Spring 2015

What are the Key Practices that STEM & Manufacturing based Companies are Deploying to Drive Improvements in the Diversity of their Workforce?

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Abstract

Studies have shown that approximately 67% of U.S. manufacturing companies are currently facing a worker shortage. This rate is dramatically higher than that of other private firms in the U.S. (See Appendix A). Subsequently there has been a huge push to recruit and advance female employees, which have been historically underrepresented. In order to do so, it is strongly encouraged that companies follow a strategy of Attract, Develop, Engage and Retain (A.D.E.R.) and employ as many best practices as possible.

Keywords

human resources, science, technology, engineering, mathematics, STEM, manufacturing, diversity, female leaders

Comments

Suggested Citation

Required Publisher Statement

EXECUTIVE SUMMARY

Research Question

Striving to achieve the greatest ROI for a China-based Leadership Development Program, what are the key competencies and skills required for leaders in China? In comparison to the US, what competencies are known to drive the greatest impact for overall business development?

China's Business and Talent Environment

Developing a leadership pipeline was the number one strategic business challenge in the American Chamber of Commerce Shanghai 2010 survey, even ahead of increasing market share and new innovations.[1] With local leaders replacing expats at astonishing levels, the development of Chinese managers is critical to success. For instance, an Aon Hewitt survey showed that between 2007 and 2010, the number of MNCs replacing expats with locals nearly doubled to 46%.[1] In addition, MNCs in China experience turnover rates 25% above the global average with the average retention period of a middle manager in Shanghai amounting to less than two years.[1,2] The fact that highly skilled leaders can expect up to 40% increases in salary at a new organization certainly encourages turnover.[3] While employee development can act as a retention tool, programs should be systematically focused on key competency needs to ensure the continual development of a strong pipeline.

Competencies for Development

Company development efforts should focus on the most highly demanded skills and the competencies needing the most improvement. Using categorization from Kolb Learning Skills Model, interpersonal and behavioral competency areas were found to be the most highly demanded, while perceptual and analytical competency areas were deemed less important for success. More specifically, as detailed in Table 1, the most highly demanded skills in China were (1) relationship skills, (2) goal setting, (3) initiative, (4) action, and (5) leadership. On the other hand, the competencies most needed for improvement included: (1) goal setting, (2) leadership, (3) initiative, (4) relationship skills, and (5) information analysis.[4]

The Expectancy Theory demonstrates that employees are motivated to learn when they expect to acquire valuable knowledge, skills, and abilities that will support them in achieving success on the job. Therefore, to reach their full potential, development programs should strive to engage employees by teaching material directly relevant to their current challenges and future competencies needs. While there are many overlapping challenges faced by leaders in both the US and China, their frequency rank differs, as shown in Table 2. A few key highlights include:[5]
- The top five challenges ranked by China included (1) Developing Managerial Effectiveness, (2) Inspiring Others, (3) Developing Employees, (4) Mobilizing Collaboration and (5) Managing Internal Stakeholders and Politics. While these all fell within the top eight in the US ranking, differences existed.
- Managing Retention and Selection, Managing Process, and Navigating Globalization were ranked in the top ten for China, but fell outside the top ten for the US.
- Guiding Change, Being Recognized as a Leader, and Leading with Less were ranked in the top ten for the US but fell outside the top ten for China.

While development programs should seek to identify the specific needs of their population, the same study aimed to identify cross-country differences between the leadership competencies critical to success.   Differences also existed by country, as detailed in Table 3. A few highlights include:[5]
- The top three competencies for both China and the US (Leading Employees, Change Management, and Resourcefulness) were consistently rated as necessary for success across all participants from all countries.
- While Participative Management and Building and Mending Relationships were rated in the top five in China, these were both ranked 7 in the US.
- Decisiveness and Doing Whatever It Takes were ranked 4 and 5 in the US but were rated lower (6 and 9) in China.

