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## Article

# The impact of human resource development on organizational effectiveness : an empirical study

Management dynamics in the knowledge economy

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## **The Impact of Human Resource Development on Organizational Effectiveness: An Empirical Study**

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**Abstract.** Human resource development is a relatively new area of professional practice and academic study. Over the past two decades, human resource development has become the fastest growing area of management development, due to the great interest of organizations in the face of intense competition and changes in the business environment. Despite this significance of HRD but, there is a lack of empirical researches or studies have specifically dealt with examining how HRD practices effect on organizational effectiveness practically, in universities and institute level. This study tries to address this gap. The main purpose of this study is to investigate the relationships between the practices of human resource development and organizational effectiveness in the Iraqi public universities context. This study adopted the survey method to collect primary data. The survey was created by the google-forms tool, which is commonly used by researchers for collecting data. The web-based questionnaires were distributed through E-mail designed to collect the relevant data from the public universities of Iraq including a number of deans, heads of departments, faculty members and principals of the execution units which seems to provide a corresponding sample for conducting data collecting and analyzing. An online questionnaire was distributed to around 342 employees, out of which 215 complete questionnaires were obtained. For analyzing the data, confirmatory factor analysis (CFA), structural equation modeling (SEM) were used. This study finds that HRD practices such as talent development, training and development, organizational development and career development have a positive and significant impact on organizational effectiveness. This study has confirmed the significance of HRD practices and how they are positively related to organizational effectiveness. The results of this study have the potential to help the decision makers of universities to develop effective HRD practices which will enable them to improve employees' competencies in enhancing organizational effectiveness. Also, this study recommends universities' managers to use effective HRD practices which are aimed at building excellent employees' competencies and increase the integration between human resource development and organizational effectiveness.

**Keywords:** human resource development; talent development; training and development; organizational development; career development; organizational effectiveness.

### **Introduction**

Human resource development is a relatively new area of professional practice and academic study. Over the past two decades, human resource development has become the fastest growing area of management development, due to the great interest of organizations in the face of intense competition and changes in the business

environment (Kareem, 2017). HRD has advanced beyond the narrow view of simply training and has evolved into a more complete approach to learning and developing knowledge at the individual and organizational level (Mittal, 2013). Leonard Nadler (1969) was the first to use the term HRD and he described it as a group of related activities completed in a given time period to produce a behavioral change. HRD can be defined as the process of developing and/or unleashing human expertise through organization development and personnel training and development for the purposes of improving performance (Swanson, 2001). The twenty-first-century challenges such as globalization, technology, and demographic changes have forced the organizations to strive constantly searching for innovative ways to achieving the superior results in terms of efficiency and effectiveness and improving competitiveness with current employees. As a result, the concept of human resource development (HRD) has emerged as a strategy to improve the competence of the employees and for enhancement of organizational effectiveness. The literature and previous studies (Bokeno, 2011; Swanson & Holton, 2009) have confirmed that the success of an organization is extremely based on the skills, knowledge, and experience of its employees, which is a basic product of human resource development capability of that particular organization. Simonds and Pederson (2006) defined HRD as a combination of structured and unstructured learning and performance-based activities which develop individual and organizational competency, capability and capacity to cope with and successfully manage change. Federman (2006) stated that the concept of organizational effectiveness is concerning with issues such as the ability of an organization to access and optimal utilization of resources and consequently achieve its goals. The integrated use of HRD practices such as training and development, organizational development, talent development, and career development play key role in create new competencies, capabilities, and attitude that influence on employee's performance to achieve organizational goals (Collins & Clark, 2003).

In addition to this present study also is modern which tries to meet the need of the higher education sector in Iraq to such studies, for its influential role in society. The fact that this sector has the components of the application of colleges and institutes of government and private colleges. The lack of empirical research and there are no researches or studies have specifically dealt with examining how HRD practices effect on organizational effectiveness practically, in universities and institutes level. This study tries to address this gap.

### ***Objectives of the study***

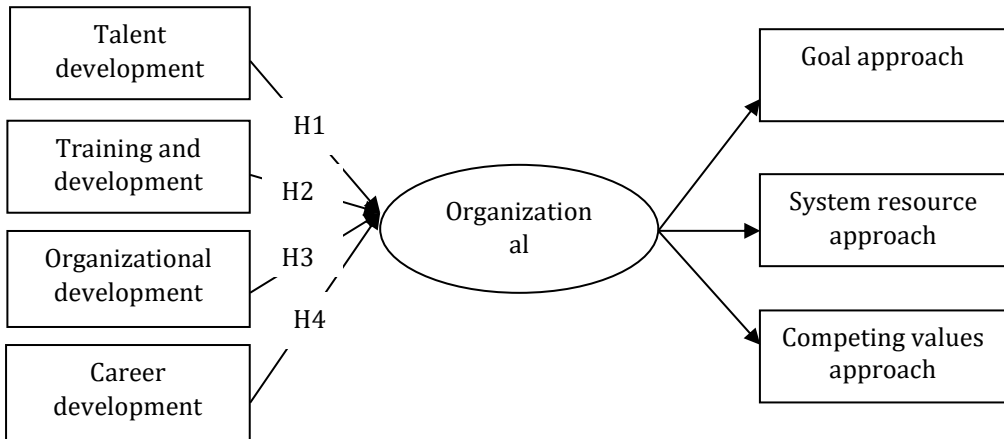
1. To assess the theoretical significance of human resource development and organizational effectiveness which are considered critical factors in the success of the organizations.
2. To examine the impact of human resource development practices on organizational effectiveness.

