Designing a Human Resources Improvement Model Based on Cloud Computing (Case Study: Tejarat Bank)

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ARTICLE INFO

ABSTRACT

Today, improving human resources is one of the most used areas of cloud computing in organizations. Because on the one hand, it has implementation complexities and diverse systems, and its implementation requires the use of numerous software, and on the other hand, it is possible to use the human resources services of organizations. The aim of the current research was to design a human resource improvement model based on cloud computing in Tejarat Bank. The research method is applied and descriptive, which was done with a mixed exploratory approach (qualitative-quantitative). The statistical population in the qualitative stage was 30 people from banking and university experts who were selected by a purposeful judgment method, and in the quantitative stage, all the experts of Tejarat Bank were 5998 people. To identify the components of human resource improvement, the Delphi method was used in four rounds, and to design the model, the structural equation method with Smart PLS3 software was used. Delphi results showed that human resources improvement based on cloud computing in Tejarat Bank includes 46 components in the form of 4 dimensions (educational improvement, professional improvement, organizational improvement, and individual improvement). Also, based on the results of structural equation modeling, it can be said: the dimensions of educational improvement, professional improvement, organizational improvement, and individual improvement have a positive effect on the improvement of human resources in Bank Tejarat at the rate of 0.864, 0.571, 0.701, and 0.622, respectively.

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1. Introduction

$\mathcal{I}$n today's era, the most important characteristic of organizations is change. In such a situation, the importance of the role of human resources in organizations is undeniable, and human resources are the most effective tools to achieve predetermined goals. One of the ways for organizations to achieve their goals is to improve human resources (Tortia et al., 2022: 221). On the other hand, the administrative systems of organizations have expanded more and more in accordance with the ever-increasing expansion of communications and the emergence of various communication flows, so the secret of organizations' survival is to equip organizations with new competitive tools, including cloud computing (Yuan & Chayanuvat, 2021: 150). Cloud computing is used in providing various organizational solutions. The improvement of human resources is one of the widely used areas of cloud computing in organizations, because on the one hand, it has implementation complexities and diverse systems, and its implementation requires the use of numerous software, and on the other hand, it is possible to use the human resources services of organizations (Mahdavi et al., 2022: 114; Abedini et al., 2022: 7). Studies show that organizations in developed countries have started using cloud computing to improve human resources and it is expected that a large number of organizations will rely on cloud computing to improve human resources by 2022. Therefore, in order to achieve their goals, the organizations of our country should pay more attention to the improvement of human resources based on cloud computing. Banks, like other organizations, need to use cloud computing in the improvement of human resources, because paying attention to the improvement of human resources in addition to financial assets distinguishes banks from each other and cloud computing enables banks through better budget management and more appropriate allocation. Resources to benefit from their human resources in a more effective way (Martineau et al., 2022: 349). But unfortunately, so far in the banking system, the field of human resources has not been given much importance, and currently only the

people themselves and colleagues have information about the ability of the employees inside the bank branches, and the decision-making managers do not have information in this field, while they have to make management decisions and this There are managers who need to have such information (Norouzi et al., 2022: 4). On the other hand, today, with the increase in the intensity of competition, many bank affairs have moved from the traditional form to digitalization, in such a case, many of the skills that the employees have will not be used in the future, and people's skills must also be changed in line with the developments. Therefore, recently, the use of cloud computing in improving human resources has attracted the attention of many bank managers. Bank Tejarat, as one of the state banks of the country, is not exempt from this and the findings show that the improvement of human resources based on cloud computing in Bank Tejarat has an average performance. Therefore, in order for Tejarat Bank to be able to compete better with its competitors in the banking industry and gain a good share of the market, it needs to have a local model to improve its human resources, so the purpose of this research is to design a model for improving human resources based on cloud computing in it is a commercial bank.

The implementation steps of this article are as follows: First, the authors will examine the concept of management improvement and its most important theories in Theoretical Framework, Second, after reviewing the research literature, the most important articles that examine the concept of management improvement, and their findings will be analyzed; Third, the research methodology and implementation steps of this article will be reviewed; Finally, the findings of article will be presented and compared with previous studies and provide the research suggestions.

