

## The Need for a New School of Thought Human Potential Development



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### THE GLOBAL PROBLEM

Today's children can meet future challenges if their schooling and informal learning activities prepare them for adult roles as citizens, employees, managers, parents, volunteers, and entrepreneurs. To achieve their full potential as adults, young people need to develop a range of skills and knowledge that facilitate mastery and application of English, mathematics, and other school subjects. At the same time, business and political leaders are increasingly asking schools to develop skills such as problem solving, critical thinking, business communication, collaboration, and self-management—often referred to as “21st century skills.” Private foundations, policymakers, and education organizations use a variety of names for the lists of broad skills seen as valuable.

The reality of building capacity for the 21st century is that we do not know what the work of the future will be like or how technology will influence health and financial issues. The challenge is to prepare students to think critically, to engage in mental activity, or habits of mind, that “...use facts to plan, order, and work toward an end; seek meaning or explanations; are self-reflective; and use reason to question claims and make judgments...”. It may be that our task is not only to prepare students to “fit into the future” but to shape it. “...If the complex questions of the future are to be determined... by human beings...making one choice rather than another, we should educate youths - all of them - to join in the conversation about those choices and to influence that future...”.

One Oxford study found that 47 percent of U.S. jobs are at risk in the next 10 to 20 years. Fast Company highlighted the 10 most at-risk jobs in 2014, which include jobs like mail carriers and farming. Much of IT administration is expected to be automated. In fact, the cost and speed of automation continues to decrease and create a mash able world. With the speed of knowledge obsolescence, reinvention is becoming a major job skill.

- 1980-2010 global labour rose 1.2 billion to 2.9 billion – set to grow another 600 million to reach 3.5 billion by 2030.
- Globalisation and technological change – 1.1 billion non-farm jobs created in developing economies.
- Skills mismatch between labour supply and employer demand.
- There will be a global shortfall of 85 million high and medium-skilled workers by 2020.
- Three fundamentals for growth: potential identification + skills development + job creation.

### THE CHANGING WORLD: THE NEW SCHOOL OF THOUGHT

#### a. NEW ECONOMIC AND SOCIETAL CHANGES

- China and India emerge as massive economies
- Knowledge superinfrastructure
- Digital Taylorism
- National innovation networks.
- Migration of Production to low cost countries
- Outsourcing of back office operations

#### b. FUNDAMENTAL CHANGES: BUSINESS DRIVERS WORK TRANSFORMED

- One-fifth of reported vacancies could not be filled due to a lack of applicants with the necessary fitment.
- High performance organisations not place an emphasis on developing the skills they need in-house due to mismatch in job and motivation skills.

- Job opportunities for unemployed and inactive employees are unlikely to improve due to access lower or less specifically skills on 20th century.
- The definition and understanding of the term skills can be complex with overlaps between skills, qualifications and characteristics.
- Overall, employers are less demanding of technical skills, considering them trainable, if candidates exhibit employability and positive attributes of 21st century skills.
- There is a greater emphasis on 21st century skills and global competence but assessing how these are measured precisely is problematic. Often measurement is based on perceptions of the interaction with candidates at interview not a systematic way.

**c. TECHNOLOGY DRIVERS WORK TRANSFORMED**

- Tremendous mental workload on information workers
- Improve performance to free cognitive bandwidth
- Our default state is mind wandering and hot let our subconscious mind work.
- Email has moved from being an excellent communication tool to being a source of job dissatisfaction.
- Reduce the number of unimportant decisions to enable better decision making.
- Fewer decisions and simplicity will drive systems that are more productive.
- Part of the quantified self will be getting just in time learning in the fastest most efficient way possible.

**d. THE CHANGING MINDSET**

- Companies confining recruitment of highly skilled workers to western ‘magnet’ economies.
- Companies becoming more dependent on the knowledge of employees and to what extent were they willing to pay a premium to high skilled workers?
- Globalisation of high skills and the creation of global skill webs.
- Creation of global skill webs and skill strategies
- Companies decide on where to locate new high tech investments?
- Sourcing medium and high skilled work in both high and low cost economies
- What are the implications of this for skills policy?
- What are the emerging strategic skills requirements?
- How can government stimulate greater co-investment with employers and individuals in higher level and strategic skills

**THE INDIA PROBLEM**

There is one sector in which the news gets consistently worse: India’s education system. Over 290 million students attend educational institutions on a typical working day. Enrolment has increased tremendously in Schools, Technical and Professional Courses, Colleges, Distance Learning Centers and even in Coaching Centers. In 1951, 19 million were enrolled at elementary level (classes 1 to 8) and just 1.5 million from 9 to 12. Today, elementary sections have over 130 million enrolled and 37 million in higher classes. Higher education has seen a stunning 100-fold enrolment growth — from 1.7 lakh students in 1951 to over 12 million currently. What drives Indians is hope that educations will open doors to a better life.