### ***Research questions***

1. Does talent development positively relate to organizational effectiveness?
2. Do training and development positively relate to organizational effectiveness?
3. Does organizational development positively relate to organizational effectiveness?
4. Does career development positively relate to organizational effectiveness?

## Research model

The paper demonstrates the hypothesized research model which proposes that HRD constructs i.e. talent development, training and development, organizational development, and career development have a positive influence on organizational effectiveness. As it is showing in figure (1).



**Figure 1. A proposed research model**

## Literature review

### Human resource development

The concept of human resource development was introduced in 1969 by Leonard Nadler through their participation in the Miami conference of the American society of training and development. Nadler (1969) states that there had been many scholars and researchers entering the HRD field and they deserved to have a definition of the subject. Lee (2001) and Wang and Swanson (2008) argue that the definition of human resource development has long been challenged to define as it considers as a part filed of the human resources discipline. Ruona (2002) argues that human resource development definitions have been given attention in the literature for more than four decades. There are wide varieties of approaches that researchers attempted to define HRD. Although a universally accepted definition of HRD is non-existent. Human resource development is a relatively new area of professional practice and academic study. Over the past two decades, human resource development has become the fastest growing area of management development, due to the great interest of organizations in the face of intense competition and changes in the business environment (Kareem, 2017). HRD has advanced beyond the narrow view of simply training and has evolved into a more complete approach to learning and developing knowledge at the individual and organizational level (Mittal, 2013). Swanson (2001) defines HRD as the process of developing and/or unleashing human expertise through organization development and personnel training and development for the purposes of improving performance. McLagan and Suhadolnik (1989) define HRD as the integration of training and development, career development, organizational development to improve individual,

group, and organizational results. Rao (1985) defines HRD as a process that organizations must continuously use to assess the skills, abilities, and knowledge of human capital in order to proactively enable employees to have the required skills to meet the present and future job requirements within the organization. Wang et al. (2017) define HRD as any process or activity that, either initially or over the long term, has the potential to develop adult work-based knowledge, expertise, productivity, and satisfaction, whether for personal or group/team gain, or for the benefit of an organization, community, nation, or, ultimately, the whole of humanity.

As noted that the defining HRD is characterized in difficulty and complexity that reflects the evolving nature of the field. Also, the definition of Human Resource Development is argumentative, it has traditionally been defined in the context of the individual, the work team, or the organization". The different definitions of HRD let to fully understand the term and also to recognize the fact that different sources describe this term in different ways. For the purpose of this study, the following definition of HRD will be used: HRD is a systematic process of educating and acquiring new skills, knowledge, and abilities of individual, group and organizations through the application of talent development, training and development, career development, and organizational development initiatives.

### ***Organizational effectiveness***

The effectiveness is a powerful and critical concept of organizations as a result of rapid development and extreme competition for the survival and continuity. Many researchers and scholars (Abu El Khair, 2016; Cameron, 1980; Gold, Malhotra, & Segars, 2001) have strived to find a theory adopted by the organizations to be effective, but the subject of effectiveness is complex and this led to a lot of differences in the definition of the concept and identify the measurements of the organizational effectiveness that may be due to the difficulty of identifying the phenomena surrounding the effectiveness of the organizations. Barnard (1938) is the first researcher who has attempted to provide a definition of organizational effectiveness where he defined the organizational effectiveness is any activity associated with the success of achieving the objective for which this activity was established.

Cameron (1986) argues that in the literature, there is still significant lack of agreement on the definition of this concept. There are wide varieties of approaches that researchers attempted to define organizational effectiveness as (Georgopoulos & Tannenbaum, 1957) define organizational effectiveness as the extent to which an organization as a social system, given specific resources and means, accomplishes its objectives without incapacitating its means and resources and without placing undue strain upon its members. Daft (1992) states that OE is the ability of the organization to invest its environment in acquiring or obtaining scarce and valuable resources for its functioning. Roy and Dugal (2005) argue that OE is the net satisfaction of all constituents in the process of gathering and transferring inputs into outputs in an efficient manner. Tabeel (2013) defines OE as the ability of the organization to achieve its objectives under the specified resources available through achieving job satisfaction and ensuring the survival and development of the institution.

In this context, the researcher defines the organizational effectiveness as the ability of an organization to achieve its goals, stability, productivity of the organization, adapt to

the changing business environment, workforce development, and optimal utilization of resources. Cameron (1980) states that the evaluating of organizational effectiveness requires selecting the appropriate criteria. The literature and scholars have developed varieties of models to indicate and measure the organizational effectiveness such as (Shah, 2016) in his study proposed six indicators to measure the organizational effectiveness are: motivation, organizational commitment, organizational attachment, organizational innovation, consensus and job involvement. Kaur (2013) proposed four indicators to measure the organizational effectiveness: production, efficiency, satisfaction, and organizational development. Gold et al. (2001) state the dimensions of organizational effectiveness include innovation, coordination, and rapid commercialization of new products.