2. Theoretical Framework; Improvement of human resources

Today, human resources management is one of the most essential tools in every organization to increase the efficiency of one of the production factors, i.e. human power. This importance will be more important in sectors where

human resources play a special role in production (Sepahvand & Bagherzadeh Khodashahri, 2021). The service sector will attach great importance to the management of this production factor due to the practical role of manpower in the production process. The importance of human resources in different service sectors is also not the same; considering the importance of finding the human dimension of development in recent years, many countries have emphasized human capital in their development plans (Misko et al., 2021).

1-2. Human resource improvement strategies

Different strategies can be used to set human resources improvement programs:

A. *Improvement based on the needs of human resources*: Assessing the needs of employees is an integral part of improvement planning, so the content of improvement that is formed through training can be adjusted. In this regard, it is necessary to form an improvement committee and act;

B. *Adjusting the content of the program according to the information of human resources*: the content of the improvement programs needs to be appropriate to the information of the employees in order to be useful in their training;

C. *Distribution of improvement information*: Human resources should be informed about the improvement programs as much as they can understand before the implementation of the improvement programs and be prepared with the artifacts of the program through the common information system in the organization. Therefore, before the implementation of the improvement program, holding meetings and various seminars double its success;

D. *Provision of financial credits and human resources for improvement programs*: The implementation of improvement programs requires financial and human resources. The financial aspect should be

proportional to the quality of the program. Also, in the human dimension, it is essential to have qualified and skilled human resources. Providing both resources appropriate to the program is effective in its success (Patrick, 2021).

E. *The agreement of the senior managers of the organization with the improvement*: according to the powers of the managers who have the authority to make the organization's policies, it is necessary for the experts to get the approval of the senior managers before implementing the improvement programs in order to operationalize the programs (De Alwis et al., 2022).

3. Literature Review

Apascaritei & Elvira (2022), conclued that Human resource management (HRM) systems have been extensively analyzed in academic research yet limited attention has been paid to the role of HRM dynamic capabilities (DC) and their impact on resources and practices, employee well-being and firm performance. Our study bridges this gap by defining a new categorization of HRM DC based on their ultimate aims: building knowledge, advancing social integration and developing reconfiguration-enhancing mechanisms. In parallel, the authors offer an integrative framework to shed light on how strategic human resource management (SHRM) can accelerate HRM DC development. Through this conceptual process model and typology of capabilities, the authors deepen the discussion around the core components of HRM systems, HRM DC, and their effects on resources and practices, employee well-being and performance. In practical terms, HRM DC represent a promising driver of sustainable long-term organizational growth by enabling firms to boost their strategic agility and capacity to navigate in the presence of environmental dynamism. Oktaviayu and Said (2022), conclued that: 1. Management play very important role in the development of Overloops; 2. the development

strategy obtained from SWOT analysis is in quadrant III. This strategy is carried out by Overloops by leaving conventional photography and switching to futuristic photography; 3. Overloops' strategy for post-pandemic stabilization are obtaining passive income and editing abroad content creator's videos.

Nugroho (2022), conclued that main objective of human resource management is to increase the contribution of human resources (employees) to the organization. It can be understood that all organizational activities in achieving its goals depend on the humans who manage the organization. Therefore, employees must be managed properly so that they can assist the organization in achieving the organizational goals that have been determined. To achieve the objectives of human resource management carried out by HR managers, and managers on all lines of the company and outsourcing. -Andrianto et al., (2022), conclued that Researchers often link SHRM with company performance, human capital and competitive advantage by using several theoretical approaches, including the resource-based view (RBV), social exchange theory (SET), and human capital theories. The reviewed articles treat the topic of SHRM differently, but, on the whole, they identify gaps that exist in SHRM research and demonstrate the importance of aligning HR practices vertically and horizontally. Phiri (2022), conclued that the National Assembly of Zambia which has its presence in all the one hundred and fifty-six (156) Constituencies through Parliamentary Constituency Offices. The study utilised quantitative research method. Data was collected from the study participants using a questionnaire. Collected data was analyzed using descriptive statistics and statistical inference (Pearson Correlation Coefficient and Multiple Regression Analysis). The Pearson Correlation Coefficient was used in order to find out the relationship between the variables and the Multiple Regression Analysis was used in order to find out the impact of independent variables on the dependent variable. The hy- pothesis test results revealed

