

Enhancing Talent Management through Competency Mapping in Higher Education Province



Manne Neelima Chaudhary, A. Geetha

Abstract: Competency mapping is developed as the promising tool to measure the talent enhancement of the faculty members working in higher education at Bangalore. It is considered to be the need of the hour to update with respect to changing environment in the field of technological, cultural, social and economic way. To conduct the study, there are 450 faculty members included as respondents from three different segments through convenience sampling technique. To describe their actual opinion of the respondents towards the competency mapping, there are six variables are used and one moderating variable also employed to enhance the talent and skill level of the faculty members, and the same was collected through administering structured questionnaire. A structural equation model is created with the primary data collected using statistical software AMOS V.21 and explained the relationship between the defined variables under the study. Finally, it is concluded that, the faculty members are agreed upon that competency mapping is a tool for measuring the talent enhancement, and which will be much helpful to survive under the hectic competitive position created by the digital rivalry.

Keywords: Competency Mapping, Higher Education, Skill Development, Talent Enhancement, Teaching Learning

I. INTRODUCTION TO COMPETENCY MAPPING

Competency mapping is evolved as a most accurate tool for measuring the behavioural pattern, skill development and knowledge improvement and talent enhancement of the faculty members working in higher education province in Bangalore. The competency requirement is different from one sector to another sector, the basic skill, domain expertise, talent updation, effective utilization of technology advancement are considered to be the basic phenomenon, which are general and common irrespective of all the industry. In particularly higher education sector, in addition to the aforesaid qualities and basic requirements it is vital to possess some distinguished competencies to match with the education platform, such as academic exposure, research activities, consultancy services and so on. The effect of these advent competency levels in developing the skill set and enhancing

the talent level of the faculty members are studies through this research.

II. LITERATURE REVIEWS

The following are the few literature reviews which are gems to explain the importance of faculty competency level in education sector. The influence of competency level and their talent management also was rightly pointed out by these research pioneers not only in India but all over the world. Shweta Tyagi, et al., (2017) highlights the main issues facing by the educational institutes is shortage of competent and qualified faculties and provides few strategies which institutions can adopt for attracting and retaining talent which is best available for them. It has resulted in institutions focusing on how to retain the talent and how to develop them. The researcher recommended that the issues regarding talent management must be discussed in the meetings of the institutions on the priority basis to make them understand the importance of managing the talent in the institutions and finally concluded that talent management in the institutions can really help in identification of the right talent, development of that talent and retaining that talent in the institution for its success and growth.

Andrew P Bradley (2016) explores human resource management practices in the university sector with a specific focus on talent pools and talent management more generally. It defines talent management in the context of the university sector and then explores its interdependence with organizational strategy, the metrics used to measure academic performance and current day-to-day management practices. It is argued that talent management can provide a conceptual framework to enhance performance over the long term by coalescing a university's strategy with its performance metrics and day-to-day management systems. However, the implementation of talent management, like many of the fundamental systems and processes within a university, relies on the skills and expertise of professional administrators and academic managers. Therefore, a holistic talent management program should also recognize and reward talent throughout all academic, administrative and management roles.

Sonia and Jayashree (2015) underlines the biggest challenge faced by higher educational Sector is the acute shortage of qualified and competent faculties. This has resulted in a scenario where institutions are vying with each other to attract and retain for them the best available faculty talent.

Manuscript published on November 30, 2019.

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The major factors contributing to faculty recruitment and retention are salaries, benefits, start-up and on-going resources for research, supportive environments, and partner/spouse employment opportunities. They offer four possible strategies such as performance, potential, readiness, and fit for acquiring the talent and nominate the following strategies like right selection, communication, include employees in decision making, allow team members to share their knowledge with others, shorten the feedback loop, balance work and personal life, provide opportunities for growth and development, recognize team members for their hard work and employee referral plan, performance based bonus plan, and giving voice to knowledge banks that institutions can adopt to attract and retain for them the best available faculty talent.

Preeti Nair (2015) states the Importance of Teaching Competencies as a Factor for Teaching Effectiveness in Higher Education, through this study she narrated the insights of different researchers tries to identify the importance of identifying good teaching competencies and to find out how it affects the effectiveness of teachers. It shall be useful to prepare a detail list of competencies of teachers required for effective performance. She concluded that Competency Management is not practiced to a large extent in Educational Sector. In India however competency development and mapping still remains an unexplored process. Hence a need arises to understand the application of competencies identification to the Educational Sector.

