

***Metrics of Competency Mapping & its impact on Deliverables with special reference to automobile sector in India***

***Dr. G Srinivasa<sup>1</sup>***  
***Associate Professor***  
***Department of MBA***  
***SJC Institute of Technology***

***&***

***Prof G Shruthi<sup>2</sup>***  
***Assistant professor & Research Scholar***  
***Department of MBA***  
***SJC Institute of Technology***

***Abstract: - Artificial intelligence, Robotics, Machine learning are the words which are used often by the people in today's competitive world. These have set a standard in the mindset of the people, most of the people are aspiring to make career in these fields in the long run. Incidentally there are many automobile companies which have implemented the above techniques in the field of manufacturing however import duties on the components on the automobile assembling has increased giving an ample opportunity to manufacture the same in India and sell in domestic market, the area of competency mapping and skill set in the automobile industry calls for specific skill set which can influence these Indian companies to go global and export such vehicles which can be a need. The paper tries to investigate the core competencies required and skill sets that can transform the Indian companies to not only go global but also become pioneer in the field of manufacturing electric vehicles which can infuse greater growth in Indian retail industry and contribute to growth and performance. Research is conducted to know the factors that the automobile industries has to implement that makes them gain the core competency and map the deliverables***

Introduction: - Competency mapping is a process of mapping the core competencies which can transform the employees in sustained asset into the organization, these competencies can lead the person to participate in the active role and can surge to build core competency which can improve the personality traits of the individual. The research paper tries to investigate the core competency required to compete in the multinational companies (Avoiding the rejection rate at the time of appraisal) & prime factors which can influence the individual to inculcate and develop the leadership quality,

- Relationship between the Personality traits on the behavioral syndrome driven by competency mapping is to be identified
- Critical factors that influence personality traits which can ease the leadership quality & match competency mapping has to be identified
- Impact of behavioral factors and exponential experience of the individual in molding the competency mapping for the attainment on the deliverables need to be identified

Famous competency models established by prominent institutions and researchers acted as reference points for the current research. The current research is restricted to Indian manufacturing companies. The respondent's profile is represented by middle and senior level HR executives and HR managers of medium, small, as well as large-scale manufacturing firms. The respondents are physically spread over the Prospective manufacturing units of Electric vehicles in India

In recent times, transformational changes to business environments and rapid technology development are major drivers causing a shift in the talent demand (Arthur-Mensah, 2020). On an industry level, this is causing prevalent talent and skills shortages amongst knowledge-based industries<sup>1</sup> that require highly skilled labor, primarily within Science, Technology, Engineering, and Mathematics (STEM) (ibid.). On a regional level, in 2011, “Business Europe”, a lobby group representing enterprises in the EU recognized the lack of STEM-skilled labor as one of the main challenges for economic growth in the forthcoming years (Business Europe, 2011).

In 2016, CEDEFOP, the EU commission’s institute for vocational education and training reported ICT<sup>2</sup> and STEM professionals as the EU’s top five skill shortage occupations (CEDEFOP, 2016). This was further highlighted in the 2020 European labor survey (European Commission, 2020).

Further analysis of the (European STEM-skilled labor force) identified electrical engineers as the top skills shortage amongst STEM-skilled professionals. This leaves European companies operating in knowledge-based industries and is heavily dependent on engineering professionals, particularly within the field of electrical engineering, at risk for acute talent shortages. A seeming example of such an industry is the Lithium-ion (Li-ion) battery industry. Not only is the industry heavily dependent on STEM-skilled labor and electrical engineers, but it is also experiencing rapid growth with a 30% CAGR<sup>3</sup> until 2030 (McKinsey, 2021). The main growth driver is the rise of Electric vehicles (EVs) due to a rapid shift toward sustainable mobility. Thus, talent shortages within the Lean Manufacturing industry are truly a bottleneck in the rapid growth journey the industry is experiencing

***Dr. Saikumari V1 , Ms. Sunitha V2 , Kirthika S V3 , Jayakrishna A R4 , Lokeshwaran K5 in their article A Study On Effectiveness Of Competency Mapping Through Training And Development<sup>1</sup>*** revealed that the competency mapping helps individuals or employees understand their competencies for betterment of performance in task.

