

# NUTA

# BULLETIN

OFFICIAL JOURNAL OF NAGPUR UNIVERSITY TEACHERS' ASSOCIATION

Regd. No. MAHBIL/2001/4448 : Licensed to post without prepayment No. NR/ATI/78/2001

YEAR : 26)

15 th November 2001

(No : 12

‘नुटा बुलेटीन’

रौप्य महोत्सवी विशेषांक मालिका

\*

विशेषांक तिसरा

\*

**शिक्षणाचे**

**वाटोळेकरण - विशेषांक**

\*

\*

‘नुटा बुलेटीन’ रौप्य महोत्सवी विशेषांक मालिकेतील आजचा हा तिसरा विशेषांक. या अंकामध्ये डॉ. ना.य.डोळे यांचा शिक्षणाचे वाटोळेकरण हा लेख प्रसृत करण्यात आला असून अशा वाटोळेकरणास सहाय्यभूत ठरणारा व गाजलेला “बिर्ला - अंबाणी रिपोर्ट” शब्दशः याच अंकात प्रकाशित केलेला आहे. त्या अहवालावरील काही प्रतिक्रिया सुद्धा या विशेषांकात समाविष्ट करण्यात आलेल्या आहेत.

आपले विनित

प्रा. अनिल सोमवंशी, मुख्य संपादक

प्रा. सुभाष गवई, संपादक :

: प्रा.सुशील काळमेघ, प्रकाशक

# शिक्षणाचे वाटोळेकरण

डॉ. ना.य.डोळे

दोन वर्ष झाली तरी शिक्षणाच्या भगवीकरणाबद्दल विविध मोठी वृत्तपत्रे साप्ताहिक साधक बाधक चर्चा करीत आहेत. नुसत्या शिक्षणाचेच काय पण संपूर्ण जीवनाचेच भगविकरण झाले पाहिजे असे नुकतेच राष्ट्रीय स्वयंसेवक संघाचे ज्येष्ठ नेते म्हणाले.

भगवीकरण म्हणजे हिंदुत्वाचा अजेंडा शिक्षणाच्या माध्यमातून शिक्षणसंस्था शिक्षक व विद्यार्थी यांच्या गळी उतरावयाचा, लोकशाहीमध्ये शिक्षण स्वतंत्र असते. कम्युनिस्ट, फॅसिस्ट, इस्लामी देशात शिक्षणावर प्रथम पकड बसविण्यात येते आणि राज्यकर्त्यांना ज्या विचाराची पीढी अपेक्षित आहे तशी पीढी तयार करण्याचे प्रयत्न होतात. शिक्षण हे समाजपरिवर्तनाचे फार प्रभावी साधन आहे हे इस्लामी मदरसावाल्यांनाही माहीत आहे. हिटलर, लेनिन, स्टालिनला सुद्धा विशिष्ट विचाराचा समाज घडविण्यासाठी शिक्षणव्यवस्थेवर, शिक्षण पद्धतीवर ताबा मिळविणे आवश्यक असते हे समजले होते.

अभ्यासक्रमात बदल आणि इतिहासाचे पुनर्लेखन हे शिक्षणात बदल करू पाहणाऱ्यांचे आवडते विषय आहेत. हे प्रकार शेकडो वर्षांपासून चालू आहेत. इ.स.पू.पाचव्या, चौथ्या (४२७-३४७) शतकातील ग्रीक विचारवंत प्लेटो यानेही त्याच्या आदर्श राज्याच्या कल्पनेच्या सिद्धीसाठी शिक्षणात फार मोठे बदल सुचविले आहेत. रिपब्लिक (आदर्श राज्य) हा प्लेटोचा ग्रंथ शिक्षणावरील एक मौल्यवान प्रबंध आहे असे फ्रेंच तत्त्वज्ञ रुसो म्हणतो, इतके प्लेटोने शिक्षणासंबंधी विवेचन केले आहे.

भाजपप्रणीत सरकार भगवीकरण करते म्हणजे काय करते? सरकारला काही नेमणुकांचा हक्क असतो, त्या हक्कांचा वापर करून संघाच्या विचाराची माणसे विविध अखिल भारतीय शैक्षणिक समित्यावर नेमायची. ऐतिहासिक संशोधन मंडळावर पूर्वी डाव्या विचाराची मंडळी होती; आता त्यांना काढून उजव्या संघाची माणसे नेमली गेली आहेत. भारतीय इतिहासाचे पुनर्लेखन झाले पाहिजे असे कम्युनिस्ट म्हणतात. संघवालेही म्हणतात, विद्रोहीवालेही हेच म्हणतात, प्रत्येकाला त्यांच्या सोयीचा इतिहास लिहून काढावयाचा आहे. तरी सुद्धा पुनर्लेखन होत नाही कारण पुनर्लेखनासाठी सुद्धा खूप संशोधन करावे लागेल, अभ्यास करावा लागेल. कष्ट करावे लागतील, नुसती भाषणे देऊन आळशी लोकांकडून इतिहासाचे पुनर्लेखन होणार नाही. इतिहास पुनर्लेखनाची तातडीची गरज कोणाला वाटत नाही, या निमित्ताने काही पदे मिळावीत इतकी अल्प अपेक्षा असते.

मध्यंतरी केंद्र सरकारच्या नियंत्रणाखाली असलेल्या विद्यापीठ अनुदान मंडळाने (युजीसीने) असा फतवा काढला की, विद्यापीठ कॉलेजच्या पातळीवर ज्योतिष्य, वैदिक कर्मकांड या विषयांचा समावेश केला तर आम्ही शंभर टक्के अनुदान देऊ. या आदेशाविरुद्ध महाराष्ट्रातील विद्वत् क्षेत्रात प्रचंड गदारोळ झाला. सर्व विद्यापीठांच्या कुलगुरुंनी हे विषय शिकविण्यास विरोध दर्शविला. डॉ. विजय भटकर यांचा अपवाद वगळता सर्व नामवंत शास्त्रज्ञांनीही पुरोगामी विचार बैठकीचा हा पुरावाच आहे असे जाहीर करण्यात आले.

## वाटोळेकरण व्हायला नको

मी स्वतः भगवीकरणाचा विरोधक आहे. पण मला जास्त काळजी वाटते शिक्षणाच्या वाटोळेकरणाची. शिक्षणाचे वाटोळेकरण महाराष्ट्रात सातत्याने चालू आहे. त्याचा दुष्परिणाम प्रत्यक्ष ज्यांच्यावर होतो ते ओरडत आहेत. पण पालकांना, विद्यार्थ्यांना, एकूण समाजाला वाटोळेकरणाची जाणीव तीव्रतेने झालेली नाही. वाटोळेकरणाच्या तुलनेत भगवीकरणाचा धोका कमी आहे असे मला वाटते. समजा काही विद्यार्थी बी.एस्.सी. पुरोहित वर्गात शिकू लागले वा ज्योतिष्य हस्तसामुद्रिक शिकू लागले तर फारसे बिघडणार नाही. या विषयांना मुळात जास्त विद्यार्थी जाणारच नाहीत कारण नोकऱ्यांसाठी या शिक्षणाचा काही उपयोग नाही, हे विद्यार्थ्यांना समजते. हे विषय जितके निरुपयोगी आहेत तसे अनेक निरुपयोगी विषय सध्या शिकविले जातात. बारावीमध्ये अधिक मार्क मिळावेत म्हणून विद्यार्थी रशियन, फ्रेंच, जर्मन, पाली वगैरे भाषा घेतात किंवा सध्या कॉलेजात किमान कौशल्यावर आधारित व्यवसाय शिक्षण दिले जाते. त्याचा काय उपयोग होतो? वराहपालन हे व्यवसाय शिक्षण घेऊन कोणी डुकरं पाळायला सुरुवात केली आहे असे दिसत नाही. तो व्यवसाय त्या व्यवसायाचे पिढीजात व्यावसायिकच करतात. त्याचप्रमाणे मत्स्यव्यवसायाचा अभ्यासक्रम ज्या गावाच्या परिसरात एकही नदी तळे नाही तेथील कॉलेजात शिकविला जातो. डेअरी सायन्ससारखे विषय शिकविले जातात. या व्यवसाय शिक्षणात मेरिटप्रमाणे प्रवेश द्यायचा असतो, त्यामुळे बहुसंख्य मध्यमवर्गीय मुलीच असतात, त्याचा नंतर म्हशी बैलाची कधी दुरून सुद्धा संबंध येत नाही. अनेक निरर्थक निरुपयोगी टाकावू जीवनाशी सुतराम संबंध नसलेले विषय शिकविले जातात त्यात समजा ज्योतिष्य, वैदिक गणित, पुरोहित शास्त्राची भर पडली तर फारसे बिघडेल असे समजण्याचे काही कारण नाही. संस्थाचालकांना इमारती बांधायला पैसा मिळेल, दोनचार शिक्षक पोटाला लागतील इतका फायदा होईल. विद्यार्थी येणारच नाहीत. प्रारंभी काही वेडे येतील. नंतर वर्ग बंद पडतील. यामुळे ज्योतिष्य, पुरोहितविद्या या विषयावर समर्थनार्थ आणि विरोधासाठी विनाकारण शक्ती वाया घालवू नसे असे माझे आता मत बनले आहे. फालतू बाबींचा बोभाटा फार झाला आहे.

महाराष्ट्र शासन ज्या दृढ चौपदरी मार्गाने शिक्षणाचे वाटोळे करीत आहे त्याकडे अधिक गंभीर लक्ष दिले पाहिजे.

नुकताच मी गंगाखेड (जि. परभणी) येथे एका कार्यक्रमासाठी गेलो होतो. कार्यक्रम स्थानिक जि.प. प्रशालेच्या भव्य नवीन इमारतीत होता. चौकशी करता असे समजले की या शाळेत पाचवी ते दहावी या वर्गात सर्व मिळून विद्यार्थ्यांची संख्या शिक्षकांच्या संख्येपेक्षा कमी आहे. शासनाने विनाकारण अनेक खाजगी शाळांना कायम विनाअनुदान तत्वावर गंगाखेड आणि भोवताली परवानगी दिली आहे. मास्टर प्लॅन, शैक्षणिक गरज, तज्ज्ञांच्या शिफारसी धाब्यावर बसवून शाळांना परवानगी दिली आहे. गंगाखेड प्रमाणेच सर्वत्र परिस्थिती आहे. जि. प. शाळात शिक्षकांना न शिकविता वेतन मिळते आणि

शिक्षणक्षेत्रातील सज्जनशक्ती संघटीत झाली पाहिजे. राज्यकर्त्यांवर सोपवून द्यावे अशी शिक्षणपद्धती ही क्षुल्लक बाब नाही. आज जे वाटोळेकरण होत आहे,

त्याची कटूफळे आपल्या मुलानातवंडांना भोगावी लागणार आहेत.

म्हणून कमालीचे अस्वस्थ वाटते. ज्यांना काळजी

वाटते त्यांनी संघटीत सक्रीय व्हावे.

स्वस्थ पाहत बसू नये.

विनाअनुदान शाळा कॉलेजातील शिक्षक प्राध्यापकांना लाखो रुपये देणगी देऊन पगार मिळत नाही. शिक्षकांना वेतन चालू असो नसो, शिक्षण थांबलेच आहे. विशेषतः ग्रामीण भागात शिक्षकांना त्याचे काम करण्याऐवजी अन्य सरकारी, झेडपीची, खाजगी कामे करावी लागतात. कागदावर मात्र विद्यार्थी पहिली पासून इंग्रजी शिकत आहेत. पर्यावरण प्रदूषण, एड्स, लोकसंख्या नियंत्रण, बचतीचे महत्त्व, संगणक आणि माहितीशास्त्र शिकत आहेत. प्रत्यक्षात मात्र चौथीच्या मुलांना साक्षर करा अशी घोषणा करण्याची वेळ आली आहे.

काटकसरीची कात्री सर्वात प्रथम शिक्षण, सार्वजनिक आरोग्य आणि समाजकल्याण खात्यालाच लावायची असा शासनाचा एकविसाव्या शतकातील निर्धार आहे. अमर्त्य सेन उडत गेले कारण ते असे म्हणतात की विकासासाठी शिक्षण आणि सार्वजनिक आरोग्य याची फार गरज आहे. विशेषतः मुलींच्या शिक्षणामुळे देशाच्या विकासाला गती येते. फुले, शाहू-आंबेडकर यांची नावं सारखी घ्यावी पण शिक्षणाचा खेळखंडोबा केल्याशिवाय राहायचे नाही असे शासनाचे धोरण आहे.

शिक्षकच नेमायचे नाहीत हा उत्तम उपाय शासनाने शोधून काढला आहे. डी.एड. चा घोळ असा करून ठेवला की एक पूर्ण वर्ष वाया गेले. केवढी बचत झाली! विद्यापीठात, कॉलेजात रिक्त जागा भरायच्या नाहीत म्हणजेही खर्च कमी होतो. शिक्षकसेवक नेमायचे वेतन तीन हजार. नेमणूक दहा महिन्याची. काम नीट करतो का नाही यासाठी सरपंचाची शिफारस मागायची. मुख्याध्यापकांची राजा सरपंच मंजूर करणार असे निर्णय घेतले जात आहेत. ग्रामशिक्षण समितीचा अध्यक्ष आता सरपंच आहे.

### वेतनाचा प्रश्न

कॉलेजमध्ये आता तासिकांच्या आधारे नेमणूका करावयाच्या असा आदेश आहे. एका नामांकित कॉलेजात नुकत्याच अशा २८ प्राध्यापकांच्या एकेका पेपरसाठी म्हणजे आठवड्यात चार तासिका घेण्यासाठी नेमणूका करण्यात आल्या. आठवड्यात चारच तासिका असल्या तरी त्यांनी सहाही दिवस कॉलेजमध्ये रोज पाच तास उपस्थित राहणे, मस्टरवर सही करणे सक्तीचे आहे. वेतन किती मिळणार? एका पेपरसाठी वर्षाला ८० तासिका असतात वर्षाला ८० x ६० = ४८०० रुपये म्हणजे महिन्याला चारशे रुपये वेतन त्यांना मिळणार. म्हणजे दिवसाला पंधरा रुपयापेक्षा कमी! वेतनासंबंधी सरकारचा कायदाच असे सांगतो की किमान वेतन ८० रुपये दिवसाला असावे. कॉलेजाचा प्राध्यापक एम.ए.बी.प्लस असलेला दिवसाला १५ रुपये मिळवितो. शेतमजुराला सुद्धा यापेक्षा जास्त मजुरी मिळते.

कंत्राटी शिक्षक, तासिकांच्या आधारे प्राध्यापक या पद्धतीने गुरुशिष्य परंपरा टिकेल की खंडित होईल. याचा विचार शासन करित नाही. यावर्षी कायमविनाअनुदान तत्वावर महाराष्ट्र शासनाने एकशेवीस महाविद्यालयांना परवानगी दिली. या कॉलेजांची गरज होती का? विद्यापीठाची शिफारस होती का? खरोखरच पालक विद्यार्थ्यांची अधिक चांगली सोय होणार होती का? कशाकशाचा विचार न करता खिरापत वाटण्यात आली आहे शिक्षणाचे वाटोळेकरण हेच उद्दिष्ट यामागे नाही असे खात्रीने म्हणता येईल का?

ई.बी.सी. रद्द करण्याची योजना आहे. फी भरा आणि शिका नाहीतर फुटा! हे नवीन धोरण आहे. संगणक शिक्षणाशिवाय तरणोपाय नाही असेही

म्हणायचे आणि संगणक शिक्षणाचा खर्च सामान्य विद्यार्थ्यांच्या आवाक्याबाहेर राहिल अशी व्यवस्था करावयाची.

कुलगुरुपासून सर्व नेमणूका राजकीय. जातीय निकषावर करावयाच्या असेही अलिखित धोरण शासनाचे दिसते. पूर्वी कुलपतींकडून ज्या नेमणूका व्हावयाच्या त्या तरी गुणवत्ता, ज्येष्ठता या आधारे व्हावयाच्या. परवा राज्यपालांनीच असे जाहीरपणे सांगितले की ज्या अध्यादेशांवर मी सही करतो त्याची पूर्ण माहिती मला असतेच असे नाही.

लोकशाही सरकारला काही राजकीय संबंध जपावे लागणार पण नेमणूका करतांना शिक्षणक्षेत्राला तरी त्यांनी अपवाद करावा. विविध महामंडळे, समित्या, पब्लिक सर्व्हिस कमिशन यांच्यावर समर्थकांची वर्णी लावण्यास हरकत नाही. कुलगुरू या शिक्षणक्षेत्रातील ज्येष्ठतम पदाचा तरी अपवाद करावा असे वाटते. शिक्षणक्षेत्रातील पावित्र्य, शिस्त एकदा बिघडले की ते पुन्हा सुधारणे अवघड होईल.

शिक्षकांच्या बदल्या बढत्या याबाबतीत जातीय, राजकीय यांच्या बरोबरीने आर्थिक हितसंबंधी गुंतलेले असतात. लोकांनी कायदा हातात घेऊन अधिकाऱ्यांना मारझोड करू नये हे खरे पण लोक कायदा हातात घेण्यास का उद्युक्त होतात त्याचाही विचार करावा लागेल. बदल्यांच्या मोसमात लाखो रुपयांची उलाढाल होते असे म्हणतात.

नवी शाळा, नवीन तुकड्या, नवी कॉलेजे, वस्तीगृहे, आश्रमशाळा, काहीही काढावयाचे असेल तरी अर्थपूर्ण बोलणी करावी लागतात. शिक्षण खात्यातील मंत्रालयातील अधिकारी, मंत्री महोदयांचे आदेश सुद्धा मानीत नाहीत. मुख्यमंत्र्यांची सही असली तरी काम होत नाही. रिझर्व बँकेच्या गव्हर्नरच्या सहीचेच कागद लागतात. त्या कागदावर म.गांधीचे चित्र असावे लागते.

पाचवा वेतन आयोगाची वाकी मिळणे हे शिक्षक प्राध्यापकांना एक संकटच झाले आहे. इन्कम टॅक्स, प्रॉव्हीडंट फंडाची बरीच रक्कम परस्पर कापली जाते. उरलेल्या रकमेवर संस्थाचालकांचा डोळा असतो. धाकदपट, दहशत, प्रलोभन, गोडीगुलावी अशा विविध मार्गांनी संस्थाचालकांनी अॅरियर्समधील मोठा हिस्सा मारला आहे.

आता कॉलेज, विद्यापीठे यांना स्वायत्तता सक्तीने देण्याचा शासनाचा विचार आहे. म्हणजे फिया वाढणार, आणि वेतन कमी होणार, पदव्यांना बाजारात किंमत उरणार नाही. पैसेवाले विद्यार्थी परदेशी विद्यापीठांच्या भारतीय शाखात शिक्षण घेतील. परदेशी खाजगी विद्यापीठांना येथे शिक्षणसंस्था चालविण्यास केंद्र सरकार परवानगी देत आहे, स्वायत्त महाविद्यालये म्हणजे संस्थाचालकांचे साम्राज्य होणार हे लक्षात घेतले पाहिजे.

किती लिहावे तितके थोडेच आहे! शिक्षणाचे वाटोळेकरण होत आहे अगदी आपल्या डोळ्यादेखत आणि आपण हतबल आहोत. एका बाजूने भगवीकरणाचे आक्रमण, दुसऱ्या बाजूने वाटोळेकरणाचे संकट, शिक्षणक्षेत्रातील सज्जनशक्ती संघटीत झाली पाहिजे. राज्यकर्त्यांवर सोपवून द्यावे अशी शिक्षणपद्धती ही क्षुल्लक बाब नाही. आज जे वाटोळेकरण होत आहे. त्याची कटूफळे आपल्या मुलानातवंडांना भोगावी लागणार आहेत. म्हणून कमालीचे अस्वस्थ वाटते. ज्यांना काळजी वाटते त्यांनी संघटीत सक्रीय व्हावे. स्वस्थ पाहत बसू नये.