The above collection of literature reviews from several research pioneers underlines the importance of competency mapping in higher education sector especially to enhance the talent of the faculty members. Based on the research findings, it facilitates to understand the factors contributing to evaluate the competency mapping and weighing the talent level of the faculty members those who are working in higher education sector.

STATEMENT OF THE PROBLEM

Now-a-days, the phenomenon of conducting course of transactions of any business under any industry is intensely customized to the requirements of their customers. It is no excuse to the education industry from the current phenomenon of customizing the core activities based on the requirements of the customers nothing but the students community. At present, the customer segment of the higher education sector are basically from the millennium year born kids. They were very sound in digital and technological evolution and trendy enough to capture the modern methodologies and recent equipment in the digital era. They were very smart and their expectations are also extended to the great extent. Unless a faculty is equipped well in all respect by improving their competency level otherwise they could not able to enlighten their knowledge with latest updated version of information. It is need of the day to study the competency level of the faculty members who were working in higher education industry in order to probe the needs of the young and energetic updated youth segments and enrich their talent with updated knowledge to fit with current environment.

III. OBJECTIVES OF THE STUDY

The present study is focused on the following objectives,

- To study the factors governing the competency level of the faculty members
- To evaluate the contribution of competency tools towards teaching learning evaluation pattern
- To develop a model to exhibit the contribution of competency mapping tool to enhance the talent management of faculty members.

IV. SCOPE OF THE STUDY

The present study is all about to cover the contribution of competency level of faculty members in enhancing their talent and considering the competency mapping as a tool to enhance their talent management. This study can be extended to test the level of competency among the specific group of faculty with respect to different education domains, different levels of higher education, research phenomenon and so on.

V. LIMITATIONS OF THE STUDY

The geographical coverage of the study is limited only in the state of Karnataka specially includes the higher education institutions located at Bangalore the capital city of Karnataka state. The data collected from the faculty members of engineering, arts and science and commerce and management institutions only. The findings are reflecting the status of these institutional backgrounds and may not reflect the cases of law, medicine and para-medical educational field.

VI. METHODOLOGY OF THE STUDY

The research methodology of the study is completely narrating the way of execution of the present study. It includes the research design, sampling techniques including the sampling frame and sample size. The methods of data collection and the tools involved for collecting the data collection. The way of handling the collected data and statistical framework applied to evaluate the content of the study to fit for the objectives assumed.

A. Design: The present study is a cautious attempt to describe the status of the competency level of the faculty members working in the higher education sector at Bangalore. The study adopts the descriptive research design, describing the quality and level of competency of the respondents of the study and their greatest opinion regarding the competency mapping as tool to enhance their talent.

B. Sampling technique: The strength of population derived from the authenticated resources are not truly exhibiting the current scenario in higher education sector due to constant migration of faculty between the institution located in and around Bangalore. The frequency of job changes and industry relocation among the faculty members

and continuing their research studies also a major phenomenon which restricts to adhere the present statistics obtained. So, it is decided to follow the non-probability sampling under which to give the greater convenience to the respondents to take the survey at their ease, convenience sampling technique was adopted.

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C. Sampling size: The sampling frame consists of the faculty working in engineering, arts & science and commerce & management institutions at Bangalore. The present study included as much as of 450 respondents to test the competency mapping as a tool to enhance the talent level of faculty members. The sampling size was arrived based on the non-proportionate sampling design which gives equal weightage of 150 sample respondents from three sample segments viz-a-viz., engineering, arts & science and commerce and management institutions.

D. Data collection: The present study includes both primary and secondary data; the primary data are collected directly from the sample respondents about their opinion regarding the competency mapping as a tool to enhance the talent of faculty members. The secondary data are collected from the past research reviews, authenticated statistical report published by the government organizations, news print media and so on. For collecting the primary data, a well-structured questionnaire prepared in English language was used and it is obtained through Google form.

E. Data analysis: The primary data collected from the 450 respondents are coded and processed through statistical package SPSS V.23 and the required structural equation model was created through AMOS V.21.