***Dr. Vinod Waiker1 , Mr. Aftab Ali Siddiqui2 , Mr. Sarwar Alam Ansari\* in their A Review Study On Employees' Competency Mapping And Output Management: With Reference Nagpur Based Small Scale Manufacturing Industries<sup>2</sup>*** revealed that the competency mapping helps individuals or employees understand their competencies to accomplish the task given within the given period of time. The organization can sustain for long only if the competencies of employees are integrated with HR functions of the organization.

***Shivanjali, Mitushi Singh, Tripti Singh in their article on competency mapping of to retain employees in IT Sector<sup>3</sup>*** stated that the competency mapping is very much important in retaining talent. Competent employees are loyal and more talented hence these talented employees have to be retained to meet the strategic need of the organization.

***Aija Staškeviča in the article The Importance of Competency Model Development<sup>4</sup>*** concluded that the competencies model will help the organization to have a clear vision of who is to be selected and also the competencies required for accomplishment of the task given. The competency model also helps in advancement of decision making in organization.

***Dr.Prachi Pargaonkar, Mayuri Yadav<sup>5</sup> COMPETENCY MAPPING AS A TOOL FOR CAREER PLANNING IN EDUCATION INSTITUTE: LITERATURE REVIEW*** concluded that competency mapping helps in identifying the key trait of individuals to accomplish the task given in the task. Also there is no linkage between career mapping and competency mapping is not available.

#### 4.1. Analysis of Data

Exploratory factor analysis to discover the original factor construction of competence was done using SPSS 21. EFA was employed to make sure that factors should load statistically as anticipated or require to be modified or dropped is rooted in answers of the questionnaire. Afterwards, confirmatory factor analysis (CFA) to examine the generated dimension structure was performed using AMOS 18. Statistical analysis of collected data was performed by t-test, correlation analysis, and reliability test.

**Table 1 constructs of the competency mapping**

Factors	Factor loading	Validity Aspect	Chronbach's $\alpha$
<b>Factor 1: PERSONAL</b>	0.25	<b>0.27</b>	0.68
1. Communication	0.31		
2. Strong initiative	0.57		
3. Trustworthy	0.17		
4. Team oriented	0.05		
5. Integrity	0.01		
6. Learning oriented			
<b>Factor 2: Traits &amp; Leadership</b>		<b>0.17</b>	0.69
1. Empower & train people	0.27		
2. Problem solving & Decision making	0.09		
3. Ensuring health & safety objectives	0.08		
4. Negotiation skills	0.23		
5. Inspiring & motivating others	0.14		
<b>Factor 3: TECHNICAL</b>		<b>0.24</b>	0.55
1. Career & succession planning	0.15		
2. Organizational development	0.17		
3. Benefits & compensation management	0.31		
4. Management of performance	0.25		
5. Resourcing & management of talent	0.29		

