<sup>cc</sup> https://doi.org/10.54012/jcell.v4i001.443

# Identification of Competence Contribution on Higher Education

# Emmy Junianti<sup>1</sup><sup>™</sup>, Bobby Reza<sup>2</sup>

<sup>1.2</sup> Universitas 17 Agustus 1945, Jakarta, Indonesia <sup>IM</sup> email: <u>emmy.junianti@uta45jakarta.ac.id</u>, <u>bobby.reza@uta45jakarta.ac.id</u>

## ABSTRACT

**Received:** November 15, 2024

**Revised:** November 20, 2024

Accepted: November 26, 2023

**Published:** December 1, 2024

The identification of job competency contributions in higher education is crucial for optimizing talent development and institutional performance. This study aims to identify job competency requirements (JCR) as a fundamental instrument in talent development and establish appropriate methods for measuring JCR for non-lecturer positions in higher education institutions. Using a quantitative research approach, data were collected through surveys to analyze competency requirements effectively. A case study was conducted at a university in Indonesia with an institutional accreditation rating of A (Superior), ensuring a high standard of academic and administrative operations. The findings of this study contribute to the development of a competency-based framework that supports human resource management, career development, and organizational effectiveness within higher education institutions. The results are expected to provide strategic insights into improving workforce capabilities, aligning institutional goals with employee competencies, and enhancing overall institutional performance.

Keyword : Competency; Higher Education; Indonesia; non lecturers

# INTRODUCTION

Taking a gander at Higher Education in developing countries whose hunger for education, the quality of institutions plays a competitive role. Higher Education plays a role as a major contributor to the nation's competitiveness, in the current era of the knowledge economy. Changes in an ever-increasing world, complexity, and competitiveness, there has never been a greater need to help HR professionals identify what it means to contribute more fully, effectively, and broadly.

The process of identifying the competencies needed to effectively carry out the desired set of goals at a given point in time is known as Competency Mapping. This includes breaking down the work assigned into small tasks/activities and recognizing the competencies (technical, managerial, behavioral, conceptual knowledge, attitude, skills, etc.) needed to do the same thing successfully. The next stage is used as a basis for competency assessment. Employee competency assessment is an assessment in which an individual employee or group of employees maintains this competency required by a given role or set of roles. The results of mapping overall competencies from important positions are a directory of roles with the required competencies (Dr. Murlidhar Chandekar, Sunetra Khatod Jain, 2015).

The advent of new technology can increase the need for talent management and organizations increase their global expansion efforts, finding the right people, with the right skills, at the right time is the concern of every executive and hiring manager. According to the Bersin Consulting (Deloitte division) survey of global clients, organizations in 2013 faced a growing shortage of talent and leadership - especially in emerging markets. There is a feeling of urgency for global organizations to invest in talent management programs to meet the needs of developing people and business.

Talent Management includes a variety of HR functions that focus on attracting, maintaining, managing and developing a high-quality workforce. This includes performance management, staffing, compensation, learning management, employee development, and succession planning. The growing interest in talent management is mainly the result of increased recognition of the impact of talent management practices on business growth and profitability and the role that talent management plays in handling the shortage of skilled workers in the workforce. The ultimate goal of talent management initiatives is to help the right people in the right jobs do the right things to make a business successful. This goal may sound easy, but it is often very difficult to achieve. Why? Because to be successful, the talent management process must effectively predict and change the daily behavior of each employee. Predicting and influencing human behavior is difficult.

This paper will discuss how competencies role in order to create high performance as the main instrument in talent management include : Talent Acquisition; Talent Mapping; Talent Development; Talent Mobility; Talent Retention can support staff and non-academic positions in higher education.