#### *Organizational effectiveness approaches*

Balduck and Buelens (2008), as well as Shoo (2016) argue that organizational effectiveness can't be measured by a single approach only, as it is a multi-approach concept. In the literature, there are four key approaches for measurement of organizational effectiveness: goal approach; system resource approach; strategic constituency approach; and competing values approach.

#### *Goal approach*

In light of this approach, the effectiveness of the organization is seen to the extent that the organization achieves its objectives. This approach is based on the basic idea that all organizations have a number of goals and become criteria for measuring effectiveness. This approach focuses on the objectives that the organization is trying to achieve and an attempt to guess the extent to which these goals are achieved (Lee, 2006; Robbins, 2003).

#### *System resource approach*

This approach focuses on the organization's ability to exploit its environment to obtain scarce and valuable resources, for the purpose of using it effectively to achieve the goals set and to maintain balance and stability (Cameron, 1978). Wolfe and Putler (2002) and Banat (2002) state that the effectiveness of the organization in this approach is primarily related to the extent to which that organization is able to obtain or to attract the necessary resources to ensure its sustainability and maintain its survival. The higher organization's performance in the process of obtaining the necessary resources from the external environment, it leads to efficiency. So, OE its ability to collect the best sources from the external environment, thus focusing on inputs (resource mobilization) as a basic measure of effectiveness rather than output.

#### *Competing values approach*

This approach assumes that there are no ideal criteria for measuring organizational effectiveness so. organizations can be evaluated in different ways depends on the personal values of the evaluators (Quinn & Rohrbaugh, 1981). Also, Robbins (1990) states that this approach assumes that people within the organization have goals may be based on personal values, preferences, and interests and therefore cannot arrive at a consensus on which goals take precedence over others. Campbell (1977) proposes

seventeen variables of competing values approach of organizational effectiveness and linked together to create three basic sets of competing values. Quinn and Rohrbaugh (1981) provide the three competing values. The first set of values is to deal with flexibility versus control. The second values are to deal with people versus the organization and, the third set of values is to deal with means versus ends. For the purpose of this study, the researcher designed three approaches to measure the organizational effectiveness based on some literature such as (Abu El Khair, 2016; Banat, 2002; Gold et al., 2000; Rahman, Ng, Sambassivan, & Wong, 2013). First, goal approach measures the extent to which, the organization is effective in achieving its stated goals. Second, system resource approach measures the ability of the organization to acquire necessary resources from its environments. Third, a competing values approach measures the organization's ability to adaptation to the changing business environment and emphasis on optimization of resources, stability, and flexibility.

### **Human resource development contributions to organizational effectiveness**

Several researchers and scholars of human resource development tried to examine and highlight the relationship between human resource development and organizational performance and effectiveness. Otoo and Mishra (2018) explore the influence of human resource development practices on organizational effectiveness by considering the role of employee competencies. He found out that HRD practices have an impact on employee competencies in enhancing organizational effectiveness. Shoo (2016) examines the impact of human resource development interventions on organizational effectiveness by means of employee competencies. He stated that HRD interventions have a significant impact on the building of employee competencies which are positively improving organizational effectiveness. Alagaraja, Cumberland, and Choi (2015) investigate the effects of human resource development contributions on organizational performance. Both types of HRD contributions strategic value and transaction effectiveness significantly enhanced organizational performance. Alagaraja (2014) states that both HRD and HRM have a critical contribution to the development, furthering of knowledge, and application of theories in improving HR service delivery and its impact on organizational performance. Alagaraja (2013) argues that the significance and power of human resource development based on its ability to engage and respond to stakeholder expectations and involvement in organizational change efforts. Nilsson and Ellstrom (2012) state that human resources development strategies in an organization play a key role in improving employees' competencies that contribute, in aggregate to organizational performance.

### ***Components of human resource development***

The literature and scholars have developed varieties of components to indicate the HRD. Hassan (2007), and Potnuru and Sahoo (2016) argue that HRD has three elements i.e. training and development, organizational development, and career development. Tomé (2011) states that HRD has four elements such as training and development, organizational development, and career development and performance development. The varieties of components of HRD allow researchers the flexibility to explore and identify specific constructs and variables on different aspects of shaping and skilling for scholarly inquiries. This study examines the effect of four HRD practices: talent development, training and development, organizational development and career

development on organizational effectiveness. For the purpose of testing the demonstrated hypotheses H1, H2, H3 and H4 which are discussed below.

