

War for Talent: Re-aligning Academic Pursuits with what Business Demands

Shekhar Murthy¹, N.Padmaja²

¹ Satyam Technology Centre , Satyam Learning Centre , Hyderabad, Andhra Pradesh, India

²CIHL, IIT-MSIT Division, Hyderabad, Andhra Pradesh, India

Abstract - The “War for Talent” is fought on a global turf. Business imperatives and dynamics in a world-wide context, propelled in a technologically effervescent environment, elude organization’s search for that all-fit “ideal” talent. A talent pool that’s technologically competent, communication and network savvy, attitudinally positive, socially and culturally understanding, and capable of delivering results anytime, anywhere is what business demands. This paper surveys skill gaps amongst college / university graduates and examines critically, what ails the educational system in a wider sense to generate readily employable fresh entry level talents from colleges and universities. A typical survey conducted in an academic, as well as, industry scenario pertaining to IT / ITES is presented. Through a short case study, the paper attempts to present a pedagogical context to learning in academic institutions, and what and how, learning content and delivery be made more effective to meet business demands.

Keywords: Skill gap, employability, experiential learning, pedagogy, competency

1 Introduction

Growing and spreading markets in different geographies have escalated this war, where demand for talent is on the rise, and quality professionals are awfully in short supply. And quality talent, where available, is ever on the move! Hiring and retention of human capital are by far two most cardinal drivers for business growth and success today.

1.1 Business Landscape Today

The knowledge economy faces severe dearth of talents. A global executive survey in Nov 2007 reported by McKinsey Quarterly indicates that the top most industry trend affecting business is the intensification of competition for talent. With the demand for professionals spirally rising, world-wide pockets of talent deficiency and surpluses shall become the prime mover for business growth and success. The increasing workforce imbalance and their

consequential impact on businesses, especially in the context of off-shore adaptation has been reported by NASSCOM and BCG Analysis, IDC¹ and depicted in Exhibit-1. It may be noted that the potential surplus is calculated keeping the ratio of working population (age group 15-59) to total population constant. Whereas, US, China, UK would face talent deficiency, India, Pakistan, Mexico, Indonesia, Philippines show pockets of surpluses talent.

While apparently pockets of excess talent creation exist in different parts of the world, the ready deploy-ability to business projects and services is a matter of concern. Industry may scream hoarse that the products from academia are woefully short of business expectations, that itself is a changing moving target, adapting fresher’s from colleges into business need focused learning facilitation to bridge the skill gaps and create talent that can be billable to projects and hence, the top line of companies.



Exhibit-1: Increasing workforce imbalance – Impact on offshore adoption

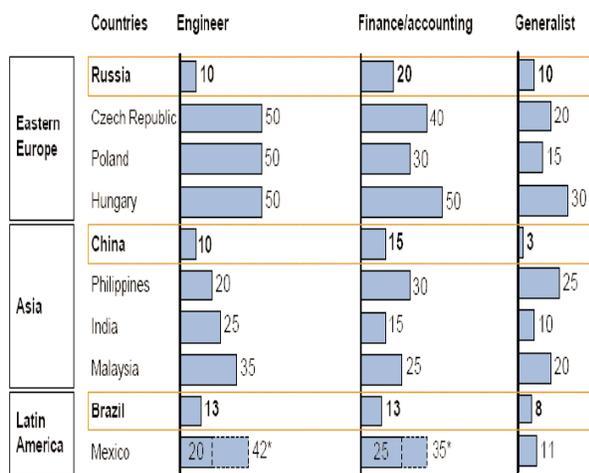
(Source: NASSCOM Strategic Review 07; U.S. Census Bureau; BCG Analysis: IDC)

1.2 Employable Skills across the Globe

McKinsey & Company² report suitability of young graduates to business projects and services. Whilst Eastern Europe has relative better standing of employability of entry level talent at 50%, countries such as India and Philippines are much lower at a mere 25%. Whilst a pool of talent may exist in such countries, employable talent is certainly in short supply. Industries worldwide grapple with this challenge and bridging the skill gap between academic produce and industry expectations in minimal time, and capturing growing market pie is literally where the war for talent takes. Exhibit-2 depicts the employability in terms of percentage of fresh graduates in different countries, as reported by McKinsey.