Although the notion of competence begins with Robert White (1959) who in his classic article for Psychological review proposes a new concept of motivational effects. Effects are described as the ability to interact effectively with the environment, also competence is defined by it as the ability to interact effectively with the environment. But the notion of competence gained popularity only after McClelland's revolutionary article in 1973 where he had predicted that experience and qualifications alone were not sufficient indicators of job performance, but rather more reliable competencies and calculation of effective performance measurements at work. In 1982 Boyatzis continued to work on competence, since then competence has become a significant factor in HR development practices. Boyatzis (1982) defines competency as a basic characteristic that leads to superior job performance. Woodrufee (1992) described competency as a concept that relates to people and work. Likewise, Mitrani (1992) states that competence can be a motive, self-concept, attitude or value, content knowledge or cognitive skills or behavior. Competence is also referred to by Martone (2003) as the skills and behaviors needed to succeed in individuals.

Competence is a set of skills, knowledge, and traits through which an individual successfully performs a task or activity in a particular function or job. (United Nations Industrial Development Organization, 2002). The underlying characteristics of a person who produce effective superior performance (Mansfield, 1997).

Researchers have shown that tertiary education in Indonesia is still categorized as an underdeveloped institution of the education industry in the world. This backwardness is seen from the implementation of Talent management, as one of the new opportunities that has not yet been exploited by Higher Education.

Talent Management is a relatively new and untapped opportunity despite its important, proven and effective role in gaining competitive advantage (Cobb 2007). Researchers have shown that tertiary institutions are lagging behind the industry in terms of talent management practices (Lynch 2007). Talent management is a relatively new and untapped opportunity even though it is important, and is able to offer institutional institutions a proven and practical way to drive competitive advantage (Cobb 2007). The importance of talent management in institutional effectiveness (Bhatt and Behrstock-Sheratt 2010; Conti 2008; Wellins et al. 2012)

Therefore, it is a big challenge for higher education because the current pace of change and the complexity of activities in higher education now requires institutions to have adaptive talents in practice and management processes that are not only successful in achieving targets but also have competitive advantages (PMI 2013). Besides the fact that in a period of high competition, developing and retaining quality talent is very important for institutional success (Lavania et al. 2011). Studies show that retaining key talent in institutions has now become a major challenge leading to a number of higher education institutions, where there has been a transformation from unsustainable institutions, to strategies to become talent hunters rather than talent developers (2012 Asset Skills; Conti 2008; O'Callaghan 2008). Further studies show, that for talent management to be effective, it must be planned carefully in line with the specific changes anticipated in the institution, not a one-size proposition for all (Success Factor 2013). A number of authorities confirm with this fact, careful recruitment, retention and development, talent management is an important aspect of staff performance motivation, quality student learning and institutional success (Conti 2008; Imazeki and Goe 2009; Leithwood et al. 2004; Ortlieb and Sieben 2012; Rivkin et al. 2005).

# Talent Management

Talent management has been identified as a major strategic problem in organizations (Clark, 2009). This is because organizations that fail to redefine their employee value propositions always have problems in attracting, developing and retaining top talent (Ernst & Young, 2010). Talent management has been conceptualized in a different way. Among the several definitions that help to explain what talent management is is given below.

Talent management is systematic interest, development, involvement / retention and development of individuals of high value to organizations (McCartney & Worman, 2013; Lawler, 2008; Smyley & Wenzel, 2006; Campbell & Smith, 2010; MOR, n.d.). Talent management is also defined as a process related to the identification and development of all talents, especially those with high potential for future assignments, positions or projects (Clark, 2009; Cobb, 2007). When talent management includes workforce planning, talent acquisition, professional development, performance management, retention strategies, and succession planning, it is now referred to as integrated talent management (Fitz-enz & Davison, 2002). The premise of talent management is that employees are the most valuable assets of any organization (Cobb, 2007) which implies that employees must always be the center of all talent management functions of each focus of organizational success. Another more enlightening definition of talent management is that it is a dynamic and ongoing process to identify, assess and develop talent systematically for an important role in the future to ensure optimal organizational sustainability and performance (Heidke, 2006).

