Human Resources Competency Development Model in Higher Education (Comparative Approach Based on Literature Study in 27 Countries)

Reniati, Meidarina Yunfin, Rika Febriani
of Management Department, Faculty of Economics,
University of Bangka Belitung
r3ni4ti@gmail.com

Abstract

The observation of this research is to identify, evaluate, and interpret the work of researchers and practitioners in developing HR competencies in Higher Education with a comparative approach based on literature studies or Systematic Literature Review systematically. Based on 34 articles published during the period from 2012 to 2022. The results showed that from the geographical area of the 34 articles that met the criteria came from 27 countries dominated by Nigeria (9%), USA (6%), Indonesia (6 %), China (6%), Tanzania (6%), Jordan (6%) and Kazakhstan (6%). Based on the Scope by field and research method, the method for developing human resource competencies in tertiary institutions has been carried out in 34 different journals in different disciplines consisting of Education Learning (50%), Human Resources (9%), Management (9%), Social Sciences (9%), Business (3%) and other journals (19%) with no specific fields. Based on the Research Method and Sample the most widely used method is the interview method with qualitative data types and taking samples of lecturers. The results of this study indicated that there are various processes that universities go through to create a human resource competency development model starting from recruitment and selection as well as training which is the most widely used method. Besides that, the development of human resource competencies also requires special attention in improving the hard skills and soft skills possessed by lecturers so that they can improve the quality of the learning process and alumni to be ready to compete in the work world.

Keywords: HR Competency Development Model, Higher Education, Systematic Literature Review

Introduction

Higher education (PT) is an educational institution and a social institution. PTs are not only required to produce excellent graduates through quality learning activities. As stated in Tri Dharma, intellectuals are also required to be willing to spend time researching in creating innovative products. The Human Resources in Higher Education factor is of course the primary source of this excellence, both for lecturers, staff, students and leaders from the University.

Universities have a responsibility to transform knowledge to create an impact in society. Higher education is a place for learning, research and innovation (Martínez-Martín & Lozano-Martín, 2021). Within the organization the quality and capabilities of human resource management talents directly affect the efficiency of organization's talent utilizations. This also affects the retention of core talents and the future development of the enterprise.

HRM is essential for the university's development (Wang & Qi, 2013). One of the tools currently being developed in universities for implementing Human Capital Management (HCM) is the ERP (Enterprise Resource Planning) model based on (Widjaja et al., 2019) research, which developed and validated instruments to evaluate ERP.

In China, it also requires a reformation of the traditional HR Management system in universities because, for almost three decades, they have used the pillars of the iron rice bowl (Xia et al., 2020). Today, in a world full of uncertainty, a country depends on the quality of higher education (Akinyemi & Abiddin, 2013).

So the issues addressed in this research are (1). How is the development of higher education human resources in terms of geography, year, theme, and methodology from the last ten years, 2012-2022? (2). How is human resource development carried out by universities so that they can improve university performance?

Theory Study of the Role of Human Resource Management in Higher Education

Human Resource Management (MSDM) is a science that regulates the relationship and role of resources (labor) owned by individuals efficiently and effectively and can be used in a maximum manner so that goals can be achieved optimally. HR Management is the process of planning, organizing, directing, and supervising the procurement, development, compensation, integration, maintenance, and termination of workforce relations to achieve organizational, individual, and societal goals.

Educational Resources at the tertiary level include elements of higher education leadership (top, middle and lower) and members or staff, both academic and administrative staff. In tertiary institutions, the top leadership is the Chancellor and his assistants, the middle leadership is the dean and his assistants, and the lower is the head of the department and the head of the program study.

Human Resources Management in Higher Education is part of managing the entire academic community consisting of lecturers and academic staff with a knowledge management orientation. Several aspects must be considered in Higher Education HR management, including (1) Human Resource Planning which involves meeting the needs of university members at present and in the future. (2) Recruiting process as an effort to fill higher education human resources, lecturers, academic staff, and employees to find individuals who suit the specified job requirements. (3) Selection that aims to determine competent individuals according to the specified job requirements. (4) Professional development, an effort to improve and increase the competency of university members to significantly contribute to the organization's interests. This fourth aspect plays a vital role in Higher Education (5) Performance Measurement Efforts to conduct personnel assessments and understand how their conditions are necessary for determining compensation policies and career development for HR in Higher Education. (6) Compensation which is used as a reward given to each Higher Education HR personnel.

2.2. Human Resource Competence in Higher Education

Mulder et al. (2008) draw competence as a set of knowledge groups, skills, and attitudes necessarily conditional for task performance and problem-solving and for being able to function effectively in certain professions, organizations, jobs, roles, and situations. Meanwhile, Husaini (2009) (Manurung, 2020) states that competence describes a person's qualifications or abilities, both qualitatively and quantitatively. Competence is defined as the knowledge, skills, and abilities of a person who has become part of himself to carry out the most appropriate cognitive, affective, and psychomotor behaviors.

