Future Vision: Education, Technology and the Education

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Abstract: *It seems miracle, if one will, demonstrates the wisdom of sustained investment in the educated people. During the nearly 60 years since independence, India's investments in human development have reduced hunger, increased literacy, and improved healthy conditions. Education investments have produced world-class scientists, engineers, and technicians. They, in turn, have fuelled the growth of Indian technology gadgets and attracted many global technology leaders, including Microsoft. People have been the key to Microsoft's success in India, and our experience may be illustrative. We entered the country 17 years ago, working closely with the government, IT industry, academia, and the local developer community. Over the years, the people of India have had end-to-end responsibility for the development of many modern technologies. They have made important contributions to many educational strategies. We have opened Modern Research centers in India, where teachers, scientists and engineers work to advance the frontiers of knowledge in computer science and related fields, often in collaboration with India's academic community. These teams have demonstrated India's great capacity for innovation during the past years. A technology is extremely proud to be a part of the education transformation. We have seen these steps because, as teachers, countrymen, leaders and simply as human beings, we believe that all 6 billion people who share this planet deserve a chance to realize their full potential. We as progressive people of India are especially excited to be working toward realizing this vision in India, where progress on many fronts is already well underway.*

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I.   Introduction

For anyone who is passionate about using technology to help create opportunities for people, trends in India today are tremendously exciting and encouraging. As everyone knows, the nation has become a global leader information technology and other high-tech fields such as education pharmaceuticals, telecommunications, and telecom-based business services. These factors have contributed to the education's rapid growth since modern times, which has lifted many people out of illiteracy. Continued growth could alleviate illiteracy and expand opportunities for millions more. One day, we may look back on India's progress during this decade as one of the great humanitarian achievements of our time. Equally exhilarating is how India's rise may influence the global community. The world will be a safer place if other nations can learn from the achievements of what is not only the largest democracy, but also one of the most pluralistic cultures. The Prime Minister, Dr Manmohan Singh, has said it well: India's success will renew humanity's faith in liberal democracy, in the rule of law, in free and open societies. The entire world has a big stake in India's future.

The Power of Indian Skills and Talent

It seems to one that the India miracle, if one will, demonstrates the wisdom of sustained investment in the educated people. During the nearly 60 years since independence, India's investments in human development have reduced hunger, increased literacy, and improved healthy conditions. Education investments have produced world-class scientists, engineers, and technicians. They, in turn, have fuelled the growth of Indian technology gadgets and attracted many global technology leaders, including Microsoft. People have been the key to Microsoft's success in India, and our experience may be illustrative. We entered the country 17 years ago, working closely with the government, IT industry, academia, and the local developer community. Over the years, the people of India have had end-to-end responsibility for the development of many modern technologies. They have made important contributions to many educational strategies. We have opened Modern Research centers in India, where teachers, scientists and engineers work to advance the frontiers of knowledge in computer science and related fields, often in collaboration with India's academic community. These teams have demonstrated India's great capacity for innovation during the past years. A technology is extremely proud to be a part of the education transformation.

Sustaining Growth, Broadening the Opportunity

How can India best sustain its rapid growth and broaden opportunity for its entire people? Much has been written about the need for sharply increased investments in education, health, highways, airports, power plants

and other infrastructure. Educationalists also point to a need for regulatory reforms and better public services provided more transparently. These are important challenges. Also, from our perspective, investments in education should continue to be a high priority, especially efforts to further alleviate hunger, reduce illiteracy and improve public health. Threats to health such as HIV/AIDS, for example, could upset much of India's recent progress. The estimate is that less than one per cent of adults are infected, but because of India's large population, the number is among the highest in the world. Education at every level remains crucial for continued growth. Output of college and university graduates is impressive in absolute terms, and has been a great source of economic strength, but India cannot afford to become complacent. The nation now faces an acute shortage of skilled teachers. This has warned recently. Education spending as a percentage of GDP lags far behind that of countries such as South Korea and Taiwan. Yet, one could argue that India needs a skilled and educated workforce even more than the so-called Asian Tigers do. They accelerated their development through manufacturing, primarily, while India's focus on services and technology makes its workforce skills especially critical.

As many others have said and as the government has recognized in its budget plans, India urgently needs to build more primary and secondary schools, improve teaching and ensure that more children attend school, especially in rural areas. Higher education needs to be expanded and upgraded. Top-tier institutions are overrun with applicants, while skill levels among graduates of some other colleges do not meet world standards or the needs of employers. By one estimate, 25% of all new engineering graduates lack the skills to be employable in the IT industry, despite its dire need for
workers.

Computer advancement tecnology is committed to helping improve Indian education. Over the past several years, we have been engaged in many collaborative efforts, mainly focused on advancing the instructional uses of technology and expanding access to computers and computer skills. For example, our Project Shish currently works with more than 1state governments, bringing computer skills training to more than120,000 teachers so far. We have helped enhance learning opportunities available to students in slum and rural schools through support for Digital Study Hall, a project that records an distributes DVDs of classes led by India's best grassroots teachers And to help overcome a scarcity of classroom computers, Microsoft Research India has developed Windows Multipoint, a technology that several students to work on a single P.C. In higher education, our efforts have included the Developer Platform Evangelism Academy, which has provided professional development to more than 1,000 IT and engineering faculty members' at51Indian colleges. To help recent engineering graduates transition from school to careers, we recently began working with the Indian government and industry on an online employability portal. It will enable graduates to assess their skills, complete appropriate training and connect with prospective employers.

Technology and India's Future

Besides being an important tool in education and a growth sector of the Indian economy, information technology can aid social and economic development in many ways. Wide deployment of computers, software and telecommunications helps boost productivity and reduce transaction costs in many sectors, strengthening economic growth. Computers, mobile devices and software can help expand the quality and availability of health care and other public services, as well as education. A lack of access to technology, on the other hand, can hinder development. More than 30 years after the invention of one of the most versatile and empowering technologies of our time, the personal computer is readily available to only 1 billion of the world's more than 6 billion people. Microsoft's founding vision of a computer on every desk and in every home is a reality for the roughly 1 billion people living near the top of the global economic pyramid. But the digital revolution has yet to spread very far in many rural areas, impoverished communities and developing countries, including India. Disparities in technology access are troubling, for as the global economy is increasingly computerized and moves online, social and economic development becomes even more difficult in the places an for the people left behind, on the less fortunate side of the digital divide.   Toward that end, we should have set our sights on an ambitious milestone: With governments and other non-govt partners, we aim to deliver the power of information technology in the field of education to 1 billion more people worldwide by the coming years. We should expand several technology training and assistance programs. And we have seen introduction of the low-cost Microsoft Student Innovation Suite of software products, including versions of windows, Microsoft Office, Learning Essentials and Microsoft Math. Although we invested many millions of dollars to develop these products, the suite will be available tom students for about Rs.127, through government programmes in India and many other developing countries as part of targeted programmes that provide PCs to disadvantaged students.

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