that there was a relationship between all human resource management practices and organisational performance at the Na tional Assembly of Zambia. However, it was revealed that organisation and resourcing had a negative and weak, positive impact on organisational per- formance, respectively. Learning and development, performance and reward management and employee welfare had a significant impact on organisational performance. Jebelli et al., (2022), conclued that trust-building management methods in the Red Crescent Society include open communication, brainstorming, collaborative management, a supportive atmosphere, and effective strategies in the functional dimensions of the Red Crescent Society, including new leadership, behavioural assumptions of managers, as well as decision-making in terms of content, time, model, cognition, and approaches of transformative leadership, ethical and pure leadership, positive and servant leadership, and distributed and intellectual leadership. Imani et al., (2020), conclued that the components of organizational culture, leadership, professional competence were identified as effective factors on job satisfaction, organizational development, and job performance. Also, the components of the design or curriculum, data collection, disaggregation of program impacts, monetary data conversion, and program cost list, return on investment rate calculation, intangible benefits identification, and reporting were introduced as constituents. Conclusion: Therefore, one of the most important factors in this regard is the attention to the Return on Investment (ROI) as an important model in evaluating the effectiveness of training and improving human resources.

The innovation of this article can be examined from four aspects: approaches to improving human resources in Tejarat bank; the most important aspects of improving human resources in Tejarat bank; investigating the most important obstacles to improving human resources in Tejarat bank; explaining and investigating the most important consequences of improving human resources in Tejarat bank.

3. Methodology

This research was applied in terms of purpose and descriptive-survey in terms of execution method, which was conducted with a mixed exploratory (qualitative-quantitative) approach. In the qualitative stage, the statistical population consisted of 30 banking and university experts who had characteristics such as experience, suitability for the field of study, academic degree, employment in teaching at the university, research and authoring experience in this field, and were selected by a purposeful judgment method. In the quantitative stage, all the experts of Tejarat Bank of the Country were 5998 people, the sample size was determined as 360 people according to the table of Karajesi and Morgan, and a simple random method was used for sampling. To identify the components of human resource improvement based on cloud management, Delphi method was used in four rounds (Table 1) and structural equation modeling method with Smart PLS3 software was used to design the model.

The criteria of were used to measure the validity and reliability of the qualitative stage. In this research, the reliability was done through review by experts. In this way, in several cases, after conducting and implementing the interview, the initial semi-open questionnaire along with an analysis of the interview was provided to the interviewee to ensure the accuracy of the information obtained in the interview. For the criterion of stability, for this purpose, it was tried to describe the procedures under study, the context and conditions of the research in a detailed and precise manner by providing sufficient evidence and documents regarding the components of improving human resources based on cloud management. In fact, we tried to carefully record all the activities, including the work steps and how to collect and analyze the data. In terms of transferability, this criterion refers to the applications of the results of the research and acts in the direction of external validity, and in terms of verifiability, it means that the results of the research are confirmed and correct by the professor or researcher who has the role of guiding the work. This is done because the research process may be

influenced by the researcher's personal perceptions. In the quantitative stage, Cronbach's alpha coefficient and combined reliability (CR) tests were used to measure reliability, and for convergent validity, average root of the extracted variance (AVE) and divergent validity were used using the method. Thus, for each of the variables, Cronbach's alpha coefficient and composite reliability (CR) are shown in Table 5, the average root mean variance extracted (AVE) is shown in Table 6, and divergent validity is shown in Table 7. Finally, the criteria of Q^2 and R^2 have been used to fit the model.

4. Findings

At this stage, using the Delphi method, a semi-open questionnaire created by the researcher was given to 30 experts to reach a consensus.

Table 1. Delphi steps

Components	Round 1	Round 2	Round 3	Round 4	Result
New educational technology	7.97	7.97	7.97	7.97	Confirmed
Calculation of the cost and benefit of the training program	7.7	7.7	7.74	7.74	Confirmed
General motivation among employees	7.82	7.82	7.82	7.82	Confirmed
Promotion of job knowledge	7.32	7.32	7.32	7.32	Confirmed
Training based on needs assessment	7.60	7.60	7.60	7.60	Confirmed
Training based on the interests of human resources	7.03	6.85	--	--	Eliminated in round 2
Executive knowledge	7.69	7.69	7.69	7.69	Confirmed
Confidence in the training program	7.67	7.67	7.67	7.67	Confirmed
Support from top managers	7.00	7.00	7.00	7.00	Confirmed
Continuing education program	6.69	--	--	--	Eliminated in round 1
Learning strategies	7.85	6.80	--	--	Eliminated in round 2