India is one of the youngest nations in the world with more than 54% of the total population below 25 years of age. India’s workforce is the second largest in the world after China’s. While China’s demographic dividend is expected to start tapering off by 2015, India will continue to enjoy it till 2040. However, India’s formally skilled workforce is approximately 2% - which is dismally low compared to China (47%), Japan (80%) or South Korea (96%). To leverage our demographic dividend more substantially and meaningfully, the Government launched the “Skill India” campaign along with “Make in India”.

**a. ECONOMIC FORCES: DEMAND FOR COMPLEX SKILLS AND SHORT LEAD TIME TO BUILD SUSTAINABLE COMPETITIVE ADVANTAGE IN INDIA**

Over the past 30 years advanced economies have become increasingly hungry for skills. New technologies have combined with intellectual and knowledge assets – the ‘intangibles’ of research, design, development, creativity, education, science, brand equity and human capital – to transform the economy. Across all sectors – manufacturing and services, high tech and low tech, domestic and internationally traded, public and private, large corporation and small enterprise – organisations have prospered by allowing highly skilled individuals the freedoms and flexibilities to deploy new technologies to rapidly create tailored products for increasingly sophisticated customers. The tripling of business investment in ‘intangibles’ such as human capital, research and development, software and design between 1990 and 2010.

Economy will be more and more based on knowledge and science in the future, human capital is essential not only for individual well-being and social inclusion but also for competitiveness and openness of the economy. The emergence of global skill webs reflect the salience of skill as a source of competitive advantage within multi-national companies, but they do not simply reflect the growing importance of knowledge and skills to product innovation (where the value of human capital is likely to remain at a premium), but due to the globalisation of high skills that has far reaching implications for the relationship between skills, jobs and rewards.

#### **b. SOCIAL FORCES: EFFECTS OF GLOBALISATION ARE PROMINENT IN DRIVING THE SOCIAL CHANGES IN INDIA**

Rapid, complex and pervasive changes are occurring that will continue to impact labor and talent— both in terms of quality and quantity. From unrelenting global demographic and economic forces to the increasing mobility of people and organizations, the business environment is more demanding and complex. There are knowledge-driven industry transformations as well as cultural changes — within businesses and in individuals' views on career life cycles. These require higher cognitive capabilities; extensive relationship management and leadership skills; and new human resource, development and career processes. There is a much wider diversity in culture, gender, working generations and modes of employment than ever before. These can be sources of advantage to be leveraged or conflict to be managed. Despite today's global financial circumstances, the capacity of organizations to attract, develop, motivate and retain talent will remain a critical strategic issue for the 21st century's knowledge economies. It will impact the ability of organizations to survive the crisis and ready them for eventual recovery.

#### **c. POLITICAL FORCES: INDIA AT HER TURNING POINT**

Meritocracy will gain importance and cultivated. People who succeed under the system, must feel the duty to contribute to the society. Continue to have a strong emphasis in work and rewarding individuals who work will be the most important factor. INDIAN will remain as core even with increase in population growth. The need to restructure our economy to reduce reliance on labour and enhancing productivity, Jobs and more specifically GOOD JOBS will be important to support the strategic thrusts and to meeting the needs of Indians where multiple pathways for career and training progress are created in 21<sup>st</sup> century.

Education and training as merit good which provide positive externalities and social benefits will likely to continue. Increasing need to provide individual-based funding to support special attention segments of workforce needs should be priority by the state and central government. To enhance individuals' employability by supporting Lifelong Learning will be the keys to success of all the plans and policies.