Development of structural equation model for enhancing talent management through competency mapping

The structural equation model was developed with the help of statistical software AMOS V.21 to exhibit the relationship between various parameters of competency mapping like Academic Exposure, Values and ethics, Co-Curricular and Extension Activities, Research Activities, Consultancy services, Professional Contribution towards the teaching and learning evaluation pattern and in turn the contribution towards the competency mapping as tool for skill development and talent enhancement. Each one of the variables are measured with the help of five statements each and its collective contribution was evolved through this model. Total number of variables used to construct the present model is seventy two and it includes the combination of both observed, endogenous and unobserved, exogenous variables.

The number of Observed, endogenous variables used in this model is 33 including Participation and paper presentation in academic events, publication will help teachers in professional growth, Participation in seminars, conferences, publications and other academic activity will help teachers professionally, Training & Developmental Programs will enhance the teaching skills, Attending orientation and refresher programs from time to time will help teachers to upgrade their skills, Pursuing M.Phil / PhD helps teachers to be more competent denoted as QC.1.1, QC.1.2 ,QC.1.3, QC.1.4, QC.1.5 respectively; Aligning teachers and University values will help in better academic achievements, Adhering to code of conduct will help teachers to be role models for students, Teachers should ensure that standards and specifications are kept, Teachers define the Moral standard of the Nation / University, Teaching is not only for knowledge sharing but to develop/mentor student integrity and honesty are denoted as QC.2.1, QC.2.2, QC.2.3, QC.2.4,

QC.2.5 respectively; Contribution towards popular lectures, subject related events, articles in college magazine and University volumes, Contribution towards Co-curricular activities for students such as field studies/educational tours, industrial visits, Training & Placement activity, Active participation in Student Mentoring Activities through NSS / NCC / NSO / other Governmental and non-Governmental channels, Active role in students and Staff related Socio Cultural and Sports Programmes (intra/interdepartmental and intercollegiate), Effective participation in professional ethics and Campus Development Activities are denoted as QC.3.1, QC.3.2, QC.3.3, QC.3.4, QC.3.5 respectively.

Research will enhance the teachers to bring the real world into the class atmosphere, Research can be handled as a tool to address the social problems, Research is a platform which is used to bridge the gap between theory and practice, Research can be considered as a performance indicator for a teacher, Research will broaden the perspective of teachers towards self and other areas of academic enhancement denoted as QC.4.1, QC.4.2, QC.4.3, QC.4.4, QC.4.5 respectively; Consultancy services are an Extension of teaching, Engrave the efficiency of teachers by solving the real time issues in the industry, The real time application of theoretical knowledge can be achieved through consultancy which will help to prepare the pupils to industry expectations, Consultancy services will provide monetary benefits, Consultancy services are mandatory for the academic growth are denoted as QC.5.1, QC.5.2, QC.5.3, QC.5.4 ,QC.5.5 respectively; Membership in profession related committees at state and national level will lead to academic enrichment, Organizing the subject associations, conventions, conferences, and seminars will broaden the academic perspectives of a teacher, Arranging the training programme, curriculum development, professional development, Examination reforms, Institutional governance will enhance the teaching competencies, Membership in Boards of Studies, editorial committees of journals / institutional publications act as indicators of academic growth, Institutional Governance responsibilities like, Vice Principal, Dean, Director, Warden, School Chairperson, IQAC coordinator and any other membership institutional Committees will lead to professional growth are denoted as QC.7.1, QC.7.2, QC.7.3, QC.7.4, QC.7.5 respectively and Teaching and Learning Evaluation was coded as CR6, the opinion of the respondents regarding competency mapping for talent enhancement is coded as CMTE and competency mapping as skill enhancement is coded as CMSE and the

grouping variables and respective error variables are demoted as Unobserved, exogenous variables and there are 39 such variables used in this model, they are VE, e1, e2, e3, e4, e5, CocurEA, e6, e7, e8, e9, e10, RA, e11, e12, e13, e14, e15, CS, e16, e17, e18, e19, e20, AE, e21, e22, e23, e24, e25, PE, e26, e27, e28, e29, e30, e31, e32, e33.

