to education had quadrupled to \$7.2 billion over the last four years, and to the health sector it had doubled to \$3.6 billion (Twelfth Five Year Plan (2012–2017), n.d.). The investment in education should increase much more to achieve quality education.

From the discussion on inclusive growth, we can propose a definition of inclusiveness that involves four attributes: Opportunity: Is the economy generating more and varied ways for people to earn a living and increase their incomes over time? Capability: Is the economy providing the means for people to create or enhance their capabilities to exploit available opportunities? Access: Is the economy providing the means to bring opportunities and capabilities together? Security: Is the economy providing the means for people to protect themselves against a temporary or permanent loss of livelihood? Consistent with this definition, “inclusive growth” is a process, in which economic growth, measured by a sustained expansion in gross domestic product (GDP), contributes to an enlargement of the scale and scope of all four dimensions. The 11th Plan (2007–2008 to 2011–2012) sought to build on the gains achieved in the 11th Plan and shift the economy to a path of faster and more inclusive growth. An important program contributing to poverty reduction in rural areas is MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Scheme, 2005), which began in the first year of the 11th Plan and was quickly expanded to cover the entire country. The economy has weathered an exceptionally difficult global environment very well during the 11th Plan. During the 12th Five-Year Plan, macroeconomic policies must ensure that fiscal consolidation takes place as planned, the investment environment remains supportive, and that investment in infrastructure is given renewed thrust, if it keeps its objective of inclusive growth to be a reality (Sen, 2019). This calls for a concerted effort to make India’s growth more inclusive in

the future. Several measures are outlined to strengthen the sources of inclusive growth. The main thrust of inclusive growth strategies must be on the following key areas: (i) employment and growth in agriculture; (ii) increased public expenditure on education and health; (iii) improved infrastructure; and (iv) more effective governance at all levels. Let us hope that the objectives of the 12th Five-Year Plan “Faster, Sustainable and more Inclusive Growth” be a reality for all its citizens during the years 2012–2017. Presently, India does not have Five Year Plans and follows an Annual Plan strategy under the auspices of Niti Aayog that outlines the new development vision (*India Three Year Action Agenda, 2017*).

**Elementary Schooling** – The Sarva Shiksha Abhiyan (SSA) (n.d.), in combination with the Mid-Day Meal (MDM) Scheme (n.d.), has succeeded in achieving near-universal enrolment in primary schools. The number of rural habitations with at least one primary school increased from 87% in 2002 to 99% in 2008, and those with upper primary schools within a radius of 3 km increased from 78% to 92% in the same period. Enrolment has increased for both boys and girls, with a welcome narrowing of the gender gap. The responsibility for improving the quality of education lies with the state governments. Lacunae in systems of governance make it difficult to enforce teacher accountability. This problem is sought to be tackled by making schools responsible to the elected Panchayati Raj Institutions (PRIs), and some steps have been taken in this direction (*Puthenkalam, 2013*).

**Secondary Education** – As the flow of children completing elementary school increases, attention will have to be focused on the development of adequate infrastructure to absorb them into secondary and higher secondary schools. The primary responsibility for developing schools lies with the state governments, but the 11th Plan (*The Eleventh Five Year Plan 2007-2012, n.d.*) recognizes that the center has to play a supporting role as it does in the case of SSA. In the age group of 5–14 years, 89.3% of children were in school in 2009–2010, up from 82.4% in 2004–2005.

**Public Expenditure on Education** – Several studies suggest that there is a correlation between inclusive economic growth and the level of public expenditure on social development (including education and health) (*Ahuja & Pandit, 2020; Ayuba & Ayuba, 2014; Pratama, 2015*). Literacy is arguably the most significant factor in poverty reduction, as it enhances employability. The role played by literacy has been found to be particularly notable by *Ravallion and Datt (2002)*, who reported that nearly two-thirds of the difference between the elasticity of the headcount index of poverty to non-farm output for Bihar (the state with lowest absolute elasticity) and Kerala was attributable to the latter’s substantially higher initial literacy rate (*Ravallion & Datt, 2002*).

## **Right to Education in India**

The initiative of the Indian government to provide education to all its children through the Right to Education Bill. This is a strategy within the context of the Five-Year Plans of India, which aims at the strategy of inclusive growth (*Singh & Mishra, 2023*). As an emerging economy, India needs to have a more skilled population if it wants to enter a path of development at a greater pace (*Sanghi*

et al., 2012). By analyzing the Right to Education Bill, we will be able to show the impact of education on growth and development (Ministry of Education - Government of India, 2021).

Right to Education – In 2009, the Right to Education Act (RTE) (*Right to Education*, n.d.) was passed, guaranteeing free and compulsory elementary education to children between 6 and 14 years old. The 86th Amendment to the Constitution of India makes education a fundamental right. The Act also obliges private schools to admit and educate at least 25% of children free of cost. Between 2003 and 2009, the number of enrollees in elementary education increased from 57 million to 192 million (*World Development Report 2010*, n.d.). An estimated eight million children, who do not currently attend schools, are expected to benefit from the program. Literacy in India (for the age group five years and above) increased from just 18.3% in 1951 to 43.6% in 1981, and to 65.2% in 2005. However, the level of literacy varies significantly across states, genders, and rural–urban areas. For example, Kerala has more than 90% literacy compared with Bihar at around 50%. There are large differences in urban–rural literacy rates in different age groups. It is disturbing, however, to note that literacy rate declined between 2001 and 2004–2005, particularly male literacy in most states, including Kerala.

## Brief Overview of SDGs

The very idea of proposing SDGs by the United Nations following the MDGs is to see a prosperous and peaceful planet by the year 2030. Though MDGs brought progress in various aspects of human life, some of the fundamental global problems continued to exist, such as poverty, health and hygiene, hunger, climatic issues, and inequality (Liimatainen, 2013). Therefore, the 17 goals were proposed and planned to be achieved by 2030 (de Jong & Vijje, 2021). They are (1) ending poverty, (2) ending hunger and promoting sustainable agriculture, (3) providing healthy life and well-being, (4) promoting quality education and lifelong learning for all, (5) gender equality and women’s empowerment, (6) providing water and sanitation facilities to all, (7) providing reliable and sustainable energy to all, (8) promoting economic growth, (9) promoting sustainable industrialization and fostering innovation, (10) reducing inequality on the planet, (11) creating safe and sustainable human settlements, (12) ensuring sustainable consumption and production, (13) combating climate change impacts, (14) conserve water resources, (15) protecting terrestrial ecosystem, (16) promoting peace, and (17) strengthening global collaboration for sustainable development.

The present volume focuses on goal four of the UN SDGs, that is, “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.” Thus, understanding the SDG-4 targets and indicators is imperative. There are 10 main targets in UN SDG-4. However, the first seven are expected outcomes, and the remaining three are the means to achieve those outcomes. The following paragraph provides the gist of the expected outcomes of the SDG-4 by 2030 (Mukherjee, 2017).

(1) Ensure that all girls and boys complete free, equitable, and quality primary and secondary education. Furthermore, they must achieve a minimum proficiency in reading mathematics. (2) Ensure that all girls and boys have access