Educator competence is one of the factors that influence the achievement of learning and educational goals. According to Law Number 14 of 2005 concerning Teachers and Lecturers article 10 verse (1), the competence of teachers and lecturers includes pedagogical competence, personal competence, social competence, and professional competence, which are obtained through professional education. Furthermore, (Jerez Yáñez et al., 2016) identified three main characteristics that constitute "excellent" teaching:

generic, pedagogical, and disciplinary competence. First, generic competence describes personal, attitude, and communicative characteristics required in any professional field and appropriate lecturer behavior. As for attitude characteristics, superior lecturers are seen as comprehensive and flexible in acting as role models, showing enthusiasm and interest in their work, organization, motivation, and positive attitude toward students, these are a sense of humor and honesty. The communicative nature describes the lecturer's ability to transfer clear information, openness, an attitude of service, and responsiveness (Sánchez et al., 2011). Second, pedagogical competence refers to a set of abilities, skills, and aptitudes that are developed and disseminated in a pedagogical context and involve the methods used to facilitate learning (e.g., facilitate critical thinking, encourage discussion, innovate in methodology, explain learning outcomes) (Alweshahi et al ., 2007). Finally, disciplinary competence denotes the knowledge, skills, and attitudes considered minimum requirements in any discipline area (e.g., to be experts in their field of discipline, up-to-date and concerned with ongoing training) (Battista et al., 2022).

2.3. The Effect of HR Development on Organizational Performance

There are 5 (five) important things in the development of human resources in the education sector: professionalism, competitiveness, functional competence, participatory excellence, and collaboration (Ramli, 2019). According to (Hasibuan & Silvya, 2019), HR development is divided into two: formal and informal. Formal development is a development effort from a company or an institution to employees in the form of formal training or education to improve their skills and productivity. Compared to informal development, this formal method requires more costs in its implementation. However, if it is related to the potential consequences whenever HR development is not carried out, this formal development is still done better, such as undergraduate, postgraduate, and doctorate lectures both at home and abroad. Informal development is defined as development for someone of personal will in honing and developing themselves through various ways, for example, literacy studies on book materials related to their field of work. Informal development highlights the existence of a desire built from within oneself so that the output will benefit the company or institution occupied because it will increase performance and productivity. Such as participation in seminars, exhibitions, workshops, and training.

This study uses a systematic literature review method. A systematic literature review is a method that systematically identifies, evaluates, and interprets the work of researchers and practitioners in selected fields. The aim is to identify knowledge gaps and research needs in specific

areas**.** Furthermore, a systematic review according to (Bacaro et al., 2020) helpful in identifying the state of the art on a particular topic, and there is an urgency in systematically reviewing the evidence-based literature on a particular topic. Research that adopts systematic literature reviews also aims to assess considerations, benefits, and unintended consequences to understand current research gaps and provide input for current and long-term policy development (Muposhi et al., 2022). The systematic evaluation aims to provide a reputation for modern literature on human resource development in higher education.

The systematic review process in this study was carried out by following the stages (Sumarni, et al., 2020). The systematic review steps are divided into two, including; the identification of articles and analytical procedures. For the systematic review procedure carried out in this study, it can be seen in Figure 1 with, the initial process of determining research objectives, then searching for words or sentences with a literature search (Suprapto et al., 2020)
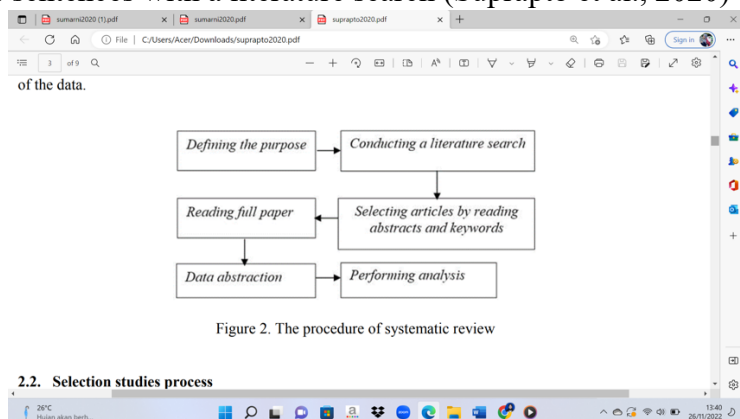

Figure 1. Systematic review procedure (Suprapto et al., 2020)

Research articles published in English-language journals on human resource development in tertiary institutions were obtained from electronic databases such as Taylor and Francis Online, Science Direct, Mendeley, Springer, Google Scholar, and Sage Publication during the period 2012 to 2022 because of this period we are going through a period of digital transformation. The keywords used for the search are "human resource development" and "human resource development in universities." Articles analyzed in each database were peer-reviewed and published in English-language academic journals. The reference list for this article is also used to find additional human resource development-related articles, as the first articles to appear in various databases are frequently cited and only recently published.