Components	Round 1	Round 2	Round 3	Round 4	Result
Educational strategies	7.69	7.69	7.69	7.69	Confirmed
Access to information technology	7.64	—	—	—	Eliminated in round 1
Favorable organizational culture	7.30	7.30	7.30	7.30	Confirmed
Effective communication	7.08	7.08	7.08	7.08	Confirmed
Team building	7.92	7.92	7.92	7.92	Confirmed
Conflict management skills	7.90	7.90	7.90	7.90	Confirmed
Stress management skills	6.89	—	—	—	Eliminated in round 1
Time management skills	7.87	7.87	7.87	7.87	Confirmed
Knowledge management skills	7.80	7.80	6.63	—	Eliminated in round 3
Life planning	7.67	7.67	6.50	—	Eliminated in round 3
Career planning	7.50	7.50	7.50	7.50	Confirmed
Self management	7.49	7.49	7.49	7.49	Confirmed
Seek participation	6.87	—	—	—	Eliminated in round 1
Innovation	7.88	7.88	7.88	7.88	Confirmed
independence of action	7.53	7.53	7.53	7.53	Confirmed
Efficacy	7.60	7.60	7.60	7.60	Confirmed
Criticism	7.72	7.72	7.72	7.72	Confirmed
Interpersonal communication	7.60	7.60	7.60	7.60	Confirmed
Organizational Justice	7.54	7.54	7.54	7.54	Confirmed
Psychological factors	7.48	7.48	7.48	7.48	Confirmed
Moral and value factors	7.52	7.52	7.52	7.52	Confirmed
Available features	7.39	7.39	7.39	7.39	Confirmed
Responsibility	7.09	7.09	7.09	7.09	Confirmed
Professional commitment	7.62	7.62	7.62	7.62	Confirmed
Independent learning	6.56	—	—	—	Eliminated in round 1
Talent management	7.31	7.31	6.74	—	Eliminated in round 3

Components	Round 1	Round 2	Round 3	Round 4	Result
Mental strength and ability	7.51	6.87	---	---	Eliminated in round 2
The fundamental transformation of education	7.99	7.99	7.99	7.99	Confirmed
Comprehensive education	7.74	7.74	7.74	7.74	Confirmed
Individual, group and organizational counseling	7.05	7.05	6.89	---	Eliminated in round 3
Psychology of teaching and learning	7.89	7.89	7.89	7.89	Confirmed
Rethinking in-service training	7.54	7.54	7.54	7.54	Confirmed
Reducing waste in resources	6.79	---	---	---	Eliminated in round 1
Research and research activities	7.58	7.58	7.58	7.58	Confirmed
Establishing a learning organization	7.81	7.81	7.81	7.81	Confirmed
New educational technology	6.85	---	---	---	Eliminated in round 1
Calculation of the cost and benefit of the training program	7.60	7.60	7.60	7.60	Confirmed
General motivation among employees	8.17	8.17	8.17	8.17	Confirmed
Promotion of job knowledge	7.03	7.03	7.03	7.03	Confirmed
Training based on needs assessment	7.87	7.87	7.87	7.87	Confirmed
Training based on the interests of human resources	7.91	7.91	7.91	7.91	Confirmed
Executive knowledge	7.78	6.60	---	---	Eliminated in round 2
Confidence in the training program	7.67	7.67	6.51	---	Eliminated in round 3
Support from top managers	7.58	7.58	7.58	7.58	Confirmed
Continuing education program	7.90	7.90	7.90	7.90	Confirmed

Components	Round 1	Round 2	Round 3	Round 4	Result
Learning strategies	7.74	7.74	7.74	7.74	Confirmed
Educational strategies	7.90	7.90	7.90	7.90	Confirmed
Access to information technology	8.04	8.04	7.74	8.04	Confirmed
Favorable organizational culture	7.33	7.33	7.33	7.33	Confirmed
Effective communication	7.82	7.82	7.82	7.82	Confirmed
Team building	7.90	7.90	7.90	7.90	Confirmed

Source: Research findings

According to the level of consensus or agreement of experts for each component in table (1), a sufficient condition has been realized for all components. Therefore, the survey process is stopped. At this stage, the members of the expert group agreed with 46 components and these components were accepted based on the Delphi method. Further, based on table (2) with exploratory factor analysis, identification components were categorized into 4 dimensions (educational improvement, organizational improvement, individual improvement, professional improvement).