#### **d. TECHNOLOGICAL FORCES: NEW CHALLENGES & OPPORTUNITIES**

Over the past 30 years advanced economies have become increasingly hungry for skills. New technologies have combined with intellectual and knowledge assets – the 'intangibles' of research, design, development, creativity, education, science, brand equity and human capital – to transform the economies AROUND THE WORLD. Across all sectors – manufacturing and services, high tech and low tech, domestic and internationally traded, public and private, large corporation and small enterprise – organisations have prospered by allowing highly skilled individuals the freedoms and flexibilities to deploy new technologies to rapidly create tailored products for increasingly sophisticated customers.

In some areas, a new generation of automated systems will replace humans, freeing us up to do the things we are good at and actually enjoy. In other domains, the machines will become our collaborators, augmenting our own skills and abilities. Smart machines will also establish new expectations and standards of performance. Of course, some routine jobs will be taken over by machines—this has already happened and will continue. But the real power in robotics technologies lies in their ability to augment and extend our own capabilities. We will be entering into a new kind of partnership with machines that will build on our mutual strengths, resulting in a new level of human-machine collaboration and co dependence.

#### **IDENTIFYING & POSITIONING RIGHT SKILLS FOR BUSINESS**

We stand at the threshold of a new renaissance in science and technology, based on a comprehensive understanding of the structure and behavior of matter from the nanoscale up to the most complex system yet discovered the human brain. Unification of science based on unity in nature and its holistic investigation will lead to technological convergence and a more efficient societal structure for reaching human goals. In the early decades of the twenty-first century, concentrated effort can bring together nanotechnology, biotechnology, information technology, and new technologies based in cognitive science. With proper attention to ethical issues and societal needs, the result can be a tremendous improvement in human abilities, new industries and products, societal outcomes, and quality of life.

The workforce of the future will be working in organizations with strong performance-based systems which incentivize both high performance and alignment to company strategies, values and work practices. Hiring will focus on attracting top talent that fits the organization culture. Cost-containment pressures may increase the focus on hiring talent with the right skill sets rather than internally training staff. Responsible financial decision making will be expected at all levels and from all employees.

The dramatic changes and challenges facing today related to growing unemployment, poverty, inequality, violence and environmental destruction demands more skills, abilities and creative problem solving potential. The importance of skills development of personal potential became significant when the future is uncertain. Ensuring academic success and also promoting healthy cognitive, social, and emotional development and resilience (including promoting opportunities to enhance school performance and protective factors; fostering development of assets and general wellness; enhancing responsibility and integrity, self-efficacy, social and working relationships, self-evaluation and self-direction, personal safety and safe behavior, health maintenance, effective physical functioning, careers and life roles, creativity)

### **TODAY IS AMAZING, AND THE FUTURE WILL BE EVEN MORE AMAZING.**

World is in transition to a knowledge based economy and its competitive edge will be determined by the abilities of its people to create, share and use knowledge more effectively. Most business and thought leaders underestimate the potential of smart machines to take over millions of middle-class jobs in the coming decades,” said Brant. Indeed, Gartner’s 2013 CEO survey shows that 60% of CEOs believe that the emergence of smart machines capable of absorbing millions of middle-class jobs within 15 years is a “futurist fantasy,” but Gartner itself predicts that smart machines will have a meaningful business impact in half that time.

- 75% of the current world wealth creation is human capital development.
- In ten years, knowledge will double every year.
- 25% of the work in can be done by anyone, anywhere in other countries.
- 30 years from now, we will need three planet earths to meet the natural resource needs of China alone.
- The most critical challenge countries is developing a competitive workforce development for high performance organisations.

#### **a. COMPANIES FOR OVER THE NEXT FIVE TO TEN YEARS**

- Flip the workplace – Enable the tooling to get the most out of your remote / flex workforce, create better activity based workspaces, and reduce your facilities cost.
- Seek productivity gains – IoT, hybrid intelligence, and robotics promise mass productivity gains over the next five years.
- Create innovation gravity – Use innovation best practices to make disruptive innovation part of how you do business.
- Learn faster – Leverage the tools that allow you to learn new skills faster.
- Embrace the quantified self for work – Seek the tools that will give you mass productivity gains.
- Rebalance work – Rebalance your workday for big productivity gains.
- Leverage hybrid intelligence – Learn to work with AI to dramatically increase your performance. Prepare for intimate computing that knows you and anticipates your needs.
- Enable robotic co-workers – Prepare for robots entering your workplace. They will offload mundane tasks and create different jobs.