F. Measurement model

The following is the measurement model developed to portray the relationship route among the variables employed in this model and the predictive way of relationships expected among the variables used in this study. There are six exogenous variables are used to address the various parameters of competency mapping such as Academic Exposure (AE), Values and Ethics (VE), Co-Curricular and Extensive Activities (CoCurEA), Research Activities (RA), Consultancy Services (CS), and Professional Contribution (PE) and there is one moderating variable used in this model, that is Teaching and Learning Evaluation (CR6) and two outcome variables are used, they are competency mapping as a tool for skill enhancement (CMSE) and competency mapping as tool for talent enhancement (CMTE).

The model is built with a view to explain the relationships between the variables under competency mapping and its direct contribution towards the determination of teaching learning evaluation pattern of the faculty members. Finally this model helps to address direct cum indirect contribution of various parameters of competency mapping in achieving the competency mapping as tool for skill enhancement and talent enhancement.

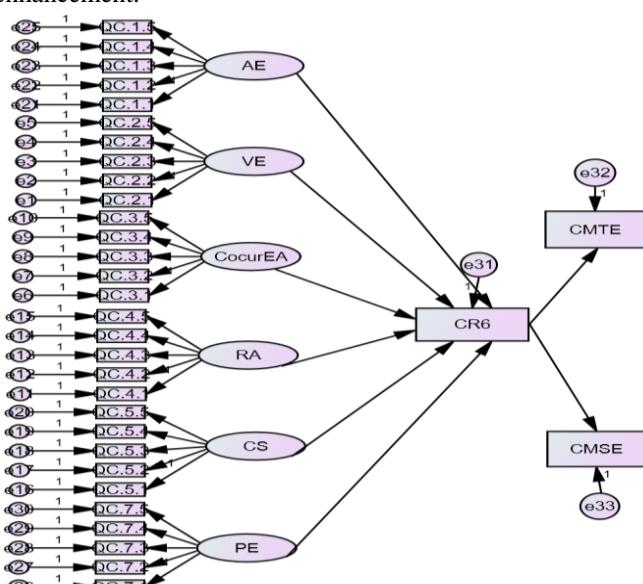


Figure 1 Measurement Model for Competency mapping and Talent Enhancement

G. Structural Model

The measurement model exhibits the direct relationship among the competency mapping variables towards the teaching and learning evaluation pattern and in turn on competency mapping as a tool to skill enhancement and talent enhancement. The model is executed through confirmatory factor analysis and Varimax rotation was performed to include as many relations as it necessary to iterate in it. The analysis results in modification indices and suggesting to establish the covariance among the parameters used to construct the valid structural equation model after considering the valuable correlations among the parameters included in the model. The necessary changes recommended by the modification indices are incorporated and finally derived the following structural equation modelling for exhibiting competency mapping as a tool to enhance the talent of the

faculty members working in higher education sector at Bangalore. The results of confirmatory factor analysis and outcome of the standardized estimates of regression weight in the outcome model as presented below.

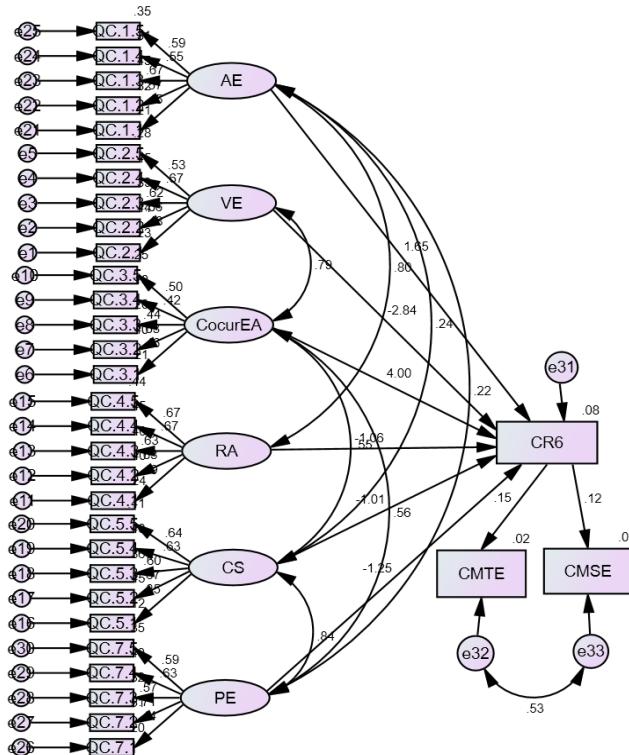


Table 1 showing Confirmatory Factor Analysis results

Model	Standard	Default
CMIN	-	3872.775
DF	-	482
P	<.05	.000
CMIN/DF	-	8.035
GFI	>.90	.956
AGFI	>.90	.916
PGFI	>.90	.949
CFI	>.90	.947
RMR	<.25	.178
RMSEA	<.25	.099