दै. "जनमाध्यम"च्या (१४.१०.२००१) सौजन्याने

## MAHARASHTRA FEDERATION OF UNIVERSITY AND COLLEGE TEACHERS' ORGANISATIONS

para 2.3 of the 'Report of the MFUCTO General Secretary' for the Union year 2000  
Adopted by the Executive Committee and the GENERAL COUNCIL  
of MFUCTO in its MEETING  
Held at Shikshak Bhavan, Amravati ON Sunday, the 26th Aug. 2001

2.3 Equally shocking is the fact that for the first time in Independent India, the Government of India has allowed Education Policy to be dictated by the big industrial houses. In fact, the government has constituted what is called the special subject Group on policy framework for private Investment in Education, Health and Rural Development also called the Prime Minister's Council on trade and Industry, which is required to submit policy framework for Reforms in Education. This Special Group consists of Mukesh Ambani as convener and Kumaramangalam Birla. While in the past all policy formulations were left to be decided by Education Commissions headed by eminent academicians and philosophers, such as, Dr. Sarvapalli Radhakrishnan, Dr. Kothari, and so on, the government has now hand picked two business tycoons in substitution of educational philosophers. The purpose of this exercise is to privatise education and hand over educational Institutions to categories of people as shikshan samrat in our own state, whose commitment to education is only money-minting by fleecing the parents, cheating the students and exploiting the teaching and non-teaching staff.

# REJECT AMBANI-BIRLA REPORT ON EDUCATION

Vijendar Sharma

SINCE the time the Government has come to power at the Centre, the attacks on higher education have increased manifold. Having surrendered to the World Bank, the Government is now implementing its prescriptions in the field of higher education as well. Treating the higher education as a nonmerit good, as dictated by the World Bank, this Government has already taken steps to gradually withdraw funding of institutions of higher education, restrict the access to higher education, recover a big part of expenditure from the students as fees, and privatise and commercialise higher education. It has also decided to impose autonomous status on colleges, and the assessment and accreditation of universities and colleges have been made mandatory.

While the Ministry of HRD and the UGC were implementing these decisions by executive orders and circulars without discussing the issues involved with the democratic movement of teachers and students, the Prime Minister's Council on Trade and Industry (PMCTI) constituted a special subject group on policy framework for private Investment in education, health and rural development. The Prime Minister found no experts in the concerned areas but the noted industrialists, Mukesh Ambani (Convenor) and Kumarmangalam Birla (Member) to constitute this special subject group. Obviously, they were among the best-interested people to suggest the implementation of the World Bank prescriptions and privatisation and commercialisation of higher education in the country.

Ambani and Birla submitted their report Policy Framework for Reforms in Education to the PMCTI on 24 April 2000. The report remained confidential till it was downloaded from the internet (Website: <http://www.nic.in>) recently.

For Ambani and Birla, education is a very profitable market over which they must have full control and for their industrial requirements "education must shape adaptable, competitive workers who can readily acquire new skills and innovate. Hence, they want us to fundamentally change our mindse" of "seeing education as a component of social development."

## Knowledge-based Economy

Knowledge has become the new asset. According to the Report, "More than half of the GDP in the major OECD countries is now knowledge based. About two thirds of the growth of world GDP is expected to come from technology-led businesses. This necessitates that education and knowledge are at the centre stage of any development process." The Report says: Weightless goods-with high knowledge content rather than material content-now account for some of the most dyamic sectors in several economies. The single largest export industry for the United States is neither aircraft nor automobiles, but entertainment. Education offers a fast track to knowledge based growth." Therefore, a call has been given for a knowledge revolution", a revaluation in education that "Induces a market oriented competitive environment."

Thus the two industrialist want the country to move towards a "knowledge-based economy" in which education will offer a "fast track" to produce "weightless goods" like "entertainment". Knowledge-based economy and revaluation are envisaged using cyber-age education and internet and "putting latest technology to innovative use "establishing" classroom of the future and virtual universities for the dot com generations.

## Knowledge Workers

A number of economic reforms, undertaken on the dic-

tates of the World Bank and multinational corporations, are "hampered by their Impact on labour and employment." These reforms are, among others, "privatization of public enterprises, reduction of public enterprises, reduction of tariffs, moving to a guantitative regime or restraining wasteful government expenditure." Several rigid labour laws protect the interests of 300 lakhs employees in the government, public sector and organized private sector. The large numbers of workers in the unorganized sector and agriculture have no such protection. Therefore, Ambani and Birla do not like to invest in organized sector because they cannot make huge profits by hiring as cheap labour as is available in unorganized sector. They have realized the enormous power of the people in India and "the potential for growth and development if over a billon people, one sixth of humanity, are educated, creative and enterprising."

Therefore, they want India to "create an environment that does not produce industrial workers and labourers but fosters knowledge workers." Since "education has a major role to play in shaping knowledge workers", they want to first capture higher education and make huge profits and then use the knowledge workers in their unorganized sector to make further profits.

## No Controls on Private Investment

Ambani and Birla are unhappy to note that the "education sector in India is probably the most controlled sector in India." There are several bodies managing education. Rules and regulations govern virtually everything from location, student intake, course content, fees and fee structure, appointments, compensation for faculty and so on. Consequently institutions of Bearningshame become rigid-They do not want "excessive regulations" in education because they will "discourage private spending" on it. They want "operational freedom and the flexibility to innovate."

Therefore they recommend, Governments must encourage private financing by taking on some of the risks that makes financial institutions reluctant to lend for higher education. "Thus, the private sector want a full freedom, including the power to hire and fire, and no law protecting the interests of students, teachers employees, and the people at large.

## Private Universities

The role of the government in higher education has been redefined which calls for "a major privatization of the university education in India." The Report says, "the Government should play the role of a facilitator" and the Government's role should be maximum at the primary stage and minimum at the higher education stage." Therefore the enactment of private University Act for the establishment of "new private universities in the fields of science and technology, management, economics, financial management and other critical areas with commercial applications" has been recommended. The Report advise the government that leading business houses must be encouraged to establish such Institutes and universities.

This recommendation goes much beyond the aims and objectives of the Private Universities Bill still pending before the Rajya Sabha. This author, as a President of Delhi University Teachers' Association (DUTA), had appeared before the Select Committee of Parliament in 1996 and opposed the Bill because, apart from other reasons, the Bill proposed to take away frontier areas of science and technology from the university system. However, Ambani and Birla want this Bill to cover every area having commercial applications other than "liberal arts and performing arts." Advocating for "foreign direct investment in education "(or collaboration with multinational corporations), they have

built a case in their own interest to start private universities turning education as a business for profit making. They also want to "market India as a destination for affordable and high quality education."

#### Full Cost Recovery

In their pursuit for profit making, they counter pose universal primary education and higher education. "Once we have largely achieved universal primary and secondary education, then we can consider higher education as a priority. There must be a concerned effort to free up resources for primary education." They further emphasize, "it will also imply a gradual move to full cost recovery in higher education and encouraging the emergence of a largely self-financing private sector."

The "user pays principle" will be "enforced strictly for higher education supported by loan schemes as well as financial grants for economically and socially backward sections of society." They have suggested as "credit market for education." Those who cannot pay should take loans or credit from the market if they want to enroll themselves in the institutions of higher education.

An "education development fund" has been proposed for primary and literacy education. This fund will be based on donations "fully exempt from Income Tax." It is also proposed to gradually withdraw subsidies for higher educa-

tion "through higher fees and changes in fee structure." Funds withdrawn from higher education, in any case, are not transferred to primary education. Nevertheless the school education is pitted against the higher education. It is clear from this recommendation: "Infrastructure for schools, buildings, telecom networks, and computers-have to be funded on a priority basis. The Government can progressively reduce the funding for universities to achieve this. These universities should take the path of self-sufficiency through higher student's fees, donations and endowments, alumni contributions, linkages with corporate establishments for research, royalties on book and research output etc." According to the report, the role of the UGC as a funding entity will no longer exist except to those areas of education involving liberal arts and performing arts."

#### Market Oriented education

For Ambani and Birla, the Indian education system is not market oriented. This system has failed to realize the potential of the information technology requirements. Therefore, private institutions enjoying brand equity and large market capitalization have come up forming a large non-formal education system of creating quality software professionals. Schools of learning must be encouraged to constantly upgrade content and facilities in order to make them more market oriented. They argue that since the "formal education system is not awake to the needs of

## AIFUCTO ATTACKS AMBANI-BIRLA REPORT

by B. Vijaykumar and V.K. Tewari For AIFUCTO

Submitted by Ambani-Birla on 24 April, 2000, this Report has been a secret document. Initiated by the PM, this effort is undemocratic as the Parliament, Standing Committee of MPs on MHRD, teachers organisations and others have been totally ignored, eclipsed. This is unprecedented. The education system evolved over the last 5 decades has been arduously and democratically built up beginning with Dr. Radhakrishnan Commission down to NPE-1968, NPE-1986 and the Review 1992. Although there have been many snags, yet the democratic openness was never a casualty. Again, shortcomings are enormous and vast which need to be taken up through a democratic system from primary to university level, but the system has made India somewhat proud of the fact that we are the third largest producers of trained manpower in all the terms, though only about 5.8% youth are able to join the university system today. Production of knowledge would have been more varied and stronger to meet national instruction needs if we had invested more in higher education and R&D.

#### Guiding ethos

Ambani-Birla Report gives a secret burial to the national values and goals imbibed by the nation through a century-long anti-colonial freedom struggle or equity and social justice for all. It also ushers in neo-colonialism, thus endangering the very sovereignty and freedom of the nation. It is a brief on totally market-oriented education to be directed through LPG-Liberalisation, Privatisation, Globalisation. Evidently, what WB-IMF combine failed to do at the UNESCO Conference Declaration (October 1998) is now intended to be manipulated in India through the backdoor unbolted by the PM's Council on Trade & Industry. This is a theatrically articulated recipe for national enslavement.

The focus of the Report on primary education is well-based, but it becomes lopsided when it recommends to "leave higher and professional education to the private sector" and that higher education could be priority only after achieving "universal primary and secondary education." We may see, so far, the successive governments have failed to fulfil the constitutional responsibility under Article 45: the NPE-1992 (Review) says that the nation needed 1.22 lakh primary schools and 2.25 lakh middle schools; the NPE-1986 noted the need of 4 million primary teachers to make one-teacher schools into 2-teachers schools. Infrastructure in schools is very poor; no quality education. Further, the proposed 83rd constitutional amendment to make Right to Education a Fundamental Right is not well conceived as it is fraught with snags. Report does not talk about these pitfalls. Base i.e. primary and secondary must be made strong but the will is lacking on the part of the government.

Higher education is to be flooded with private investments upto university level. So, legislation on establishment of private universities is suggested by the report. Concomitantly, the UGC is to be almost wound up through drastic reduction in its powers. "Regulatory role" government is suggested. A new system is in the offing: A free one for the big investor: foreign and local. The eye of greed is on science, information technology, management courses relevant for commercial enterprises. Corporations, business enterprises, profit motive are the corner stones of new policy.

Teachers are to be divided as the UG and PG teaching. Such divisions are foreign to the university system in India as it is holistic that way. "User pays" principle is to be applied. Higher education has to be cost-effective. Funding is to be linked to rating. So, private, self-financing educational institution will be legislated and the big loot legitimized. He who invests gets the profit, "full cost recovery" is the guideline. Soon, 250 universities and 11000 colleges besides IITs and National Laboratories etc will go in for disinvestments and thus the PM's Council will bid goodbye to the public-funded, legislatively guided Higher Education system in the country.

This Report has many contradictions. The whole thesis of the Report is misplaced. The Parliament will eventually reject this anti-national exercise.

\*\*\*\*\*

society,” therefore “non-formal system” of self-financing institutions has filled the need.

Ambani and Birla should know that it is the government policy of gradual withdrawal of state funding of institutions of higher education that has thwarted many attempts of institutions of higher education, universities and colleges, to upgrade their courses in view of present day technology requirement. They should also know, for example, the Government and the UGC have paid nothing in the past several years to Delhi University to start new courses and upgrade the existing ones by integrating computer and information technology. They are actually pleading their case for the privatization and commercialization of higher education by blaming universities and colleges and not the government policies.

Market wants to capture all the areas of higher education which are profitable. However, it is not profitable for the market to “support education in such areas as oriental languages, archaeology, palaeontology, religion and philosophy.” Since these education programmes are important and necessary, therefore, the leaders of the market recommend to the state “to play an active role and support the pursuit of disciplines whose scholars do not command a market.”

#### **Rating of Institutions**

The employment market has created a non-formal assessment of institutions but there is no formal system in place. Therefore, the Report recommends, “All educational institutions in India schools, colleges, institutions and universities-must be rated by independent agencies analogous to a standard and Poor’s or CRISIL in the financial sector. There should be an annual review by the rating agency. Rating should service, physical education and games. This rating should be mentioned in the prospectus as well as all important communications.” The Report further states, “funding to educational institutions must be linked to rating. Institutions with a lower than the minimum specified rating should not be allowed to operate ... Based on ratings, a differential fee structure could emerge.”

The rating system as proposed by Ambani and Birla is going to be more stringent than 5 point scale of National Assessment and Accreditation Council (NAAC) Standard and Poor’s CRISIL in financial sector are known to change the rating of an organization on the basis of a criterion best known to them. Since the funding will be linked to the rating, therefore many institutions, which may not come up to the minimum level for want of adequate state funding are going to be closed down. This process will be much faster than that proposed by the NAAC.

#### **Divestment of Public Sector**

Ambani and Birla proposed the divestment of public sector. Increased spending on education has to be met, according to the Report, “by restructuring of inter sectoral allocations and divestment of loss making public sector companies. For example, the average annual losses of all state electricity boards (1997-98) was Rs. 10,684 crores which is 272 times the average annual plan expenditure on education.” It further calls upon panchayats to “seek funding from the local community to supplement state funding. Central and state assistance should not be seen as largesse but linked to those who can help themselves.” These Industrialists are finding new grounds to further dismantle the public sector and advising the state to give up its responsibility of funding of education.

#### **Ban on Political Activities.**

In order to have full control over education, Ambani and Birla want that legislation should be enacted “banning any form of political activity on campuses of universities and educational institutions.” Even the normal trade union activities will not be allowed. They do not put undergraduate and postgraduate teaching on par and divide the teachers at higher education level. Therefore, they propose “a differentiation in teachers education and experience based

on levels of teaching.” At the school level, they propose to make teachers accountable, not the government, for retention of children.

#### **Cheating the People**

Ambani and Birla have assumed that by the year 2015, primary and upper primary education (age group 5-14 years) will be universalized, 75% enrolment rate will be achieved for higher secondary, and 20% enrolment in colleges and professional education. They have projected that the percentage of public spending would be 90% in the primary sector, 50% in the secondary sector and 40% in the tertiary sector. This would translate to a total public spending of Rs.1,17,000 crores and a private spending of Rs.68,900 crores(i.e. Rs.1,85,900 crores and calculated at 1998-99 levels of costs and prices) In effect this means that the government spend would be 1.98% the projected GNP.” Thus, they want the government spending on education to reduce from 3.7% to 1.98% by the year 2015. The number of students projected to be enrolled in the institutions of higher education in the year 2015 is 220 lakh. This number is about three times the current figure.

It is unbelievable that Ambani and Birla did not know the current state of affairs in higher education. Only 6% of the children in the age group of 17-23 are currently enrolled in higher education. These students, about 75 lakh in number, could join higher education with the currently prevalent fee structure. The percentage rise in the enrolment of students per year has been decreasing in last ten years. These industrialists want us to believe that not only these students but others amounting to 220 lakhs students will be able to pay more than rupees thirty thousand per year, at 1998-99 prices, in 2015 for a B.A. degree. Given the experience in relation to rise in prices in past, this fee might be about 1.5 lakh per year in 2015. This is the fee alone, actual expenditure may be much more. With such a high fee the enrolment of students will never be 20% as proposed by Ambani and Birla, but it will fall steeply and will be far below even 6%.

Loans to students have been proposed so that they are able to meet the enhanced fees. It is being advocated that the poor students who cannot pay the fees, instead of dropping out from higher education should take loans, get jobs and then pay back loans. The government has already started implementing these proposals. There are several serious problems associated with this proposal. Firstly, while proposing loans it has been assumed that after education, students would get jobs with "good" earnings and be able to pay back loans. But education does not guarantee employment. With no employment or no ability to repay, people from relatively poorer sections will be worst affected. Secondly, the recovery of loans would become the most important consideration for the banking institutions. Therefore, they would not be willing to give loans to economically weaker and educationally deserving students. They would prefer to cater to economically better-off students. The conditions of guarantee based on the mortgage of immovable property would further exclude a large section of students. Thirdly, since dowry is an important social phenomenon in several countries including India, loans to students would work as a negative dowry resulting in decline in the enrolment of girls in higher education. On the whole, the proposed loans to students would prove to be detrimental to the growth of higher education and adversely affect equity in and access to higher education.

Ambani-Birla Report, if implemented, will convert the entire system of higher education in the country into amount of fee will enroll in higher education. The Report is not only against higher education but is anti-people. This Report must be rejected and thrown on the dump heap.

(Courtesy-University Today)

\*\*\*\*\*

## **Prime Minister's Council**

on

## **Trade And Industry**

# **REPORT ON A POLICY FRAMEWORK FOR REFORMS IN EDUCATION**

MUKESH AMBANI (CONVENOR)  
KUMARMANGALAM BIRLA (MEMBER)

SPECIAL SUBJECT GROUP ON  
POLICY FRAMEWORK FOR PRIVATE INVESTMENT IN  
EDUCATION, HEALTH AND RURAL DEVELOPMENT

PRIME MINISTER'S COUNCIL ON TRADE AND INDUSTRY  
GOVERNMENT OF INDIA

New Delhi : April 2000

## **PREFACE**

We are happy to present this report titled 'A policy framework for reforms in the education sector' to the Prime Minister's Council on Trade and Industry, Government of India. We are grateful to the Prime Minister for this opportunity and for the honour.

The challenge that we face in education in India is to bridge the large gap between the education haves and the have-nots while, simultaneously, radically upgrading education content, delivery and processes to foster a competitive, yet co-operative, knowledge based society. Given the magnitude of the challenge and the complexities involved, this will call for a national mission unprecedented in the history of mankind.

We have to fundamentally change our mindset - from seeing education as a component of social development to realising that it is a means of creating a new information society, resplendent with knowledge, research, creativity and innovation. It is not a social expenditure but an investment in India's future. The education opportunity before us is right, so funds have to be made available under any circumstances. Neglect of education will turn out to be India's nemesis.

This is not the time for just reforms. It is time for a revolution - a knowledge revolution. The green revolution in agriculture ushered in high productivity and prosperity through technology, education of farmers and field extension activities. Likewise, a revolution in education that embraces information technology, fosters freedom and innovation and induces a market oriented competitive environment is vital for our future. The need of the hour is for bold steps, not incremental and tentative ones. With this perspective, we commend the recommendations in this report.

We thank officials in the Prime Minister's office for their support and acknowledge the insights provided by a number of educationists, social scientists, policy planners and the Business Intelligence Unit, Chennai in the preparation of this report.

New Delhi  
April 24, 2000

Mukesh Ambani  
Kumarmangalam Biria

## 1. EDUCATION AND DEVELOPMENT

### 1.1 Social Development

Education imparts knowledge and skills and shapes values and attitudes. It is vital for population control, poverty reduction, economic growth, civic order, culture and citizenship. Education helps reduce poverty by increasing the productivity of the poor, reducing fertility rates, improving health and equipping people with the skills they need to participate fully in the economy and in society. More generally, education helps strengthen civil institutions, build national capacity and good governance. These are critical elements for progress of a civil society.

### 1.2 Economic Growth

Education contributes to economic growth, but by itself does not generate growth. Various empirical analyses estimate that education explains about twenty per cent of growth in a country. The single largest contributor to this growth is primary education.

Historically, investment in education was considered more of a social obligation rather than one that would give significant returns. However, more recently, evidence has been accumulating to demonstrate that countries with high levels of basic education, whether developed or developing, show better economic performance. An analysis of 60 countries (basic data in Table 1.1) shows that there is a good correlation between the real per capita GDP of a country and its adult literacy rate. Also, that there is a better correlation between the real per capita GDP of a country and its first, second and third level gross enrolment ratio. (Table 1.2)

### 1.3 South East Asian Experience :

South East Asian countries are not rich in natural resources. Fast-developers in this region have invested heavily in education: Countries that achieved universal basic education first (Korea being a prime example) were also the first ones to experience substantial economic growth. A World Bank study

in 1993 studied eight South East Asian economies - Hong Kong, Indonesia, Japan, Korea, Malaysia, Taiwan, Singapore and Thailand - and found that the single largest contributor to economic growth was primary education. Primary school enrolment explained between 58 percent (Japan) and 87 percent (Thailand) of predicted growth. The analysis concludes that there is a strong correlation between high levels of education and economic growth. Interestingly, in the wake of the financial crisis, South East Asian countries are shoring up their educational systems to make them even stronger. In Thailand, a constitutional overhaul is laying the foundation for a radical shake up. Indonesia has introduced an emergency scholarship system. Singapore has begun a campaign to teach innovative thinking. Malaysia is launching computerised smart schools. The accent of these countries is on a quantum leap on basic education and skill standards to regain labour force competitiveness, shift from rote learning to creative learning, less state dominance of education and making education more responsive to local needs.