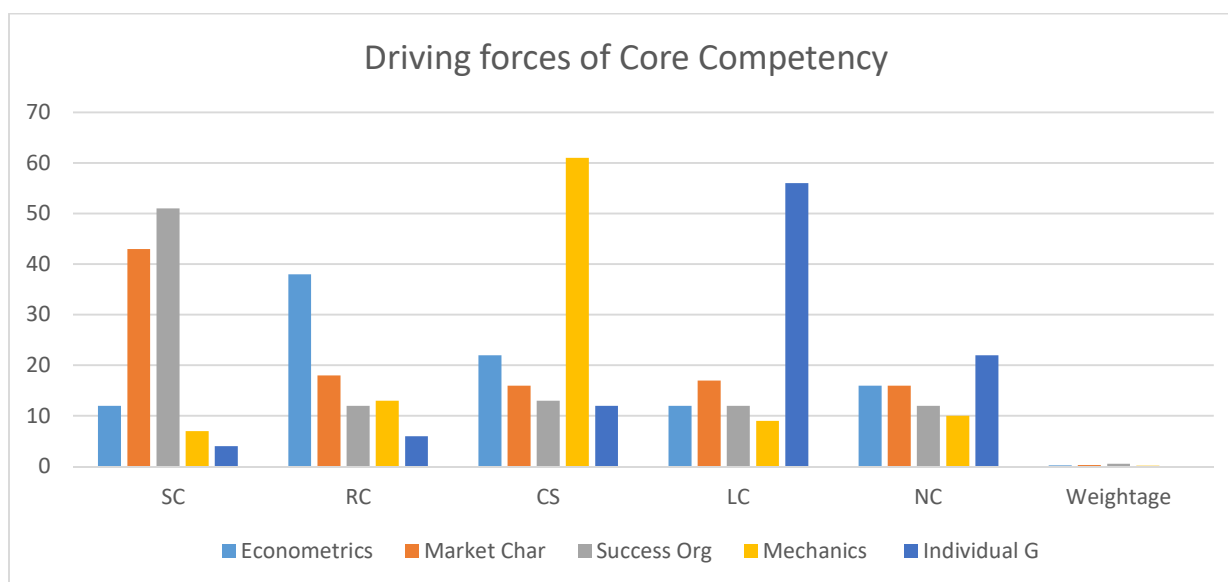
6. Management of change	0.23		
<b>Factor 4: ANALYTICAL</b>		<b>0.24</b>	0.70
1. Adaptability/Flexibility	0.15		
2. Critical & Analytic thinking	0.17		
3. Creativity & Innovation	0.31		
<b>Factor 5: MANAGERIAL</b>		<b>0.19</b>	0.65
1. Problem-solving skill	0.25		
2. Professional/Managerial expertise	0.29		
<b>Factor 6: STRATEGIC</b>			
1. Company vision & mission knowledge	0.21		
2. Strategic & customer orientation	0.26		
3. Applying business acumen	0.18		
<b>Factor 7:Core Skills Sets</b>		<b>0.19</b>	0.54
1. Information technology skills	0.04		
2. IT Knowledge & adapting IT	0.25		
to HR management			

**Source:** - *Competency Mapping and Training Needs Assessment in the Context of Indian Manufacturing Industry Dr. Vikram Singh Chouhan, Dr. Sandeep Srivastava*

**The Above traits are mapped with the competency, further the paper also tries to assess the Training need assessment. The existing skills and gap analysis is done using the Meta analysis. This would facilitate the Companies to effectively prepare for the deployment of the skill force in Managing the competition and usage of penetration strategy well in terms of providing electric vehicles**

### 1. Mapping the skills sets to that off core competency

Constructs	SC	RC	CS	LC	NC	Weightage
Econometrics	12	38	22	12	16	0.25
Market Char	43	18	16	17	16	0.31
Success Org	51	12	13	12	12	0.57
Mechanics	07	13	61	09	10	0.17
Individual G	04	06	12	56	22	0.05
<b>Total</b>	<b>Mean Variance of the Class Interval</b>					<b>0.27</b>