SUITABILITY VARIES MARKEDLY BETWEEN COUNTRIES AND SEEMS ESPECIALLY LOW IN NASCENT GLOBAL RESOURCING MARKETS

"Of 100 graduates with the correct degree, how many could you employ if you had demand for all?"
%



All suitability rates are empirically based on a total of 83 interviews with HR professionals working in each country

* Mexico is the only country where interview results (higher number) were adjusted since interview base was thinner and risk of misunderstanding high.

Source: Interviews with HR managers, HR agencies and heads of global resourcing centers, McKinsey Global Institute analysis

McKinsey&Company

Exhibit-2: Global Pattern of Employable Entry Level Talent

The industry connotation of employable skills is rapidly changing with technological advancements and high order thinking skills and personal qualities³ are seen as crucial differentiators amongst professionals. Interestingly, learning budgets in US industry are increasing at 7% (Bersin & Associates⁴ report for 2007) and 44% of industry

emphasize on increasing learning effectiveness, which makes business sense as companies worldwide wish to reach untapped markets, fast and first. This brings to focus on the pedagogical aspects of learning and make content relevant to business context.

2 Skill and Talent Gaps

Numerous skill-gaps surveys have been undertaken and reported worldwide. While percentages may vary, indications and trends suggest critical deficiencies of academic produce in areas of:

- Domain Orientation: Providing context to content
- Problem Solving & Analytical Abilities: An effect of recipe-based prescriptive teaching in colleges
- Synthesis & Analysis: The missing link as most academic focus terminates at lower level learning of Bloom's taxonomy.
- Cross-cultural & Communication: Localized learning environs in academia
- Collaborative Efforts: Score based percentile systems encourage competition than collaboration
- Life Skills & Attitude: Being a professional takes more than content grasping. In people based knowledge economy, ownership, initiative, empathy, integrity, self awareness, persistence and ethics play a vital role.
- Creativity and left brained focus: Education system focuses more on guided thinking than creative. Out of the box thinking is an exception than norm.
- Learning to learn, Learning to enjoy: Lifelong learning with enjoyment is the ultimate sustainable factor in learning.
- Quality consciousness: Students should be trained to become quality conscious professionals while at college to excel at workplace.
- Critical thinking and reasoning skills: Education system need to focus on promoting good logical and decision making skills to foster self management.

A survey on the performance of the first time entrants to industry, as reported by a leading IT / ITES giant in India in Sep 2007, reiterates the gasping chasm between academia produce and industry expectations. There seems to be a difference between the actual learning outcomes and the required learning outcomes. Most of the employers are inclined to hire people with ready skills to save in the cost of training and development. Exhibit-3 depicts the crucial skill gaps amongst freshers from colleges / universities, the deficiencies largely being on the soft attitudinal factors.

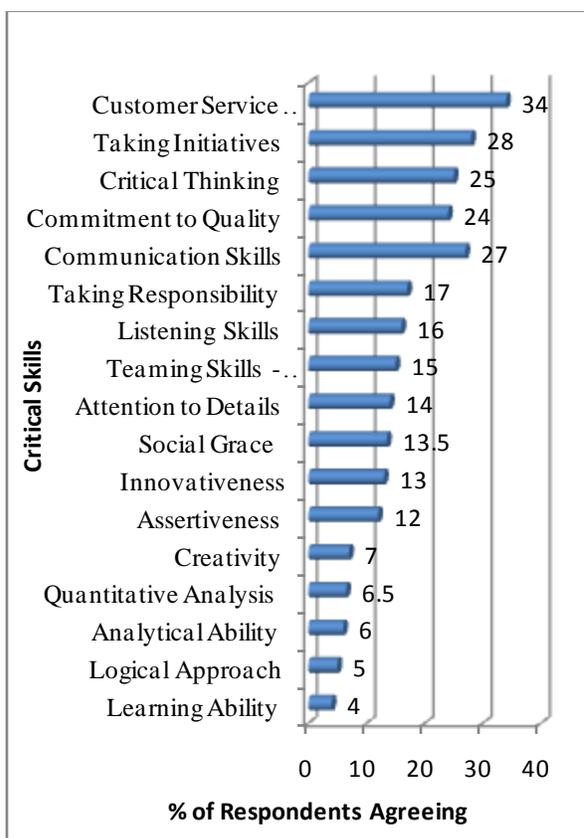


Exhibit-3: Skill Gaps amongst Fresher’s – Survey by Indian IT/ ITES Company, Sep07