# Talent Management Role In Non Academic Staff

In the context of Higher Education (HE) universities increasingly compete in global markets, and adopt management styles and approaches from the private and industrial sectors (National Audit Office, 2017). This is reflected in the competition for academic staff with strong research skills (Weale, 2017) and the application of performance indicators, such as the number of academic staff trained by PhDs (Breakwell and Tytherleigh, 2010). In addition, academic staff are knowledge workers (Arthur et al., 2017) with high international mobility (Bauder, 2015) and a group with different bacterial characteristics (Beigi et al., 2018). With this developing climate and unique resources, universities must manage their talents positively and proactively and avoid talent waste (Blackmore, 2014).

#### Relationship of Talent Management Process and Higher Education Performance

The competency model makes transparent the organizational skills needed to be successful, and competency models have been popular in many of these human resource departments. This study offers the value of originality in terms of information framework, job requirements and one's competency as an instrument for managing talent. Integrated Talent Management includes: 1) Talent Acquisition; 2) Talent Mapping; 3) Talent Development; 4) Talent Mobility; 5) Talent Retention



Figure 1. Model Integrated Competency Based Talent Management

The competency framework will be the basis for all functions in human resource management, as well as functioning as a "relationship" between individual performance and university performance. The purpose of this paper is to explore which competency interests can produce high performance in non-academic staff in higher education. Competency is important in tertiary institutions and competency is important as an instrument for human resource management in tertiary institutions.

# **Research Purposes**

Establish appropriate methods for measuring job competency (JCR = Job Competency Requirements) for positions in Higher Education non-lecturers. Case Study was taken with one of the universities in Indonesia with the recognition of accreditation of institution A (Superior). It is hoped that by getting the appropriate method, the JCR found can be used as HRM practices (managing People in HE) (NICOLENE BARKHUIZEN) HEI throughout the world in facing significant challenges in Indonesia to attract, retain, and develop competent, innovative, and imaginative leaders for the future (Davies & Davies, 2010; Theron, Barkhuizen & Du Plessis, 2014). Colleges and universities will, sooner or later, have to recognize the importance, and perhaps the importance of employees as assets, and reflect this in the strategic plan or mission statement of the human resources department in order to achieve lasting success (Saurombe, Barkhuizen & Schutte, 2017).

Lynch (2007) further points out that most institutions perform well in developing their students, but there are deficiencies relating to assisting their internal personnel in developing their own skills. Since these institutions have not failed to develop students, this ironic situation can be resolved by the simple solution of adopting 'practice what you approach to preach. The main objective of this study is to explore the consequences of staff talent management by referring to their satisfaction with the talent of management practice and intention to move.

# Talent Management : Current Trends in Higher Education

The following three talent management trends help explain the reasons why tertiary institutions especially private tertiary institutions need to be seriously involved in the paradigm shift regarding their talent management strategy if they are to succeed in their operations and achieve competitive advantage (Hewitt 2012). The first trend is that the literature shows, performance programs and rewards in higher education are interrupted in order to support effective and strong talent management due to the fact that only 48% of higher education institutions use a systematic performance management process to assess and improve staff performance (Rudhumbu & Maphosa, 2015).

Talent as a construct grows from personnel management to human resource management, to human resources, and finally, to the exciting and new TM field. the current economic situation throughout the world forces an organization to make TM a business priority, in this study, "national culture" was added to this list, because

researchers consider this seventh perspective as an integral part of TM. Table 2 lists prominent TM definitions, categorized according to the workplace context.

Perspective	Summary	Source
Process	TM Should include all process needed to optimize people within an organization and does not stand alone from other people management practices in an organization, despite its talent-focused approach.	Garrow & Hirsch (2008)
Competition	TM is about identifying talented people and figuring out what they need so that competitors cannot poach them	Woodruffe (2003)
Development Paths	TM focuses on accelerated development of high- potential employees for future leadership deployment. Hence, the focus is on developing high potentials or talents much faster than others.	Blass (2007)
Change Management	Change Management is underpinned by the belief that TM is a driver of change in the organization, using the talent management system as part of the wider strategic HR initiative for organizational change.	Lawler (2008)
National Culture	TM is defined according to the different cultures (namely individualistic and collectivistic), which have different value about what a talent is and what kind of TM, or HRM practices in general, are appropriate. National culture has a great influence on TM and the way it is implemented in organizations.	Born and Heers (2009)

#### Table 1: Definitions of Talent Management

# **Competence and Performance**

The concept of competency-based human resources has changed from new techniques to general practice in 36 years since David McClelland (1973) first proposed them as a critical differentiator of performance in publications. At present, almost every organization with more than 300 people uses some form of competency-based human resource management. Large consulting companies, such as The Hay Group, Development Dimensions International, and Personnel Decisions Incorporated and thousands of small consulting firms and independent consultants have become competency assessment and development practitioners around the world.