SC= Strongly Considered

RC= Requirement

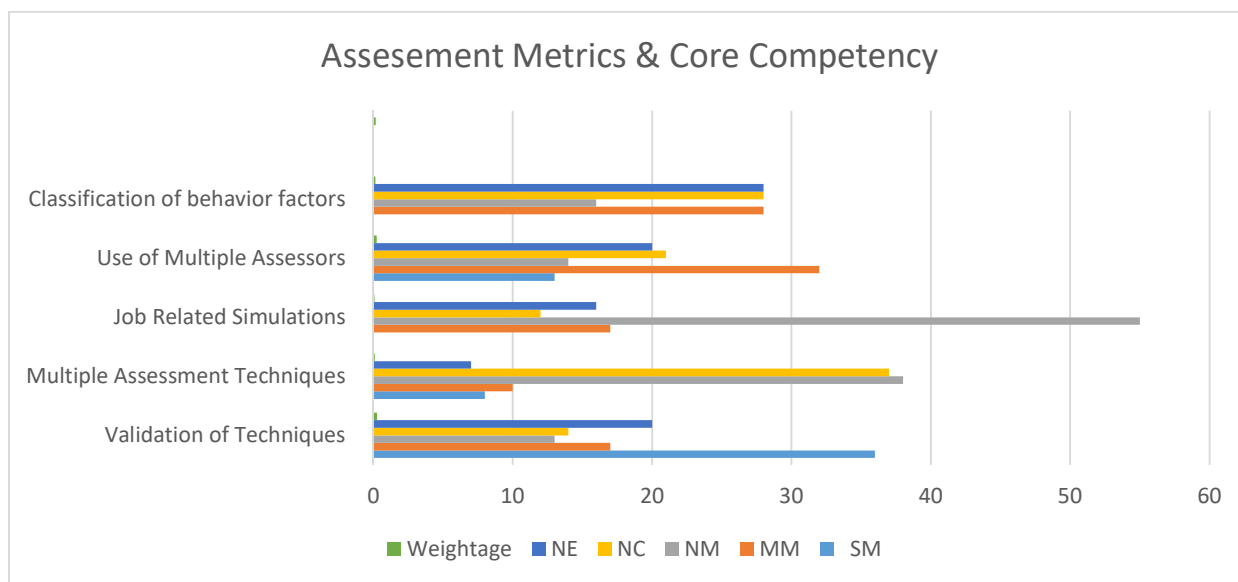
CS= Supplement

LC= Least Considered

NC= Not considered

**1. Leveraging core competency through assessment metrics**

<b>Constructs</b>	<b>SM</b>	<b>MM</b>	<b>NM</b>	<b>NC</b>	<b>NE</b>	<b>Weightage</b>
Validation of Techniques	<b>36</b>	<b>17</b>	13	14	20	<b>0.27</b>
Multiple Assessment Techniques	<b>08</b>	<b>10</b>	38	37	07	<b>0.09</b>
Job Related Simulations	<b>00</b>	<b>17</b>	55	12	16	<b>0.08</b>
Use of Multiple Assessors	<b>13</b>	<b>32</b>	14	21	20	<b>0.23</b>
Classification of behavior factors	<b>00</b>	<b>28</b>	16	28	28	<b>0.14</b>
<b>Mean Variance of the Class Interval</b>						<b>0.17</b>