### 1.4 Rates of Return

Education is an excellent investment for society. In general, the social rates of return to investment in all levels of education exceed the long-term opportunity cost of capital. Rates of return to education are very high in low and middle-income countries. (Table 1.3) Rates of return in education are also better than rates of return in other sectors such as agriculture, industry and infrastructure. (Table 1.4). Since education is subsidised almost everywhere in the world, private returns to investment in education invariably exceed social rates of return.

### 1.5 Human Capital

Education is universally recognised as an important investment in building human capital. Human capital affects growth in two ways. First, human capital levels act as a driver of technological innovation. Second, human capital stocks determine the speed of absorption of technology. It is now widely accepted that human capital, and not physical capital, holds the key to persistent high growth in per capita income.

## ACKNOWLEDGEMENTS

- 1 Dr. A.P.J Abdul Kalam, Principal Scientific Adviser to the Government of India
- 2 Prof. Amrik Singh, Former Secretary, Association of Indian Universities
- 3 Dr. M. Anandakrishnan, Vice Chairman, Tamil Nadu State Council for Higher Education
- 4 Dr. Ashok Chandra, New Delhi
- 5 Shri. R.K. Chhabra, Former Secretary, University Grant Commission
- 6 Prof. B.B. Dhar, Director (Research), Association of Indian Universities
- 7 Dr. M.S. Gore, Former Vice-Chancellor, Bombay University
- 8 Shri. Has Mukh Shah, Chairman, Gujarat Ecology Commission
- 9 Prof. C. S. Jha, Former Director, IIT-Kharagpur and Vice Chancellor, Banaras Hindu University
- 10 Shri. Joyojeet Pal, University of California at Berkeley, USA
- 11 Prof. M.P. Kapoor, Director, Thapar Institute of Engineering & Technology
- 12 Dr. D.V. Kapur, Chairman, Reliance Power Limited
- 13 Dr. A.W. Khan, Vice Chancellor, Indira Gandhi National Open University
- 14 Dr. Kireet Joshi, Chairman, Auroville Foundation
- 15 Prof. S.K. Khanna, Former Chairman, All India Council of Technical Education and Vice Chairman,
- 16 Prof. M.G.K. Menon, Former Union Minister and reputed scientist
- 17 Prof. M. Mukhopadhyaya, Senior Fellow, National Institute of Educational Planning and Administration
- 18 Prof. Navin C. Nigam, Chairman, All India Council for Technical Education
- 19 Ms. Nita Kumar, Research Fellow, NIAS, The Netherlands
- 20 Prof. K.A. Padmanabhan, Director, Indian Institute of Technology, Kanpur
- 21 Dr. Pradeep Khandwala, Former Director, Indian Institute of Management, Ahmedabad
- 22 Dr. Rafiq Dossani, Asia Pacific Research Centre, Stanford University, USA
- 23 Prof. J.S. Rajput, Director, National Council of Educational Research and Training
- 24 Dr. V.S. Raju, Director, Indian Institute of Technology, Delhi
- 25 Prof. M.S. Srinivasan, Former Trustee of B.M.S Educational Trust and B.M'.S. Hospital Trust
- 26 Dr. S.P. Sukhatme, Chairman, Atomic Energy Regulatory Board and Former Director, Indian Institute of Technology., Mumbai
- 27 Prof. Shyam Sunder, Professor, Yale School of Management, USA
- 28 Dr. Subir Choudhary, Former Director, Indian Institute of Management, Calcutta
- 29 Prof. T.K.N. Unnithan, Former Vice Chancellor, Rajasthan, University
- 30 Shri. J. Veera Raghavan, Director, Bharatiya Vidya Bhavan and Former Secretary (HRD), Government of India
- 31 Shri. S. Venkitramanan, Former Governor, Reserve Bank of India and Finance Secretary
- 32 Prof. Yajulu Medury, Chairman & Managing Director., Educational Consultants India Limited
- 33 Business Intelligence Unit, Chennai



This is because people, unlike machines, can learn. Investments that increase people skills and productivity, yield not diminishing returns, but constant or increasing returns.

### 1.6 Market Economy

Market economies now prevail in countries accounting for over 80 % of the world's population. This is a huge increase from the 30% figure that prevailed a decade ago. (Table 1.5) Market based systems reward enterprise, risk taking, skill and agility, but offer less security and a constantly changing environment. In such a context, education is vital since those who compete best have an enormous advantage in the fast paced world economy.

Globalisation of markets and the factors that drive them - especially knowledge - is reinforcing these impacts. Global capital constantly seeks and flows to more favourable opportunities, including well trained, productive and -attractively priced labour forces in a market friendly and politically stable business environment. Education will be at the centre stage in creating such an environment.

### 1.7 Knowledge Economy

Education is becoming even more vital in the new world of information. Knowledge is rapidly replacing raw materials and labour as the most critical input for survival and success.

Knowledge has become the new asset. More than half of the GDP in the major OECD countries is now knowledge based, about two thirds of the growth of world GDP is expected to come from technology-led businesses. (Table 1.6). This necessitates that education and knowledge are at the centre stage of any development process. The global labour market is increasingly integrated for the highly knowledgeable and skilled - corporate executives, scientists and technologists - offering high mobility and wages. However, the market for unskilled labour is highly restricted by national and state barriers.

Weightless goods - with high knowledge content rather than material content - now accounts for some of the most dynamic sectors in several economies. The single largest export industry for the United States is neither aircraft nor automobiles, but entertainment. Education offers a fast track to knowledge based growth. A knowledge-based economy is not restricted to mean computers and information technology. It is a society where knowledge transcends all economic and social activities.

The agriculture sector is in a particularly vulnerable situation in the post-quantitative rate regime that will be upon the country very shortly. India is far behind in yield and productivity of principal crops. Valid fears arise over the country's food security. The industrial sector too has not seen much improvement in technology, or productivity. It has been harshly exposed to global competition over the last eight years. The services sector has advanced only in parts, and much needs to be done in the banking and insurance sectors.

Moving towards a knowledge-based economy should necessarily have the objective of causing a fundamental upward shift in the competitiveness of these sectors. Greater reforms coupled with targeted investments in education will make a substantial contribution in achieving this objective.

### 1.8 Technology

Technology has a pivotal role to play in the future of education. At one level it is through better use of existing communication technologies. Television and radio broadcasts offer important advantages to institutions involved in distance education. Broadcasting raises public awareness of the distance education institution, its programmes and in securing acceptance by the community at large of this alternative means of providing access to higher education. The programmes are also important in providing distance education institutions with the opportunity to demonstrate excellence in academic content and teaching quality. This helps secure acceptance by the academic community for this innovative approach to learning. An appraisal of communications-based teaching which does not take these and related advantages into account is likely to underestimate the role of broadcasting in distance education.

At another level is the spread of information technology for revolutionising content and delivery of education. The Internet is capturing people who have never been touched by education. It is expected to become the school and the university for the dot com generations. In the United Kingdom, British Telecom is

designing the "classroom of the future". A range of "virtual universities" is putting the latest technology to innovative use.

Internet offers policy-makers additional alternatives for delivering education and training to learners of all ages. This technology can reduce costs, increase access and expand the range and quality of education and training options. It offers poorer nations the chance to catch up. In Egypt, a government-backed project is developing a "Utopian school", where pupils take "the best courses from the best teachers from around the world".

An increasing number of countries are experimenting with various forms of new technologies to expand education and training options. This is because they are able to develop multimedia materials that reflect local values and culture, provide visual images of desired behaviours, collaborate across borders, and access information not previously available.

The world of the future will have much more education occurring outside of schools. It will draw on vastly more powerful technologies, like the two-way voice-activated, computer-assisted and self-paced learning. Such technologies will harness a much better understanding of how people learn and what they need to learn. Learners will be able to go beyond the classroom and obtain information in a variety of forms -text, data, sound, video - from all over the world, at any time of the day or night and at rapidly diminishing costs.

### 1.9 Cyber-age Education

Half of all spheres of human activity in the world have got wired into a connectivity that has transcended national frontiers, geographical boundaries and even cosmic contours. It is an age that has brought to one's doorstep promises and prospects for unimaginable change and progress. Significant implications of the cyber age in the context of the potential role of education would be the following :

Knowledge will no longer be a static, finite mass bound by space and time. It will be perpetually self-multiplying and self-renewing in proportion to R & D investment. The velocity of knowledge transmission will be incredibly fast.

Geographical barriers to access to knowledge will no longer be operative. Access, of course, will be influenced and determined by socio-cultural, politico-economic, and personal factors.

Generation, transmission, storage, retrieval, renewal and application of knowledge will not only be very largely helped and driven by technology, but will also be enhanced by it., in particular by technologies of information, communication and education.

The world, having now increasingly adopted a market driven economy, information will tend to be commodified, will command an economic value, and therefore, will tend to create social classes of "haves" and "have-nots".

Formal education will tend to be more a life long continuum, and dispersed rather than a one-shot limited period-centralised activity in respect of contents, instruction, materials, human resource, evaluation, accreditation, certification, and management. A rush to blend cyber-age education into the traditional education process must not be at the cost of elementary education, cognitive learning, physical activity and overall development. It must be realised that cyber-age education presents an option that is layered on top of a traditional system with its benefits of co-operative learning.

### 1.10 Funding

Government spending on education is often inefficient and inequitable. It is inefficient when it is misallocated among uses; it is inequitable when qualified potential students are unable to enrol in institutions because educational opportunities are lacking or because of their inability to pay.

A study of some developing countries in Africa and Middle East show that the Governments reallocate public spending to education from other publicly funded activities, such as defence and divestment of public enterprises. Other countries have, within their macroeconomic policies, increased the revenues of government and thereby increased the spend on education. Yet others have sought to supplement government funds for education with private funds.

Private financing can be encouraged either to fund private

institutions or to supplement the income of publicly funded institutions. Private schools are usually financed through fees. In countries, which excessively regulate private schools, it is found that such restrictions discourage private spending on education that would otherwise have occurred and so increase the pressure on government funded schools. Another argument in favour of private schools and universities is that, even though they tend to draw their students from more advantaged socio-economic backgrounds, they promote diversity and provide useful competition for public institutions, especially at higher levels of education.

### 1.11 Government Role

There is a need to follow a mix of both public and private presence in the education sector. Public intervention in education has several advantages. It can reduce inequality, improve accessibility, compensate for market failures in lending for education and disseminate information about the benefits and availability of education.

Governments can help improve the quality of education by establishing standards, supporting inputs, adopting flexible strategies for the acquisition and use of inputs, and monitoring performance.

### 1.12 Equity

Achieving equity in education means that every citizen has the right to basic education that enables acquisition of basic knowledge and skills to function effectively in society. It also means that no qualified student is denied access to education because of an inability to pay. Ensuring equity in education requires both financial and administrative measures.

Financial measures, such as scholarships; are important, at all levels to enable the poor to gain from education. Scholarships can cover fees and other direct costs, such as transport and uniforms and, when appropriate, can compensate families for the indirect costs of sending children to school - for example, loss of labour services for the household.

Administrative measures can increase enrolments of the poor, females and other deprived classes of society. Programs designed to demonstrate the importance of educating children can increase the demand for schooling among the poor.

### 1.13 Competition

There is evidence that competition among schools improves their performance. For choice to be effective, the student must have more than one possible school. The institutions should have some distinguishing characteristics. For example, what aspects of the curriculum are emphasised, in teaching styles, and, at higher levels, in course offerings. Finally, institutions need to enjoy considerable autonomy in how they teach. The availability of a variety of institutions enables parents and students to exercise choice and thus gives institutions an incentive to adapt to demand.

### 1.14 Autonomy

Quality of education can benefit when schools have the autonomy to use instructional inputs according to local school and community conditions and are accountable to parents and communities. Fully autonomous institutions have authority to allocate their resources and they are able to create an educational environment adapted to local conditions inside and outside the school. Accountable autonomous institutions can be encouraged by both administrative and financial means. Administrative measures include giving school management the authority to allocate resources - for example, the authority to deploy personnel and to<sup>1</sup> alter such things as the timing of the school day and year and the language of instruction to fit local conditions. Most critically, teachers need to have the authority to determine classroom practices, within limits set by a broad national curriculum.

### 1.15 Politics

Education is intensely political: it affects the majority of citizens, involves all levels of government, and makes up a significant component of government spending. There are also public subsidies that are biased in favour of the elite. Prevailing systems of education spending and management often protect the interests of teachers and the government rather than those of parents, students, communities and the poor. Teachers, administrators, textbook publishers - all have reasons to prefer things to remain as they are, or to change only gradually.

### 1.16 Democracy

The concept of democracy has spread rapidly in the last decade. Local governments are becoming more important. Citizens are gaining an increasing voice through civil society organisations, community groups, religious organisations and chambers of commerce. If democracy is to survive, citizens must develop capabilities that require them to be well informed, understand the impact of issues, make wise choices and hold elected officials accountable for the responsibility thrust on them. Education is the process of enlarging people's choices. Choices that are created by expanding human capabilities- what people do and can do in their lives.

### 1.17 Directions for India

Implicit in the above discussion, the following are the broad directions for India.

Globalisation and a shift to a market-led, knowledge-based economy demands that education must become the cornerstone of development if India has to find a place at the top of the league of nations.

Building knowledge for a competitive, information-based society must be the core theme of reforms in education.

Education, for girls as well as for boys, therefore deserves the highest priority on the government agenda not just those of the Ministry of Human Resources Development.

Education must shape adaptable, competitive workers who can readily acquire new skills and innovate. Education must also support the continued expansion of knowledge.

It is important that skills, as a result of education, have economic value beyond their intrinsic merit. Equally, it is important that there is diversity in order to avoid an abundance in any one skill and consequent poor rewards. To illustrate, although computer skills are valuable, if too many computer specialists are produced, rewards for them will be weak.

An increase in aggregate spending on education is intuitively appealing, but should be treated cautiously as appreciable changes in education outcomes result only with relatively large shifts in spending. The accent must be on promoting efficient use of resources as much as on expanding the overall resource envelope. Efficiency is achieved by making public investments where they will yield the highest returns. This is in the area of primary education. Consequently, government investments to improve enrolments and retention in primary education must have the highest priority in intersectional allocation of educational resources. Decisions about public education priorities beyond basic education must be taken within a broad sectoral approach. Once we have largely achieved universal primary and secondary education, then we can consider higher education as a priority. There must be a concerted effort to free up resources for primary education through concomitant changes in other sectors and subsectors. This will mean reallocation of public spending to education from other sectors such as defence and inefficient public sector enterprises. It will also imply a gradual move to full cost recovery in higher education and encouraging the emergence of a largely self-financing private sector.

To achieve equity, the government must ensure that no qualified student is denied access to education because of an inability to pay. Because the gap between private and social returns is larger for higher education than for basic education, students and parents must bear part of the costs of higher education.

Governments must encourage private financing by taking on some of the risks that makes financial institutions reluctant to lend for higher education.

A credit market for education, together with selective scholarships, especially in higher education, must be nurtured.

Concerted steps must be taken to harness new technology opportunities in content and delivery of education. Prudent steps must be taken to use already existing technology options, such as in communications, more effectively. Education systems must also gear for an era of cyber-age education without sacrificing the basic principles of elementary education and cognitive learning. A climate of competition among educational institutions must be fostered. Decentralising the management of public education and encouraging the expansion of private and community educational institutions must be given thrust.

## 2. EDUCATION DEVELOPMENT IN OTHER SELECT COUNTRIES

### 2.1 Selection of Countries

A review of the development of education in some comparable and/or successful countries will provide useful lessons for India. The following countries have been selected:

- a. Sweden - Sweden ranks 6 in human development. It has the highest expenditure on education at 8.3% of GNP.
- b. Singapore - Singapore ranks 22 in human development. It is an example of the wide use of information technology in education and of a concerted effort in building a knowledge society.
- c. South Korea - South Korea ranks 30 in human development. It achieved independence, in 1948, at around the same time as India, but has been far more successful in education.
- d. Thailand - Thailand ranks 67 in human development. It has had a similar legacy as that of India in terms of a British system of education.
- e. China - China ranks 98 in human development. It is comparable to India in terms of the magnitude of the education development imperatives.

All these countries are ranked ahead of India in human development. (India's rank is 132 out of 174 countries). All the five countries have primary school enrolment in the high nineties. (Table 2.1). Incidentally, except Sweden, all other countries have diversity in terms of ethnicity, religion and language.

### 2.2 Sweden

#### 2.2.1 Background

Sweden covers a total area of 450,000 km<sup>2</sup>. It has a population of 9-million. The national language is Swedish. For many centuries, Sweden was ethnically and linguistically very homogeneous. There were two exceptions though- the Finnish-speaking population of the northeast and the Sami (Lapps). Today's approximately one million of Sweden's total population are immigrants or have at least one immigrant parent. Sweden is a constitutional monarchy with a parliamentary form of government.

#### 2.2.2 Education Philosophy

Sweden fundamentally believes that everybody must have access to equivalent education, regardless of sex, ethnic and social background and place of residence. The education system is based on the premise that education and welfare are linked. Sweden has reformed its system to bring about a structurally uniform education system.

#### 2.2.3 Salient Features

Under the Education Act, local bodies are required to provide pre-school activities (public or private) for children in the age group of 1-5 years. Pre-schools are open to all children and the attendance of children is voluntary. As a complement to pre-schools, childcare is also provided.

The aims and responsibilities of the pre-school are set out in a national curriculum formulated by the Government. Experiential learning is underlined as a key factor for learning.

There is no evaluation of the outcome of the individual child in pre-school. Grades and assessments are not issued.

There is a 9-year comprehensive compulsory education for children aged 7-16. However, there is an option for the children to start compulsory school from the age of six years or from the age of eight years.

Compulsory elementary schooling was formally introduced in Sweden in 1842. A process of reform began in the 1940s with the aim of expanding compulsory schooling. The 9-year compulsory comprehensive school was introduced in 1962 and fully implemented in the academic year 1972-73. The compulsory school system comprises compulsory school and special schools for handicapped children and linguistic minorities.

The Education Act provides for parents and pupils to make a choice concerning compulsory education. Parents can choose between public and private schools. The municipalities are obliged to provide pupils with all the materials necessary for schoolwork.

All compulsory schooling is co-educational and provided

free of charge. In order to support integration of activities, a common curriculum for compulsory school and pre-school class is followed. The national syllabi states the objectives, which are to be achieved by the end of the fifth and ninth year of school. This provides an opportunity for nationwide evaluation of school achievements after the fifth year.

Schools are free to decide the organisation of the school, the teaching arrangements, size of classes etc. Pupils may be taught in groups of the same age or as mixed-age groups. Teachers are given freedom in planning their teaching and in choosing their working methods and subject matter. Municipalities are obliged by law to provide upper secondary schooling for all pupils leaving compulsory school.

Education at the upper-secondary level is voluntary and free of charge. Almost the entire compulsory school leavers continue studying in upper secondary school. There are sixteen nationally determined programmes in upper secondary schools . . .

All study programmes provide a broad-based general education and gives general eligibility for entrance to higher education and prepare the students for working life. Students with interests other than the 16 national programmes can opt for specially designed programmes.

The award of marks in upper secondary education is a continuous process, i.e. marks are awarded on the completion of every course and not for individual subjects or for each term.

Under the Higher Education Act, the requirements of the individual students and the achievements of the individual institutions influence the capacity of different programmes and the allocation of grants between institutions.

Several measures were taken to reform upper secondary schooling in the 1980s to match the needs of the market and the aspirations of the students. This was implemented fully in 1995.