Source: Boyatzis (1982, 2008)

Identification of Competence...

#### **Competency Based Human Resource Management**

Competency based human resource management can be interpreted as "an employee structuring process that starts from recruitment, selection, performance appraisal, training & development, career planning, compensation to retirement where the decision making process is based on information on the needs of occupational and individual competencies to achieve organizational goals" as illustrated below .



#### Benefits of Linking Management and Talent Strategies

Adapted from: David Ulrich, Human Resource Champions, p.247

Talent management adds the greatest value to an organization if it is linked to organizational strategy. In such situations, talent management influences a variety of business factors. For example, aligning talent management with corporate strategy has a relevant effect on talent that results in appreciation, higher motivation, and stronger commitment to the organization (human resource outcomes) (Gandossy & Kao, 2004). Furthermore, organizations report higher financial results (Bethke-Langenegger, 2013), positive influence on organizational interest, achievement of business goals, and customer satisfaction (optional organizational results) (Bethke-Langenegger et al., 2011). Therefore, regardless of the scope of the organization in the local or global market, organizations need to have a consistent strategy that translates into clear talent management.

#### Management and Talent Strategies as Succession Planning

Higher education has historically been an egalitarian culture that is immune to the formal identification of the testator. On the other hand, it is clear that organizational succession does occur less formally. HR can consult with the leadership of the dean to identify potential players to advance. An organizational chart that clearly reflects performance, risk of loss (including retirement eligibility) and promotion capabilities will enable investment in development and planned experience needed to enable internal progress. The role is very important to direct the organization's long-term competitive advantage. Performing in this role requires special skills or knowledge such as teaching, research, fundraising, or investment.

#### **METHOD**

Research uses quantitative research with a survey, the sample consists of 177 education / non-academic staff who have worked as permanent employees of the university for more than five years, has a minimum level of supervisory position and

above at eight State and Private Universities with Accreditation A from the Accreditation Board of Higher Education.

The survey uses a competency questionnaire, respondents respond to the choice of competency interests to do their work in shaping high performance, by category, 1) Supporter, 2) Important, 3) Very Important, 4) Absolute. The compilation of the questionnaire competency variables begins with a preliminary study with interviews of 10 non-academic staff with competency variables developed based on (Boyatzis, R.E 2008, Hopkins M M, 2008, Bilimora, 2008). Hay ESCI guide 2015 is 13 competencies. The results of data collection of 177 respondents whose answers are complete. Then the data is processed by statistical tests using SPSS 22, namely the questionnaire validity test by calculating Cronbach's alphas, then using descriptive statistical tests and factor analysis tests that aim to determine whether the competencies are important to do in shaping superior performance

#### FINDINGS AND DISCUSSION

Obtained recapitulation of respondents' choices on the interests of competence to produce high performance on a scale of 1) ordinary; 2) Important; 3) Very Important; 4) Urgency / necessary.

No	Competency Needs for	Numbe	r of Resp	ondents w		Degree of Interes	
	Performance	1	2	3	4	Score	Competencies
1	Leadership	0	13	53	111	629	4
2	Planning and Organizing	0	12	75	90	609	4
3	Creative and Innovation	1	37	114	25	517	3
4	Teamwork	0	13	93	71	589	3
5	Business Acument	0	40	102	35	526	3
6	Decision-Making	1	23	88	65	571	3
7	Adaptability	0	40	102	35	526	3
8	Customer ServiceOrientation	0	16	90	71	586	3
9	Comitmen	1	50	76	50	529	3
10	Communication	1	28	105	43	544	3
11	Empowerment	1	59	88	29	499	3
12	ICT	0	57	94	26	500	3
13	Continous Learning	1	32	84	60	557	3

Table 2. Results of Data Recapitulation

Source: Author, 2022

From these results it can be concluded that, the degree of competence for each value are :

	•
Table 3. Scale of Rese	earch Results
Competency Needs for Performance	Scale of Research Results
Leadership	Urgency/Necessary
Planning and Organizing	Urgency/Necessary
Creative and Innovation	Very Important
Teamwork	Very Important
Business Acument	Very Important

Identification of Competence...