SM= Strongly Mapped

NC= Need Change

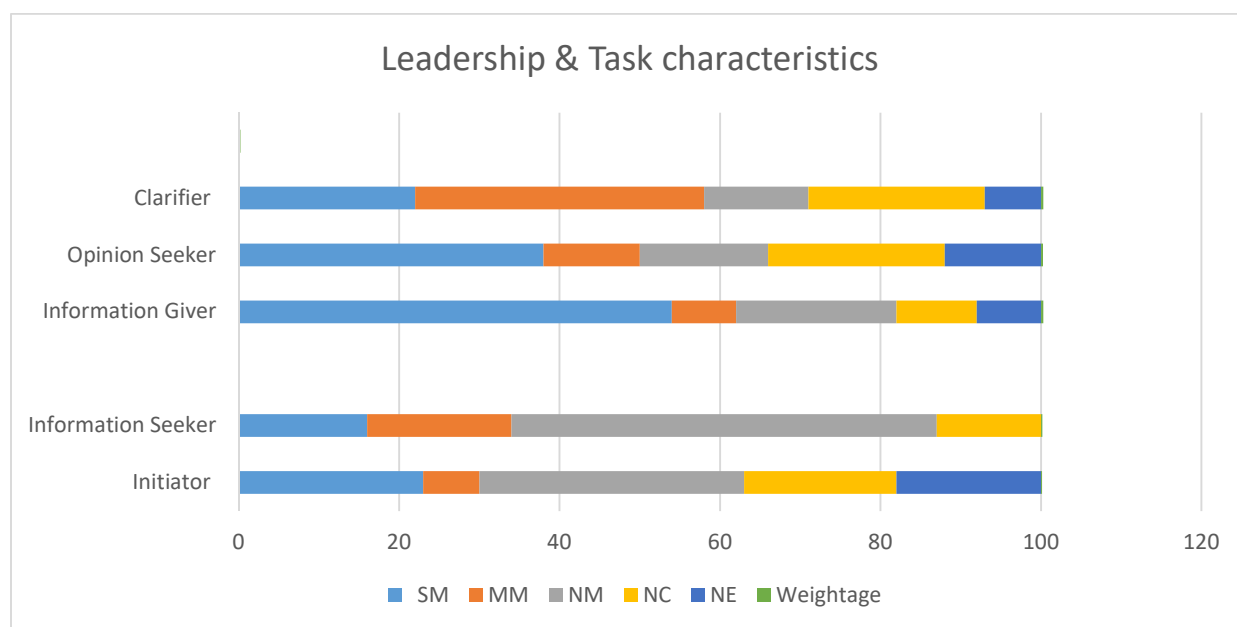
MM= Moderated

NE=No Effect

NM= Not Mapped

**1. Impact assessment on Deliverables ( Leadership & Task Characteristics)**

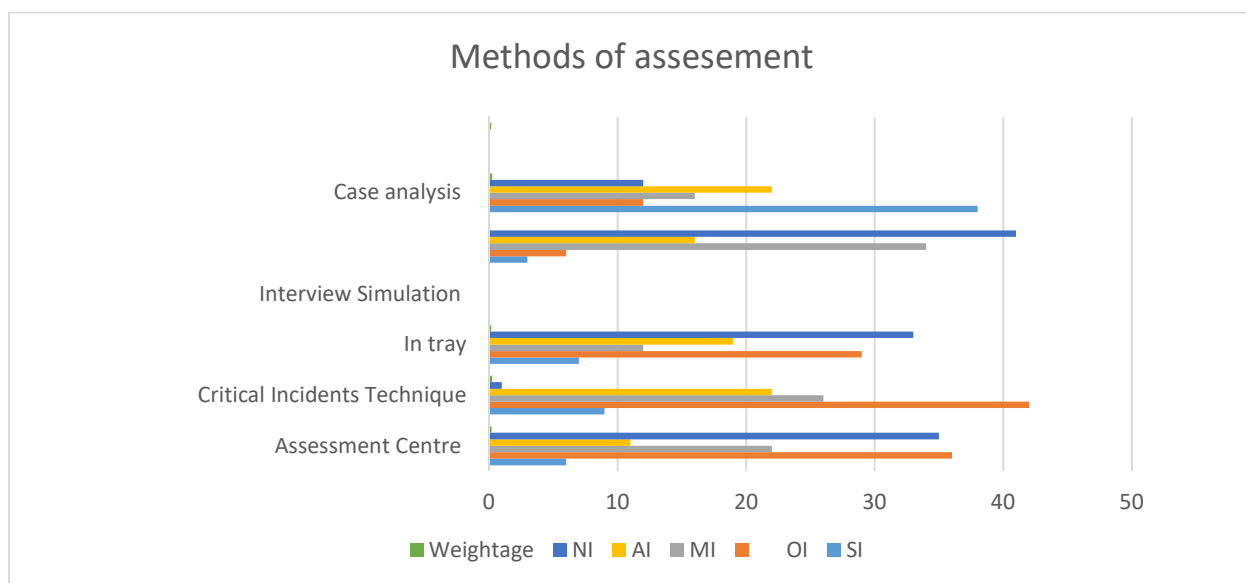
<b>Constructs</b>	<b>SM</b>	<b>MM</b>	<b>NM</b>	<b>NC</b>	<b>NE</b>	<b>Weightage</b>
Initiator	23	07	33	19	18	<b>0.15</b>
Information Seeker	16	18	53	13	00	<b>0.17</b>
Information Giver	54	08	20	10	08	<b>0.31</b>
Opinion Seeker	38	12	16	22	12	<b>0.25</b>
Clarifier	22	36	13	22	07	<b>0.29</b>
<b>Mean Variance of the Class Interval</b>						<b>0.24</b>