All public higher education is free of charge. Students who need help to finance their cost of living can receive assistance from the central government for this purpose. This support consists of a non-repayable grant and a larger repayable loan in combination and may be awarded for both full-time and part-time studies.

Adult education in Sweden is wide-ranging and based on a long tradition. It is provided in many different forms ranging from national or municipal adult education to labour market programmes and personnel training and competence development at work.

The overall responsibility for education in Sweden is borne by Parliament and the Government. The entire educational system is under the Ministry of Education and Sciences. The county councils, municipalities and private organizers are responsible for the provision of education under the Ministry of Education and Science. The municipalities operate almost the entire public education in Sweden below university level. Most of the higher education institutions are run by the central government although decisions in several important areas have been decentralized to the universities and university colleges.

Education in Sweden has traditionally been organized within the public sector. In the middle of the 1980's the system was opened up for private organisers to receive public funding for childcare. The number of private pre-schools has increased steadily since then. There are a few private institutions in higher education level. The State has gradually switched from laying down rules to the approach based on goals and results in the educational system. The local authorities have been given extensive autonomy in administering the schools within the framework set out by the Government. Decisions in several important areas were decentralised from the central level to the institutions of higher education. The funding of school-level education is shared between central and local governments. The municipal tax revenue is the main income of the local government. Additionally, the local government receives a state grant of dual character, consisting of both pure grants as well as tax and structural equalisation. The structural equalisation part is determined by population and structurally, related cost differences. Each municipality has the right to decide on the allocation of resources and the organisation of activities. Teaching materials and school meals in compulsory school are free of charge to the student. The municipalities are obliged to provide free school transport for compulsory school pupils.

Financial support to students at upper secondary level

comprises a general study grant, representing a continuation of child allowance, payable to all pupils from the age of 16, and a need-based grant towards the cost of studies and daily travel. Higher education is financed directly from the state. Appropriations for universities and university colleges are based on proposals from the Government and given to each institution. The basic principles of the allocation system are that appropriations are made as remuneration for results achieved. Results refer to the number of credit points earned by students and the number of full-time equivalent students taught at the institution.

The Government accords the institutions the right to award degrees. The education system of Sweden is presented in Exhibit 2.1.

## 2.3 Singapore

### 2.3.1 Background

Singapore occupies an area of 648 sq. km. It has a population of 3.5 million. There are three major ethnic groups - Chinese, Malay and Indian - accounting for 76 %, 15 % and 6 % respectively. The major religions are Buddhism, Islam and Hinduism. The official languages are Chinese, Malay, Tamil and English. Singapore is a republic with the President as Head of the State directly elected by the people.

### 2.3.2 Education Philosophy

The vision of Singapore for meeting the challenges of the future is summed up in four words: THINKING SCHOOLS LEARNING NATION. It is a vision that aims to inspire Singapore as a nation of thinking and committed citizens capable of contributing towards Singapore's continued growth and prosperity. It focuses on the development of human resources to meet Singapore's need for an educated and skilled workforce.

### 2.3.3 Salient Features

Every child in Singapore undergoes at least 10 years of general education. This comprises six years of primary education (four years of foundation and two years of orientation) and four years of secondary education.

Literacy, numeracy, bilingualism, physical and moral education, and creative and independent thinking are emphasised by the school education system. The bilingual policy requires that each child learn English and the mother tongue. The system is oriented to foster strong bonds among students and to develop in them a sense of responsibility and commitment to family, community and country.

Computer-based programmes are introduced in schools to ensure that pupils are ready to meet the challenges of the 21st century.

Information Technology is used widely as teaching and learning resources to develop skills in communication and independent learning.

All schools are expected to be fully networked by the year 2002, through the information technology masterplan. Teachers and pupils would have adequate access to multi-media computer resources, courseware, the Internet and digitised media resources. The target of the IT Masterplan is to provide one, computer to every two pupils from primary one to junior college and for IT to be used for 30 % of curriculum time.

All pupils at the foundation stage follow a common curriculum, which provides them with a firm foundation in English, their mother tongue and Mathematics. Also included in the curriculum are subjects such as Music, Art and Craft, Civics and Moral Education, Health Education, Social Studies and Physical Education. Pupils are also encouraged to participate in extra-curricular activities.

Pupils are formally streamed according to their learning ability at the end of Primary Four. All pupils then advance to the next stage of primary education, the orientation stage. At the orientation stage, pupils are placed in one of three language streams, namely EM1, EM2, and EM3, according to their abilities.

At the end of Primary Six, pupils sit for the Primary School Leaving Examination (PSLE) which assesses their abilities for placement in a secondary school course that suits their learning pace and aptitude. Pupils who obtain the necessary standards are then admitted to the Special, Express or Normal stream in secondary schools.

At the secondary level, pupils have the choice of three courses designed to match their learning abilities and interests. Pupils undergo four to five years of secondary education with different curricular emphasis. The majority of pupils undergo the Special course or Express course whilst the rest enter the Normal course.

Pupils in the Normal (Technical) course are prepared for technical-vocational education with the Institute of Technical Education.

After completion of their secondary level, students can apply for entry to a junior college for a two-year pre-university course, or a centralised institute for a three-year pre-university course.

At the end of the pre-university course, students sit for the Singapore-Cambridge General Certificate of Education "Advanced" (GCE "A") Level Examinations. Their eligibility for tertiary education is determined by the results of their GCE "A" Level examinations.

### There are six types of schools in Singapore.

Independent schools enjoys autonomy in setting its own scale of fees, in the admission of pupils, in the selection and appointment of teachers and principals as well as in curriculum matters. They conform to national education policies. Autonomous schools are either government or government aided schools. They are given additional funds and more leeway to execute their mission of providing quality education. They, too conform to national education policies. The Special Assistance Plan (SAP) schools are established to maintain high standards in both English and Chinese whilst preserving the traditional ethos existing in the schools. The secondary SAP schools offer the Special course where pupils learn Chinese at a higher level and English. The School Cluster Scheme was mooted as a management model to enhance the management of schools by reducing centralised control and decision-making. Under the scheme, a group of schools forms a cluster co-ordinated by a Superintendent with the responsibility of facilitating networking and collaboration among the Principals of the cluster schools. The Superintendents are also in charge of developing and supervising the Principals.

Some of the schools are double-session with two groups of students making use of school facilities from 7:30am to 1:00pm and 1:00pm to 6:30pm. By the year 2000, the Government of Singapore has set a target of converting all secondary schools into single-session schools. Schools are expected to use the available facilities for extra-curricular activities and enrichment programmes in the afternoons.

Pupils with physical or intellectual impairment go to special schools, which are run by the voluntary welfare organisations and heavily funded by the government. Trained teachers are seconded to teach in these schools.

Pupils at primary level do not have to pay school fees. They only pay miscellaneous fees that go to their respective school, to help cover the cost of equipment and Special programmes for the benefit of the pupils. Pupils, at secondary and pre-University levels pay subsidised school fees and similar miscellaneous fees.

Professional training for teachers is conducted by the National Institute of Education (NIE), an institute at the Nanyang Technological University.

Admission to the two universities, the National University of Singapore and the Nanyang Technological University, is based on GCE "A" level performance and, in some cases, interviews as well. A third University, the Singapore Management university, is being established and expected to offer academic programmes from 2000.

The Ministry of Education appointed the Singapore Institute of Management to run the Open University Degree Programme.

The education system of Singapore is presented in Exhibit 2.2.

## 2.4 South Korea

### 2.4.1 Background

South Korea covers a total area of 98,480 sq. km. It has a population 46.9 million. It is almost homogenous in terms of ethnicity, except for a minor presence of Chinese. The major religions are Christianity and Buddhism. Korean and English are the most frequently used languages. South Korea is a

republic and is headed by a President, who is elected by the voters directly. The Prime Minister is the head of the government and is appointed by the President from the National Assembly.

#### 2.4.2 Education Philosophy

Korea has established knowledge, human welfare and open-mindedness as its ultimate goals to be delivered to the individuals from the education system. The vision of the education system is to develop a self-reliant individual equipped with a distinct sense of independence, a creative individual with a sense of originality, and an ethical individual with some sound morality and democratic ideology.

#### 2.4.3 Salient Features

Following the establishment of the Republic of Korea in 1948, an education law was enacted on the basis of democratic principles. Accordingly, an autonomous educational structure and a compulsory education system were introduced.

Korean education in the 1980's endeavoured to enhance the quality of education. The government set the formation of a sound personality through education and reform of civil education, emphasising science and life-long education as the nation's top priority.

In March 1985, the Presidential Commission on Educational Reform was established under the direct supervision of the President. To achieve the goal of educating Koreans as the Prospective Leaders in the 21st Century the Commission recommended major reforms in school system, facilities, teacher training, content and investment.

The nineties and the following years are expected to advance education by realising quality education and educational welfare. The major concerns are the pursuit of qualitative, rather than quantitative, growth of education, and the fulfilment of high public demands for education through extending compulsory education, popularising secondary education and increasing opportunities for higher education. Early childhood education is largely provided by private institutes or those affiliated to public primary schools. Parents are expected to pay the entire costs of this education. At present, opportunities are not yet universal. Children are admitted to the kindergartens in their residential areas on the basis of parents' applications and is purely voluntary.

The government has concentrated on building public kindergartens in rural areas while encouraging the private sector to establish kindergartens in major cities where a large number of kindergarten-aged children are concentrated.

Primary education in Korea is free, compulsory and provides the general basic education necessary in daily life. Practically all children are provided with primary education. This consists of six years of education.

The objective of middle school education is to provide general education to build on the foundation of elementary education. All applicants are allocated to schools near their residences.

This level of education is free and compulsory. Free and compulsory middle school education was first introduced in 1985 to agricultural and fishing villages, and was extended to the entire nation within a few years.

Admission to high schools is through grades obtained in a national level selection examination. This was modified in 1995 to enable the schools to consider other factors in addition to the examination grades for admission.

Additionally, private schools with self-supporting ability, which is managed by a school foundation and on fees paid by the students, are given the autonomous right to set their tuition fees and select students.

Vocational high schools aim at providing advanced general education as well as vocational training in agriculture, technology, commerce, fisheries and ocean sciences.

In addition, foreign language, science, art and athletic high schools are also operational to educate future leaders in these specific areas. Under strong governmental support, these schools aim at identifying the gifted at an early age and developing their potential to the maximum level.

Higher education aims at teaching and studying fundamental academic theories and their various applications as applicable

to the progress of the society. The period of study for college education is four or six years.

The scholastic achievement test is administered on a national scale. Private universities are free to administer their own exams.

One of the unique features in South Korean education is the utilisation of modern technology to improve education reach even at the primary school. The Educational Broadcasting System (EBS) was inaugurated in 1990 to support school education and expand the opportunity for education.

EBS has one television and radio channel and a staff of 630. The Ministry of Education is responsible for policy making and financial support. EBS is in charge of planning, organisation, production and delivery of the education broadcasting.

Educational broadcasting programs are aired on television for 8 hours and 30 minutes every day (18 hours on Sundays) and on radio for 20 hours a day.

## 2.5 Thailand

### 2.5.1 Background

Thailand occupies a land area of 514,000 sq. km. It has a population of 60.6 million in 1999. The major ethnic groups are Thais (75 %) and Chinese (14 %). The official languages are Thai and English. Thailand is a constitutional monarchy. The King is the Chief of the State. The Head of the government is the Prime Minister and he is the leader of the party enjoying majority in the House of Representatives.

### 2.5.2 Education Philosophy

Thailand sees education as centric to long term economic development. The National Education Development Schemes are evolved to meet needs of a changing economy.

### 2.5.3 Salient Features

Pre-school education is provided for 3-5 year old children through child care centres, nursery schools and kindergartens. The Ministry of Education has established a kindergarten in every provincial capital to serve as a model for the private ones.

Since this level of education is voluntary, the private sector has played an active role.

**Primary education is compulsory and free of charge for the children in the age group between 6 and 11 years.** Primary school curriculum is an integrated curriculum comprising five areas of learning experiences, namely: basic skills development, life experience, character development, work oriented education, and special experiences.

Since student backgrounds in the various parts of the country are different, a basic national core curriculum allows certain flexibility for regional diversification.

The secondary education is divided into two levels, each covering a period of three years. There is a common curriculum across the nation.

Students who complete upper secondary school successfully are eligible to enter higher education courses. The higher education institutions can be classified into four categories. They are public universities and institutes, private universities and colleges, technical institutions and specialised training institutes.

There are 24 public universities and institutes and 41 private universities and colleges comprising of 23 universities and 18 colleges. They do not depend on government support and have freedom in operating their institutions.

Apart from the above, several ministries operate higher education institutions in their own fields such as medicine, agricultural sciences, physical education etc. The respective ministries administer these institutions.

In addition, Thailand has three specialised training institutions, viz. the Asian Institute of Technology and two Buddhist Universities, which are popular and attract students from all parts of the world. They are completely autonomous. Each public university or institute has its own Act empowering the University Council to function as the governing body.

## 2.6 China

### 2.6.1 Background

China occupies a land area of over 9.5 million sq. km. The population of China is over 1.25 billion. The country is divided into 23 provinces, 5 autonomous regions and 4 municipalities. The most popular languages are Mandarin and Cantonese. Buddhism and Taoism are the most popular religions and the minorities include Christians and Muslims. The country is a Communist State headed by a President. The National People's Congress elects the President and the Vice President. The president nominates the Prime Minister who is later confirmed by the National People's Congress.

### 2.6.2 Education Philosophy

the focus of China's educational policy is to improve the country's intellectual outlook and bring about competent students in all aspects of China's development.

### 2.6.3 Salient Features

Since 1978, China has adopted an education policy of nine-year compulsory schooling system, which means that all children are required to attend school for at least nine years. During this period, students will finish both the primary school program and the junior middle-school program.

Children aged from 3 to 6 usually attend kindergartens near their neighborhood, where they learn the basics of their mother tongue. The inculcation of values in the children is one of the top priorities on the teaching agenda among kindergartens and childcare centres throughout the country.

The primary school education was for a period of five years earlier and has now been increased to six years.

High school education is divided into two parts: three-year junior high school program and senior high school.

Admission to higher education is through the national college entrance examination. Usually, two sets of examinations are designed. One is for the science stream and the other for the arts stream.

China provides free education at the university level, and those students whose families have financial difficulties receive subsidies. The students' union runs the dormitory, which is an integral part of student life in China. The dormitory is provided free of charge to the students. Attempts have been made to charge students from the economically superior classes in the past few years. In recent years, the number of pay students increased because of the education reform. The Chinese have established three components to address major issues and constraints:

The Access to Nine Year-Compulsory Education Component to remove barriers to access (particularly for girls and minorities) by financing renovations, rehabilitation, construction of new schools, furniture and instructional equipment, assistance programmes and a pilot textbook rental scheme at the primary and secondary levels. The Education Quality Enhancement Component to enhance the quality of education particularly for minorities and girls by providing books and materials, upgrading staff programs, establishing pilot teacher service networks and supporting the dissemination of information, training of education staff, administrators and technicians.

The Education Management Improvement Component to develop education systems and management capabilities at the national, provincial and institutional levels through staff training, provision of equipment and expert services, training of local education managers and project implementation authorities, an education management information system (EMIS).

The Chinese education system is presented in Exhibit 2.3.

## 2.7 Lessons for India

Based on the above discussion, the following are the implicit lessons for India:

As a nation, we have to prepare ourselves to graduate to a knowledge based society. A vision for the nation has to embrace the development of competent human resources.

Creative and independent thinking must be emphasised across the education system in order to promote a learning society. The inculcation of values in children has to be on top of the teaching agenda in preschool and primary education.

Primary education has to be universal, compulsory and, if possible, free. There has to be a mix of government and private

initiative. Government should directly participate in all the education segments, but focus more on primary and adult education. Private participation should be encouraged in pre-school education. Higher education must involve private initiatives including setting up of private universities. A strong emphasis on vocational education and education that is market-oriented, especially in secondary and higher education, is called for.

An obsession for the use of technology, particularly information technology and communications technology must pervade the education system.

A common curriculum with an integrated education structure, is essential for progress.

A national level testing program would be required in order to channel students to higher levels of education based on performance and aptitude.

Admission to institutes of higher learning should be on a centralised testing and enrolment system. Autonomy and freedom for educational institutions is important to bring about innovations in education.

Grants have to be linked to achievements of individual educational institutions.

Reforms in education is a continuing process.

## 3. PERSPECTIVES ON EDUCATION DEVELOPMENT IN INDIA

### 3.1 Education Development in Ancient India

In ancient times, India was a great centre for learning. The 500 years from the 4th century AD to the close of the 8th century under the Guptas and Vardhanas was a glorious period in the history of Indian education. It was an age of the Nalanda and Valabhi Universities and the rise of Indian sciences, mathematics and astronomy. The Nalanda University had 1,500 teachers and thousands of students, maintained by revenues from more than 100 villages. Its fame attracted scholars from all over the world. Its open system covered vedas, logic, grammar, Buddhist and Hindu philosophy, astronomy and medicine. Sadly, today India does not enjoy that glory in the field of education.

### 3.2 Current State of Education

In 1997, India had an education index of 0.54 (maximum=1) against an average 0.95 enjoyed by countries with high human development. (Exhibit 3.1) The education index is a construct that is a function of gross enrolment in education and adult literacy, and has been brought out by United Nations Development Programme. China is far ahead with an index of 0.78; Sri Lanka has an index of 0.82. Even Swaziland, Botswana and Namibia have much higher indices of 0.76, 0.73 and 0.81. The primary net enrolment ratio as percent of relevant age group was 77.2 percent. The secondary net enrolment ratio as percent of relevant age group drops alarmingly to 59.7 percent. The adult literacy rate is 54%.

Between 1993 and 1996, India spent 3.4 percent of its GNP on public education, constituting 11.6 percent of total government expenditure. Countries like Canada and Sweden spent 7 percent and 8.3 percent of their GNP on education. Among the relatively less developed countries, Swaziland, Namibia and Botswana spent 7.3 percent, 9.1 percent and 10.4 percent of their GNP on education.

India shows a high gender gap in education. Female adult literacy stands at just 39.4 percent, just 59 percent of the male rate. Female primary net enrolment ratio stands at 71, while female secondary net enrolment ratio drops to 48. Female adult literacy is far higher in countries like Indonesia (79.5 percent), Swaziland (76.3 percent), Namibia (78.5 percent), Gabon (56.8 percent), Zambia (67.5 percent), Malawi (43.4 percent), Rwanda (55.6 percent) and Lesotho (92.5 percent). India's literacy rate in 1997 classified state-wise is given in Exhibit 3.2. Progress of India's literacy rate in the 20 Century is given in Exhibit 3.3

Even after 53 years of independence, we have not been able to achieve the dream of eradicating illiteracy. In 1942, the British Government instituted the Sargent Committee to propose a plan for eradicating illiteracy in India. The committee Proposed a plan that would make India 100 % literate in 40 years. Indian nationalists scoffed at the plan stating that India does not have that kind of patience, and wanted quicker results. However, 58 years after that and 53 years after independence, our literacy

rate is only 62%.

It must be noted that there has been considerable progress in the field of education India. The literacy rate has increased from 18.3% in 1951 to 62% in 1997. The number of primary schools increased from 2.09 lakhs in 1950-51 to 6.1 lakhs in 1998. The enrolment in schools increased from about 240 lakhs in 1950-51 to about 1090 lakhs in 1998. The student enrolment in universities and colleges increased from about 2 lakhs at the time of independence to 56 lakhs in 1998. The details of the number of all types of educational institutions from 1961 to 1998 are given in India today spends 3.8% of its GNP on education. India has 46% of its population aged 15 years and above as illiterates. In contrast, China spends only 2.6% of its GNP on education but has only 22% of its population aged 15 years and above as illiterates. About one third of the world's illiterates are in India. The details of the public expenditure on education by India and other emerging countries as a percentage of their GNP for the year 1996 is presented in Exhibit 3.4. The total enrolment in general education by level and state for the year 1998 is presented in Table 3.2. The details of the students by level of education and sex is presented in Exhibit 3.5 and the net attendance ratio by sex and broad class group is presented in Exhibit 3.6. Though significant progress has been made in enrolment, retention is still a major hurdle that India faces. The dropout ratio especially amongst the girls is extremely high. The details of the percentage drop out in different stages of school education are presented in Exhibit 3.7 (boys) and Exhibit 3.8 (girls).