#### **b. DIVISIVE AND POTENTIALLY IMMOBILIZING CONCERNS OVER JOB SECURITY & INSTABILITY**

- Many state workforce systems do not reflect market needs
- Public education is not adequately preparing individuals for the new knowledge based digital economy
- Globally workers must navigate a more uncertain career path
- Many low-income workers need supports to advance in their career path and living standard.
- Effective governance and accountability is lacking in developing the real potential.

#### **c. FUNDAMENTAL CHANGES IN THE NATURE OF WORK AND MANAGEMENT RELATIONS**

- Churning economy – every year a third of all jobs are in flux
- Skill shortages – during the economic downturn skill shortages continued in many industries and still do today
- Diverse workforce – new challenges and opportunities due to smart machines
- High productivity – slow job growth
- Outsourcing of jobs – puts a premium on innovation and skills

## **THE POTENTIAL DEVELOPMENT CHALLENGES IN THE CURRENT EDUCATION AND LEARNING SYSTEM**

The first few weeks after joining university are an exciting time for the new comer. There is a lot going on in terms of getting to know timetable, new subjects of study, meeting new class mates, lectures, and Students' and becoming familiar with the campus. From an employer's perspective, everything students do during the next three to four years counts. Employers expect graduates to not only have a strong academic background but also discipline based knowledge and a range of employability skills and attributes. Examples include being an effective communicator, team player, leader and possessing interpersonal skills.

Institutions welcome students to campus and look forward to working with them over the next few years. Once students have settled in, we would like to take the first steps in considering student's future career. Students may not automatically know what they want to do when they finish their degree. Starting now gives them time to explore ideas, develop skills and get relevant experience. Lay the ground work now to reap success later on when applying for internships and graduate jobs.

Subject-specific knowledge is not the primary determinant of suitability for employment in most graduate recruitment, the main exceptions being engineering. Graduate recruiters want a raft of other skills in addition to a first degree and these override the degree specialism in many areas. Employers and their representatives consistently say that, to succeed at work, most people in future must develop a range of personal and intellectual attributes beyond those traditionally made explicit in programmes of study in higher education institutions.

Most of the Institutes envisioned as an academic institution of excellence that would facilitate and promote the technical education of its students from all over India. All the Institute aspire to serve as an inter-disciplinary institution for technical and research. But most of the Institutes struggle to give emphasis on synthesis, creativity, hands-on experience, innovation, communication and entrepreneurship qualities along with basic knowledge of engineering, technologies and scientific research. This is due to lack of expert support and a definite systematic approach ON HUMAN POTENTIAL DEVELOPMENT.

### **A NEED FOR SYSTEMATIC AND SCIENTIFIC SYSTEM**

FOR YEARS PEOPLE BELIEVE THAT IT'S THE HUMAN BEING WHO HIMSELF CAN SOLVE THE ILLS OF HIS OWN DESTINY WITH WISDOM AND BALANCING SCIENTIFIC METHODS. THERE ARE MANY PRACTICAL PROGRAMS AND TECHNIQUES FOR TRANSFORMATION IN LIFE, RELATIONSHIPS, MENTAL STATES, WELL BEING AND FINALLY DESTINY FOR A LIVELIHOOD AS A SUPPORT SYSTEM FOR THE INDIVIDUAL AND NATION.

We still haven't convinced a wide range of people that social emotional development is just as important as physical and cognitive development in terms of life course, health and well-being . . . There is lots of evidence that social emotional climate, development, and learning are all steps in variety of life course phenomena, both in terms of how well schools do right through to the risk of latent depression later on in life, so from the standpoint of human development, it's indispensable.

The dawn of 21st century has brought in several opportunities globally. Many of them flourished in the past decade due to technological developments and resulted in today's lifestyle wherein Internet of Things and Digital Age is the buzzword. In spite of so much work that has gone into the technology and business process areas leading to ease of use and availability of resources, very little has been done in the area of Human Potential Development. Due to this reason, we're seeing a scarcity in bringing out innovative thoughts that can bring in efficiency in operations of these businesses.