### ***Talent development and organizational effectiveness***

Talent management and talent development have been increased as important to the success of organizations. As results in globalization, mobile workforce, and empowered workforce. Talent professionals today work in a dynamic environment that requires developing of talent strategy if the organization wants to increase the potential of its workforce (Fitzgerald, 2014). Employee talent development is one of the challenges that has become a potential main source of competitive advantage and sustainability. It is significant for the organization and plays a key role in identifying and encouraging their workforce who have the capability and potential (Ingham, 2006). Gallardo-Gallardo, Dries, and González-Cruz (2013) state that talent can be demonstrated as a concept of natural ability, mastery, commitment, and fit, which are evident as innate abilities, acquired skills, knowledge, and attitudes whereby better outcome can be achieved. According to Annakis, Dass, and Isa (2014) talent development is a systematic process of developing and integrating new workers, developing and retaining current workers, and attracting highly skilled workers to work for a company and it's beneficial to the organization. Lewis and Heckman's (2006) state that talent development is a collection of practices of human resource department within the organization which are concerning with rewarding, sourcing and developing the talent of the employee. According to Jantan, Hamdan, and Othman (2009), talent management can be defined as a consequence to ensure the right person is in the right job; process to ensure leadership continuity in key positions and encourage individual advancement, and decision to manage supply, demand, and flow of talent through a human capital engine. In this context, the researcher defines talent development as a systematic process of attraction, identification, development, and retention of those individuals with high potential who are of particular value to an organization. Based on the above discussion, the first hypothesis can be derived as follows:

*H1: Talent development has a positive influence on organizational effectiveness.*

### ***Training and development and organizational effectiveness***

Training and deployment play a key role in the achievement of an organizational goal through integrating the interests of the organization and the workforce. Nowadays training and development is a very significant factor in the business world because it enhances the efficiency and the effectiveness of both employees and the organization (Ghafoor Khan, Khan, & Khan, 2011). Noe (2001) states that organizations that adopt training and development practices are able to retain their customers, suppliers, employees, shareholders, and other stakeholders in the long run as they are deemed more trustworthy and better custodians of the interests of the various stakeholders. Biswas (2012) argues that training and development is fundamental for the superior performance of employees, improvement of employees' ability to adapt to the changing and challenging business environment and technology for better performance, increase employees' knowledge and ability to develop creative and problem-solving skills. Training and development is a part of the human resource development function. Training and development have an important role to address the gap between current performance and expected future performance of the employees (Weil & Woodall,



2005). Sims (2002) states that training focuses on current jobs while development makes employees for possible future jobs. Essentially, the training and development aims to enhance the organization's overall goal. Armstrong (2003) defines the training and development is a systematic process designed by the organization to improve the current and future employee performance by increasing an employee's skills, knowledge and ability to perform through learning activities, changing the employee's attitude and behavior.

In this context, the training and development is a systematic process of increasing an employee's ability to perform through learning and changing the employee's attitude and behavior and improving their skills and knowledge in order to enable the organization to achieve its strategic objectives. Human resources departments should pay efforts to the training and development programs to their organizational success. Also, training programs may be led to improved profitability, positive attitudes toward profit orientation, improve the job knowledge, ability, and skills at all levels of the organization, motivate the employees and engage them with organizational goals. Based on the above contribution, the second hypothesis can be derived as follows:

*H2: Training and development have a positive influence on organizational effectiveness.*

### ***Organizational development and organizational effectiveness***

In today's rapidly changing business environment and global competition, organizations are facing difficulties in operating at an optimum level. Hence, the emergence of organizational development as today's changing environment in order to compete, survival and perform a wide range of activities in adapt to environmental changes (Roodposhti, 2007). Azari (2014) state that organizational development is a systematic use of behavioral science to develop the planned progress, improve, and emphasis on strategies, structures, and organizational processes for improvement of organizational effectiveness. According to Dobrai and Farkas (2015), organizational development is a planned wide-range effort, that includes the organization as a whole, and it aims to enhance effectiveness and sustainability of the organization through imperative planning into organizational processes. Al-aldaejia (2016) argues that organizational development is a comprehensive and integrated concept that is used to address the insufficiency and ineffectiveness of the organization. It is a planned effort to change the attitudes, culture, values of individual and collective work, leadership, organizational structure technology, and decision-making. It is also an institution-based approach as a whole system, provides adaptation to the changes in the environment. Omayan (2005) stated that organizational development is a long-term effort to improve the organization's capacity to solve problems and renew its operations through comprehensive development of the Organization's climate, with particular emphasis on increasing the effectiveness of its workforce by using human resource development practices. In this context, the researcher defines organizational development as is a system-wide application is designed to develop the employees through changing their values, skills, and behavior, as well as change the used technology and organizational structure. Based on the above discussion, the third hypothesis can be derived as follows:

*H3: Organizational development has a positive influence on organizational effectiveness.*

### ***Career development and organizational effectiveness***

In an organizational context, career development is basically considered as a crucial human resource development function (Osman, Ismail, Nowalid, & Adnan, 2014). Prince (2005) argues that career development is a function of human resource development which focuses on developing and enhancing the organization's workforce in light of both the organization and individual's needs. Amah (2006) defines career development is the process of promoting organizational employees' knowledge, abilities, and skills to prepare them for new opportunities and challenges.