Every article information that examines human resource development in tertiary institutions are collected in a database: journal name, year of publication, author, affiliation, the country where the survey was conducted, method (data collection method, data type, sample), the theory used, and survey results. Several data collection methods have been classified in each article, including document *review, interview, survey by portal email, explorative consideration, onsite questionnaire, case study, focus group discussion, and an online survey*. The data type is classified based on quantitative, qualitative, or mixed methods. Finally, the overall results categorized based on survey questions are presented to understand how human resource development is in higher education.

The analytical procedure is carried out by determining the development of human resources in tertiary institutions and supporting further research. Therefore, several aspects are presented in this study, including the type and author of the research (location, year of publication, journal), the methods used, the theory of human resource development and its application in higher education, and the results of the research. The survey results are then categorized based on the survey questions. In the final stage, the researcher explained the critical reviews of further research and how human resource development in higher education can be applied.

3. **Discussion**

The scientific research papers used in this study are 34 articles in total in the fields of human resource development in higher education, published from 2012 to 2022. A systematic review aims to determine what, where, by whom, how, when, and what was found. This technique allows authors to determine the value of various studies and fields, such as human resource development in universities, and assists in planning future research. Table 1 shows the research location countries used in this study.

3.1 *Geographical Scope*

Of the 34 articles that met the criteria, they came from 27 countries, dominated by Nigeria (9%), the USA (6%), Indonesia (6%), China (6%), Tanzania (6%), Jordan (6%) %) and Kazakhstan (6%). There are also several research paper articles from other countries with a percentage (3%) including Turkey, Australia, Norway, Brazil, Germany, Japan, Czech Republic, Southeast Asia, Mauritius, Cyprus, Morocco, Croatia, Ethiopia, England, Saudi Arabia, Ukraine and the Republic of Korea. There are several reasons why among the four countries, Nigeria, the USA, Indonesia, and China have published research on this topic in quite a large number compared to other countries. First, these three countries (USA, Indonesia, and China) have the largest population in the world. Both show that these four countries are

concerned about human resource issues, especially in universities, including Nigeria, which comes from the African continent. The following is a table showing the research location countries:

Table 1. Research location countries for articles/journals on Human Resource Development in Universities.

Countries	Research Location	
	N	%
Nigeria	3	9%
USA	2	6%
Indonesia	2	6%
China	2	6%
Tanzania	2	6%
Kazakhstan	2	6%
Jordan	2	6%
Turkey	1	3%
Australia	1	3%
Norway	1	3%
Brazil	1	3%
Germany	1	3%
Poland	1	3%
Ghana	1	3%
Japan	1	3%
Czech Republic	1	3%
Southeast Asia	1	3%
Mauritius	1	3%
Cyprus	1	3%
Morocco	1	3%
Croatia	1	3%
Ethiopia	1	3%
United Kingdom	1	3%
Saudi Arabia	1	3%
Ukraine	1	3%
Republic of Korea	1	3%
	34	100%

3.2 Scope by Year

Figure 1 shows the scope of articles by year that have been reviewed in this study. It illustrates that article publications were dominant in 2015, 2019, and 2021 while the lowest was in 2012.
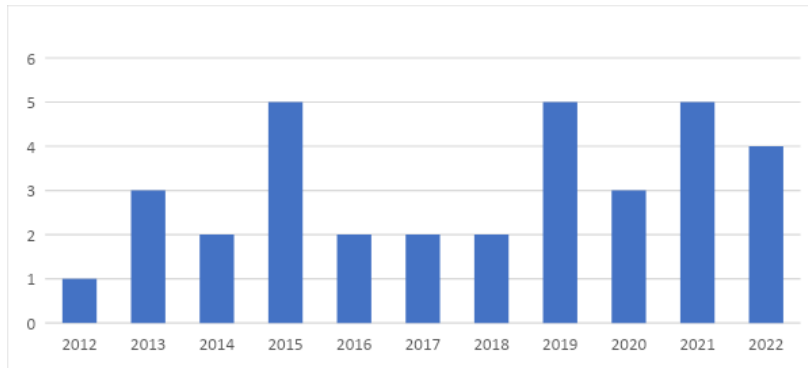

Figure 1 Frequency of articles per year

3.3 Scope by field and research method

Research explaining several methods of developing human resource competence in tertiary institutions has been conducted in 27 Countries with different scientific disciplines shown in Table 3. Fields that are often researched include Education Learning (50%), Human Resources (9%), Management (9%), Social Sciences (9%), Business (3%), and journals (19%), which do not include particular fields. Journals with dominating studies on human resource competency development in higher education are known as Industry and Higher Education (50%) and Procedia - Social and Behavioral Sciences (9%).

Several methods have been used to determine the development of human resource competencies in various tertiary institutions, as shown in Table 4. It can be seen that the research design used by most researchers is qualitative (50%) and quantitative shows (35%). Five of the 34 published articles (15%) used mixed methods. The most commonly used methods are interviews (32%) and document reviews (18%). Other methods are surveyed by postal email (9%), onsite questionnaire (15%), online survey (15%), case study (6%), as well as focus group discussion and explorative consideration each (3%). The samples that are widely used in research are lecturers (60%), then educational staff and university officials respectively (25%), and students (15%).