2.1 Impact of skill gap

The factors causing the skill gap could be many as the changes in the nature of businesses in the new era of globalization demand active learning and adaptability to match the demands of technology driven, data-intensive, knowledge based economy⁵. Impact of the skill gap can be multifold and can affect the innovation and growth of an organization. With a widening skill gap, there is an evident imbalance in the demand supply ratio and employability competency of the professionals is reduced. To grapple with the skills shortages, industry has been deploying a few internal and external strategies like training the existing staff, increasing the employee benefits and compensation to retain the current skilled workforce and outsourcing⁶. While generating manpower to meet the demand has been an impending predicament that the industry today faces, the skill deficiencies identified at the entry level emphasizes the role of academia in training. An online survey was conducted by authors in Feb 2008 with specific focus on the critical success factors for first time entrants into IT / ITES industry. Three groups separately surveyed were: industry practitioners, academic faculty and students. It is

imperative that the business leaders, learning professionals and the academia have equal responsibility to bridge the gap. The survey highlights problem solving, time management, goal setting, project management skills and cross cultural issues, as key success attributes for the current generation professionals. Exhibit-4 summarizes the survey results

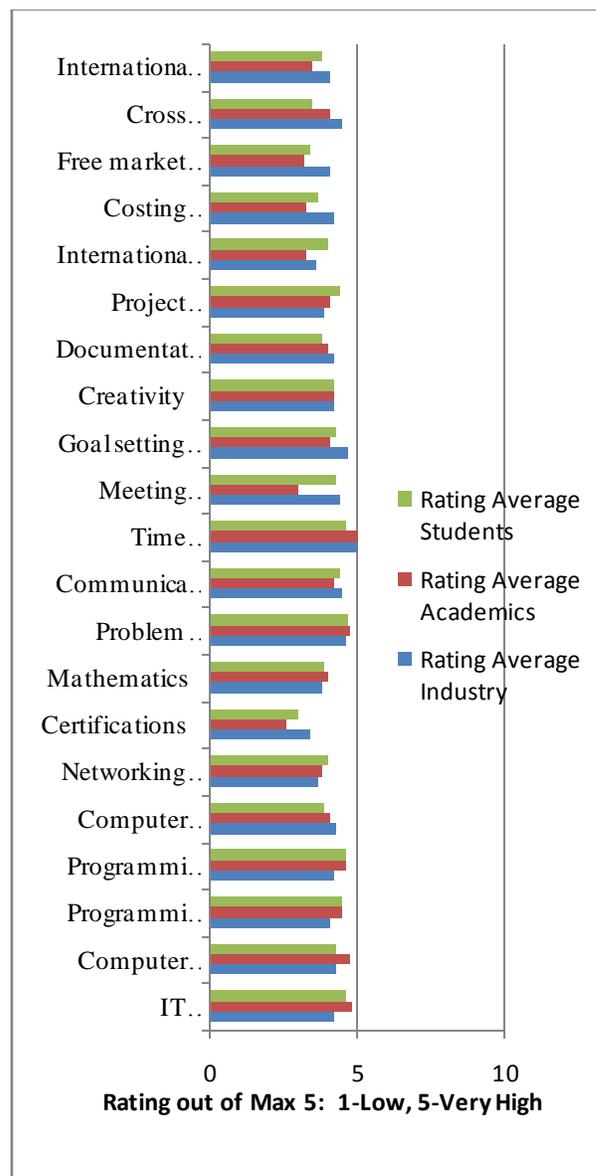


Exhibit-4: Personal and professional competencies of an IT professional

A literature survey was also undertaken by the authors to corroborate other similar skill-survey studies. Table 1.1 succinctly summarizes critical skill gaps in entry level workforce, collated from different surveys undertaken by Duyen Q Nguyen, UICEE⁷, Australian chamber of commerce & Industry⁸, and SCORE⁹, University of Glasgow.