**1. Assessment methods ( infra character tics) impacting deliverables**

Constructs	SI	OI	MI	AI	NI	Weightage
Assessment Centre	06	36	22	11	35	0.21
Critical Incidents Technique	09	42	26	22	01	0.26
In tray	07	29	12	19	33	0.18
Interview Simulation	03	06	34	16	41	0.04
Case analysis	38	12	16	22	12	0.25
<b>Mean Variance of the Class Interval</b>						<b>0.19</b>



SI= Strong Impact

AI= Adverse Impact

OI= Ordinary Impact

NI= No Impact

MI= Moderate

### Findings and conclusion

- Well-equipped employee base would be one the key factor for the success of the organization and this would further enhance the core competency amongst the Indian manufacturing companies (0.57), Growth of the employee should also be considered for market moment (0.05) which is least as compared with any other company residing outside
- Market characterizes have been well analyzed by the employees and this would enhance the productivity and operations in the long run( 0.31)
- Attributing the leadership and task characteristics it is clear that productivity would increase on the factor of involvement and assessment in more effective way (Initiator 0.15).
- Use of most advanced assessment techniques would help to employ the skilled people who can create core competency and act as a stipulator.
- Assessment matrix techniques are positively correlated to critical incidents technique which can enhance the deliverables
- Core competency is driven by critical factors which can influence to build core competency with an average mean score of (0.27). The level of improvement in this keeping in mind the transactional analysis to be done at a speed of (0.002)
- Average mean in the motivational factors are considered as less imperative (0.17) improvement of such metrics would enhance the companies viability of producing different product and process based characters.
- Core competency can also be built on the critical incidents methods building which include “Validation technique system” with a mean score of (0.27).
- Econometrics and market characteristics of the company with a mean score of (0.31 & 0.25) leading the improvisation of success rate of the organization with a mean score of (0.57).
- Interview simulation method assessment should be implemented in effective way which can broadcast company to facilitate the competition.
- To keep the momentum going the outcome of the constructs should be taken into account which can facilitate these companies to build their competitive advantage and create a brand in the mindset of the customers in the electric vehicle segment

### References & Bibliography

Dr. Saikumari V1 , Ms. Sunitha V2 , Kirthika S V3 , Jayakrishna A R4 , Lokeshwaran K5 <sup>1</sup> in their article A Study On Effectiveness Of Competency Mapping Through Training And Development<sup>1</sup> published in Turkish Journal of Computer and Mathematics Education Vol.12 No.11 (2021), 411-416 in the year 2022

Dr. Vinod Waiker<sup>1</sup> , Mr. Aftab Ali Siddiqui<sup>2</sup> , Mr. Sarwar Alam Ansari<sup>3</sup> A Review Study On Employees' Competency Mapping And Output Management: With Reference Nagpur Based Small Scale Manufacturing Industries Journal of Positive School Psychology 2022, Vol. 6, No. 7, 4105-4111 <sup>2</sup>

Shivanjali, Mitushi Singh, Tripti Singh Competency Mapping: A Strategic Perspective in Employee Retention International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878 (Online), Volume-8 Issue-2, July 2019<sup>3</sup>

Aija Staškeviča\* The Importance of Competency Model Development Acta Oeconomica Pragensia, 2019, 27(2), 62–71, <https://doi.org/10.18267/j.aop.622> <sup>4</sup>

Dr.Prachi Pargaonkar, Mayuri Yadav, COMPETENCY MAPPING AS A TOOL FOR CAREER PLANNING IN EDUCATION INSTITUTE: LITERATURE REVIEW Shodha Prabha (UGC CARE Journal) ISSN: 0974-8946 Vol. 47, Issue. 03, No.3: 2022<sup>5</sup>