The research method is carried out to collect and then investigate information or data on activity. In this study, the method often used is interview 37%. The main advantage of using this method is that it can dig up more in-depth and high-quality information (Reniati et al., 2022). Furthermore, most of the data collection was done online either using electronic forms or sent via email.

Table 2 *Scope by Field*

Field	Journal Title		Field Total	
			N	%
Education Learning (17)	Industry and Higher Education	3	17	50%
	Computers & Education	1		
	Education and Information Technologies	1		
	Journal of Hospitality, Leisure, Sport & Tourism Education	1		
	Journal of Educational Computing Research	1		
	International Journal of Disability, Development and Education	1		
	E–Learning and Digital Media	1		
	International Education Studies	1		
	International e-Journal of Educational Studies	1		
	Journal of Educational and Social Research	1		
	International Journal of Environmental & Science Education	1		
	European Journal of Education	1		
	Journal of Physical Education and Sport	1		
	Research in Education	1		
	Mentoring & Tutoring: Partnership in Learning	1		
Human Resources (3)	Advances in Developing Human Resources	1	3	9%
	Human Resource Development Review	1		
	The International Journal of Human Resource Management	1		
Management (4)	Human Systems Management	1	4	12%
	IOSR Journal of Business and Management	1		
	Technology Analysis & Strategic Management	1		

	Problems and Perspectives in Management	1		
Business (1)	Journal of Business Research	1	1	3%
Social Science (4)	Procedia - Social and Behavioral Sciences	3	3	9%
Others	European Journal of Training and Development	1	6	18%
	Procedia Computer Science	1		
	Eastern Africa Social Science Research Review	1		
	Journal of Asian and African Studies	1		
	SAGE Journal	1		
	Bulletin of Indonesian Economic Studies	1		
		34	34	100%

Table 3 *Research Method and Sample*

Category	N	%
Methods used		
Detail of the methods		
Document review	6	19%
Interview	11	34%
Survey by postal email	3	9%
Explorative consideration	1	3%
Onsite questionnaire	3	9%
Case study	2	6%
Focus Group Discussion	1	3%
Online survey	5	16%
	32	100%
Type of data		
Quantitative	10	31%
Qualitative	17	53%
Both	5	16%
	32	100%

Sample

Student	3	9%
Teaching staff	5	16%
Educational staff	7	22%
University officials	8	25%
Not educational staff or teaching staff	9	28%
	32	100%

3.4 Overall results categorized by research questions

Of the 34 articles that have been reviewed, there are several models of developing human resource competencies in various tertiary institutions. The most widely applied method is training with seven articles stating it. Training is a method of developing human resource competencies that dominates because it can encourage regional growth by training relevant human resources and having relationships with the industry (Mei & Symaco, 2021). Meanwhile, training is expected to improve students' ability to work (Hasibuan & Silvya, 2019). Employees with excellent quality are essential keys toward sustainable competitive advantage. Likewise, a performance that can be maintained with training and development is an important aspect of educational effectiveness (Bastas & Altinay, 2019).

Besides training, recruitment and selection processes are important to achieve long-term sustainability. There are several dimensions in the selection process, including experience and desire to continue education (Allui & Sahni, 2016). Recruitment and virtual orientation are also needed during the Covid-19 pandemic that has occurred, this is important to implement so that activities can continue (Bennett & McWhorter, 2021). Furthermore, in terms of recruitment responsibilities, the role of the personnel manager is significant in supporting the process to run smoothly. However, many HR functions (especially those related to faculties) are still handled by deans and heads of departments (Arslan et al., 2013). Effective recruitment and selection can attract the right quality and quantity of people, develop employee knowledge, skills, and abilities, and retain employees in the organization (K. M, Saifalislam, et al., 2014).

Furthermore, (Seitova, 2016) stated that the professional competency development of faculty members is a core component in forming academic identity, which involves the construction of new knowledge that is updated in the academic world. This development is carried out by increasing the knowledge and skills of professionals in various jobs and conducting research

that links theory and practice through real applications in various businesses and industries to promote science and technology innovation for the country's sustainable development. Developing human resource competencies is also a facilitation mechanism in supporting knowledge transfer (Djikhy & Moustaghfir, 2019). Besides knowledge, skills development is also a method of developing human resources in higher education. These skills include oral and written communication, social skills, collaboration, ethics, responsibility, creative abilities, and equal work skills (Goulart et al., 2022). Furthermore, abilities are divided into two: hard and soft skills. Soft skills have 13 factors which can be classified into (1) Ability to involve others, (2) Curiosity, (3) Ethics, (4) Respect for diversity, (5) Creativity, (6) Enthusiasm, (7) Ability socializing, (8) Solidarity, (9) Networking skills, (10) Spirit of coaching, (11) Hard worker, (12) Charisma, and (13) Experience of competitive sports (Sato et al., 2021). Skills development in improving the quality of work can also be implemented by planning programs in the application of technology, teaching, and learning processes. and joint business development programs to work with industry to provide opportunities for students to improve their work skills (Owusu-Agyeman & Fourie-Malherbe, 2019). Inappropriate workforce competencies and skills can lead to mass migration with low education (Reniati, 2016).