Most countries have some kind of system but they vary greatly in levels of sophistication and detail on skill development not on human potential development. There has been a shift in the objectives of identifying future skill needs from human resource development planning to more general assessment of skills needs to inform all about human potential development and human capital investment. For example, there are many opportunities available to evaluate the knowledge level and aptitude of employees prior to hiring but very little is done and made available to the decision makers in terms of measuring the skill level that is needed for the particular job portfolio. Much of the above is due to the reason that there is limited availability of personnel who can design and apply skill development methods suitable for an organization. In many instances, the decision is taken based on budget available rather than trying to make an effort to identify the right set of skill development techniques needed for the business and deploying them efficiently.

Our study and research finding shows most countries have some kind of system but they vary greatly in levels of sophistication and detail on skill development not on human potential development. There has been a shift in the objectives of identifying future skill needs from human resource development planning to more general assessment of



competencies and skills needs to inform all about **HUMAN POTENTIAL DEVELOPMENT AND HUMAN INVESTMENT**.

Human Potential Development will help understand the dimensions of the “true destiny, true nature and true purpose.” The powerful methodologies and approaches will assist in gaining awareness of true human nature. This awareness will attune, unify and focus on mental power and energies for life and living today and tomorrow.

The human potential development philosophy and action based on 1) “**Scientifically helping people finding their core genius based on creative will and conscious mind**” 2) “**Figuring out what you love or like to do as young as you are**” 3) “**Creating one’s ideal life in the context of desire fulfilment**” 4) “**Organising Life how to make living at it**” 5) **And finally “For the greatest possible mutual gain of Society and economy”**.

Human Potential Development systems developed by us are sophisticated and simple. There is a clear trend to combine methods, mental models and frames, development perspective and sense of perception. Human Potential Development system for skill needs anticipation is based on information cascade generally accepted on powerful forward thinking models looking into the future. It is based on moving from an old frame of mind to a new one for 21st century digital knowledge super infrastructure.

We envision a National and International Prominence for Human Potential Development. Our goal is to create Human Potential Development Scientist and Skill Scientist to professionally help deploying scientifically proven techniques in the society, business and governments worldwide bringing in right human potentials, skills and also develop their potential and skill sets to cater the needs of the toughest challenges faced by the current society and economy.

Human Potential Development and Management System initiative, objective is to help individuals to make a successful transition into academic, personal and professional success, free from limiting habits and preconceptions to make them understand how the dreams, goals, values and highest aspirations can be integrated into personal, academic and professional life. The entire system will be facilitating the psychological, academic, emotional, career, social, and vocational development of individuals and by serving as mental health, academic, cognitive and enabling career to all.

Human Potential Development Science experts to guide the individuals to find many ideas and innovative ways to improve individual life by developing skills, understanding behavioral pattern and habitual ways of doing things to suit the circumstances and own interests. Human Potential Development Science will guide students to develop mental health and intellectual maturity with a step by step approach. Human Potential Development Science will make and keep-fit psychological skills and skills of mind. So that individuals will know what should be done at each stage to make practical improvements in day-to-day life. The objective is to show them how to develop individual inner potential so that they can live life in the way that individuals wish enjoy in life and success to develop their hidden potential.

The reengineering initiative is termed as “**HUMAN POTENTIAL DEVELOPMENT OF THINGS FOR 21ST CENTURY**” in the line of Internet of Things. Human Potential will be the predominant form factor in 21st Century. All profession will be reluctantly dragged into Human Potential of Things. It will be heavily incentivized to be Human Potential development of Things in the 21st century for human potential development for all. Collected data in 21st century on Human Potential development of Things is a treasure trove—for good or evil. Human error lapses in advocating Human Potential Development confidentiality and privacy will not be tolerated. Visits with Human Potential Development scientists will be more meaningful for everyone in 21st century. Human Potential Development will be more achievable for action, success and happiness.

Human Potential Development will be the basic building blocks of Academic, Institution and Corporate as economic drivers for 21st century. Nationally and internationally recognized programs in key areas of industry and business, social science, material science, governance etc. as the platform for world-class education, earning and research centers, which in turn will be home to remarkable collections of intellectual talent and attract public and private investment in 21st Century. Human Potential Development will attract private capital looking for human potential development requirements to turn into businesses, creating jobs and economic prosperity. These activities fuel the exciting, entrepreneurial environments that attract and retain the young people for the 21st century human potential development.