### 3.3 National Policy on Education

The National Policy on Education (NPE), framed in 1986 and amended in 1992, accords priority to universalisation of elementary education, universal retention of children up to 14 years of age, non-formal education in the educationally backward states and thrust to the National Literacy Mission.

It states that the investment on education be gradually increased to reach a level of 6% of the National Income as early as possible. In fact, several Government documents dating back to 1969 state this goal. The actual level of investment has remained far short of this target.

The Programme of Action of the NPE 1986 and as revised in 1992 states "Time is of essence, and unless we act now, we stand in the danger of once again missing the opportunity of education reform, so critical not only for the development of our nation, but for our very survival." It also mentions that "it is people's achievement in the education reconstruction which will make the real difference." We have not yet succeeded in any meaningful reform and also having society's involvement in the process.

### 3.4 Pre-primary Education

Primary education is the building block for developing literacy. However, the transition from home to the school environment poses a significant challenge to children. Moreover, scientific research has found that language skills, intelligence, personality and social behaviour are largely determined by age four or five. The need for a pre primary school was therefore felt to prepare the child mentally, physically and socially for the many years of education to be pursued ahead. Primary education in India is characterised by two extremes. In rural areas, it is common that children who have studied for as long as six years lack the basic reading and writing skills, while children in urban areas are subjected to extreme pressures to excel in academic skills. The root of this dichotomy lies in pre-primary education system in India. While the pre-primary school in the rural schools rarely stresses on education, children in urban areas attend as much as two to three years of pre-school.

In rural India in 1984, 124 of every thousand children born to illiterate mothers died before age one. In the same rural areas in 1991, about 64 percent of children under three exhibited some level of malnutrition. And of the 101 million Indian children enrolled in primary school in 1991-92, the dropout rate was 47%.

To improve the situation, the Indian government initiated Integrated Child Development Services (ICDS) in 1975. ICDS is supported by the World Food Programme, Centre for American Relief Everywhere, UNICEF, the European Union, USAID and the World Bank.

The first and second ICDS projects attempt to combine education with basic services to children, pregnant women and

nursing mothers. It is the largest such programme in the world, aimed at seventeen million pre-school children and seven million pregnant and nursing women. The programme is delivered at the village level in four States: Andhra Pradesh, Orissa, Madhya Pradesh and Bihar and gives priority to the low-income groups.

The two projects work through a network of Anganwadi ("courtyard") centres, each run by an Anganwadi worker, usually selected from the local village. The Anganwadi workers gather between 20 and 40 children in a courtyard for several hours each weekday and provide non-formal pre-school education, supplementary feeding, immunisations, health check ups and medical referral services. They also provide health and nutrition education, parenting education through home visits and maternal and child health referrals. The projects use existing services of diverse governmental departments and of voluntary agencies, but overall administration responsibilities lie with the Department of Women and Child Development within the Ministry of Human Resources Development.

Though the ICDS has now spread to almost all states, most of the Anganwadi centres operate at a minimum level of quality and estimates are that only 12% of India's children are reached by any early childhood assistance.

### 3.5 Primary Education

Provision of free and compulsory education to all the children until they complete the age of 14 years is a Directive Principle of the Constitution. The stated national goal of education for all has still not been met. India has steadily raised primary enrolment rates since Independence and today has the world's second largest education system after China, with 1080 lakhs children aged 6-10 attending primary school. Yet, one of its most stubborn development challenges is the fact that about -330 lakhs children of primary school age are still not enrolled in school. In addition, the qualities of teaching and retention power of primary schools are weak, and there are large gaps in access to education, quality of education and learning according to gender, ethnicity and location. though the gross enrolment rate in primary schools is about 90%, there are still about 33 lakhs children who are not enrolled in any school and the total number of illiterates in 1997 was about 3000 lakhs. The attendance ratio and survival rate makes the picture even more dismal. India's primary school survival rate of 62% is also lower than other developing countries such as Brazil (71%), Mexico (84%) and Egypt (98%). This indicates that very few students are reaching the fifth or sixth grade. Dropout rates measured by the Department of Education show that 35% of males and 39% of females dropout before completing primary "education. Only 84% of rural habitations have access to a school within a distance of 1 km and only 76% have access to a school within a distance of 3km, though in terms of population, the figures are higher at 95% and 85% respectively. 21000 schools are still single teacher schools. The quality of education imparted leaves much to be desired, with students not being able to read and write even in the fifth grade. This is due to the fact that availability of a school does not mean it has all the required facilities.

A comparison of India with other emerging countries in primary school enrolment is given in Table 3.3. It could be seen from the table that India ranks poorly even amongst the emerging countries. The number of primary schools from 1970 to 1997 is presented in Exhibit 3.9.

India's public spending on education as a percentage of GNP, for the period 1993-97, was lower than that of Egypt, Kenya, Mexico, Nicaragua, South Africa, Thailand and Tanzania. The spending on primary education as a percentage of total public expenditure in the same period in India was 40%. Fifteen other emerging nations were compared with India, and India's percentage spend is the second lowest ahead of Peru. These details are presented in Table 3.4.

A study of China shows that due to a compulsory 6 year and 9 year education system, the enrolment percentage is in the high 90s for the age group 6-11. China, whose literacy rate was less than 20% in the late 40s has gone up substantially to over 80% today. China has achieved all this in a matter of 40 to 50 years. It is not difficult for India to outdo China in a shorter time span.

A phased drive called Operation Blackboard has been launched to improve the basic infrastructure of primary education. Till 1989-90 a total of Rs 383 crores had been spent under the scheme. The education policy provides for opening

of residential schools for talented children. These schools are named Navodaya Vidyalayas. These schools are residential, co-educational and primarily for children from rural areas. At least one third seats are reserved for girls. Presently, the overall percentages of SC/ST students admitted so far are 21% and 12% respectively. The Navodaya Vidyalayas aim to provide opportunities to the talented children to develop their full potential and to promote national integration. Education in these schools is free for all students. It is proposed to open such schools in each district in the country. 342 Navodaya Vidyalayas covering 24 States and 6 Union Territories have been set up till 31st January 1994.

### 3.6 Secondary Education

The Secondary Education which serves as a bridge between primary and higher education is expected to prepare young persons between the age group 14-18 in the world of work and entry into higher education. The children population at the secondary and senior secondary level, as projected in 1996-97 by NSSO has been estimated at 966 lakhs.

There are over one lakh secondary/higher schools and two lakhs upper primary schools in the country. In spite of the rapid increase in the number of schools, there are still unserved areas in the country where there is no secondary/higher school for 10 to 20 kms.

Against this population, the enrolment figures of the 1997-98 shows that only 270 lakhs are attending schools. Thus, two-third of the eligible population remains out of the school system. To accommodate the children in schools at the secondary level, we have at present 1.10 lakh institutions (1998-99). With the emphasis on universalisation of elementary education, the enrolment is bound to increase and once this universalisation takes place, we may require more than two lakhs institutions at the secondary level to accommodate them. There are several systems of education at (the secondary level. Each state has its own board of secondary education. In addition, there are the Central Board of Secondary Education (CBSE) and Indian Council for Secondary Education (ICSE). The Central Board of Secondary Education (CBSE) was set up in its present form in 1952 with an objective to promote national integration to provide uniform school education in the country, cutting across state borders and linguistic barriers. CBSE has affiliated schools all over the country and even abroad. CBSE has also set up an Open School in 1979 for propagation of distance education in the country. The National Council of Educational Research & Training (NCERT) was established in 1961 to assist and advise the Ministry of Education and Culture in implementing policies and programmes in the field of education. The Council, with the objective of bringing about national integration in education, has over the years revised secondary level syllabi and textbooks in collaboration with the CBSE. It also conducts national surveys of teacher education every five years and organises training for school teachers.

### 3.7 Higher Education

India has one of the largest 'Higher Education Systems' in the world. It has 237 Universities, 10600 Colleges, 41 Deemed universities, 70.78 lakh students 3.31 lakh teachers. There are several organisations involved in the field of higher education system in the country. They include:

University Grants Commission (UGC) is responsible for co-ordination, determination and maintenance of standards and release of grants. Professional Councils are responsible for recognition of courses, promotion of professional institutions and providing grants to undergraduate programmes and various awards. The statutory professional councils are:

- All India Council for Technical Education (AICTE)
- Distance Education Council (DEC)
- Indian Council for Agriculture Research (ICAR)
- Bar Council of India (BCI),
- National Council for Teacher Education (NCTE)
- Rehabilitation Council of India (RCI)
- Medical Council of India (MCI),
- Pharmacy Council of India (PCI)
- Indian Nursing Council (INC)
- Dentist Council of India (DCI)

Central Council of Homeopathy (CCH)

Central Council of Indian Medicine (CCIM)

The central government is responsible for major policy relating to higher education in the country. It provides grants to the UGC and establishes central universities in the country. The Central Government is also responsible for declaration of Educational Institutions as 'Deemed to be University' on the recommendation of the UGC. Presently there are sixteen central universities in the country. In pursuance of the Mizoram Accord, another Central University in the State of Mizoram is planned. There are 37 Institutions which have been declared as Deemed to be Universities by the Govt of India as per Section 3 of the UGC Act. 1956. State governments are responsible for establishment of State Universities and colleges, and provide plan grants for their development and non-plan grants for their maintenance. The co-ordination and co-operation between the Union and the States is brought about in the field of education through the Central Advisory Board of Education (CABE).

Education is on the 'Concurrent list' subject to Entry 66 in the Union List of the Constitution. This gives exclusive Legislative Power to the Central Govt. for coordination and determination of standards in Institutions of higher education or research and scientific and technical institutions.

### 3.8 Professional Education

Professional education would cover engineering and technical education, medical education, management, financial and law courses. Professional education has great potential for adding value to products and service for contributing to the national economy and improving the quality of life of the people. The Indian technical education system is accorded a great deal of respect base on the alumni who have been setting trail-blazing paths in the developing countries, the large number of Indians who are being sought after by developed countries and large multinationals in various spheres such as information technology, financial services, marketing, medicine etc. is testimony of the innate strength of our technical education system. There is however a view that this is a reflection of the innate ability of Indian brainpower and has little to do with the education system. We need to rejuvenate the system by modernisation and removal of obsolescence of the curriculum.

A large number of inventions and discoveries all over the world have been the result of research initiatives in educational institutions. However, India is an exception to this. There is a felt need to foster a strong culture of research with much stronger linkages with the industry and societal needs.

The colleges and universities have largely bypassed the rural sector, except a few universities designated as rural universities. India is still a largely rural nation. It is the duty of the education system to disseminate knowledge to the entire nation. The urban-centric approach has left a large population of the country untouched. These institutions should utilise the reach of the latest medium and also spearhead the transfer of technology to the rural sector.

### 3.9 Adult Education

The relationship between adult education and the basic education process is one of interdependence. Recognising the vital role of adult education in the social development of the country, many policies and policy provisions have reflected the Government's concern and commitment for promotion of adult education. Since independence, the Government has been making serious efforts to achieve 100% literacy but it has remained an elusive goal, due to several factors, such as economic constraints, unchecked growth population, lack of community participation, lack of awareness etc.

The literacy rate at present is 62% against the population growth rate of 2%. Various programs have been launched in the country to enhance literacy rate through six months programme and basic education. Simultaneously efforts are being made to support adult illiterates with daily life skills and knowledge.

The horizon of adult education has widely expanded in the national scenario during the last two decades. Of the various factors which have influenced its development, the launching of the National Adult Education Programme (NAEP) in 1978 and the National Literacy Mission (NLM) in 1988 have been greatly responsible for catapulting adult education into a national programme of high priority and prominence besides ensuring it committed policy support and liberal grants from the



Government of India.

Today, several types of adult education activities viz.; Total Literacy Campaigns (TLC), post literacy and continuing education programs and experimental projects like Manila Samakhya are being implemented in different parts of India by official agencies, Non-Governmental Organisations (NGO) and educational institutions. The operationalisation of these diverse programs have not only generated a variety of professional literature ranging from literacy primers, post literacy materials, training manuals, evaluation reports, research studies and innumerable articles but also led to the expansion of training programs.

The systematic strategies evolved by the NLM towards developing the administrative and academic infrastructure at national, state and district levels has been duly supported by the University Grants Commission's (UGC). UGC has established 92 University Departments of Adult Continuing Education, which has also played an important role in strengthening the professional base of adult education in the country.

Although literacy levels are low, there has been progress in improving attainment for both sexes in India over the last several decades. In 1981, 70% of women and 43% of men were illiterate. By 1997 this figure had come down to 50% for women and 27% for men. Thus there has been an increase in the proportion of women who are literate in just about 15 years. Despite the improvements in literacy, there continues to be a large gap between the literacy levels of men and of women.

Additionally, there are differences in literacy rate by place of residence, with rates in rural areas lagging behind rates in urban areas. In 1991, the urban female literacy rate was more than twice that of rural rate, 64 and 31 percent respectively. While there have, however, been substantial increase in literacy rates in both urban and rural areas, the gap between the two sectors has not narrowed appreciably.

The difference in literacy rates among the states is also extreme. Mizoram has the highest female literacy rate, with 95% of women literate in 1997. The state with the second highest female literacy is Kerala, where nearly 90% of women are literate. On the other hand, there are several states that have literacy rates of less than 40%, including Bihar and Uttar Pradesh, the two most populous states. As with India as a whole many states have large rural-urban differences in female literacy. In 6 of the 24 states 25% or less of the women in rural areas are literate. In Rajasthan, less than 12% of rural women are literate.

The Total Literacy Campaigns, constituting the principal strategy for eradication of illiteracy, have been extended to cover 282 districts and the Post Literacy Campaigns to 105 districts. The focus of the campaigns has now shifted to Hindi speaking States having bulk of the illiterate population. A significant event in 1988 was the setting up of a National Literacy Authority to manage the national literacy missions aimed at achieving 80% literacy in the 15-35 age group in the country by 1995. A total of 58.07 million people have been enrolled under various National Literacy Missions as in August, 1994.

### 3.10 Women's Literacy

It is believed that when you educate a man you educate an individual but when you educate a woman you educate the family. The development of a nation cannot only be assured through the technological and materialistic advances, but also through the quality of life.

The current framework of National Development recognises women as one who can and has played a crucial role in social reforms economic development and also in the political process. Women make the most effective providers of healthcare, non-formal teacher and managers of the local environments. As a wife and mother she is the most influential member in determining the stability of her family and the Development of her children's personality. Hence, the women's development is a pre requisite for the all round development of the society.

Many studies have shown that there is a strong correlation between several developmental indicators and level of literacy of the population. Such correlation is particularly strong with the level of female education. It is found that the relation between the age of marriage of a girl and her achievement in education is positive. On the other hand infant mortality rate, birth rate and total fertility rate are negatively correlated. The lower the educational level of the mother, the more number of children

born to her and greater is the risk of reproductive mortality/morbidity. In today's technological worlds education, especially for women is much more important for reduced population growth.

Literacy levels are highly correlated with the health status of the population. Kerala has the lowest infant mortality rates and the highest life expectancies of all the states. Conversely, Uttar Pradesh and Bihar have some of the lowest life expectancies found in India. A woman's lack of education also has a negative impact on the health and well-being of her children. Recent surveys have found that infant mortality was inversely related to a mother's educational level. Also, children of illiterate mothers are twice as likely to be undernourished or stunted as compared to children whose mothers have completed at least high school. Of the literate women in India, 59% have only a primary education or less. This level of education may not be sufficient to meaningfully improve the status of these women. Only 41% of the literate population, or 13% of all Indian women, have more than a primary education.

### 3.11 Summary

To sum up, India's education system is highly skewed. India has excellent examples of institutions at all levels of education to demonstrate its capability. Some higher education institutions like HTs and IIMs have earned international acclaim.

But below this elite crust there is not much to speak of and the road ahead is challenging.

## 4. SECTORAL ISSUES AND IMPERATIVES

### 4.1 Pre-primary Education

#### 4.1.1 Issues

##### a. Social equity

Poor children face many problems in their childhood years, such as lack of nutrition, stunted mental development and reluctance to study. These attributes later lead to low achievement, high dropout rates and functional illiteracy. Pre-primary school can tackle these critical deficiencies early and build a strong base for the child's successful learning.

##### b. Socio-economic

Early childhood education increases the productivity of a child and in turn increases the probability of the child's success at school. In the later years, this may reduce social costs in areas such as school repetition and health education.

##### c. Increasing literacy

Early child development programmes combine the objectives of education with health and nutrition. Pre-primary schools are mostly in the form of 'day care centres' where children are taken care of and provided with the necessary minimum nutrition. Many children and women don't attend school because they have to take care of their siblings or children. The pre-primary school thus gives them some free time, which they can use to attend school themselves and improve literacy.

##### d. Increasing productivity

Female participation in the labour force throughout the developing world is substantial and increasing. Availability of childcare centres, which provides education and health, can increase the productivity and income of self-employed women and creates opportunities for additional learning and education.

#### 4.1.2 Imperatives for Sectoral Planning

While the dichotomy between urban and rural pre-primary education has to be eliminated, the pre-primary education system needs to change focus from academics to all round development of children. This calls for a radical change in teaching methodology based on scientific principles.

Research has shown that exposing young children to interesting sources of information for very brief periods each day stimulates the development of the brain cells during early years and fosters a spontaneous curiosity and natural love of learning in children. The pre-primary education system should be based on these scientific principles and has to focus on developing a conducive atmosphere for learning and stimulating the innate curiosity of children.

Learning should be in the form of presenting information to the child in an interesting manner and inducing the child to inquire about the subject. There should not be undue emphasis

on memorising. Active teaching should be confined to brief periods and not extend beyond the child's span of interest. The teacher should engage in active teaching to a group of around five children while other children are engaged in play and other activities. Since the child has a natural tendency to learn languages, very high importance should be given to development of basic reading and writing skills in different languages.

## 4.2 Primary Education

### 4.2.1 Issues

#### a. Urban-rural divide

Education is largely perceived as urban-centric. The stark difference in the literacy rates between rural and urban areas underline this point. In 1997 the urban literacy percentage was 80 % whereas the rural literacy percentage was only 56 %. Apart from the large difference in the literacy percentages, there is a quality difference in primary education between the rural and urban areas. This glaring disparity results in fewer opportunities for rural students in the higher education streams. Distance between schools and the students is high in certain states especially rural areas, which reflects in the educational backwardness of the states. Compared to the urban areas, the availability of trained teachers in the rural areas is limited.

#### b. Teaching methodology

The current system emphasises teaching by rote. The students are not exposed to experiential learning. This curtails the innate spirit of the children to learn through experiments and practical situations.

#### c. Low enrolment and high dropout rates

Primary school enrolment and attendance ratios are the most common indicators to measure the success of a primary education system. Net primary school enrolment ratios describe the percentage of primary school-age children who are registered in school. Primary school attendance ratios estimate the percentage of primary school age children that are actually attending school. Another important indication success of a school system is the student retention rate, which gives the percentage of enrolled children who reach a certain grade level.

A comparison of these indicators with other developing countries shows that India fairs poorly on all the counts and the goal of universal primary education is still far beyond reach. Countries such as Bangladesh, Brazil, Egypt, Kenya, Nepal, Peru, Philippines, South Africa and Tanzania score over India in at least one of the two factors. The details of this are presented in Table 4.1.

#### d. Gender

A major concern is the gender and caste wise disparity in literacy. Girls face many obstacles in pursuing education, including the traditional attitudes about female roles and a lack of female teachers. They are often expected to make a critical contribution to household work and childcare. With the result, girls constitute two-thirds of all children not attending school.

The female literacy rate was 50% as compared to 73% for male in 1997. There are also wide variations among the various states, ranging from 90% female literacy in Kerala to 34% female literacy in Bihar. A similar situation prevails in the case of male literacy, which ranges from 96% in Kerala to 62% in Bihar.

#### e. Myths about education.

The most common reasons given for inadequate spread of education are:

Illiterate parents don't value education.

Children cannot attend school due to work.

However, a recent survey carried out by a group of researchers based at the Delhi School of Economics and the Indian Social Institute finds otherwise. The survey covered all the schooling facilities in a randomly selected sample of 188 villages in Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan. The survey's findings have been released as part of the Public Report on Basic Education for India (PROBE), which is supported by the Centre for Development Economics (India). Most respondents were very keen to enable their children to acquire education. 80.2 per cent of parents felt primary education should be made compulsory for all children. While 98 per cent stressed

it was important for sons to go to school, as many as 89 per cent felt similarly in case of daughters. A small minority did not consider it important for a girl to be educated.