Those perceived to be outstanding leaders are better able to convince followers to fully commit themselves to the organization's goals and put forth discretionary effort. Therefore, organizations should strive to select for and develop these behaviors. The GLOBE study assessed differences in the characteristics of outstanding leadership by country. The characteristics were statistically categorized into six styles: Charismatic, Team-Oriented, Self-Protective, Participative, Humane-Oriented, and Autonomous. While Table 4 provides the details, a few highlights include:[6]
- Large cultural variation was found in all except the Charismatic and Team-Oriented styles, which were universally determined to be a contributor to outstanding leadership.

- For China, four styles (Charismatic, Team-Oriented, Participative, and Humane-Oriented) were determined to contribute to outstanding leaders and no styles were found to inhibit outstanding leadership.
- Between China and the US, the greatest difference was found in the Participative style, which includes encouraging input from others, delegating, and ensuring equality. A large difference was found in the Self-Protective style, with procedural, status-conscious, and face-saving behaviors that protect the individual and group seen as a definite detractor in the US and having little impact in China. Lastly, while a contributor in both countries, the Charismatic style, including high standards, decisiveness, inspirational, and innovation-focused, has a greater impact in the US.

China's Mastery of the Competencies Required for Global Leaders Working Cross-Nationally

Deloitte's research with 30,000 leaders in 10 countries revealed eight capabilities required of all global leaders: Strategic Thinking, Persuasive Communication, Delivering Results, Developing Talent, Cross-Cultural Intelligence, Global Business Acumen, Resourcefulness, and Agility. Deloitte's Global Human Capital Trends echoed the importance of similar competencies while adding Creativity, Customer-Centricity, and Influence and Inspiration. In the past, China focused on developing 'hard' skills, leaving many of the 'soft' skills required for successful leadership underdeveloped. Additionally, tensions exist between China's cultural norms and the behaviors leaders need to exhibit. Support is needed to develop the following:[7,8,9,10,11]

- **Strategic Thinking:** Following from an educational system where respect for authority and rote learning was emphasized, leaders have a reputation for weaker critical thinking and strategic planning skills. Expecting directives from leaders, many fail to exercise strategic thinking, take the initiative, or be proactive with ideas and actions.[8,10,11]
- **Encouraging Innovation and Diversity of Thought:** Growing up, conforming and group think were expected, which limited unique ideas. Consultative decision-making and cross-unit collaboration needs to be encouraged. In addition, creativity and innovation are stifled as the desire to 'save face' prevents risk-taking.[7,8,9,10]
- **Developing and Empowering Talent:** While autocratic leadership was successful in the past, to achieve innovation and agility, lower-level employees should be empowered with decision-making power and responsibility. Additionally, in China, the goal of preserving relationships hinders effective constructive feedback. Business success, productivity, and employee development are negatively impacted when employees don't receive direct feedback.[7,8,11]
- **Communication:** Succinct, articulate messages communicated in an engaging way are critical. Indirectness is perceived as indecisiveness and weakness in the US, but in China, it is viewed as thoughtfulness, which supports relationship building and negotiations. Cultural awareness as well as communication skill building are key.[8,10,11]
- **Cross-Cultural Intelligence:** Chinese leaders would benefit from learning effective strategies for cooperating and working with non-Chinese groups. Exposure to different countries and cultures is critical for leading a MNC.[7,11]
- **Transformational Leadership:** While known to be exceptionally strong in operational effectiveness, planning, analysis and execution, China is less transformational in their leadership when compared to other countries. Organizations need a balance between transactional management and transformational leadership to achieve both agility and stability. Figure 1 details specific competencies associated with transformational leadership.[8,12]

Especially in China, beginning development early is critical for filling a pipeline with capable leaders. As Figures 2 and 3 detail, each stage of development should target unique capabilities. Initially, operational mastery and delivering results is essential. The next critical focus is on influence, including developing others, coaching, providing constructive feedback, and developing effective communication and persuasion skills. As organizational leaders, strategic thinking skills focused on business strategy and finance, cross-cultural intelligence, global business acumen, agility, and resourcefulness are key.[11,13]

Benchmarking

The recent CAHRS Working Group provided confirmation of many of the insights discussed above. Anecdotally, participants agreed that approximately 80% of leadership competencies required for success in China are consistent with the US, yet rankings of importance differ. The following themes were discussed as essential in China:[14]

- **Agility:** The highly dynamic environment and increasing rate of change in China highlights the importance of agile leaders that can predict external changes, engage in scenario planning, pivot quickly, and embrace change.
- **Employee Empowerment:** Prior generations expected autocratic leadership, but participative cultures that encourage employee involvement and give employees a voice are required to succeed today.
- **Employee Development:** Leaders need to go beyond achieving results through top-down directives and instead coach employees on strategies for success.