Competency Needs for Performance	Scale of Research Results
Decision-Making	Very Important
Adaptability	Very Important
Customer ServiceOrientation	Very Important
Comitmen	Very Important
Communication	Very Important
Empowerment	Very Important
ICT	Very Important
Continous Learning	Very Important

Source: Author, 2022

It can be concluded that what is very urgent and urgently needed right now is leadership and planning and organizing in higher education institutions. The following is a description of the competency requirements for carrying out office duties :

 Table 4. Competency Requirement Demands

	Demands Competency Needs To Carry Out Job Positions
1	Leadership
	Convincing, inviting others for organizational matters
2	Planning & Organizing
	Make goals, compile the stages of communicating the work plan, and detailing the needs of efficient
-	resources
3	Teamwork
	Estabilished, foster cooperation in carrying out tasks with existing regulations
4	Decision Making & Problem Solving
-	Understand the core problem, cause and effect of the problem, make solutions based on facts
5	Creative and Innovation (new ideas and their application)
	Make ideas / solutions / alternatives in new ways, for the better
6	Business Acumen (Understanding About Higher Education)
-	Take advantage of opportunities provided in work, understand the ins and outs of college
7	Customer Service Orientation
	Providing services, understanding customer needs (internal and external)
8	Commitment
	Aligning personal desires with the interests of the organization, willing to sacrifice for the interests of
•	others
9	Communication
10	Convey information / opinions / ideas that are easy to understand, followed
10	Empowerment / Teach - Develop Others
	Teach others, superiors, subordinates or fellow employees
11	Adaptability (Adaptation to adjust in changes)
	Adapting to changes in situations, information, tasks, procedures, responsibilities, and technology
12	Continous Learning
	Without being told, continue to improve knowledge & skills in dealing with current tasks and
	anticipating future tasks
13	Information Communication Technology (ICT)
	Skills need to work using ICT, how to convey messages with ICT / ICT skills

Anti Image Covariance	Leadership	Planning & Organizing	Teamwork	Decision Making	Creative & Innovation	Business Acumen	Customer Service Orientation	Commitment	Communication	Empowerment	Adaptability	Continuous Learning	ICT
Leadership	0.827	-0.159	-0.115	0.000	0.029	-0.046	0.060	0.006	-0.007	-0.034	-0.026	0.025	-0.008
Planning & Organizing	-0.159	0.607	-0.174	-0.134	-0.080	-0.046	-0.060	0.087	-0.021	-0.025	0.028	0.014	-0.063
Teamwork	-0.115	-0.174	0.567	-0.062	-0.011	-0.019	-0.117	0.000	-0.101	0.056	-0.051	-0.044	0.020
Decision Making	0.000	-0.134	-0.062	0.575	-0.092	0.070	-0.029	-0.163	0.053	-0.110	-0.070	0.120	-0.034
Creative and Innovation	0.029	-0.080	-0.011	-0.092	0.634	-0.079	-0.041	-0.056	-0.077	-0.088	0.019	0.019	-0.095
Business Acumen	-0.046	-0.046	-0.019	0.070	-0.079	0.667	-0.170	-0.152	0.094	-0.064	-0.011	-0.048	-0.012
Customer Service Orientation	0.060	-0.060	-0.117	-0.029	-0.041	-0.170	0.600	0.023	-0.126	0.047	-0.079	-0.003	-0.059
Commitment	0.006	0.087	0.000	-0.163	-0.056	-0.152	0.023	0.586	-0.142	-0.022	-0.058	0.000	-0.056
Communication	-0.007	-0.021	-0.101	0.053	-0.077	0.094	-0.126	-0.142	0.621	-0.068	0.006	-0.082	-0.004
Empowerment	-0.034	-0.025	0.056	-0.110	-0.088	-0.064	0.047	-0.022	-0.068				
Adaptability	-0.026	0.028	-0.051	-0.070	0.019	-0.011	-0.079	-0.058	0.006				
Continuous Learning	0.025	0.014	-0.044	0.120	0.019	-0.048	-0.003	0.000	-0.082				
ICT	-0.008	-0.063	0.020	-0.034	-0.095	-0.012	-0.059	-0.056	-0.004				