The application of the curriculum and provision to students are considered necessary for changes in dealing with today's digital challenges (Nermend et al., 2022). Learners who tend to succeed in higher academic endeavors have a broad knowledge base, varied experience, and exposure to broaden their conceptual base for higher learning (Uche, 2014). In dealing with digital challenges, specific strategies are needed to overcome the technological gap (Kalolo, 2019). Several ethics must be increased in technological awareness, namely, hacking computer systems for illegal purposes; assuming a different personal identity on the Internet; illegal use and distribution of copyrighted material; privacy violation; hatred; and plagiarism (Iyadat et al., 2012). Technology supported by digital education can benefit the learning process because digital learning spaces have been implemented for students and educators (Bygstad et al., 2022).
In addition to implementing the curriculum, debriefing students also includes teaching methods that are applied. One is stimulating creative thinking supported by adequate quality teachers and instructors (Indrawati & Kuncoro, 2021). Decent quality educators can provide employability for graduates in the labor market (Soukalová & Gottlichová, 2015). On the employee side, a formal and vocational scholarship program can improve employees' quality in providing public services (Setiabudi, 2020). Employee quality can also be

improved by implementing quality strategies, in Total Quality Management (TQM) and Continuous Quality Improvement (CQI) which are also supported by the use of the latest technology (Akinyemi & Abiddin, 2013).

A performance management system with a strategic approach can also be applied to human resource management in higher education institutions (Sušanj et al., 2020). One of the reasons for the lack of lecturer performance in carrying out their duties is the low motivation of lecturers to work. Work motivation is a strength in a person, encouraging his/her behavior to take action (Mardijuwono & Subianto, 2018). The success or failure of a tertiary institution is based on the spirit of the lecturer as the lecturer himself. Various aspects of success from the high motivation of lecturers include transformational leadership that must be able to influence subordinates and be able to transform the values that are adhered to by subordinates, the competencies possessed by lecturers, and the compensation received while carrying out their duties (Manurung, 2020). Work motivation for academic staff is considered to impact human resource development and the growth of university competitiveness (Mynzhanova et al., 2018). Therefore, motivation for individuals is considered necessary to encourage creativity (Reniati et al., 2019).

In addition, human resource management practices in providing incentive compensation to academic faculty and job security and human resource measures in industrial liaison offices significantly contribute to the collaborative performance of universities working with industry, such as the number of registered patents, intellectual property license revenue, and integrated collaboration revenue (Lee, 2018).

4. **Conclusions and Closing**

An important finding in this study is that there are various processes universities go through in developing their human resource competencies where training, recruitment, and selection are the most widely used methods. Besides that, in developing human resources, training is highly needed to improve hard and soft skills. Therefore, the university needs to create an effort to develop its human resources, especially in dealing with today's digital challenges.

The results of the study also show that from the geographical area of the 34 articles that meet the criteria come from 27 countries dominated by Nigeria (9%), the USA (6%), Indonesia (6%), China (6%), Tanzania (6%) %), Jordan (6%) and Kazakhstan (6%). Based on the Scope by field and research method that human resource development methods in tertiary institutions have been carried out in 34 different journals in different disciplines in Education Learning (50%), Human Resources (9%), Management (9%), Social Sciences

(9%), Business (3%) and other journals (19%) do not include a special field beside the name. Based on the Research Method and Sample the most widely used method is the method with interviews a qualitative approach and sampling dominate the research design uses the most samples oflecturers.

REFERENCES

Akinyemi, GM, & Abiddin, NZ (2013). *Quality administration and management in higher education in nigeria: Implications for human resource development*. International Education Studies, *6*(4), 225–235.

Allui, A., & Sahni, J. (2016). *Strategic Human Resource Management in Higher Education Institutions: Empirical Evidence from Saudi*. Procedia - Social and Behavioral Sciences, *235*(October), 361–371.

Alweshahi, Y., Harley, D., & Cook, DA (2007). *Students' perception of the characteristics of effective bedside teachers*. Medical Teacher, *29*(2–3), 204–209.

Arslan, H., Akdemir, A., & Karslı, MD (2013). RETRACTED: *How Human Resource Operations Work in Higher Education Institutions*. Procedia - Social and Behavioral *Sciences*, *99*, 742–751.

Bacaro, V., Benz, F., Pappaccogli, A., De Bartolo, P., Johann, AF, Palagini, L., Lombardo, C., Feige, B., Riemann, D., & Baglioni, C. (2020). *Interventions for sleep problems during pregnancy: A systematic review*. Sleep Medicine Reviews, *50*, 101234.

Baker, VL (2015). *People Strategy in Human Resources: Lessons for Mentoring in Higher Education*. Mentoring and Tutoring: Partnership in Learning, *23*(1), 6–18.