Conclusion

China has an exceptional talent base that can only be further enhanced through development of key leadership competencies. The keys for success are inspiring, leading, developing and empowering employees through a participative style. An additional success factor includes building a strategic, global mindset to enable agility.

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Impact of Generational Differences

Talk of how the millennial generation is searching for a different value proposition is commonplace in the US. Yet, China is experiencing an even greater generational divide. Currently accounting for approximately 50% of the employed population, Gen Y's are seen as more ambitious, demanding, assertive, hypersensitive to criticism, and highly intelligent. While grounded in many core traditional values, this employee population is fighting the hierarchical system and limiting the trust automatically given to managers. Additionally, the new generation is deprioritizing guanxi (relationships) and has a more democratic, individualized mindset. To fully engage the Gen Y's, leaders should strive to:[15,16]

- Build trust and loyalty through consistent responses and behaviors
- Share information, encourage brainstorming and allow Gen Y's to influence strategy
- Limit directives and instead use small hints, such as "Have you tried X?"
- Support Gen Y's in building persistence, self-confidence, active listening, interpersonal skills, and receiving feedback, while limiting over-emotional reactions

Development Methodologies

To successfully develop the critical competencies, multiple methodologies have proven successful:

- **Dynamic Methods:** Dynamic learning approaches that go beyond lectures to achieve a learner-focused design rooted in real work challenges are more effective. Utilizing real project involvement, leveraging technology and social media, conducting management simulations, and providing overseas rotations are most effective for development of these skills. One successful example includes a 'Corporate University' set up to encourage cross-functional collaboration. Additionally, allowing employees to observe the impact of capability building reinforces its importance. [1,17,18]
- **Diverse Training Groups:** Since analysis has revealed similarities between the challenges faced and competencies required for success, Leadership Development Programs can benefit from discussing challenges, insights, and successful strategies with a diverse group of participants from multiple cultures. Participants can further engage and truly own their development by analyzing the insights to decide the best strategy for them to personally pursue in terms of their cultural and organizational context.[5]
- **Enabling Self-Development:** Companies should strive to capitalize on what 80% of Chinese leaders are already undertaking on their own: self-development. By promoting the benefits of self-development, offering a portfolio of self-directed options, utilizing assessments to recommend particular modules, and leveraging new technologies as a platform for learning, companies will be able to maximize the impact of self-development initiatives. In addition, face-saving and face-giving strategies should be employed to promote the self-directed learning.[3]
- **Continuous Learning:** While highly demanded, especially by young employees, China is the least prepared country in regards to 'pull' learning models where resources are available anywhere and anytime to fulfill an immediate need.[9]

Appendix

Table 1. Competencies Demanded, Developed and Needing Improvement in China

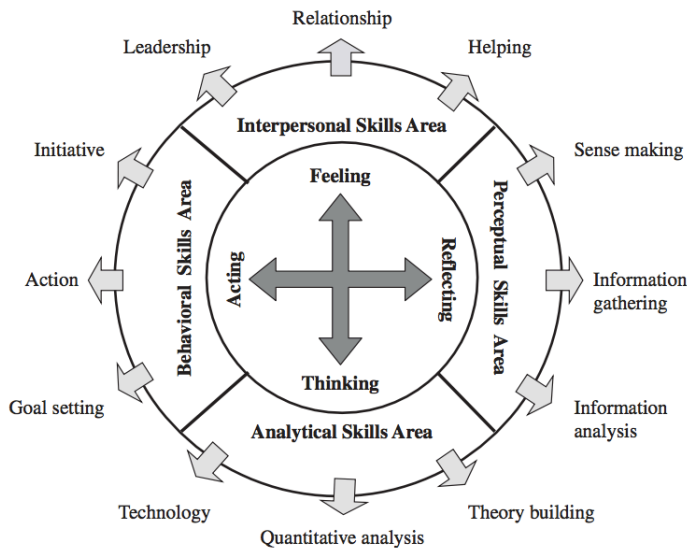|	Importance Rank	Currently Developed	Improvement Needed
Leadership	5	7	2
Relationship	1	1	4
Helping	6	3	11
Sense making	10	9	7
Information Gathering	7	4	12
Information Analysis	9	10	5
Theory Building	11	11	8
Quantitative Analysis	12	12	9
Technology	8	8	6
Goal Setting	2	6	1
Action	4	2	10
Initiative	3	5	3