The discipline and profession of Human Potential Development will be matured in a way that has provided a wide range of education and skill development options for the next generation of professionals and expert. It provides a sample of the types of competencies that human potential development programs often strive to develop in preparing human potential development scientists to work in organizational and family settings. These areas of competency ensure that as human potential development scientists have a strong background and understanding of the history and recent developments in the discipline and profession of human potential development with very strong evaluation, critical

thinking, and systematic inquiry skills, professional skills essential for working in a range of organizational and family settings, and both a breadth and depth of content knowledge in key domains.

There likely will be many new ideas to inform our research, theory and practice, but human potential development and management will be at the forefront of what happens to us in the next 10 to 20 years. The major conceptual, theoretical and practical breakthrough will be the recognition and incorporation of human potential development into practice and research of **academic, emotional, career, employability competence** development. On the positive side, scientific counseling, coaching, mentoring, skill development, human performance development, life skills, career counseling, assessment and developmental life planning, assessments and consultation, industry-aligned curriculum design, enhancing the academics and professional skills, develop self esteem and values, leadership and entrepreneurial skills, physically and mentally fitness, wellness and assessment, student assessment tools and techniques, counseling techniques and methods etc... become central theme and a potent answer to the current crisis facing juvenile systems today.

Targeted interventions will be needed to enhance academic skills, career skills and job skills, provide entry employment opportunities, and improve access to critical support services such as academic and emotional competence, mental muscles development, individual and group counseling skills, conflict management, building emotion confidence, developing human intelligence zones etc... if we are to improve the economic position of self and large numbers of families. Understanding human behavior is a key to designing public policies that can improve the functioning of the nation's economy and the operation of its community and political institutions. The behavioral and social sciences have made great strides in contributing to that understanding, but this research continues to be poorly understood, both by the public and by elected officials. For many people, personal experience is a more-powerful influence than scientific evidence and methodologies, especially when the two conflict. But public policies must depend on clear evidence of how people and institutions act—not on people's impressions, wishes, or fears. Therefore, it seems likely that the social justice movement in the human potential development profession will continue to gain strength and will become increasingly international in focus.

The reality of building capacity for the 21st century is that we do not know what the work of the future will be like or how technology will influence health and financial issues. The challenge is to prepare men and women to think critically, to engage in mental activity, or habits of mind, that "...use facts to plan, order, and work toward an end; seek meaning or explanations; are self-reflective; and use reason to question claims and make judgments..." It may be that our task is not only to prepare them to "fit into the future" but to shape it. "...If the complex questions of the future are to be determined... by human beings...making one choice rather than another, we should educate- all of them - to join in the conversation about those choices and to influence that future..."

We hope this paper will further encourage the efforts of policymakers, program implementers, development experts, and youth leaders alike, as together we build a society in which every young person has a real chance to learn, work, and lead.

## **BACKGROUND**

Since 2011 the Human Potential Development Science Corp team has been working with employers, training consultants, education colleges and government to design and deliver a course that will provide young people with the skills, attitudes and behaviours they need to secure and sustain their future. Human Potential Development Science Corp is created with a vision to provide assured jobs through transformational education, learning, skill development programs like HUMAN POTENTIAL DEVELOPMENT PROGRAM (HPDP) and SKILL ENGINEERING AND MANAGEMENT DEVELOPMENT PROGRAM (SEMDP) with a focus on various unique game-changing Skill 21st Century Development Model. The profession is first in line helping people with great passion and enthusiasm, as a safe career that is on high demand in the 21st Century knowledge economy locally and globally.

We scanned the academic literature from the past 1 to 5000 years to clarify the most up-to-date definitions of and the recently reported findings on human potential. We conducted a series of searches in the Education Resources Information Center and EBSCO host databases. These databases provided results for dozens of major academic journals, including American Educational Research Journal, Economics of Education Review, Educational Psychologist, Journal of Educational Measurement, and Review of Research in Education, Sociology of Education, and Teachers College Record. We also searched individually American Journal of Sociology, American Sociological Review, and Education Policy Analysis Archives. We then reviewed empirical, original, peer-reviewed research that focused on the effect of these attributes on academic success in prekindergarten through grade 12. Our objective with this review was not to estimate an overall effect size of each attribute on critical academic outcomes, as a meta-analysis would. Rather, we sought to provide readers with a general sense of the definitions of each attribute, the measurement strategies researchers tend to employ, and how each attribute may be related to educational attainment.