Bastas, M., & Altinay, Z. (2019). *Employment for Disability: Human Resources Management in Higher Education for Quality*. International Journal of Disability, Development and Education, *66*(6), 610–615.

Battista, S. Di, Pivetti, M., & Berti, C. (2022). *Lecturer Competence from the Perspective of Undergraduate Psychology Students: A Qualitative Pilot Study*. Education Sciences, 12(2), 139.

Bennett, EE, & McWhorter, RR (2021). *Virtual HRD's Role in Crisis and the Post Covid-19 Professional Lifeworld: Accelerating Skills for Digital Transformation*. Advances in Developing Human Resources, *23*(1), 5–25.

Bygstad, B., Øvrelid, E., Ludvigsen, S., & Dæhlen, M. (2022). *From dual digitalization to digital learning space: Exploring the digital*

*transformation of higher education.*Computers and Education, 182(August 2021).

D'Ambra, J., Akter, S., & Mariani, M. (2022). *Digital transformation of higher education in Australia: Understanding affordance dynamics in E-Textbook engagement and use.* Journal of Business Research, *149*(May), 283–295.

Djikhy, S., & Moustaghfir, K. (2019). *International faculty, knowledge transfer, and innovation in higher education: A human resource development perspective*. Human Systems Management, *38*(4), 423–431.

Ebisine, SS (2015). *Human Resource Development: Imperatives for Achieving Quality Assurance in Higher Education in Nigeri*. Journal of Educational and Social Research, *5*(2), 171–176.

Goulart, VG, Liboni, LB, & Cezarino, LO (2022). *Balancing skills in the digital transformation era: The future of jobs and the role of higher education.* Industry and Higher Education, *36*(2), 118–127.

Hasibuan, JS, & Silvya, B. (2019). *Adapting the Mauritian higher education system for effective workforce development*. Industry and Higher Education, *33*(6), 414–424.

Indrawati, SM, & Kuncoro, A. (2021). *Improving Competitiveness Through Vocational and Higher Education: Indonesia's Vision For Human Capital Development In 2019–2024.* Bulletin of Indonesian Economic Studies, *57*(1), 29–59.

Iyadat, W., Iyadat, Y., Ashour, R., & Khasawneh, S. (2012). *University students and ethics of computer technology usage: Human resource development.* E-Learning and Digital Media, *9*(1), 43–49.

Jerez Yáñez, Ó., Orsini Sánchez, C., & Hasbún Held, B. (2016). *Atributos de una docencia de calidad en la educación superior: una revisión sistemática.* Estudios Pedagógicos (Valdivia), *42*(3), 483–506.

K. M, Saifalislam, A, O., & MK, A. (2014). *Human Resource Management Practices: Influence of recruitment and selection, and training and development on the organizational performance of the Jordanian Public University.* IOSR Journal of Business and Management, *16*(5), 43–46.

Kalolo, JF (2019). *Digital revolution and its impact on education systems in developing countries.* Education and Information Technologies, *24*(1), 345–358.

Lee, KJ (2018). *Strategic human resource management for university-industry collaborations in Korea: financial incentives for academic faculty and employment security of industry liaison offices.* Technology Analysis and Strategic Management, *30*(4), 461–472.

Manurung, EF (2020). *The Effects of Transformational Leadership, Competence and Compensation on Work Motivation and Implications on the Performance of Lecturers of Maritime College in DKI Jakarta.* International Journal of Multicultural and Multireligious Understanding, *7*(6), 112.

Mardijuwono, AW, & Subianto, C. (2018). *Independence, professionalism, professional skepticism: The relation toward the resulted audit quality.* Asian Journal of Accounting Research, *3*(1), 61–71.

Martínez-Martín, R., & Lozano-Martín, AM (2021). *Sustainability and conflict management in the university environment. Analysis of students of the degrees in labour relations and human resources, and social work at the university of granada (Spain).* Sustainability (Switzerland), *13*(23).

Mei, W., & Symaco, LP (2021). *Higher Education for Development: The Role of University Towns in China.* SAGE Open, *11*(3).

Mulder, M., Gulikers, J., Wesselink, R., & Biemans, H. (2008). *The new competence concept in higher education: error or enrichment? Objectives and purpose Perspectives and theoretical framework.* www.ecs.wur.nl%5Cnwww.mmulder.nl

Muposhi, A., Mpinganjira, M., & Wait, M. (2022). *Considerations, benefits and unintended consequences of banning plastic shopping bags for environmental sustainability: A systematic literature review.* Waste Management and Research, *40*(3), 248–261.

Mynzhanova, G., Sailaubekov, N., & Kunanbayeva, D. (2018). *The role of university faculty motivation in human resources development and university competitiveness growth.* Problems and Perspectives in Management, *16*(3), 91–101.

Nermend, M., Singh, S., & Singh, US (2022). *An evaluation of decision on paradigm shift in higher education by digital transformation.* Procedia Computer Science, *207*, 1959–1969.