Figure 1.   Kolb's learning skills model.

Table 2. Challenges Faced by Managers: Comparison Rank in China and US
Note: Red text denotes when a challenge fell in the top ten for one country but outside the top ten for the other.

Challenge Faced	China Rank	United States Rank
Developing Managerial Effectiveness	1 – 26.3% of responses	1 – 26.0% of responses
Inspiring Others	2 – 22.2% of responses	5 – 15.1% of responses
Developing Employees	3 – 20.2% of responses	4 – 15.1% of responses
Mobilizing Collaboration	4 – 18.2% of responses	8 – 10.3% of responses
Managing Internal Stakeholders and Politics	5 – 17.2% of responses	2 – 24.0% of responses
Managing Retention and Selection	6 – 15.2% of responses	14 – 6.8% of responses
Managing Process	7 – 11.1% of responses	20 – 4.8% of responses
Leading a Vision	8 – 11.1% of responses	6 – 13.0% of responses
Leading a Team	9 – 10.1% of responses	7 – 11.6% of responses
Navigating Globalization	10 – 10.1% of responses	23 – 4.1% of responses
Guiding Change	11 – 10.1% of responses	3 – 22.6% of responses
Being Recognized as a Leader	26 – 3.0% of responses	9 – 9.6% of responses
Leading with Less	19 – 5.1% of responses	10 – 7.5% of responses

Table 3. Competencies Essential for Success: Comparison Rank in China and US
Note: Red text indicates that a leadership competency was ranked in the top five for one country but outside the top five for the other.

| Leadership Competency	China Rank	United States Rank
Leading Employees	1 – 88.89%	2 – 82.19%
Change Management	2 – 76.77%	3 – 73.97%
Resourcefulness	3 – 75.76%	1 – 88.36%
Participative Management	4 – 72.73%	7 – 63.70%
Building and Mending Relationships	5 – 64.65%	7 – 63.70%
Decisiveness	6 – 60.61%	4 – 71.92%
Doing Whatever It Takes	9 – 42.42%	5 – 68.49%

Table 4. The GLOBE Study's Assessment of Outstanding Leadership: Comparison of China and the US
Note: Red text highlights inhibitors and green text denotes contributors to outstanding leadership.

Country	Charismatic	Team-Oriented	Self-Protective	Participative	Humane-Oriented	Autonomous
China	5.57	5.57	3.80	5.05	5.18	4.07
US	6.12	5.80	3.16	5.93	5.21	3.75
Difference	-.55	-.23	.64	-.88	-.03	.32

Building on the work of Hofstede and others, the GLOBE study identified 9 cultural dimensions to assess the similarities and differences between societies in terms of norms, values, believes and practices. Countries were grouped into clusters, with China falling within the Confucian Asia culture and the US falling within the Anglo culture. As shown below, the Confucian Asia culture is tied for the second farthest apart from the Anglo culture. [6]