Career development is basically negotiable values, expectations, and objectives of employees related to their career advancement, combined with the needs and goals of the organization in order to create an efficient working relationship among them (Orpen, 1994). Rhoades and Cameron (1999) state that career opportunities and promotion have a positive effect on organizational support. Career development positively impacts on career success and career satisfaction. Chetana and Mohapatra (2016) argue that career development entails initiatives from both the individual and organization. The organization must be aware of its individuals' career needs. Individuals should identify their knowledge, abilities, skills, and interest in order to explore their career path. So, organizations while setting up a strategic career development program should take on account the competencies that can enhance the employee's career. In this context, career development is a lifelong process of identifying the individual interests, competencies, activities, and job assignments required to develop individual employee skills for future needs of the organization. Based on the above contribution, the fourth hypothesis can be derived as follows:

*H4: Career development has a positive influence on organizational effectiveness.*

### **Research methodology**

#### ***Research design, sampling and data collection***

This research was used quantitative design. A quantitative design is suitable to use in hypotheses testing of the relationship between independent and dependent variables (Sekaran & Bougie, 2013). The purpose of this quantitative design study was to determine the extent to which does HRD practices i.e. talent development, training and development, organizational development and career development influence organizational effectiveness. This study adopted the survey method to collect the primary data. Creswell (2013) argues that researchers and scholars adopt a quantitative research often employ survey method because it is considered an economical and efficient method to gather quantitative data concerned to a given population for the purpose of generalizing the result. Quantitative research commonly employs survey method as it is considered the most appropriate for collecting data. According to Grohmann and Kauffeld (2013) questionnaire is often used while adapting survey method. The survey was created by google-forms tool, which is commonly used by researchers for collecting data. The web-based questionnaires were distributed through E-mail designed to collect the relevant data from the public universities of Iraq including a number of deans, heads of departments, faculty members and principals of the execution units which seems to provide a corresponding sample for conducting data

collecting and analyzing. The questionnaire was distributed to around 342 employees, out of which 215 complete questionnaires were obtained, with response rate of 62.86 % of the respondents. The demographic data of the respondents are showed in table 1.

**Table 1. The demographic data of the respondents**

Item		Frequency	Percentage
Gender of the respondent	Male	165	76.74
	Female	50	23.25
Age of the respondent	20-30 years	34	15.81
	31-40 years	96	44.65
	41-50 years	65	30.23
	51-60 years	14	6.51
	More than 61 years	6	2.79
Designation	Executive	82	38.13
	Non-Executive	133	61.86
Educational achievements	Bachelor's Degree	26	12.93
	Master's Degree	87	40.46
	Ph.D. Degree	102	47.44
Work experience	Less than 5 years	31	14.41
	5-10 years	63	29.30
	11-20 years	89	41.39
	More than 21 years	32	14.88

Table 1 shows the demographic data of the respondents. Out of the 215 respondents, (76.74%) were males and (23.25%) females. The majority of the respondents (44.65%) were in the age category within 31-40 years. Most of the respondents at (61.86%) were non-executive designation and (38.13) were an executive designation. The majority of the respondents (47.44%) were holders of Ph.D. degree while (40.46%) were holders of master's degree and (12.93%) were holders of bachelor's degree. A little lower than half of the respondent (41.39%) had work experience 11-20 years.

### ***Instrumentation development and measures***

The questionnaire comprises of two sections. Section one collects participant & institutional background information of the respondents such name of the university, age, gender, a position held, educational attainment, work experience, and organization size. Section two includes questions are designed to measure the variables of the study by using a comparative seven-point Likert-type scale ranging from 1-7, in which, 1 = strongly disagree, 7 = strongly agree. Moreover, 20 items are designed to measure HRD constructs as follows: 5 items are developed by Mahfoozi, Salajegheh, Ghorbani, and Sheikhi (2018) were used to measure talent development as the organization's ability to attraction, identification, development, and retention of talented individuals. 5 items are adopted from Asfaw et al. (2015) were used to measure training and development as the organization's ability to increase an employee's ability perform through learning, changing the employee's attitude and increasing their skills and knowledge in order to enable the organization to achieve its strategic objectives. Organizational development was measured by 5 items developed by Rastgoo (2016) and Zadeha and Ghahremanib

(2016) which measure the organization's ability to improve, reinforcement of the strategies, structures, and processes in order to improve organizational effectiveness. Career development was measured by 5 items adopt from Weng and McElroy (2012) and Pei (2017) were measured the organization's ability to identifying the individual interests, competencies, activities, and job assignments required to develop individual employee skills for future needs of the organization. Finally, 12 items are designed to measure the organizational effectiveness constructs which are goal approach, system resource approach, and competing values approach. Also, Cronbach's alpha coefficient was used to evaluate the internal consistency of the scales where Cronbach's alpha coefficient for all the constructs ranges between 0.874 and 0.953 and it is considered acceptable which indicates that all the items are internally consistent. Table (2) shows detailed information regarding the variables, sources, number of the items and Cronbach's alpha as follows:

**Table 2. the study measures in regard to the sections of the questionnaire, sources, and Cronbach's alpha**

Sections	Name of the variable	Source	Number of items	Cronbach's alpha
Section one	Participant & institutional background information	Researcher developed	9	
Section two	Talent development	Mahfoozi et al. (2018)	5	0.946
	Training and development	Asfaw et al. (2015)	5	0.932
	Organizational development	Rastgoo (2016) Zadeha and Ghahremanib (2016)	5	0.947
	Career development	Weng and McElroy (2012) Pei (2017)	5	0.953
	Goal approach	Banat (2002)	4	0.931
	System resource approach	Abu El Khair (2016)	4	0.874
	Competing values approach	Gold et al. (2001) Rahman et al. (2013)	4	0.936