Owusu-Agyeman, Y., & Fourie-Malherbe, M. (2019). *Workforce development and higher education in Ghana: A symmetrical relationship between industry and higher education institutions.* Industry and Higher Education, *33*(6), 425–438.

Ramli, AH (2019). *Work Environment, Job Satisfaction and Employee Performance in Health Services.* Business and Entrepreneurial Review, *19*(1), 29–42.

Reniati, R. (2016). Rev. Integr. Bus. Econ. Res. Vol 5(2) 239. Revuew of Integrative Business & Economics Research, *5*(2), 239–249.

Reniati, R., Santi, R., & Sabri, F. (2019). *The model success of business and the competitiveness of featured smes in bangka belitung province island.* Humanities and Social Sciences Reviews, *7*(4), 659–676.

Reniati, R., Yusnita, M., & Purwasih, R. (2022). *MSMEs Scale Up Model Post Next Normal through Frugal Innovation, Transformational Leadership, Blue Ocean Strategy and Government Policies*. April 2020.

Sánchez, MM, Martinez-Pecino, R., Rodríguez, YT, & Melero, PT (2011). *Student perspectives on the university professor role.* Social Behavior and Personality, *39*(4), 491–496.

Sato, S., Kang, TA, Daigo, E., Matsuoka, H., & Harada, M. (2021). *Graduate employability and higher education's contributions to human resource development in sport business before and after COVID-19.* Journal of Hospitality, Leisure, Sport and Tourism Education, *28*(January), 100306.

Seitova, D. (2016). *Perspectives on the present state and future of higher education faculty development in kazakhstan: Implications for national human resource development.* International Journal of Environmental and Science Education, *11*(18), 11081–11096.

Setiabudi, A. (2020). *Human Resources Development via Higher Education Scholarships: A Case Study of a Ministry of Public Works and Housing Scholarship Program.* International E-Journal of Educational Studies, *4*(8), 209–223.

Soukalová, R., & Gottlichová, M. (2015). *The Impact of Effective Process of Higher Education on the Quality of Human Resources in the Czech Republic.* Procedia - Social and Behavioral Sciences, *174*, 3715–3723.

Spöttl, G. (2013). *Permeability between VET and higher education - a way of human resource development.* European Journal of Training and Development, *37*(5), 454–471.

Sumarni, W., Faizah, Z., Subali, B., Wiyanto, W., & Ellianawati. (2020). *The urgency of religious and cultural science in stem education: A meta data analysis.* International Journal of Evaluation and Research in Education, *9*(4), 1045–1054.

Suprapto, N., Sunarti, T., Suliyanah, Wulandari, D., Hidayaatullaah, HN, Adam, AS, & Mubarok, H. (2020). *A systematic review of photovoice as participatory action research strategies.* International Journal of Evaluation and Research in Education, 9(3), 675–683.

Sušanj, Z., Jakopec, A., & Đorić, A. (2020). *Academics' effectiveness and professional development in Croatia: Challenges for human resource management in higher education institutions.* European Journal of Education, *55*(4), 476–488.

Tan, RSE, Harland, T., & Daniel, B. (2021). *The Benefits and Challenges of Globalisation for the Development of Higher Education Teaching and Research: A Case Study of an Emerging University in East Africa.* Journal of Asian and African Studies, *56*(4), 905–918.

Teshome, T. (2018). *Human Resource Development Climate in Higher Education Institutions in Ethiopia: Empirical Analysis on Selected Public Universities.* Eastern Africa Social Science Research Review, *34*(1), 277–290.

Thirkell, E., & Ashman, I. (2014). *Lean towards learning: connecting Lean Thinking and human resource management in UK higher education.* International Journal of Human Resource Management, *25*(21), 2957–2977.

Tkachenko, O., Crocco, OS, Nguyen, LA, & Jonathan, V. (2022). *Regional Human Resource Development in ASEAN: An Institutional Theory Perspective. Human Resource Development Review, 21*(2), 225–248.

Uche, RD (2014). *Quality of university graduates and human resources development in Nigeria.* Research in Education, *92*(1), 49–58.

Wang, B., & Qi, YZ (2013). *Problems and measurements for electronic human resource management in Chinese universities.* Applied Mechanics and Materials, *411–414*, 2892–2896.

Widjaja, HAE, Meyliana, Fernando, E., Surjandy, Grady, D., Liejaya, B., & Siwi, MP (2019). *Development and Validation of Instruments for Evaluation Enterprise Resource Planning on Human Resource Management in Higher Education Sector.* ICICOS 2019 - 3rd International Conference on Informatics and Computational Sciences: Accelerating Informatics and Computational Research for Smarter Society in The Era of Industry 4.0, Proceedings, 1–6.

Wu, B., Hu, Y., Gu, X., & Lim, CP (2016). *Professional Development of New Higher Education Teachers with Information and Communication*

*Technology in Shanghai.*Journal of Educational Computing Research, *54*(4), 531–562.