Figure 1: Country Clusters According to GLOBE
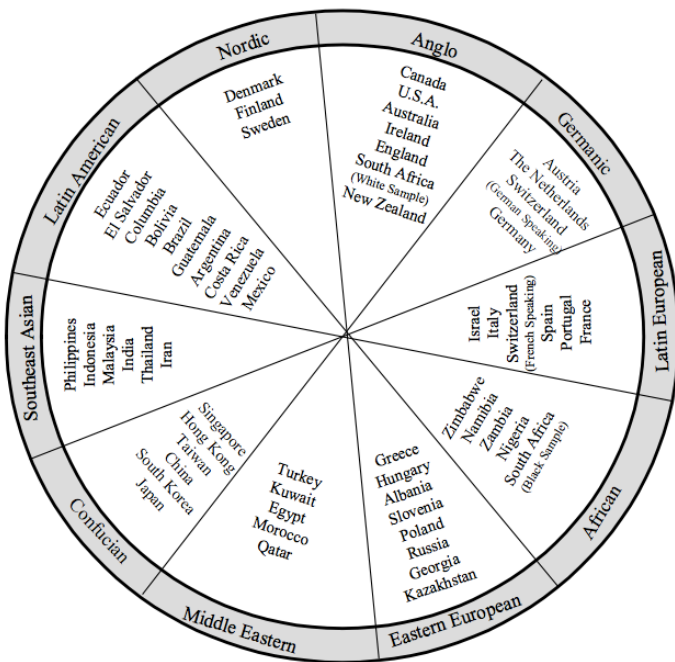
These 21 leadership scales were statistically and conceptually reduced to six scales, resulting in six leader styles:

The *performance-oriented style* (called "charismatic/value-based" by GLOBE) stresses high standards, decisiveness, and innovation; seeks to inspire people around a vision; creates a passion among them to perform; and does so by firmly holding on to core values.

The *team-oriented style* instills pride, loyalty, and collaboration among organizational members; and highly values team cohesiveness and a common purpose or goals.

The *participative style* encourages input from others in decision-making and implementation; and emphasizes delegation and equality.

The *humane style* stresses compassion and generosity; and it is patient, supportive, and concerned with the well-being of others.

The *autonomous style* is characterized by an independent, individualistic, and self-centric approach to leadership.

The *self-protective* (and group-protective) style emphasizes procedural, status-conscious, and 'face-saving' behaviors; and focuses on the safety and security of the individual and the group.

Figure 1. Leadership – Transactional and Transformational

Figure 4: Competency Model – Factors for Management versus Leadership Focus

Leadership Function	Definition	Competencies	
		Management Focus (Transactional)	**Leadership Focus (Transformational)**
Developing the Vision	This involves the critical analysis of the current situation, and the generation of ideas to move forward (Strategy).	**Analyzing & Interpreting** Analyzing complex information and applying expertise.	**Creating & Conceptualizing** Producing innovative ideas and thinking strategically.
Sharing the Goals	This involves persuasively communicating the vision to others, as well as personally adapting to the changes that the new strategy brings (Communication).	**Adapting & Coping** Responding and adapting well to change and pressure.	**Interacting & Presenting** Communicating with, persuading and influencing others.
Gaining Support	This involves gaining other people's support by motivating and empowering them to implement the actions needed to deliver the strategy (People).	**Supporting & Co-operating** Supporting other and working effectively with people.	**Leading & Deciding** Initiating action, giving direction and taking responsibility.
Delivering Success	This involves using operational efficiency and commercial acumen to effectively implement the strategy (Operations).	**Organizing & Executing** Planning, working in an organized manner and focusing on delivery.	**Enterprising & Performing** Focusing on results and on achieving goals.

Source: SHL 2012.

Figure 2. Progressive Leadership Curriculum for China

Source: *Bersin by Deloitte, 2013.*

Figure 3. Development Capabilities by Leadership Level

Operational Skills

Resourcefulness
Agility
Cross-Cultural Intelligence
Global Business Acumen

INDIVIDUAL: Skill Development

Leadership and Management Skills

Strategic Thinking
Persuasive Communication

LOCAL: Understanding Local Business Environment, Market and Regulatory Issues, and Culture

Talent Development
Results Orientation

Strategic Skills and Business Acumen

GLOBAL: Understanding Corporate Vision, Values, and Strategy

Emerging Leader | First-Level Leader | Midlevel Leader | Senior-Level Leader | Executive