While many children have to work long hours, the survey found that among children who don't attend school, about half worked less than three hours on the preceding day, and 33% had not worked at all during school hours on that day. Only 18% worked for more than eight hours. Also, girls worked more than boys did, but mainly at home. It is thus clear that the real causes go deeper than the apparent.

#### f. Lack of Educational Infrastructure and Services

One of the main reasons for India's poor progress in primary education is the lack of educational infrastructure and facilities. Overcrowded classrooms, long distances to schools, high student-to-teacher ratios, lack of school supplies such as desks, chairs, chalk, and blackboards etc. limit access to primary education.

#### g. Cost of education

Despite attempts to make primary education free for all, schooling is still a costly proposition for the average agricultural labourer. The PROBE survey estimates the cost incurred to send a child to a government primary school at Rs.366 per student per year. The break-up of the cost is presented in Table 4.2. Sending two children to school amounts to about 30 to 40 days wages for an agricultural labourer. Further, the loss of the child's earnings and his job experience adds to the family's decision not to send children to school.

#### h. Low teacher to student ratio

During the period 1951 to 1997, the number of primary teachers increased by three times and the percentage of trained teachers has increased from 61% to 87%. However, the student teacher ratio has remained stable at around 45 students to a teacher. The actual number in states varies from 17 in Sikkim to 78 in Bihar. The PROBE survey found that there were about 50 children enrolled for each teacher. Teachers are often absent and spend little time in active teaching even when they are present. Further, the distribution of teachers among schools is highly uneven. This often leads to the actual pupil-teacher ratio being much higher than 50 in many schools, even shooting up to three-digit figures in some cases. Another manifestation of this problem is that of the single-teacher school. Official Single-teacher schools have been abolished in the country since introduction of Operation Blackboard in 1986. However, in the PROBE survey sample villages, 12 per cent of all primary schools had a single teacher appointed. Another 21 per cent had a single teacher present, because the other teachers were absent. Thus, one-third of all schools effectively had a single teacher.

#### i. Inefficient teaching methods

It is found many children are unable to read and write even after many years of schooling. This is due to the inefficient teaching methods employed in schools. Teaching aids are rarely used either because they are not available or are kept locked up and away from the children. The favoured teaching method is copying from the board or from textbooks and emphasis is on controlling the children rather than teaching. Teachers are compelled to teach more than one grade at a time. Some teachers deal with this by concentrating their efforts on the higher grades, leaving the younger children to their own devices.

#### j. Child labour

The 1991 census of India lists 112.8 lakhs child workers in the age group of 5-14, 90% of which are in rural areas. Besides, 62 lakhs children are involved in housework, majority (88%) of which are girls. There is a strong relationship between child labour and lack of primary education. Working children have low enrolment, high absenteeism and dropout rates. This may be attributable to fatigue from long hours of labour, injuries and illnesses, and work schedules that conflict with school hours.

Recognising this, the International Labour Organisation (ILO) has stipulated that the minimum working age should be more than the age required to complete compulsory education and in any event, not less than 15 years. However, India does not have any compulsory education laws.

The U.S. Department of Labour through its International Child Labour Programme has studied 16 developing countries to find the link between primary education and child labour. The fifth report in this series states that high absenteeism and drop

out rates are particularly chronic among working children in rural areas. Though many countries have complementary child labour and compulsory education laws, India has no national laws in this regard. Only 14 states in India have legislation regarding compulsory education. A comparison of this legislation is given in Table 4.3.

#### 4.2.2. Imperatives for Sectoral Planning

There should be a compulsory enrolment of children at the age of 5 in primary schools. This should be enshrined in the constitution. A system of reward and Penalty needs to be followed. The students should be offered incentives such as mid-day meals, free textbooks and teaching aids. There should be stiff penalties for parents in case the children are not admitted to schools.

To ensure retention, the mid-day meal scheme and other incentives should continue. There are a large number of NGOs working in the field of primary education. The synergy between the Government and the NGOs should be utilised. The curriculum should be overhauled to encourage learning through experience and not by rote. The teacher's role should shift to that of a facilitator.

The trained teacher's role should serve a specified period in the rural areas, as in the ranking system and the medical profession.

National education fund needs to be created. The donations to this fund should be preferred attractive tax breaks. This fund to be utilised for primary education and adult literacy.

There should be at least one primary school within 2 kms. of each prospect student. The reach of new technology tools such as television, cable television and Internet should be utilised for enhancing the reach and quality of primary education.

Economic incentives alone are not very effective in increasing school attendance. However, a recent survey carried out by ILO has found it to be very effective when combined with other social measures such as raising community awareness, about education and improving educational quality and infrastructure. Economic incentives are thus very important in raising education levels and should be employed in India more as a means to offset the income loss incurred by sending a child to school. Incentives can be in the form of free meals to students, food to the student's family and free uniforms and books.

A variety of programs to provide alternative education opportunities for working and underprivileged children should be introduced. These may include the following programmes:

##### a. Orientation Schools

Temporary schools, which would operate in the lean months of employment, should be introduced. These schools should target working children who are early drop outs or have never attended school and should impart basic reading and writing skills, vocational skills and other skills relevant to their work environment. Focus should be on generating interest in the formal education system.

Andhra Pradesh, with the highest number of working children in India, is implementing such a program successfully with about 74% of the students subsequently enrolling to formal schools.

##### b. Flexible Schedules

Another strategy for increasing school enrolment and attendance is to make school schedules more flexible, allowing working children the opportunity to both work and study. Schools should operate on a two-shift basis, one starting in the morning and other later in the day. Working children should be allowed the flexibility to attend school in either shift. Agricultural and rural labour requirements are highly seasonal. The school calendar should be adapted so that majority of the curriculum is covered in the lean months. Moreover, many labourers migrate to other places for some time in a year. Appropriate arrangements should be made to allow children of such labourers to attend school at different locations in the same grade. Such programmes have been successfully implemented in countries like Guatemala, Peru, Brazil and Mexico.

There should be national legislation requiring compulsory education for children during the ages of 6-14. Effective child labour laws fixing the minimum working age at 15 should complement this.

An example of a country where compulsory education has

worked to reduce child labour and increase literacy is Sri Lanka. The Sri Lankan government decided to enforce compulsory education in the 1920's and 1930's. With this compulsory education policy, school participation rates rose from 58 percent in 1946 to 74 percent in 1963. The literacy rate also increased from 58 percent in 1946 to 66 percent in 1984 and to 90% in 1997. Correspondingly, the employment rate of children in the ten to fourteen age group has shown a substantial decline from 13% in 1946 to 6.2% in 1963 and currently stands at 5.3% for males and 4.6% for females.

### 4.3 Secondary Education

#### 4.3.1 Issues

##### a. Urban-rural divide

The enrolment figures though improving with time, is still lopsided in favour of the urban areas. The distance to the nearest school is quite high especially in rural areas.

##### b. Lack of facilities

Most of the existing schools have poor facilities for laboratories, learning resources, computers and sports. The variance in the quality of teaching is stark between different schools. Apart from the lack of facilities, the other major reason for this is the lack of adequate teaching professionals in remote areas.

##### c. Different systems

There are several organisations administering to this education system both at the Centre and the states.

#### 4.3.2 Imperatives for Sectoral Planning

A common system of education across the nation is absolutely necessary. This could contain common syllabi across the nation allowing for regional variations. The States would be responsible for implementing the syllabi. The curriculum should provide vocational education at the 10 + 2 levels. The curriculum to be reviewed periodically. All higher secondary and high schools to be provided computers at a ratio of at least 1 computer for every 50 students. Stress should be on practical learning rather than on theoretical learning.

### 4.4 Higher Education

#### 4.4.1 Issues

As with the other sectors, there is a tremendous variance in the quality of education being imparted by various institutions. The reasons for these include the variation in infrastructure facilities in different institutions and variable quality of the teaching professionals.

There are no innovations in teaching and research. The existing scheme for continuous learning of faculty is inadequate. The outcome is ill-equipped faculty members.

Higher education is an urban phenomenon with most of the Universities located in the urban areas. Also the decision making process of the Universities is extremely slow. This is one of the reasons for the perception amongst the rural population that they do not need higher education. The content and curriculum is not in tune with the needs of the society and does not reflect the changing trends. The result is an increasing level of educated unemployed.

The objective of higher education at the most basic level is to prepare its students for employment. This would mean value addition of a fairly high level. However, as mentioned earlier this is merely a dream. The value addition for the cost of collegiate education is disproportionate.

At the higher education level, the financing options for the students is almost non-existent. This and the other issues discussed above preclude a large segment of the Indian population from being a part of the higher education system.

#### 4.4.2 Imperatives for Sectoral Planning

The system should provide affordable and quality higher education on par with the best in the world to all. This would mean tremendous value addition for the students and they would be better prepared for employment.

There is a need to evaluate the utility of current Arts and Science courses in the prevailing scenario. This evaluation should not restrict to the curriculum alone but also to the linkage to employment opportunities. There should be in-built mechanisms to constantly upgrade and evaluate curriculum.

These evaluations should be undertaken at a maximum interval of one year.

The private institutions should be encouraged to establish science and technology institutions. There should be no funding from Government to these institutions. The linkages between industry and academic institutions, especially in research and development, should be institutionalised.

All courses from the UG level should have a module on entrepreneurship.

Continuous learning should be made mandatory for all teachers in higher education on a period basis. This should be at least 6 weeks of training for every two years of teaching.

The institutions should be rated by independent agencies, as is done in the financial markets. The process should be analogous to the credit rating for financial instruments. All institutions failing the minimal quality tests to be given a pre-specified time to improve, failing which these are de-recognised. All institutions should obtain this rating each year. This should be prominently displayed in all communication and application forms. This would strengthen the accreditation process.

The University governance structure should be compact and effective. In view of global participation of the Universities, the issue concerning their jurisdiction of geographical territory needs a review. Also the University should be allowed to establish their centres of studies at various locations in India and abroad. The University administration should be effectively decentralised and based on the latest information technology techniques. The courses of studies should be flexible to encourage the students to choose the variety of subjects in tune with their strengths and the market demands.

The University system should establish transfer of credits to enable students to move from one institution to the other.

#### 4.5 Professional Education

##### 4.5.1 Issues

The colleges and universities have largely bypassed the rural sector, except a few universities designated as rural universities. India is still a largely rural nation. It is the duty of the education system to disseminate knowledge to the entire nation. The Urban-centric approach has left a large population of the country untouched. These institutions should utilise the reach of the latest medium and also spearhead the transfer of technology to the rural sector.

The faculty, once they are part of the academic system do not keep themselves abreast of the latest happenings in their field. There should be methods to compulsorily train teachers at specified periodicity. This would enable them to update themselves on the latest tools and techniques especially in the emerging areas.

There is a variance of quality of education amongst institutions, with the result that for a few colleges and institutions, there is a greater demand for admissions, and for some others there are not enough requests for admissions. The cost of professional education is quite high. The lack of financing options attenuates this.

##### 4.5.2 Imperatives for Sectoral Planning

An all-India examination for professional courses on the lines of SAT, GMAT or GRE should be organised. This will be the evaluation criterion for entry into professional courses at the undergraduate courses. The tests can be conducted every quarter. The students are free to take the test at their convenience. The entry into postgraduate level for the technology courses must be strictly through GATE or other similar entrance examinations.

The curriculum should be reviewed and updated to be globally competitive. The teaching faculty should compulsorily attend programmes to update their knowledge and skills on the latest research and trends.

Consistency in quality amongst all technical education should be ensured. The role and powers of AICTE, MCI and other organisations responsible for accreditation needs to be merged into one single entity which would grant institutions an annual certification process based on the rating obtained from independent authorities.

The institutions should explore methods of increasing their

corpus and reduce their dependence on the Government for funding.

Establishment of Private Universities in the field of Science and technology should be encouraged. An enabling legislation for this purpose should be passed.

#### 4.6 Adult Education

##### 4.6.1 Issues

###### a. Rapid Increase in Population

The total population of the country has been increasing at a fast rate and is currently around one billion. Though, the literacy rate has also been consistently rising it has not been able to keep pace with the population growth rate. Consequently, the number of illiterates kept increasing for several decades. However, there has been a turnaround in the trend since 1991. The details are presented in Table 4.4.

###### b. Needed for a larger focus on certain states

About one-third of the world's illiterates are in India. 48 % of the illiterates in India are in the four states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh.

###### c. Functional literacy

Concept of functional literacy and emphasis not on mere enrolment of learners but on attainment of certain predetermined norms and parameters of literacy, numeracy, Functionality and awareness is not focussed.

###### d. Rural-urban disparity

The rural-urban disparity has posed a major problem with respect to literacy. However, in this decade the growth of literacy in the rural areas has been significant. In spite of the improvements in this decade the literacy percentage in the urban area is 80 % and in the rural areas is only 56 %.

###### e. Economic disability

Poverty is widely acknowledged to be the underlying cause for all the social problems facing India, illiteracy obviously being one of them. An individual in India, especially in the rural areas does not have the inclination towards education, since he would rather earn his living than spend time on getting educated. Hence the opportunity cost of learning is high. In other words, the utility from education is considered very low.

###### f. Access

Another critical reason to the slow growth of education could be attributed to access in terms of time and place. The timings of the educational institutions/communities are not convenient for most of the people. A common man will not compromise on his daytime to study since he has to sustain his family through employment. Also, the community centres imparting adult education are more concentrated in urban or semi-Urban areas rather than rural areas. Basically, the reach of these programs is very poor and again it becomes inconvenient for a common man to access such education.

###### g. Weak Policy Formulation

A review of the efforts made so far in policy formulation and planning on training in adult education in India indicate that though meticulous planning has been done and concrete policy guidelines formulated but there is a lacuna in implementation of these, programs and policies at the grassroots level. A number of research and (evaluation studies have been conducted of the implementation of total literacy campaign (TLC) in India and these studies have revealed the following facts which need to be rectified immediately.

The weaknesses revealed by these studies are generally the following: -

1. It is not primer specific.
2. Lack of proper planning.
3. Training needs are not properly identified.
4. Appropriate training methods are not used (focus is on lecture method).
5. Lack of relevant training materials on specific aspects of TLC.
6. Proper monitoring, evaluation and documentation is not seen.

7. Numbers of participants are bigger in size (un-manageable number)
8. Insufficient support system for training.
9. Same training model is followed in low and high literacy areas.
10. Research in training is very poor.
11. Development of training skills is not properly attended.

#### 4.6.2 Imperatives for Sectoral Planning

India should achieve, by 2010 AD, 100 % literacy levels in the age group 6 to 65. The current estimates of NSSO state that by 2005, our literacy rate would be over 75 %. We would need support of a large number of organisations to achieve this, both within Government and outside of it.

A comprehensive programme similar to those launched for polio vaccination needs to be organised involving large number of social organisations and NGOs. The responsibility should be placed with a single ministry who will co-ordinate with all the States and Union Territories for achieving the first objective.

Additional sources of funding for this programme should be explored. The norms for receipt of foreign funding for literacy programme to be liberalised. Focus should be more on the educationally backward states.

Separate programmes for women illiteracy eradication, taking into account the social norms should be drawn up on a micro-management level at the school going population. In making these projections, all prices and costs are based on 1998-99 levels.

### 5. A VISION FOR EDUCATION IN INDIA

#### 5.1 India's Labour Oriented Society

Despite rapid advances in industrial development, India is today still seen as a non-competitive labour oriented society. Two thirds of our work force is dependent on agriculture for a living. In most industrial sectors, competitive advantage is built around labour. A substantial part of our exports are in the form of labour intensive goods and services. In information technology, some flag our vast pool of labour as an advantage while others say that a majority of them are not working in cutting edge areas.

A number of economic reforms are hampered by their impact on labour and employment - be it privatisation of public enterprises, reduction in tariffs, moving to a quantitative regime or restraining wasteful government expenditure. We have rigid labour laws that protect the interests of 300 lakhs employees in the government, public sector and organised private sector. The large numbers of workers in the unorganised sector and agriculture have no such protection. These labour laws hinder the creation of several hundred million new jobs that will be required for our growing population. Rigid labour laws are also hampering investments that have high employment elasticity, much needed by a populous - nation. Labour related issues are centre stage in our current phase of reforms. But at the same time, the power of people in India is enormous. Imagine the potential for growth and development if over a billion people, one sixth of humanity, are educated, creative and enterprising. We have the numbers, but not the quality. Labour is both as a promise as well as a peril in Indian society.

#### 5.2 Dawn of the Information Society

In contrast, the developed world is shaping to be part of an information society. In such a society intellectual capital will be at a premium.

Businesses in the information society will see employees work as quasi-owners in shall cohesive organisations. Conventional models of employment that are labour oriented will be unable to unleash the human potential. Information intensive businesses will demand the nurture of creativity and innovation. Organisations in the information society will tend to be smaller nuclear outfits rather than large monoliths. Traditionally organisations were designed for stability. In information led world, organisations would be designed for change.

Innovation will be at the heart of competitiveness in the information society. Innovation is a commitment to create future growth. Societies will tend to be research intensive. Already,

R&D expenditures are 1.8% of GDP in Europe, 2.7% in USA and 2.8% in Japan and would tend to move higher in absolute and relative terms. Tiger patent laws will support the sustenance of such expenditures. Innovation without knowledge and people is unimaginable.

The information society will place emphasis on soft assets - programmes that run computer systems, systems solutions that integrate businesses, people who drive innovation and ideas that create the future. It will be a world where services will make up a significant component of economic value.

In such a society there will be much education occurring outside of schools. Education will draw on vastly more powerful technology. For example, learning through a two-way voice activated computer assisted self-paced learning. Learners will be able to go beyond the classroom. They will obtain information in a variety of forms - text, data, sound, video - from all over the world, at any time and at rapidly diminishing costs. Multimedia materials will reflect local values and culture, provide visual images of desired behaviour, collaborate across borders and access information not previously available.

The information society will be education centric - in content, network, delivery and outcome.

#### 5.3 Imperatives for India

As the world moves to forging an information society founded on education, India cannot remain behind as a non-competitive labour oriented society. India has to envision to being a competitive knowledge economy.

India has to create an environment that does not produce industrial workers and labourers but fosters knowledge workers. Such people must be at the cutting edge of knowledge be competitive and innovative. Education development has a major role to play in shaping knowledge workers and, in turn, placing India in the vanguard in the information age.

#### 5.4 Imperatives for Education

While the larger world embraces the information age, the world of education in India encompasses different 'worlds' that live side by side.

One world includes only a fortunate few with access to modern institutions, computers, Internet access and expensive overseas education. A second world wants to maintain status quo - teachers, administrators, textbook publishers, students - all have reasons to prefer things to remain as they are or change only gradually. The third world struggles with fundamental issues such as, no books, wrong books, teachers desperately in need of training, teachers' with poor commitment, rote learning of irrelevant material, classrooms with hundred students, dirty floors and no toilets.

India cannot hope to succeed in the information age on the back of such three disparate worlds.

The imperative for India is to raise standards of the vast majority with poor education, break the education sector free from its inertia and forge a society that places knowledge as the cornerstone of its development. At the same time, It is difficult to envisage the Indian society, with its ethos centred on family values and caring, being in a purely competitive mould. The tradition of co-operation and coexistence in India, among diverse communities, religions and languages and regions, has to be sustained.

#### 5.5 A Vision for Education

Therefore, a vision for education in India has to inspire creation of a knowledge-based society, induce competitiveness yet foster a sense of co-operation.

Thus, the vision for education in India would be " TO CREATE A COMPETITIVE, YET CO-OPERATIVE, KNOWLEDGE BASED SOCIETY."

#### 5.6 Strategic Objectives

Several strategic objectives would have to be pursued in order to realise this vision. These are provide quality primary education facilities to every citizen of India within a distance of one kilometre from his residence.

Provide and support the private sector in the establishment of high quality secondary education facilities in every taluka.

Encourage the establishment of world class higher education facilities at every district head quarters.

Encourage the creation of state-of-the-art professional research based education institutions in all disciplines.

Encourage institutes of education for physical education and education for the challenged.