Xia, J., Cherrie Zhu, J., Fan, D., & Zhang, MM (2020). *The 'iron rice-bowl' regime revisited: whither human resource management in Chinese universities?* Asia Pacific Journal of Human Resources, *58*(2), 289–310.

Appendix

Author (Year/No. of authors)	Journal	Study Location	Sample	Methode	Type of data
Akinyemi & Abiddin (2013/2)	International Education Studies	Nigeria	Not educational staff or teaching staff	Document review	Qualitative Survey
Allui & Sahni (2016/2)	Procedia - Social and Behavioral Sciences	Saudi Arabia	University officials	Onsite questionnaire	Both
Arslan, Akdemir, & Karslı (2013/3)	Procedia - Social and Behavioral Sciences	Turkey	Educational staff	Online survey	Quantitative Survey
Baker (2015/1)	Mentoring & Tutoring: Partnership in Learning	USA	University officials	Interview	Qualitative Survey
Bastas & Altinay (2019/2)	International Journal of Disability, Development and Education	Cyprus	University officials	Case study	Qualitative Survey
Bennett & McWhorter (2021/2)	Advances in Developing Human Resources	USA	Not educational staff or teaching staff	Document review	Qualitative Survey
Bygstad et al. (2022/4)	Computers & Education	Norwegia	Educational staff	Interview	Qualitative Survey

D'Ambra, Akter, and Mariani (2022/3)	Journal of Business Research	Australia	Student	Online survey	Both
Djikhy & Moustaghfir (2019/2)	Human Systems Management	Maroko	University officials	Interview	Both
Goulart, Liboni, & Cezarino (2022/3)	Industry and Higher Education	Brazil	Student	Focus Group	Qualitative Survey
Indrawati & Kuncoro (2021/2)	Bulletin of Indonesian Economic Studies	Indonesia	Not educational staff or teaching staff	Document review	Qualitative Survey
Iyadat et al. (2012/4)	E–Learning and Digital Media	Jordan	Student	Onsite questionnaire	Quantitative Survey
Kalolo (2019/1)	Education and Information Technologies	Tanzania	Not educational staff or teaching staff	Document review	Qualitative Survey
Mei & Symaco (2021/2)	Sage Journal	China	Educational staff	Interview	Qualitative Survey
Mynzhanova, Sailaubekov, & Kunanbayeva (2018/3)	Problems and Perspectives in Management	Kazakstan	Teaching staff	Onsite questionnaire	Quantitative Survey
Nermend, Singh, & Singh (2022/3)	Procedia Computer Science	Poland	Teaching staff	Interview	Quantitative Survey
Owusu-Agyeman & Fourie-	Industry and Higher Education	Ghana	Teaching staff	Interview	Both

Malherbe (2019/2)					
Roopchund & Ramlowat (2019/2)	Industry and Higher Education	Mauritius	Not educational staff or teaching staff	Interview	Qualitative Survey
Saifaislam & AlQudah (2014/2)	IOSR Journal of Business and Management	Jordanian	Educational staff	Onsite questionnaire	Quantitative Survey
Sato et al. (2021/5)	Journal of Hospitality, Leisure, Sport & Tourism Education	Jepang	Not educational staff or teaching staff	Survey by postal email	Both
Seitova (2016/1)	International Journal of Environmental & Science Education	Kazakstan	Educational staff	Interview	Qualitative Survey
SETİABUDİ et al. (2020/3)	International e-Journal of Educational Studies	Indonesia	University officials	Case study	Qualitative Survey
Soukalová & Gottlichová (2015/2)	Procedia - Social and Behavioral Sciences	Czech Republic	Not educational staff or teaching staff	Survey by postal email	Quantitative Survey
Spöttl (2013/1)	European Journal of Training and Development	Germany	Not educational staff or teaching staff	Explorative consideration	Qualitative Survey
Sušanj, Jakopec, & Đorić (2020/3)	European Journal of Education	Croatia	University officials	Survey by postal email	Quantitative Survey

Sylvester (2015/1)	Journal of Educational and Social Research	Nigeria	University officials	Document review	Qualitative Survey
Tan, Harland, & Daniel (2021/3)	Journal of Asian and African Studies	Tanzania	Educational staff	Interview	Qualitative Survey
Teshome (2018/1)	Eastern Africa Social Science Research Review	Ethiopia	Educational staff	Onsite interview	Quantitative Survey
Thirkell & Ashman (2014/2)	The Internation al Journal of Human Resource Management	Inggris	Educational staff	Interview	Qualitative Survey
Tkachenko et al. (2022/1)	Human Resource Development Review	Southeast Asia	Not educational staff or teaching staff	Document review	Qualitative Survey
Uche (2014/1)	Research in Education	Nigeria	Student	Onsite questionnaire	Quantitative Survey
Wu et al. (2015/4)	Journal of Educational Computing Research	China	Teaching staff	Online survey	Quantitative Survey
Zavydivska et al. (2017/4)	Journal of Physical Education and Sport	Ukraine	Teaching staff	Online survey	Quantitative Survey