### **Data analysis procedure**

Data analysis was conducted to address the research questions, objectives and hypotheses. Data analysis was done by using Statistical Package for Social Science (SPSS) version 23 and the Analysis of Moment Structures (AMOS) software version 24. Before conducting data analysis, the data preparation was done on the completed questionnaires by editing, coding, entering and cleaning the data. Descriptive statistics such as the frequency and percentage, mean, standard deviation, were used to provided data summarization of demographic characteristics of respondents. Also, the Pearson correlation coefficient was used to describe the correlations among the variables. To purify the instrument items, confirmatory factor analysis (CFA) was carried out to

assess the validity and reliability of the instrument by using convergent and discriminant validity. Also, Cronbach's Alpha was used to examine the reliability of the scale items. The overall model fit was assessed using seven goodness-of-fit indices, namely the chi-square / degree of freedom ( $\chi^2/df$ ) ratio, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the Normed Fit Index (NFI), the goodness of fit index (GFI), the root means square error of approximation (RMSEA). In addition, Partial least squares structural equation modeling (SEM) was used to test empirically the proposed hypotheses. SEM is commonly used in the social sciences because of its ability to explain the relationships between unobserved constructs (latent variables) from observable variables (Henson & Roberts, 2006). SEM is comparable to common quantitative methods, such as correlation, multiple regression, and analysis of variance to estimate and test the relationships among constructs.

## Results

### *Descriptive statistics*

Table 3 presents a descriptive analysis of the data and the correlations matrix among variables. The means, standard deviations, and correlation matrix are presented. The mean score for HRD practices (TD, T&D, OD, CD) and organizational effectiveness constructs (GA, SRA, CVA) is located between (3.29-3.80) and standard deviation (1.48-1.62) that indicates a good implementation of HRD practices in enhancement organizational effectiveness of in the public universities of Iraq. Also, the results show that each of the constructs is positively and significantly correlated to each other.

**Table 3. Descriptive and correlation results**

	Mean	S. D	TD	T&D	OD	CD	GA	SRA	CVA
TD	3.29	1.59	1.000						
T&D	3.49	1.56	.778**	1.000					
OD	3.46	1.60	.777**	.823**	1.000				
CD	3.35	1.59	.755**	.795**	.832**	1.000			
GA	3.80	1.62	.733**	.839**	.859**	.788**	1.000		
SRA	3.44	1.48	.701**	.793**	.767**	.715**	.853**	1.000	
CVA	3.80	1.53	.629**	.694**	.703**	.695**	.771**	.743**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

TD=Talent Development, T&D=Training & Development, OD=Organizational Development, CD=Career Development, GA=Goal Approach, SRA=System Resource Approach, CVA=Competing Values Approach

### *Reliability and validity*

In this study and before testing the hypotheses reliability and validity of measurement scales were assessed by using confirmatory factor analysis (CFA) to estimate the convergent validity, discriminant validity and goodness of fit statistics. The reliability of the scales was evaluated using Cronbach's alpha coefficient. As it is seen on table 2, Cronbach's alpha coefficient for all constructs ranges between 0.874 and 0.953 and it is considered acceptable which indicates that all the items are internally consistent (Hair, Black, Babin, & Andreson, 2010). In order to determine the convergent validity, there are three important indicators of convergent validity are factor loadings (standardized

estimates), Average Variance Extracted (AVE) and Composite Reliability (CR). Hair et al. (2010) suggest that the items with loadings in between .50 to .70 can be maintained. This study investigates that the item loadings all exceeded the threshold value and statistically significant ( $p < 0.05$ ). (see table 3). Composite reliability (CR) for all constructs ranges between 0.872 and 0.955 which are above 0.50 that indicates that all the constructs have a good level of composite reliability (CR) as recommended by (Hair, Sarstedt, Ringle, & Mena, 2012). The average variance extracted (AVE) value for all the constructs are in the range between .618 to .808 which are above the threshold value .50 which is suggested by (Hair et al., 2010).

**Table 4. Constructs evaluation**

Constructs	Measurement Items	Factor Loading	CR	AVE	P. Value
Talent Development	TD5	0.852	0.947	0.780	.000
	TD4	0.884			.000
	TD3	0.896			.000
	TD2	0.898			.000
	TD1	0.852			.000
Training & Development	T_D5	0.807	0.932	0.732	.000
	T_D4	0.902			.000
	T_D3	0.886			.000
	T_D2	0.855			.000
	T_D1	0.827			.000
Organizational Development	OD5	0.9	0.948	0.785	.000
	OD4	0.9			.000
	OD3	0.904			.000
	OD2	0.875			.000
	OD1	0.85			.000
Career Development	CD5	0.854	0.955	0.808	.000
	CD4	0.952			.000
	CD3	0.904			.000
	CD2	0.922			.000
	CD1	0.861			.000
Goal Approach	GA4	0.901	0.932	0.789	.000
	GA3	0.837			.000
	GA2	0.904			.000
	GA1	0.91			.000
System Resource Approach	SRA4	0.883	0.872	0.618	.000
	SRA3	0.733			.000
	SRA2	0.722			.000
	SRA1	0.797			.000
Competing Values Approach	CVA4	0.904	0.936	0.771	.000
	CVA3	0.94			.000
	CVA2	0.824			.000
	CVA1	0.841			.000