The survey focuses on the skills considered to be essential for the entry level professionals and the priority attributed to them.

Table 1.1 Deficient Skills & Attributes in Entry Level Workforce				
Fundamental skills	Technical skills: Priority High	Intellectual skills: Priority High	Social skills: Priority High	Other
Literacy	Technical knowledge	Critical thinking	Communication	International/national culture
Numeracy	ICT	Problem solving	Interpersonal skills	Proficiency in foreign languages
		Planning and organizing	Team work	
		Self management & learning	Initiative	

The findings of the aforementioned surveys converge significantly. It is evident that there is a growing importance attached to intellectual and social skills in the contemporary corporate arena to win the war of talent.

It is therefore imperative to build strong linkages between academia and industry to complement each other's core competencies and enrich quality professional attributes in the entry level talent. NASSCOM in India has spearheaded various initiatives in this direction, notably:

- Conduct IT Workforce Development programme wherein various industry-academia meet and round tables are regularly organized to develop require skill sets of potential employees in the IT industry.
- Collaborate with Apex Educational Bodies viz. University Grants Commissions (UGC), All India Council for Technical Education (AICTE) to strengthen professional education in line with the IT industry's requirements of demand for skilled professionals.
- Encourage industry driven faculty development and student mentorship programs
- Create, operate and maintain a national database of employees working in ITES BPO industry in India, known as National Skills Registry (NSR)

- Introduced NASSCOM Assessment of Competence (NAC), to address the possible talent shortage by creating a robust and continuous pipeline of talent through a standard assessment and certification.
- Introduced NASSCOM Executive Development Programme (NEDP) in collaboration with leading quality consultancy in India, QAI, the first-of-its-kind Certification Program for Frontline Management for ITES-BPO sector.

2.2 Focus on generating talent

Whereas, such industry-academia effort would only strengthen and grow, given the compelling market operatives and global competition, it behooves upon academia to re-orient and re-focus the learning content, pedagogy and delivery mechanisms to remain in sync with corporate demands. Table 1.2 presents the spectrum of 21st century skills¹⁰ that academia must necessarily focus upon.

Table 1.2 Spectrum of 21st century skills:

Digital age literacy-Today's basics	Inventive Thinking—Intellectual Capital	Interactive Communication—Social & Personal Skills	Quality, State-of-the-Art Results
Basic, Scientific, and Technological Literacy's	Adaptability/Managing Complexity and Self-Direction	Teaming and Collaboration	Prioritizing, Planning, and Managing for Results
Visual and Information Literacy	Curiosity, Creativity and Risk-taking	Personal and Social Responsibility	Effective Use of Real-World Tools
Cultural Literacy and Global Awareness	Higher Order Thinking and Sound Reasoning	Interactive Communication	High Quality Results with Real-World Application

Most educational constructs today at best, address lower forms of learning (Knowledge-Comprehension-Application) as against Analysis-synthesis-Evaluation¹¹ in the Blooms taxonomy as shown in Exhibit 5. Indeed, learning design constructs must address the higher forms of learning, of analysis, synthesis and evaluation. These are,

as would be evident from survey results mentioned above, contribute to major crevices between academia produce and corporate needs.

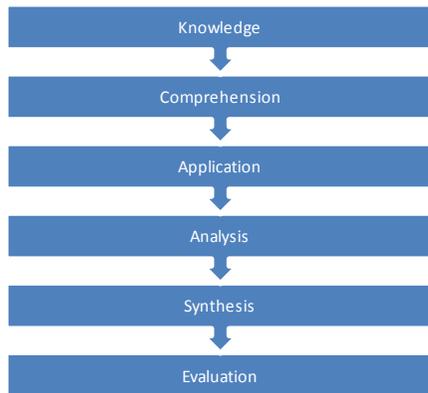


Exhibit 5: Bloom's Taxonomy

2.3 Pedagogy as the enabling factor

Pedagogy plays a pivotal role in learning effectiveness. It is essential to choose an appropriate pedagogy to enhance the learning and the performance of a professional. Experiential learning with a “feel-of-the-real-life”, in all its facets, both in its look and experience, is perhaps a much desired framework in learning delivery. An effective pedagogy can balance the mismatch between the qualifications and competencies required at the workplace. A comprehensive survey report on the effectiveness of pedagogies was conducted by National training laboratory, Bethel Maine, USA, that portrays the average learning retention rates of a learner as shown in Exhibit- 6.