 Table 5. Results of Covariance Factor Analysis between each Competency Variable

Source: Author, 2022

Anti Image Correlation	Leadership	Planning & Organizin	Teamwork	Decision Making	Creative & Innovati	Business Acumen	Customer Service Orientatio	Commitmen t	Communicatio n	Empowermen t	Adaptability	Continuo us Learning	ICT
Leadership	0.828	<u> </u>	-0.169	0.001	0.04	-0.062	n 0.086	0.008	-0.01	-0.051	-0.043	0.039	-0.01
Planning & Organizing	-0.224	0.830	-0.296	-0.227	-0.128	-0.051	-0.043	0.146	-0.034	-0.044	0.054	0.024	-0.096
Teamwork	-0.169	-0.296	0.873	-0.108	-0.018	-0.031	-0.202	0.000	-0.17	0.104	-0.101	-0.08	0.031
Decision Making	0.001	-0.227	-0.108	0.818	-0.152	0.114	-0.049	-0.281	0.089	-0.203	-0.139	0.220	-0.053
Creative and Innovation	0.040	-0.128	-0.018	-0.152	0.920	-0.121	-0.066	-0.092	-0.123	-0.155	0.036	0.034	-0.141
Business Acumen	-0.062	-0.051	-0.031	0.114	-0.121	0.854	-0.268	-0.243	0.146	-0.109	-0.02	-0.081	-0.018
Customer Service Orientation	0.086	-0.043	-0.202	-0.049	-0.066	-0.268	0.878	0.039	-0.207	0.085	-0.153	-0.006	-0.091
Commitment	0.008	0.146	0.000	-0.281	-0.092	-0.243	0.039	0.860	-0.236	-0.041	-0.114	0.000	-0.086
Communication	-0.010	-0.034	-0.170	0.089	-0.123	0.146	-0.207	-0.236	0.874	-0.121	0.012	-0.145	-0.006
Empowerment	-0.051	-0.044	0.104	-0.203	-0.155	-0.109	0.085	-0.041	-0.121				
Adaptability	-0.043	0.054	-0.101	-0.139	0.036	-0.020	-0.153	-0.114	0.012				
Continuous Learning	0.039	0.024	-0.080	0.220	0.034	-0.081	-0.006	0.000	-0.145				
ICT	-0.010	-0.096	0.031	-0.053	-0.141	-0.018	-0.091	-0.086	-0.006				

Table 6. Correlation Factor Analysis Results between each Competency Variable
---

Source: Author, 2022

#### CONCLUSION

Some important findings of individual behavior from the survey results were that Leadership turned out to have a positive effect of 1) 2.9% on the creative and innovation process, 2) 6% on customer service orientation, 3) 0.6% on commitment, 4) 2.5% on Continuous Learning. But it has a negative effect 1) 15.9% Planning and Organizing, 2) 11.5% Teamwork, 3) 4.6% Business Instrumentation, 4) 0.7% on Communication, 5) 3.4% on Empowerment, 6) 2.6% on Adaptability, 7) 0.8% on ICT.

Leadership apparently has no effect at all on decision making in the institutions surveyed. Some important findings of individual behavior from the survey results are Planning & Organizing, which turns out to have a positive effect of 1) 8.7% on commitment, 2) 2.8% on adaptability, 3) 1.4% on continuous learning. But it has a negative effect on 1) 15.9% on leadership, 2) 17.4 on teamwork, 3) 13.4% on decision making, 4) 8% on creative and innovation, 5) 4.6% on business accounting, 6) 6% on customer service orientation, 7) 2.1% of communication, 8) 2.5% of empowerment, and 9) 6.3% of ICT.