CR =Composite Reliability and Average, AVE=Variance Extracted

Fornell and Larcker (1981) method was used to assess discriminant validity. He suggested that to support for discriminant validity if the square root of the AVE for a latent construct is greater than the correlation values among all the latent variables. Table (5) shows that the square root of the AVE values of all the constructs are greater than the inter-construct correlations which supports the discriminant validity of the constructs. Also, the goodness-of-fit statistics of the measurement model indicated a good fit to the data (CMIN/df=1.903, GFI=.0.913, TLI=.909, CFI=.901, RMSEA=.084). Thus, the measurement model reflects good construct validity and desirable psychometric properties.

**Table 5. Discriminant validity of the constructs**

	TD	T_D	OD	CD	GA	SRA	CVA
TD	<b>0.883</b>						
T_D	0.823	<b>0.858</b>					
OD	0.816	0.857	<b>0.886</b>				
CD	0.785	0.827	0.866	<b>0.899</b>			
GA	0.798	0.836	0.821	0.850	<b>0.880</b>		
SRA	0.788	0.848	0.871	0.808	0.857	<b>0.795</b>	
CVA	0.0685	0.744	0.754	0.737	0.841	0.745	<b>0.886</b>

Notes: Bold values in diagonal represent the squared root estimate of AVE. TD=Talent Development, T&D=Training & Development, OD=Organizational Development, CD=Career Development, GA=Goal Approach, SRA=System Resource Approach, CVA=Competing Values Approach.

### **Test of hypotheses**

The proposed model indicates that HRD constructs i.e. (talent development, training and development, organizational development and career development) have an influence on organizational effectiveness. Structured equation modeling (SEM) was used to test this hypothesized model. The results (Table 6) show that all the four hypothesized relationships between HRD practices and organizational effectiveness are significant and thus all the hypotheses are supported. Moreover, the positive significant relationships include, (1) talent development and organizational effectiveness ( $\beta=0.13$ ,  $p<0.044$ ) supporting H1; (2) training and development and organizational effectiveness ( $\beta=0.57$ ,  $p<0.000$ ) confirmed H2; (3) organizational development and organizational effectiveness ( $\beta=0.63$ ;  $p<0.000$ ) that supports H3; (4) career development and organizational effectiveness ( $\beta=0.20$ ,  $p<0.000$ ) confirming H4.

**Table 6. Result of hypothesis analysis**

No.	Hypotheses	Beta Coefficient	P. Value	Result
H1	Talent development→ Organizational effectiveness	0.13	0.044	Supported
H2	Training & development→ Organizational effectiveness	0.57	0.000	Supported
H3	Organizational development→ Organizational effectiveness	0.63	0.000	Supported
H4	Career development→ Organizational effectiveness	0.20	0.003	Supported

## Discussion and conclusions

The lack of empirical researches or studies have specifically dealt with examining how HRD practices effect on organizational effectiveness practically, in universities and institute level. This study tries to address this gap. The aim of this study is to investigate the influence of HRD practices i.e. (talent development, training and development, organizational development and career development) on organizational effectiveness in the context of public universities of Iraq. The results show that all the HRD practices are significant predictors of organizational effectiveness. The results confirmed that all the four hypothesized relationships between HRD practices (talent development, training and development, organizational development and career development) and organizational effectiveness are significant and thus all the hypotheses are supported. Moreover, the results verified the hypothesis H1 by showing that talent development has a significant influence on organizational effectiveness. Which supports opinions of Bayyurt and Rizvi (2015). The second hypothesis H2 also have similar result shows a significant positive relationship between training and development and organizational effectiveness. Which is in line with the suggestions of Asfaw et al. (2015). The results confirmed the third hypothesis H3 by showing that organizational development significantly affects organizational effectiveness. Which supports the opinion of Al-aldaea (2016). The results of the final hypothesis H4 confirms that career development has a significant influence on organizational effectiveness. Which is in line with the opinions of Lyria, Namusonge, and Karanja (2017).

In general, findings of this current study are in the line with Alagaraja et al. (2015) and Nilsson and Ellstrom (2012) stated that human resources development practices in an organization play a key role in improving employees' competencies that enhance to organizational performance. Findings support that if the universities develop an effective HRD program for their employees to improve their knowledge skills and abilities that led to enhance organizational performance.

## *Theoretical contributions of the study*

Although, HRD and organizational effectiveness have drawled attention in the literature but, there is a lack of empirical researches or studies have specifically dealt with examining how HRD practices effect on organizational effectiveness practically, in universities and institute level. Therefore, this study tries to address the gap and under-explored issues in the literature in several ways. First, this study developed an empirical research model for the literature and empirical studies in the field of HRD practices, organizational effectiveness, and the link between HRD practices and organizational effectiveness. Second, this study measured two important organizational processes. Thus, it shows that HRD and organizational effectiveness are measurable and applicable processes. Third, the study attempts to empirically test the impact of HRD practices on organizational effectiveness. The findings suggest that HRD practices i.e. (talent development, training and development, organizational development and career development) have a significant positive impact on organizational effectiveness. Thus, this study provides a better understanding of the relationship between HRD and organizational effectiveness.