Integrate education with information and communication technologies to:

- create smart schools,
- network and deliver education and training,
- institutionalise distance education,
- Create and maintain data bases, and
- continuously analyse trends.

Develop human resources required for the education process. Continuously upgrade educational content in multiple media. Create institutional linkages to other sectors of social development such as health and rural development.

Motivate non-resident Indians to participate in India's education programmes on a voluntary or sabbatical basis. Market India as a destination for affordable, high quality education.

### 5.7 Guiding Principles

The following guiding principles must permeate the pursuit of the above strategic Objectives:

Foster a healthy mix of state supported education with private initiatives.

Costs of education must be affordable to the under privileged sections of society.

Quality of education must be continuously monitored and upgraded to ensure high Standards.

User pays principle to be enforced strictly for higher education supported by loan schemes as well as financial grants for economically and socially backward sections of society.

## 6. AN AGENDA FOR REFORMS IN EDUCATION

Chapter 1 highlighted the directions for India in education development. Chapter 2 outlined the lessons for India, drawing upon the experience of other countries that lead India in education. Keeping these directions and lessons in mind in the context of the state of education in India, if India has to achieve the vision in education, what is needed is not just reforms but a revolution of sorts. There has to be a drastic overhaul of the existing education system. Such an overhaul would have to embrace the following agenda:

### 6.1 Primary Education

Compulsory and free primary education must be on top of our education agenda. There is no getting away from enforcing the Constitutional commitment to compulsory education till the age of fourteen years, provided by Article 45 and reinforced by a historical Supreme court judgement declaring education as a fundamental right.

Compulsory and free primary education is feasible only through active involvement of local bodies at the panchayat and municipal levels.

In our endeavour to enforce compulsory education, it must be recognised that an important reason for drop out, apart from economic factors, is that children feel inferior. In many cases parents feel inferior as well and consequently do not send children to school. If enrolment levels are to go up, every child has to see a school as unthreatening and stimulating.

Compulsory and free primary education will entail increased spending on education. This has to be met by restructuring of inter-sectoral allocations and divestment of loss making public sector companies. For example, the average annual plan expenditure on education (1992-97 plan) was Rs.3,920 crores and the annual losses of all state electricity boards (1997-98) was Rs. 10,68.4 crores which is 2.72 times the average annual plan expenditure on education. There must be a political will and a conviction that compulsory and free primary education is an investment in India's future.

Equally; there is a case for free secondary education. However, this can be taken up once the primary education aspect is addressed and when primary level enrolments reach 95%, say by the year 2005 which is feasible.

### 6.2 Teaching

In the current system of education, the lack of opportunities for creativity for teachers as well as students is stifling. Preoccupation with textbooks and external examinations, to the exclusion of the process of education, is partly responsible for this. Whole generations of teachers have not known any other system and changes in the present system will meet with resistance. There is also an inertia in the system to upgrading educational material given cosy relationships between textbook writers, education administrators and publishers. The government spends 90 to 97% of our total educational budget at primary and secondary levels on staff salaries. Studies under taken by the National Teachers' Commission indicate that a majority of teachers are ill-prepared, do not keep abreast of developments in their disciplines and take Private tuitions at the cost of institutional work.

Training of teachers to infuse commitment, sensory learning, experiential learning, computer-aided teaching and technology led learning has to be the second item on the agenda for reforms. The Government of India and State Governments have to facilitate this process by bringing about regulations for continuous teacher quality upgradation.

A system of evaluation of teachers by students, at least in higher education, is due. At the primary and secondary levels, teachers must be made accountable for retention of children. These are revolutionary concepts in our current mindset and are bound to meet, with stiff resistance. However, it has the potential to bring about high teaching standards.

Currently, undergraduate and postgraduate teaching have been put on par. This is disastrous. There must be a differentiation in teachers' education and experience based on levels of teaching.

### 6.3 Technology

The use of technology in the process of education comes third on the agenda. India has a unique opportunity to leapfrog in the use of technology in education. Our vast and growing resources in information technology and the social awareness of the benefits of information technology must be leveraged to bring about smart schools that integrate computers, networks and content.

Computers are becoming ubiquitous and computer literacy will be as important as literacy. In India. Internet made its debut in the mid-eighties as an educational and research network called ERNET. However, the early advantage was never capitalised. Computer education has to be an integral part of the curriculum from the school level.

The 'Class 2000' initiative of the Education Department to impart, "computer based, education in 100 smart schools, 'computer aided education' in 1,000 schools and general computer literacy in 10,000 schools is laudable." However the effort has to be on a much larger scale. It has to be in the nature of a National Mission.

There should be at least one smart school in each district of India which completely networked. This should be implemented to cover all schools over the next five years. Private sector should be encouraged through tax benefits to invest heavily in his mission.

The use of satellite communication technology presents another great opportunity for primary education. India had an early start in the seventies and eighties in delivering higher level education to directly to homes, thanks to the work done by SRO. UGC and Doordarshan. However, the low penetration of television could not bring about a revolution in distance education Today, with the widespread use of television and the envisaged spread of high band optic fibre networks, the opportunity to use communications technology in education could have never been more appealing.

A concerted effort in supporting primary and secondary education through communications technology is an imperative. This has the benefit of cutting through the maze inertia in the existing education system ranging from poor access activities to absence of paid teachers in classrooms in rural schools.

### 6.4 Sensory Learning

The current education system in India is oriented to teaching. There is an emphasis on learning by rote from a very young age. Pre-school and primary education is obsessed with learning by

reading and writing. These are relatively less developed faculties in children in the age group three to six. Ironically, learning by hearing and feeling, which are better developed faculties, are not given prominence. Child psychologists have repeatedly pointed out to this basic lacuna in primary education. The emphasis on reading and writing from a very young age is also not conducive to creativity. The latent curiosity in children is not tapped.

Thus, an important agenda for reforms is to migrate from teaching to sensory learning in order to provoke curiosity. Pre-school learning should not be allowed to degenerate into a formal learning. The accent must be on fostering creative joy and healthy psychological development. In the process, a strong foundation for an innovative society would be created.

### 6.5 Learning to Learn

-The current system of book-based and theory-oriented teaching does not inculcate Independent thinking. It should be changed to make the students learn by practice and experience. This should be initiated from the primary level of education. In the information age, information would be available in multiple forms and through multiple media. Learning to learn from a vast array of information, instead of being taught, would -be critical. The teacher's role has to transform to one of a facilitator, such a shift from teaching to learning to learn would encourage; the students to develop an innovative mindset from the very beginning, which is important in building a knowledge society.

At the same time it must be ensured that cognitive and language skills, for which the Indian education system is recognised, is not diluted.

### 6.6 Vocational Education

Vocational education in India has unfortunately still not become socially acceptable, academic courses have tended to ignore practical aspects. Vocation courses are perceived as courses meant for the less bright students.

Vocational training and skill development to inculcate a sense of pride in doing by one's own hands and to induce a respect for dignity of labour has to receive sufficient focus. Vocational training has to be compulsorily given in an intensive manner at the secondary level.

### 6.7 Distance Education

The potential for distance education in India has been largely untapped. World wide, there has been a strong component of technology in the spread of distance education. Distance education is cost effective, has reach and is a challenging process by itself. Distance education must be promoted not as a correspondence course but as an alternative system of education on par with the formal system of education.

### 6.8 Value Systems

It is internationally accepted that education must inculcate values in children, leading them to be good citizens. Value education is the very definition of education.

Unfortunately, training of young minds on values has taken a backseat in Indian society, given its obsession with material pursuits. Compounding this is the fact that there are hardly any role models in public life. Today there is a crisis of character in Indian society.

To build a society with good character and citizenship, it is important that value education is introduced in pre-school and reinforced in primary, secondary and higher education. At the same time, there have to be safeguards against advertent or inadvertent creeping in of various 'isms'.

### 6.9 Common National Content

A centralised system for curriculum, examinations and funding has brought about gross inadequacies in the learning process, infrastructure, facilities, effectiveness of expenditure and innovation at the institutional level.

As of now there are different boards of studies for primary and secondary school education. The State Boards, the Central Board of Secondary Education and the Indian Certificate for Secondary Education have varying content, standards and acceptance.

A common national system for educational content at the school level is necessary to bring about-better standards. At the same time, there must be provision to accommodate, regional

and local variations and perspectives, especially with respect to languages, history and culture.

However, at the college, institution and university levels, the endeavour has to be to courage innovation and creativity in content and process within a broadly defined national framework.

A common national, system looks difficult in the context of education being in the concurrent list of the Constitution. However, the challenge is worths taking in the interest of the future of our younger generation.

### 6.10 Decentralisation of Management

Education management, on the contrary, must be decentralised. Financing and management of education at the primary and secondary level as well as literacy programmes must devolve down to Panchayat levels. Panchayats must be encouraged to seek funding from the local community to supplement state funding. Central and state assistance should not be seen as largesse but linked to those who can help themselves. There are, of course, exceptions in the form of poor and backward areas.

Decentralised management can help bring about better accountability, better utilisation of resources and greater people participation in the future of their children.

### 6.11 Common Admission Tests

Student seeking admission to higher education and professional courses are required to undergo a number of examinations in order to qualify. This is simply an utter callousness of the existing system and is largely wasteful.

A common system for admissions to professional courses needs to be instituted based on national level standardised tests on the lines of SAT, GRE and GMAT. Students can write these tests as many times as they want, and the best score should be considered. Each test score would have a validity of three years. These test scores would form the basis for admission purposes. Concurrently, the system of migration certificates should be abolished and students should be free to move from one institution to another based on a system of transfer of professional credits.

### 6.12 Market Oriented Education

An important objective of education is to enhance one's standing in society and create economic value. The simplest measurement is the earning potential of the graduating student.

The Indian education system is not market oriented. The failure of the system to realise the potential of the information technology requirements has led to a large non-formal education system of creating quality software professionals. These private institutions enjoy brand equity and large market capitalisation. The formal education system is not awake to the needs of society. Hence non-formal systems fill the need.

Schools of learning must be encouraged to constantly upgrade content and facilities in order to make them more market oriented. An independent rating system would also need to factor market valuation of products from schools of learning.

At the same time, one must recognise that the market may not support education in such areas as oriental languages, archaeology, palaeontology, religion and philosophy. These educational programmes are important and necessary. It is here that the state will have to play an active role and support the pursuit of disciplines whose scholars do not command a market.

### 6.13 Education Infrastructure - Hardware

Just as economic infrastructure is seen as critical to an industrial society, the development of educational infrastructure must be seen as critical to, a knowledge society.

Infrastructure for schools - buildings, telecom networks, and computers - have to be funded on a priority basis. The government can progressively reduce the funding for universities to achieve this. These universities should take the path of self-sufficiency through higher students' fees, donations and endowments, alumni contributions, linkages with corporate establishments for research, royalties on books and research output etc. Thus UGC's role as a funding entity will no longer exist except to those areas of education involving liberal arts and performing arts.

### 6.14 Education Infrastructure - Content Development

Curricula in Indian schools of learning seldom reflect

changing trends in the world. Periodic reviews undertaken show a lack of progressive thinking. A conservative approach is employed in development of curriculum. The result is that the students are ill prepared for the real world and require training on the job.

The stress should be on content development that will reflect latest advances in the subject. The Internet revolution has made it possible for information to be disseminated in real-time. This needs to be fully utilised to develop content that will be contemporary. This would involve fully utilising the ERNET and if necessary, expanding its reach.

Higher education should incorporate courses in the emerging technologies in areas such as telecommunication, robotics, automation and biotechnology and constantly seek to embrace new and emerging disciplines. In the traditional courses, the focus should be on cutting edge technologies and courses. For instance, in Civil Engineering the cutting edge technology would involve constructing intelligent buildings and intelligent roads.

#### 6.15 Government Role

Given sustained large fiscal deficits of the Government of India and state Governments, the outlays on social sectors have been low. Most of the outlays are spent on salaries and wages. Given this situation, the tax payer's money is better spent on improving literacy, primary education, secondary education and education that is not market oriented while private sector money needs to be attracted for institutions of higher learning.

The responsibility of the Government must be confined only to

funding and ensuring that primary education is compulsory and free,

funding and ensuring that secondary education is compulsory,

funding and bringing about 100% literacy,

supporting disciplines that have no market orientation,

selectively supporting and part funding centres of higher learning,

providing financial guarantees for student loans,

ensuring uniformity in content and quality, and

planning.

In succeeding levels of education, the Government should play the role a facilitator. Government must exercise its regulatory role to streamline higher education to ensure, that it is meaningful, purposeful and cost effective. In essence the Government's role should be maximum at the primary stage and minimum at the higher education stage.

#### 6.16 Government Controls

The education sector in India is probably the most controlled sector in India. The whole mindset is on grants and aids. Arising out of this mindset is a plethora of rules and regulations. There are far too many bodies managing education. Rules and regulations govern virtually everything from location, student intake, course content, fees and fee structure, appointments, compensation for faculty and so on.

This is the equivalent of government imposing controls on an industrial unit's location, capacity, raw material intake, technology, compensation package, product prices, recruitment etc. on the back of subsidies and grants. Consequently, institutions of learning have become rigid. There is little freedom for creativity and innovation. The compensation system is unable to attract good quality faculty, research initiatives are constrained and linkages with private sector are poor.

The whole system needs to be overhauled. Institutions that do not depend on the government for funding or have low levels of funding must have operational freedom and the flexibility to innovate. Management of education must be decentralised.

#### 6.17 Private Universities

A redefinition of government role in higher education would call for a major privatisation of the university education system in India. A Private University bill should be legislated to encourage establishment of new private universities in the fields of science and technology, management, economics, financial management and other critical areas with commercial application.

These new private universities should offer courses in emerging areas of science and technology and respective areas. They must be encouraged to aim for world class standards that would revolve around research based learning, an open environment, people based competencies, best in class facilities, market oriented curriculum attractive performance based compensation packages and an unfailing accent on quality.

Business and industry have a vital role to play in establishing world class institutes of higher learning. Leading business houses must be encouraged to establish such institutes and universities.

#### 6.18 Rating System

The quality of education imparted in India is diverse. For example, in technical education the quality ranges from the globally recognised Indian Institutes of Technology to fly-by-night engineering colleges. Educational institutions in India are neither rated nor benchmarked. There is no demand on teachers to constantly upgrade skills. While institutions exhort students to be competitive, they themselves have no motivation to be competitive as schools of learning. The employment market has created a non-formal assessment of institutions but there is no formal system in place.

There are anomalies as well. The University Grants Commission is responsible for quality of universities. However the Indra Gandhi National Open University and the All India Council of Technical Education are outside its purview.

All educational institutions in India - schools, colleges, institutions and universities must be rated by independent agencies analogous to a Standard and Poor's or CRISIL in the financial sector. There should be an annual review by the rating agency. Rating should mandatorily cover some important issues such as emphasis on girls' education, value education, social service, physical education and games. This rating should be mentioned in the prospectus as well as all important communications. Initially, higher educational institutions should comply with rating requirements. After a defined period of time, the rating system should be extended to schools as well.

Funding to educational institutions must be linked to rating. Institutions with a lower than the minimum specified rating should not be allowed to operate.

An dependent rating system will bring about accountability in the education system in India, it will motivate schools of learning to be performance oriented and competitive. It will push teachers and faculty to be contemporary. Based on ratings, a differential fee structure could emerge. On the whole, a system that continuously seeks higher standards of performance would emerge. This is important for Indian society to progress in a far more intensively competitive world.

#### 6.19 Foreign Direct Investment

Almost all sectors in India, save such sectors as defence, atomic energy and education, are open to foreign direct investment. In the education sector, such investments are cleared on a case to case basis and there are very few instances. Foreign direct investment in education will have the benefit of improving standards and quality of education. It can facilitate global integration of the Indian education which, even to date, is not accepted in many professional disciplines such as medicine and accounting.

The Government should allow foreign direct investment in education. To begin with, this can be limited to education in science and technology. In other areas, there could be a possibility of external cultural influences coming in through foreign direct investment and hence may not be allowed.

#### 6.20 Financing

The massive investment in education involved in creating a knowledge society needs to be financed.

An education development fund needs to be set up for primary and literacy education. Donations to this fund to be fully exempt for income tax purposes. The Government of India should utilise this fund for primary and secondary education, development of disciplines that the market cannot support, higher education on a selective basis and for creating the required infrastructure for education. Privatisation of higher and professional education can relieve government funding from these areas which can be used for primary, education and improving literacy. Subsidies for higher



education should be gradually withdrawn through higher fees and changes in fee structure.

Concurrently, a credit market for education needs to be developed to support financing the higher costs. Financial institutions should be encouraged to offer assistance in the form of loans to students in higher education and professional Streams. Introducing loans improves resource allocation since students will enrol in courses with better returns. It will also attract resources to the education sector as it is linked to graduates future earnings. Since sufficient collateral cannot be provided by students, a scheme for government guarantees coupled with an independent recovery authority needs to be institutionalised.

### 6.21 Marketing Indian Education Abroad

India being seen by foreign universities from UK, USA, Canada and Australia as a huge market for their educational services. The quality of educational services rendered by some of these universities is questionable, but such concerns get clouded in our society's blind charm for foreign labels and degrees. This process has to be reversed. Indian institutions and universities must be able to attract overseas students. There is a good market for Indian education in Asia, Africa, South America and East Europe. Our cost levels will easily be less than one fourth of those in the developed world with comparable quality. The Indian education system, once reformed, will have the ability to attract a large number of foreign students. This will have to be encouraged in order to generate additional finances and earn goodwill. To begin with the establishment of international schools in all our existing centres of excellence, which have international reputation, can be started.

### 6.22 Politicisation

Our universities have become hot beds of politics. The teacher turned politicians in universities are largely responsible for falling standards and commitment. University unions are seen as nurseries for political careers. To remedy this serious malady it is important that all political parties come to an understanding that they will keep away from universities and educational institutions. This may seem to be an Utopian idea. However a beginning in this direction is overdue. It is also important to bring about legislation banning any form of political activity on campuses of universities and educational institutions.

### 6.23 Education and Economic Freedom

Education is not the only input for creating a knowledge based society. Economic opportunities are equally important. Education is necessary but not enough. Opportunities to harness education and knowledge need to be created. This would necessitate an economy free from controls that fosters new opportunities. These new opportunities, in turn, place new demands on education. They also help reverse the process of brain drain. In this sense, reforms in education and in the economy are mutually reinforcing.

### 6.24 Research in Education

Research in India is largely an elitist concept. Research at all levels starting from the Undergraduate level in the science and technology fields should be encouraged. Even the infrastructure available for research and development is poor and archaic. The industrial growth is estimated to be around 12 to 15 % in the coming years. This would mean not only a large requirement of trained graduates but also providing continuing education for upgrading the skill and knowledge of technical personnel working in industry and service sectors. There are meagre efforts to address this large segment. This could be a potential money-spinner for the educational institution. Universities and institutions should establish separate administrative department to focus on this segment. The faculty should be drawn from those teaching the regular classes. The faculty will also benefit from interaction with the industry personnel.

### 6.25 Physical Education

There is no emphasis on physical development in our school curriculum. There is a need to encourage sports activities by providing the necessary infrastructure. The existing resources of Sports Authority of India and other sports bodies in the country should be utilised for this critical area.

### 6.26 Extra-curricular Activities

One day per week (preferably Saturday) has to be compulsorily set aside for extracurricular activities such as

games, study trips, arts and crafts and similar activities at the primary school and secondary school level.

### 6.27 Upgrading RECs and ITIs

The Regional Engineering Colleges can be upgraded by allowing them more autonomy to raise additional resources for upgradation of their resources. This has to be taken up on priority to ensure that the quality of RECs are comparable to the existing IITs.

Industrial Training Institutes (ITI) established in the late sixties provided a large number of skilled and semi-skilled manpower for both Indian and Persian Gulf companies. However, over the years, they have gradually lost their position due to non-upgradation of their curriculum and infrastructure. India's growth aspirations would need a large number of skilled manpower and these ITI can meet these requirements. Urgent steps should be taken to upgrade the infrastructure, resources and curriculum of these ITI s.

## 7. PLANNING FOR THE FUTURE

### 7.1 Assumptions

In planning for the future, it is assumed, obviously, that the goal of an education policy would be to universalise primary education (age group 5-9) and upper primary education (age group 10-14 years). Apart from this that a 75 % enrolment rate is to be achieved in higher secondary (age group 15-19) and 20 % enrolment in colleges and professional education (age group 20-24).