# REFERENCES

- Berger.L. A., & Berger Dorothy R. (2004). The Talent Management Handbook: Creating Organizational Excellence by Identifying, Developing, and Promoting Your Best People, United States of America: McGraw-Hill
- Blass, E. (2007). Talent Management: Maximising talent for business performance. Chartered Management Institute and Ashridge Consulting, London and Hertfordshire.
- Born, M. &Heers, M. (2009). Talent Management: Alternatives to the single ladder approach. Dansk ErhvervsAkademi.
- Boyatzis, R.E. (2008). "Competencies in the 21 Century ", Journal of Management Development, Vol. 27(1), pp.5-11. DOI 10.1108/02621710810840730
- Cohen, Debra J. (2015). HR past, present and future: A call for consistent practices and a focus on competencies. Human Resource Management Review. DOI: http://dx.doi.org/10.1016/j.hrmr.2015.01.006
- Dave Ulrich, Jon Younger, Wayne Brockbank, Mike Ulrich. (2012)."HR talent and the new HR competencies", Strategic HR Review, Vol. 11 Iss 4 pp. 217 222. DOI: http://dx.doi.org/10.1108/14754391211234940
- Dreyfus, C.R. (2008). "Identifying competencies that predict effectiveness of R&D managers" Philadelphia, Pennsylvania, USA, Journal of Management Development, Vol. 27(1), pp.76-91. DOI 10.1108/02621710810840776
- Kandula R. Srinivas. (2013). Competency Based Human Resource Management: A Compelette Text With Case Studies on Competency Mapping, Modelling, Assessing and Applying. New Delhi: PHI Learning.
- Kusumastuti, D. and Idrus, N. (2017a). Nurturing quality of higher education through national ranking: a potential empowerment model for developing countries,

*Quality in Higher Education*, 23, 3, 230-248. DOI: 10.1080/13538322.2017.1407400

- Lawler, E.E. (2008). Talent, making people your competitive advantage. San Francisco: Jossey-Bass.
- Mar Gómez, Evangelina Aranda & Jesús Santos. (2016). A competency model for higher education: an assessment based on placements, Studies in Higher Education. DOI: 10.1080/03075079.2016.1138937
- Norman Rudhumbu & Cosmas Maphosa. (2015). Implementation of Talent Management Strategies in Higher Education: Evidence from Botswana, Journal of Human Ecology, 49:1-2, 21-32. DOI: 10.1080/09709274.2015.11906820
- Okonkwo, O. (2015). Talent management in the UK higher education institutions setting a research agenda. In: EIASM's 4th Workshop on Talent Management. Retrived from http://create.canterbury.ac.uk/14526/
- Perera, S, Babatunde, SO, Zhou, L, Pearson, J & Ekundayo, DO. (2016). Competency mapping framework for regulating professionally oriented degree programmes in higher education, Studies in Higher Education. DOI:10.1080/03075079.2016.1143926
- Sateesh V. Shet, S.V. Patil, Meena R. Chandawarkar.(2019). "Competency based superior performance and organizational effectiveness", International Journal of Productivity and Performance Management. DOI: https://doi.org/10.1108/IJPPM-03-2018-0128
- Seo G., Mehdiabadi, Amir Hedayati & Huang, Wenhao. (2016). Identifying core competencies to advance female professors' careers: an exploratory study in United States academia, Journal of Further and Higher Education, DOI:10.1080/0309877X.2016.1177167
- Sharma, Rakesh & Bhatnagar, Jyotsna. (2009). Talent management-competency development: Key to global leadership. Industrial and Commercial Training. 41. 118-132. DOI: 10.1108/00197850910950907.
- Spencer, L. M., & Spencer, S. M. (1993). Competence At Work, Models For Superior Performance. Toronto: John Wiley & Sons.