**Managerial implications of the study**

In terms of managerial implications, this study has confirmed the significance of HRD practices and how they are positively related to organizational effectiveness. The results of this study have the potential to help the decision makers of universities to develop effective HRD practices which will enable them to improve employees' competencies in enhancing organizational effectiveness. Also, this study recommends universities' managers to use effective HRD practices which are aimed at building excellent employees' competencies and increase the integration between human resource development and organizational effectiveness. Lastly, this study emphasizes the important role of HR managers in stimulating the employee's skills, knowledge, and abilities which are necessary to perform the required job efficiently.

**Limitations and future research**

Despite the significant contributions of this study but, it has some limitations that need to be addressed. First, this study focuses on the Iraqi public universities context, which may be different from others. Second, this study adopts a cross-sectional research method for data collection, which does not allow the researcher to examine the causality of the relationships between HRD and organizational effectiveness in greater depth. Finally, this study is limited because it focuses on four HRD practices as the major predictors of organizational effectiveness, other HRD practices may be significantly explained organizational effectiveness. In this regard, future research may include other potential practices of HRD and other attributes of organizational effectiveness. In addition, the possible mediating role of other variables, such as dynamic capabilities the relationship between HRD and organizational effectiveness.

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### Appendix 1

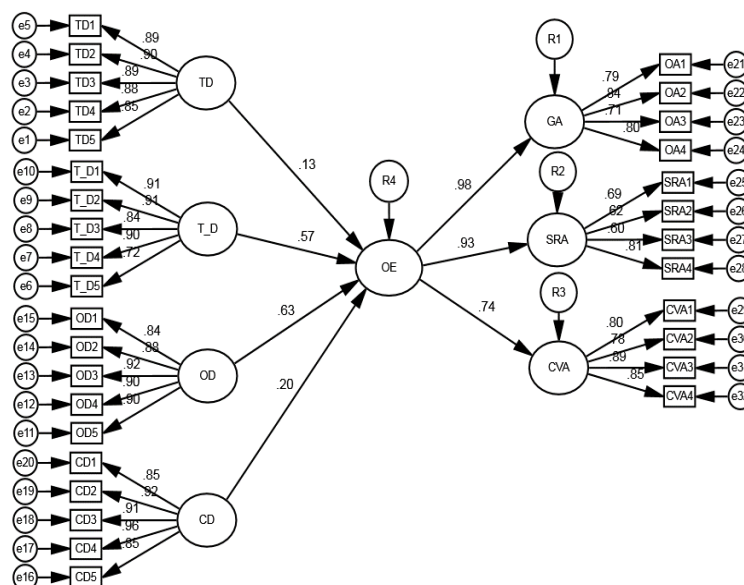


Figure 1. The SEM model analysis

### Appendix 2. List of measurement items

#### HRD practices:

##### 1. Talent Development

- TD1. Our university\institute attracts and recruit the right talent  
TD2. Our university\institute identifies existing talent  
TD3. Our university\institute nurtures and develop talent  
TD4. Our university\institute ensures the talent engagement  
TD5. Our university\institute ensures the talent retention

##### 2. Training and Development

- T&D1. Our university\institute has effective training and development programs  
T&D2. The activities of training development programs provided enable to improve skills, knowledge, attitude change, new capability of the employee.

T&D3. The activities of training programs provided help to increase job satisfaction and work efficiency.

T&D4. Our university\institute uses a modern training and development methods and tools.

T&D5. Evaluate the trainees' overall satisfaction with the training program.

### ***3.Organizational Development***

GD1. Our university\institute makes efforts to development of human resources according to organizational change

GD2. Our university\institute encourages the change management

GD3. Our university\institute ensures the organizational restructuring

GD4. Our university\institute encourages the teamwork

GD5. Our university\institute encourages the problem-solving culture

### ***4.Career Development***

CD1. The organizational structure of the university\institute facilities the career planning and development

CD2. Our university\institute offers career counseling.

CD3. Our university\institute gives training to help develop my career

CD4. Our university\institute has a fair promotion

CD5. Our university\institute ensures the growth of remuneration.

## **Organizational effectiveness:**

### ***1.Competing Values Approach***

CVA1. Our university\institute makes efforts to improve the productivity

CVA2. Our university\institute adapts to the changing environment

CVA3. Our university\institute makes efforts to the optimization of resources

CVA4. Our university\institute makes efforts to the stability

### ***2.Goal Approach***

GA1. Our university\institute ensures goal achievement

GA2. Our university\institute has an effective strategic planning

GA3. Our university\institute encourages the innovation

GA4. Our university\institute makes efforts improve the quality

### ***3.System Resource Approach***

SRA1. Our university\institute has the ability to acquire resource

SRA2. Our university\institute has good physical infrastructures and equipment

SRA3. Our university\institute ensure the accreditation

SRA4. Our university\institute encourages the organizational health

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