The age-wise population projections for 2015 of the US Census Bureau (Table 7) have been utilised to arrive at the school going population. In making these projections, all prices and costs are based on 1998-99 levels.

### 7.2 Enrolment of Students in 2015

The estimated enrolment of students by the year 2015 will be 1130 lakhs in primary school, 1130 lakhs in upper primary, 1130 lakhs in secondary and 220 lakhs in colleges/universities. The number of students in each age group in the respective level of education is presented in Table 7.2.

### 7.3 Number of Education Institutions

To achieve the above enrolments, the number of schools and institutions needs to be increased manifold from the current levels. Based on 150 students in a primary school, the additional number of primary schools would be 7,32,000 schools, double the number today. Assuming 675 students in each secondary school, additions 23,600 schools would be required. At the tertiary level, additional 27,000 institutions, almost three times the existing number, would be required with 580 students in each-institution. The details of the total educational institutions required are presented in Table 7.3.

### 7.4 Recurring Expenditure

Recurring expenditure is in the form of establishment expenses, teacher salaries, textbooks and training material. The annual recurring expenditure that would be required to meet the above objectives would be around 11% of the current GNP and 3.15 % of the projected GNP. This translates to Rs. 1,80,000 crores each year. The compulsory and free education level (age group 5-14) would account for about 37 % (Rs. 65,850 crores) of the total expenditure. The public spending would be 1.98% of the projected GNP. The details of the recurring expenditure are presented in Table 7.4.

### 7.5 Capital Expenditure

Capital expenditure pertains to cost of buildings, furniture and fixtures, toilets, communication equipment, computers etc. Capital costs to fund the increment number of institutions required have been assumed taking an average cost of Rs. 40 lakhs for a primary institution, Rs. 20 lakhs for a secondary institution and Rs. 40 lakhs for a tertiary institution. On this basis, the total capital expenditure required will be Rs.88,900 crores.

It is reasonable to assume that this required capital investment would be met over the next 15 years. Thus the annual capital expenditure will be Rs. 5,900 crores. The computation of capital costs is presented in Table 7.5.

### 7.6 Public and Private Spend on Education

The total expenditure has been separated as those that would be spent by the government and that would be spent by the private sources. The percentages of public spending would be 90 % in the primary sector, 50 % in the secondary sector and 40 % in the tertiary sector. This would translate to a total public spending of Rs. 1,17,000 crores and a private spending of Rs. 68,900 crores. In effect this means that the government would spend 63 % of the total expenditure. The private sector would spend the rest. The government spend would be 1.98 % of the projected GNP. The details of the public and private investments in education are presented in Table 7.6.

### **7.7 Estimates of Manpower Requirements for Tertiary Education Planning**

Three scenarios have been presented, one where India would achieve a GNP growth of 6 percent (pessimistic), 8 percent (most likely) and 10 percent (optimistic). The requirements of professionals in various sectors are based on the growth in GNP. In the case of engineers, the growth rate in manufacturing sector and its contribution to the economy is taken into consideration. The assumptions are that agriculture will constitute 20 percent of GDP, manufacturing and services will constitute 40 percent each. Estimates of GNP growth under the three scenarios are given in Table 7.7.

In the case of doctors, including dentists and veterinary doctors and nurses, who are involved in providing healthcare services, an idealistic target number of doctors and nurses per 1000 population based on international human development statistics were relied upon.

The estimates indicate that the total population that should have achieved tertiary education will be between 5.6 % and 9.8 %. The total number of teachers in all the sectors would need to increase from the existing 49.25 lakhs to a range of 93.47 lakhs to 119.15 lakhs. The details are presented in Table 7.8.

### **7.8 Options in Financing and Management**

Present systems for financing and managing education are often inappropriate for meeting the challenges of ensuring equity in education amongst disadvantaged groups, ensuring quality of education and for speeding up reforms in the education system. Public financing is growing, more difficult as enrolments expand. Public intervention in education can be justified on several counts it can reduce inequality, open opportunities for the poor and the disadvantaged, compensate for market failures in lending for education, and make information about the benefits and availability of education generally available. But public spending on education is often inefficient and inequitable. It is inefficient when it is misallocated among uses; it is inequitable when qualified potential students are unable to enrol in institutions because educational opportunities are lacking or because of the inability to pay.

The inefficiencies and inequities, along with expanding enrolments in public schools at all levels, have contributed to increasing the share of GNP devoted to public spending on education. The result is increasing pressure on public funds. To merely increase efficiency in public spending on education may not be enough. The government will necessarily have to increase the quantum of public spending. This can be done in several ways. Government can reallocate public spending to education from other publicly funded activities such as defence and inefficient public sector enterprises. Government can increase revenues and spend more on education. Government can also supplement public funds for education with private funds.

Private financing can be encouraged either to fund private institutions or to supplement the income of publicly funded institutions. Private schools and universities tend to draw their students from more advantaged socio-economic backgrounds, and thereby promote diversity and provide useful competition for public institutions, especially at higher levels of education.

### **7.9 Policy Options in Financing Education**

Adverse macroeconomic conditions and keen inter-sectoral competition for public funds have reduced the Indian government's ability to continue expanding education. The lack of a credit market for education makes this problem worse. There are basically three policy options that could overcome some of the problems in financing education. These options are:

Recovering the public cost of higher education and reallocating government spending on education towards the

level with the highest social returns. Developing a credit market for education, together with selective scholarships, especially in higher education. Decentralising the management of public education and encouraging the expansion of private and community-supported schools.

### **7.10 Public Investment in Education**

The high rates of return estimated for basic education in most developing countries strongly suggest that investments to improve enrolments and retention in basic education should generally have the highest priority in India, which has not yet achieved universal basic education. A policy package in respect of the role of the public sector in education would consist of:

Free basic education, including cost-sharing with local communities and targeted stipends for children from poor households.

Selective charging of fees for upper-secondary education, combined with targeted scholarships.

Fees for all public higher education, combined with loans, taxes, and other schemes to allow needy students to defer payment until they become income-earners, and a targeted scholarship scheme to overcome the reluctance of the poor to accumulate debt against uncertain future earnings.

Assurance of quality primary education for all children by making that level the top priority for public spending on education.

Improved access to quality general secondary education as the second priority, once their children are receiving good primary education.

### **7.11 Efficient Public Spending at the School and Institution Level**

Public finance is the main instrument for implementing public priorities, and there is a strong rationale for public intervention in the financing of education. The high private rates of return to investments at all levels of education justify large investments by individuals. They also justify self-financing by families or students, through immediate or deferred cost sharing. Despite these high private returns and the justification for private finance, there is also a strong case for public intervention, especially for basic education, for reasons of income distribution, capital market imperfections, information asymmetries, and externalities. In fact most governments are heavily involved in all levels of education - an activity that takes up a significant portion of public expenditure. Education expenditure by source of funds in some important countries is given in Table 7.9.

### **7.12 Private Financing as an Incentive Mechanism**

The general expectation is that the more a school depends on private financing, through fees collected from students or contributions from the local community, or both, the more the school is likely to use resources efficiently. When people share directly in the cost of a service, they are likely to monitor costs more closely and guard against waste. Even when public institutions charge no fees, allowing fee-charging private institutions to emerge and survive can generate the incentive for greater efficiency. Such institutions promote competition in the system and generate information for judging the performance of public institutions.

### **7.13 Financing Upper-Secondary Education and Higher Education**

Since secondary school graduates will have higher earnings than those who leave school earlier, selectively charging fees for public secondary school can help to increase enrolments. Cost sharing with communities can be encouraged at the secondary level. There is considerable evidence that household demand for education is relatively price-inelastic, that is, unresponsive to increases in private costs, except among the poor. The relative inelasticity of demand could be a useful criterion for making decisions about charging fees. However, poorer families have difficulty in meeting the direct and indirect costs of children's school attendance. To offset this hardship, secondary school fees can be combined with scholarships and stipends to ensure equity in enrolment.

In general, fees are justified at public institutions for higher education. An optimal policy would be full cost recovery by public higher education institutions, with students paying fees out of parental income and out of their own future incomes,

through a loan scheme or a graduate tax. Such a policy is very distant in India since existing fee levels are so low and experience with loan schemes has been relatively disappointing,

#### **7.14 The Efficiency of Alternative Types of Higher Education**

An extremely radical cost-saving intervention is distance education. Distance education is dramatically cheaper than conventional higher education. But lower unit costs do not necessarily imply greater efficiency in open universities, because completion rates often are also lower. One reason is that open universities tend to attract weaker students because entry is usually non-competitive. Another reason is that, with only a tenuous link to an institution, teachers and fellow students, a student's motivation and discipline to complete a course is poorly reinforced. Even though open universities produce graduates efficiently, the output is wasted unless graduates are productive in the labour market.

#### **7.15 Creating a Credit Market for Education**

Without well-functioning commercial credit markets, people must often borrow funds from relatives, friends and moneylenders. These sources of credit are inefficient since the ability to borrow depends on whom the borrower knows and whether willing lenders can be found.

Extensive financial regulation generally limits total supply of loans in the economy, and private banks may be unwilling to lend to students. Education is a particularly long-term investment, and risks are high because few students have acceptable collateral. Graduates may be unable to repay loans if they are ill or unemployed. India also lacks the legal and administrative framework to enforce financial contracts effectively.

The government can play an important role in alleviating students' difficulties in obtaining educational credit. The government is big enough to absorb risks that private lenders cannot or will not bear, by insuring commercially loaned funds from banks. If loans are under government authority; employers may also be willing to make deduction from former students' salaries for loan repayment. Some types of loans, especially for medical studies, could be repaid through national service in deprived areas of the country. The extensive network of more than 66,000 branches of commercial banks could be used effectively for government-guaranteed student loan administration.

#### **7.16 Student Loan Schemes**

Introducing loans for higher education adds benefits on almost all counts. Loans mobilise more resources for higher education by tapping graduates future earnings, even when default rates and administrative costs of loan schemes are high. They improve resource allocation because students will tend to enrol in the courses with the highest returns. When augmented by selective scholarships, loans improve student selection and equity by allowing talented students from poor families to compete for places in higher education.

Student loan schemes are an essential complement to cost recovery and the charging of fees. Many students are unable to afford the cost of higher education out of their families current income, and loan schemes permit them to pay out of their future earnings. About fifty countries, industrial and developing, have such schemes. In most countries, loans are repaid according to a fixed schedule; in a few, including Australia and Sweden, they are repaid as a proportion of a graduate's income each year. In the United States, student loan programmes guaranteed by the government enable borrowing from abroad also. Loan schemes can be made financially sustainable, as the experiences of Canada and Colombia demonstrate. They require the public sector to bear some of the risk, since banks and financial institutions are generally unwilling to accept students' likely future earnings as collateral. Sustainable loan schemes require an effective collection agency with incentives to minimise evasion and default. Income-contingent and graduated annual payment schemes are needed to encourage repayment commensurate with the students' future earnings, which will rise over time.

#### **7.17 Involvement of Non-Governmental Organisations (NGOs) in Education**

The contribution that NGOs can make to efforts to expand access and improve quality of education is immense. The Bangladesh Rural Advancement Committee (BRAC) is a shining instance of an NGO playing a national role in the country's

health and population programmes. In 1992 BRAC had more than 8,000 schools operating, and plans are being made to expand to 50,000 schools. The education programme is free to students, except for community contributions for school construction. Internationally BRAC is a model for the potential of the NGO sector in education expansion. It also illustrates how a combination of targeting, school design, flexibility and follow through can dramatically increase girls' primary school participation rates. NGOs have greater flexibility than government bureaucracies and may be able to reach target groups more effectively. Furthermore, as BRAC's expansion programme illustrates, NGOs need not necessarily be limited to small pilot projects, but can also, carry out large-scale delivery programmes.

NGOs have long been pioneers in the area of early child development. Save the Children, for instance, is an international NGO, that has worked with at-risk children and families since 1932 and is now active in forty countries world-wide. The Aga Khan Foundation is working in parts of Pakistan and with Muslim communities on the coast of Kenya. The Soros Foundation focuses a large share of its resources on pre-school education in Eastern Europe and Central Asia.

#### **7.18 Revenue Diversification**

Encouraging public educational institutions to diversify their sources of revenue and allowing them to keep such revenues can encourage autonomy. The scope for this is greatest in higher education. The practice of attracting resources from alumni and private industry is standard among private schools and universities, and is beginning to spread to public ones. In Chile, Indonesia, Thailand and Venezuela, private industry provides scholarships or subsidised loans for talented university students. Structured tax regimes can encourage such donations. Public schools and universities can also use their facilities to provide income. Universities in Uganda and Senegal generate 4 to 5 percent of annual expenditure by renting out facilities. China and Vietnam encourage schools to run short-term courses, and provide services to industry.

#### **7.19 Quality of Education and Education Expenditure**

Schooling within formal education systems plays an important role in the expansion of human capital. However, there is a big difference between children sitting in a classroom and an increase in human capital. The quality of education is a deep concern in India. If the quality deficiencies were due merely to the lack of inputs the policy prescription would be obvious: increase resources. However, empirical evidence shows that resources are only tenuously related to measured achievement. Budgets do not account for performance, how well a budget is spent. Plays an important role. There is clear evidence that the enormous inefficiencies in education spending arise due to relatively high spending on teacher inputs. In a study made in Northeast Brazil, it was found that cost effectiveness of teacher salaries (normalised to one) is by far the lowest. Material inputs that provide amenities to the school and teachers, such as teacher tables, toilets, bookcases, have a cost effectiveness on average 7.7 times larger than teacher salaries. Instructional materials have cost effectiveness ratios between 17 and 34 times as large as the impact of additional spending on teacher salary increases. A World Bank study in India covering eight states has come to similar conclusions. The cost effectiveness of spending on improving physical facilities is higher than that of teacher salaries (1.2 times higher), however that for increasing just classroom size is between 1.7 and 4 times higher. The cost effectiveness of spending on Instructional inputs is between 4 and 14 times higher than that of increasing teacher salaries.

#### **7.20 Universal Basic Education is Possible**

Every time the country talks of improving the quality of education or universalising elementary education, it is suggested that a shortage of resources is a strong obstacle to progress. The truth is different. It is not a matter of resources but of priorities.

Poorer countries than India have achieved much more in education. War-torn Vietnam with a per capita income of under \$300 has achieved a literacy rate of 94 per cent. Kenya, with a per capita income of \$340 has achieved a literacy rate of 75 percent. India with a per capita income of \$390 has a literacy rate of 62 per cent.

India also needs to improve the efficiency of public spending on education. It spends around 3.5 per cent of its gross national product (GNP) on education - a much higher, share than China

and Sri Lanka - but its educational achievements are lower. Sri Lanka, which spends only 3.1 percent of its GNP on education, has ensured that 90 percent of adults are literate and that 98 percent of children complete primary school. China spends only 2.3 percent of its GNP on education, and 82 per cent of its adults are literate, while 94 percent of those who enter school complete primary schooling. Vietnam spends only 2.0 percent of its GNP on education, yet, as already mentioned, the literacy level is 94 percent.

**7.21 Industry - University Partnership**

The universities must be strongly encouraged to form partnerships with industry. Such a linkage would entail several benefits for the university. It would give the university opportunities to attract additional funds for teaching and research thereby facilitating financial autonomy, access to latest technology, improved employment prospects for students, continuous upgradation and adaptation of curriculum and improved motivation in students.

The industry would also stand to benefit through reduction in recruiting costs, access to pre-screened, high achieving students, cost effective productivity, better communications with the higher learning centres and collaborative research opportunities.

Students stand to gain in the form of real life practical experience, contact with Practising professionals, and application of theoretical knowledge and enhancement of oral and written skills.

**7.22 Network and Infrastructure Planning**

Planning networks and establishing networks among neighbourhood villages offer a potent possibility in this era of modern communications facilities and the Internet. It is physically and economically viable to link villages using wide area networks and provide community Internet centres. All teaching can originate from the 'hub' villages for dissemination simultaneously to a number of villages. The advantages of such a network are basically two. One, the pupil-teacher ratio can be raised to a new high, without unduly affecting the quality of education. Two, timing can be kept flexible so as to involve the entire household in the education process.

**8. CONCLUSION**

India faces two major challenges in her path to progress - income poverty and information poverty.

**8.1 Income Poverty**

Income poverty arises due to poor skill sets, low access to material and knowledge resources, exploitation by intermediaries and environmental degradation. There are about 40 crores people in India facing income poverty. Poverty and illiteracy go hand in hand.

At the lower level are 8 crores subsistence farmers in India, with income less than 8,000 rupees a year. They are caught in a low skill, low investment, low productivity, low income trap. This group has no marketable skills other than labour. They can be set free from the poverty trap by providing wage-employment and access to training and education.

At the higher level are 32 crores people, mostly in the rural and farm sector, with income levels between 8,000 to 12,000 rupees per year. These people have trade-related skills with

limited marketability and have some access to primary education and health. They can be freed from the poverty trap by upgrading skills sets, providing access to education and by providing job employment. India has to visualise education, apart from economic growth and development, as a means of liberating the poor from deprivation and poverty.

**8.2 Information Poverty**

While India has a huge task of alleviating income poverty, she faces an equally formidable prospect of falling into information poverty. Almost all emerging technologies - biotechnology, communications, automation, advanced materials and so on - are information intensive. The delivery of these technologies as well as of services is also information intensive. If India does not bring about an information revolution, she will face a new dimension of information based poverty. The information age will create a new class of the knowledge poor.

**8.3. Education Centric Development**

As the information age envelops the world, India has to pursue a path of education centric development. Such a development would have to create millions of knowledge farmers and knowledge workers as part of a national mission. At the same time, it would have to significantly enlarge the pool of professionals demanded by a large knowledge economy.

An education centric development will generate millions of new knowledge based jobs and add several hundreds of billions of dollars to economic output. It would also use new learning technologies, in information and communication, as a powerful cost effective medium for delivery of knowledge to the smallest and remotest of villages for social and economic development.

**8.4 Role of the State**

The state has a vital role to play in bringing about an education centric development. Government must focus strongly on primary and secondary education and leave higher and professional education to the private sector. It must not only use information and communication in the delivery of education but also foster an environment conducive to the widespread use of such technologies. It must correct the serious distortion in the current system, that the best ten per cent of the educated corner sixty per cent of subsidies. There is no getting away for the Government from enforcement of the Constitutional obligation for compulsory education for children up to the age of fourteen years. Funds required for universal education must be raised and allocated against all odds.

**8.5 Revolution, Not Reforms**

The education sector has been largely neglected in India. This neglect can turn out to be India's undoing and nemesis in the information age where knowledge, research, creativity and innovation will be at a premium. Education oriented to foster a knowledge based society can place India at the vanguard of nations. This is not the time for just reforms. It is time for a revolution. The green revolution in agriculture ushered in high productivity and prosperity through the use of technology. Likewise, a revolution in education that embraces information and communications technologies fosters freedom and innovation and induces a market oriented competitive environment is vital for progress and prosperity in the information era. The need of the hour is bold steps, not marginal and tentative ones. For fortune, they say, favours the bold.

\*\*\*\*\*

**NUTA BULLETIN** (Official Journal of NAGPUR UNIVERSITY TEACHERS' ASSOCIATION) **CHIEF EDITOR** : Prof. A.G.Somvanshi, Shankar Nagar, AMRAVATI-444 606. **EDITOR** : Prof. S.S. Gawai 1, Abhinav State Bank Colony, Chaprashi Pura, Camp, AMRAVATI 444 602. **PUBLISHER** : Prof. S.R. Kalmegh, Lahari Apartment, Keshao Colony, Camp, AMRAVATI 444 602. Type Setting at NUTA Bulletin Office, Phundkar Bhavan, Behind Jain Hostel, Maltekadi Road, Amravati-444 601. **PRINTED AT** Bokey Printers, Gandhi Nagar, Amravati. (M.S) **REGD NO. MAHBIL/2001/4448** Licenced to post without prepayment **LICENCE NO. NR/ATI/78/2001** Name of the Posting office : **R.M.S. Amravati.** Date of Posting : **24.11.2001**

**If Undelivered , please return to :** NUTA Bulletin Office, Phundkar Bhavan, Behind Jain Hostel, Maltekadi Road, **Amravati-444 601.**

-----  
-----  
To,.....  
.....  
.....  
.....  
.....