The Goodness of Fit indices such as GFI, Adjusted Goodness of fit indices (AGFI), PGFI, CFI, Root Mean Approximation of Error (RMR) and RMSEA. The standard figure which are recommended to accept for the social science research by the social scientist are provided along with the loaded value of the present model for the respective indices. However, the high value is found respectful for the goodness of fit indices whereas low value is most expected and opt for the measurement of error level especially for RMSEA and RMR based on the principle that high the significant value high the quality; low the error value will results with high standard model.

The results of the confirmatory factor analysis reveals that the constructed model is meet out all the standard specifications given by the pioneers in social science research. Hence, it is concluded that the model constructed with the variables of competency mapping to measure as the tool to skill and talent

enhancement of the faculty members through continuous improvement of the teaching learning process. The p value results with .000, it is lesser than the standard statistical value for determining the significance of the model i.e., .05 (explaining 95% confidence limit) level. Thus the constructed model for competency mapping is statistically significant. The following table signifies the relationship among the variables loaded in to the model and also explains the relationships and contributions given by each one of the variables to ascertain the teaching and learning with extended activities competency level. Finally the opinion of the respondents towards the competency mapping as valid tool for improving their knowledge through skill development and talent enhancement was proved.

Table 2 showing Regression Weights

Variables			Unstd. Estimate	Std Estimates	S.E.	C.R.	P	Result
CR6	<---	AE	2.410	1.654	5.260	.458	.647	Insignificant
CR6	<---	VE	-3.730	-2.836	8.031	-.464	.642	Insignificant
CR6	<---	CocurEA	5.490	4.004	10.689	.514	.608	Insignificant
CR6	<---	RA	-1.536	-1.062	4.190	-.366	.714	Insignificant
CR6	<---	CS	-1.813	-1.006	5.150	-.352	.725	Insignificant
CR6	<---	PE	-1.670	-1.254	3.735	-.447	.655	Insignificant
QC.2.1	<---	VE	1.000	.484				
QC.2.2	<---	VE	1.421	.660	.130	10.944	***	Significant
QC.2.3	<---	VE	1.320	.621	.124	10.633	***	Significant
QC.2.4	<---	VE	1.473	.671	.134	11.023	***	Significant
QC.2.5	<---	VE	1.158	.533	.118	9.800	***	Significant
QC.3.1	<---	CocurEA	1.000	.460				
QC.3.2	<---	CocurEA	1.279	.631	.121	10.539	***	Significant
QC.3.3	<---	CocurEA	1.031	.444	.119	8.688	***	Significant
QC.3.4	<---	CocurEA	.721	.422	.086	8.414	***	Significant
QC.3.5	<---	CocurEA	.970	.499	.104	9.328	***	Significant
QC.4.1	<---	RA	1.000	.486				
QC.4.2	<---	RA	1.429	.634	.131	10.873	***	Significant
QC.4.3	<---	RA	1.498	.629	.138	10.834	***	Significant
QC.4.4	<---	RA	1.572	.669	.141	11.145	***	Significant
QC.4.5	<---	RA	1.692	.667	.152	11.132	***	Significant
QC.5.1	<---	CS	1.000	.353				
QC.5.2	<---	CS	1.959	.672	.233	8.399	***	Significant
QC.5.3	<---	CS	1.616	.603	.198	8.152	***	Significant
QC.5.4	<---	CS	2.036	.630	.247	8.254	***	Significant
QC.5.5	<---	CS	2.100	.639	.253	8.287	***	Significant
QC.1.1	<---	AE	1.000	.453				
QC.1.2	<---	AE	1.183	.567	.124	9.541	***	Significant
QC.1.3	<---	AE	1.640	.670	.160	10.255	***	Significant
QC.1.4	<---	AE	1.267	.555	.134	9.440	***	Significant
QC.1.5	<---	AE	1.555	.593	.160	9.743	***	Significant
QC.7.1	<---	PE	1.000	.445				
QC.7.2	<---	PE	1.586	.711	.150	10.585	***	Significant
QC.7.3	<---	PE	1.270	.568	.132	9.640	***	Significant
QC.7.4	<---	PE	1.357	.630	.134	10.106	***	Significant