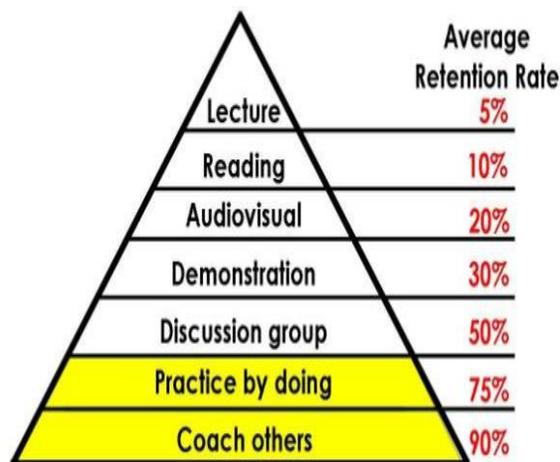


Exhibit 6: Learning Pyramid: Influencing Pedagogies
 (% figures refer to average retention rate)
 (Source: National training lab, Bethel Maine, USA)

2.4 An Effective Pedagogical Framework- Case Study

A premier post graduate program (Information Technology) in India introduced a new pedagogy which is based on the aforementioned education principles with emphasis on learning by doing, project centric curriculum, behavioural skills training and e-learning. The course design involved active participation of industry professionals and academia in content development. The program is offered in collaboration with CMU, USA to graduate students pursuing MS in Information Technology.

The learning principles followed by the course are based on Roger Schank's problem centric learning. The student masters the concept while he does the task designed to offer the essential gradation in a particular subject. A summative evaluation after each task is done by analyzing their daily logs, viva voce or task demonstration. The students are segregated into teams in the beginning of each course to enable collaborative learning and also to learn team building strategies. Specializations are offered in the second year of the course in their domains of interest.

Each subject in the curriculum designed is offered in a story centred fashion with a story board simulating corporate environment. Personalized mentoring and extensive soft skills training stand out as salient features of the course. A blended learning model in soft skills training helps students in developing their social skills and human relation skills. Rich content as resource and a guided instructional approach help them assimilate all the practical nuances in addition to the theory concepts. The course was successful in inducing learning to learn skills through an active learning approach. The approach has been successful in churning out industry ready all rounded professionals with a high learning curve, who are highly productive from day one on their job.

The authors conducted a survey at the institute, between Dec 2007 to Feb 2008 with a sample size of 75 students who completed their program successfully and are in 1-3 years band in IT industry. Table 1.3 captures the salient feedback of the alumni.

The Major outcomes of the program referred above are:

- Learning curve of students improves markedly. This is evidenced through their performance shown in continuous assessments and quality of presentations and reports.
- Enhanced Thinking-Doing-Communicating ability evidenced through project assessments and innovative solutions presented by students.

- Enhanced research, surveying and analysis capabilities evidenced from reports and presentations made by students on diverse topics – technical, professional and standards related. Given unknown domains, students learn to independently learn newer aspects on their own. Learn to learn, is in fact a major take away from the program.
- 100% placement with an average salary of \$10,000 per annum, with \$20,000 on the higher end.