QC.7.5	<---	PE	1.551	.591	.158	9.823	***	Significant
CMTE	<---	CR6	.168	.146	.043	3.947	***	Significant
CMSE	<---	CR6	.095	.120	.029	3.251	.001	Significant

From the regression weight table, it was keenly observed that certain variables are explaining the negative relationship with the moderate variables i.e., teaching, learning and extended activity, such as values and ethics are negatively influenced the teaching, learning and extended activity of the faculty members those who are working in higher education province in Bangalore. Like values and ethics, research activities, consultancy services, professional contribution also negatively influencing the teaching, learning and extended activities. The level of competency of the faculty on the above specified areas, have high order level of influence over the teaching, learning an extended activities. Among the six variables included to influence the teaching, learning and extended activities of the faculty members, only two variables are influenced at high level, among these two co-curricular and extended activities stands at first and academic exposure follows at the next level. It may be indicating the present scenario, but in order to improve the standard of teaching, learning and extended activities in higher education sector urgently needs to concentrate on the weak areas such as research activities, consultancy services, and professional contribution by the faculty members. Now it is clearly visionary that, to measure the talent of the faculty members for improved teaching and learning process, it demands at high level standard activities in the field of research, consultancy services and professional contributions. Besides that, all the statement used to explain different variables constitutes high degree correlation and significant relationship for the respective variables measured under competency mapping. Each competency mapping variables are measured through five parameters and all these five statements are qualified with high degree correlation and proves they are statistically significant to construct the defined variable.

VII. HYPOTHESIS TESTING

To equip the model and support the third objectives of the present study, there are two hypotheses are framed and successfully tested through confirmatory factor analysis and presented the results summary through below table.

Table 3 Hypothesis Testing

Variable 1	Variable 2	Hypothesis	p	Results
CMTE	Teaching, learning and Extended Activities (CR6)	Competency Mapping is not considered as a valid tool for Talent Enhancement	.000	Significant
CMSE	Teaching, learning and Extended Activities (CR6)	Competency Mapping is not considered as a valid tool for Skill Enhancement	.001	Significant

The statistical result of the confirmatory factor analysis reveals that the the relationship between the observed variables are highly significant and the calculated statistical value is ($p < .05$) significant. Hence the null hypothesis framed was not accepted for the both the variables and concluded that based on the opinion of the faculty members working in higher education sector at Bangalore especially Engineering colleges, Arts & Science colleges and commerce & Management institutions, it is derives that competency mapping is considered as prominent tool and it will definitely applied to improve their skill and an inevitable measure for enhancing their talent at the rapidly changing digital environment in higher education province.

VIII. PRACTICAL IMPLICATIONS

Today, the world of higher education are envision the concept of virtual classroom and experiencing he Google classroom, and alike e-learning practices cum platforms like MOOCs, Moodle's and so on. It is vital for the part of the faculty and educational institutions to prove their expertise and talent to capture the student aspirants. The essence of this kind of measure will articulate the importance of talent enhancement and skill development to sustain in the virtually competitive world where the physical existence of rivalry is no more the matter of concern. Even the competition extends and covers to the rivalry who are all not known to each other i.e expecting the unexpected competitors in the higher education platform. The main underline theme for attaining the sustainable development is "Perform or Perish".

IX. CONCLUSION

The expectations of the people living in the 21st century are not alike with previous century. The growing expectations, vigorous improvement in technology and technology hunt by the general public, references, representations and responses towards the advent technology amusement are the great challenges for the performer in all the industry especially in higher education sector, the scope of rivalry covers the knowledge sharing session from Artificial Intelligence, virtual reality, augmented reality, and simulation techniques. To with stand in the competition, it demands more talent which will endures the win-win strategy for both side of the participants in the higher education province.

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