Table 1.3 Evaluation of learning methodology	
Learning component	Grade
Content of the course: Conceptual depth, problem solving & behavioural skills	Very Good
Pedagogy	Good, Learning by doing approach, most appreciated
Mentoring and Buddy system	Fair
Assessment	Good
Projects offered	Good
Salient Findings of the Case Study:	
Story centred case studies and project work supported with active mentoring has been critical success factor for the program	
E-learning and e-mentoring have been supplemental factors that enriched learning experience	
Though the program has exposed the learner to multiple perspectives of knowledge through constant mentoring and rich content increased number of face to face contact sessions with subject matter experts can strengthen the pedagogy.	
Conceptual depth of learning content definitely has immense scope for improvement. Redesign of content with enhanced presentation of e-learning modules and effective use of wiki can provide enriched learning experience.	
Instructor led component, where applicable, can be strengthened. This reflects both on the content, facilitator and collaterals.	
Provision of internships can facilitate students' exposure to corporate adding value to their professional experience.	
Web logs and focus learning groups can provide a medium for interaction promoting the knowledge sharing process	
Outbound exercises encourage participation and quick learning of the behavioural skills; the course certainly requires interventions of this kind	

In addition to the focus on academics, the industry has to provide positive transitioning climate and experience to attract and retain the talent pool available in the market. Industry needs to provide jobs that are challenging with a good employee value proposition¹².

In the opinion of the authors, factors that can strengthen learning process which aims at producing competitive professionals:

- A blend of theory and practical nuances offered to the graduates to obtain the proficiency in implementation.
- Intensive soft skills training
- Personalized mentoring

- Collaborative learning
- Training in domain knowledge
- Good relationships between academia and industry
- Internships from industry to provide an insight into the corporate challenges and environment
- Initiative from industry to conduct faculty training programs
- Introduction of mobile learning and podcasting to make learning more accessible
- Game based learning to make learning enjoyable.

Conclusion:

The war on talent is a corporate reality. Academia-Industry linkages supported with strong business-aligned academic content, delivered with proven pedagogical construct, in a meaningful technological, social and cultural context, encouraging “learn to learn” paradigm are necessary ingredients to bridge the skill gap. The idea is to promote meta-cognition where better self awareness may lead to more organized and effective learning thus ensuring the transformation of talent at college campuses into effective global professional leaders of tomorrow.

References:

- [1] Strategic Review 07; U.S. Census Bureau; BCG Analysis: IDC
- [2] McKinsey & Company Global Institute Analysis based on Interviews with HR Managers, HR agencies and Heads of Global Resourcing Centers
- [3] The workplace, A fact sheet, Alabama Cooperative Extension system, Volume I issue 3, September 15 2000.
- [4] Bersin & Associates, Annual Training Industry Report 2007
- [5]ASTD Public Policy Council, Bridging the skills gap, Fall 2006
- [6] López-Bassols, ICT Skills and Employment, OECD Science, Technology and Industry Working Papers, OECD Publishing, 2002
- [7] Duyen Q. Nguyen, The Essential Skills and Attributes of an Engineer: A Comparative Study of Academics, Industry Personnel, and Engineering Students, UICEE, Australia, Global J. of Eng. Educ., Vol. 2, No.1, 1988.
- [8] An article on ‘Employability skills-an employer’s perspective’, Australian chamber of commerce and industry
- [9] Janet Powney, Kevin Lowden, Stuart Hall, Young People’s Life Skills and the Future, University of Glasgow, SCRE Research Report, September, 2000
- [10] Building America’s 21st Century Workforce. Executive Summary, National Alliance of Business, page 5, (June 2000), website: www.workforce21.org
- [11] Bloom B. S. (1956), Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1973), Taxonomy of Educational Objectives, Handbook I&II: The Cognitive Domain. New York: David McKay Co Inc.
- [12] Nigel Purse, Director, The EuMan Group, Managing Human Resources, Page 323, Oct 2002.
- [13]. An article on NASSCOM- Mckinsey Report 2005
- [14]Charles A. Handler, Rocket-Hire, Mark C. Healy, De Anza College, Talent in 21st Century, Global skills report, in conjunction with brain bench, 2006.
- [15]C. Mckimming, An investigation to identify the key strategies Cardonald College can use to improve the employability of its students, A Report for Cardonald College Strategic Management Group, 2007.
- [16] An article on Knowledge Services Market, Beyond the hype: will India deliver?, Roc search Ltd, 2006.
- [17] Nurita Juhdi, Aion Jauhariah and Shaharudin, Study on Employability Skills of University Graduates The Business Wallpaper, Volume 2 Issue 1, 2007.
- [18] A McKinsey Quarterly Reader, Selected McKinsey Survey results, 2006.