Table 2. Exploratory factor analysis

Components	Dimensions			
	Educational improvement	Organizational improvement	Personal improvement	Professional development
Q1	0.441	0.323	0.099	0.095
Q2	0.447	0.145	0.221	0.043
Q3	0.635	0.276	0.199	0.092
Q4	0.587	0.153	0.163	0.090
Q5	0.626	0.183	0.077	0.171
Q6	0.677	0.300	0.226	-0.171
Q7	0.491	0.169	0.381	-0.073
Q8	0.667	0.261	0.215	0.038
Q9	0.613	0.312	0.187	0.185
Q10	0.558	0.282	0.099	0.123
Q11	0.691	0.264	0.282	-0.013

Components	Dimensions			
	Educational improvement	Organizational improvement	Personal improvement	Professional development
Q12	0.479	0.324	0.355	0.193
Q13	0.127	0.652	0.199	0.235
Q14	0.274	0.753	0.357	-0.063
Q15	0.108	0.415	0.227	0.291
Q16	0.359	0.452	0.194	0.284
Q17	0.107	0.658	0.095	0.064
Q18	0.287	0.711	0.127	0.223
Q19	0.174	0.445	0.266	0.295
Q20	0.289	0.692	0.301	0.273
Q21	0.301	0.413	0.283	0.307
Q22	0.158	0.639	0.369	0.384
Q23	0.236	0.573	0.201	0.321
Q24	0.280	0.487	0.105	0.292
Q25	0.248	0.486	0.356	0.061
Q26	0.250	0.346	0.617	0.082
Q27	0.132	0.334	0.484	0.186
Q28	0.200	0.118	0.873	0.023
Q29	0.376	0.194	0.468	0.220
Q30	0.220	0.352	0.479	0.340
Q31	0.069	0.000	0.729	0.224
Q32	0.306	0.181	0.770	0.084
Q33	0.354	0.123	0.782	0.067
Q34	0.302	0.192	0.714	0.191
Q35	0.178	0.276	0.530	0.353
Q36	0.166	0.216	0.631	0.196
Q37	0.257	0.263	0.515	-0.002
Q38	0.316	0.171	0.420	0.092
Q39	0.164	0.104	0.249	0.689
Q40	0.244	0.373	0.170	0.465
Q41	0.281	0.255	0.358	0.553
Q42	0.270	0.128	0.383	0.772
Q43	0.182	0.321	0.229	0.455
Q44	0.295	0.117	0.365	0.691
Q45	0.060	0.215	0.229	0.608
Q46	0.309	0.174	0.102	0.565

Source: Research findings

Table 3. Explained variance

Factor	Special value			The sum of the squared factor loads (before rotation)			The sum of the squared factor loads (after rotation)		
	Total	Ratio of variance (in percent)	Cumulative percentage	Total	Ratio of variance (in percent)	Cumulative percentage	Total	Ratio of variance (in percent)	Cumulative percentage
1	20.120	64.521	64.521	20.120	64.521	64.521	8.844	28.225	28.225
2	2.621	2.642	67.163	2.621	2.642	67.163	7.457	21.210	49.435
3	2.274	2.562	69.725	2.274	2.562	69.725	6.920	15.044	64.479
4	1.601	2.449	72.175	1.601	2.449	72.175	3.395	7.696	72.175
5	0.995	2.149	74.323						
6	0.989	2.068	76.391						
7	0.985	1.854	78.246						
8	0.679	1.763	80.009						
9	0.967	1.533	81.542						
10	0.958	1.515	83.056						
11	0.951	1.414	84.471						
12	0.853	1.292	85.763						
13	0.811	1.163	86.926						
14	0.705	1.141	88.067						
15	0.697	0.962	89.029						
16	0.651	0.914	89.942						
17	0.595	0.860	90.803						
18	0.535	0.839	91.642						
19	0.525	0.792	92.434						
20	0.443	0.768	93.201						
21	0.420	0.693	93.894						
22	0.396	0.638	94.532						
23	0.386	0.624	95.156						

Factor	Special value			The sum of the squared factor loads (before rotation)			The sum of the squared factor loads (after rotation)		
	Total	Ratio of variance (in percent)	Cumulative percentage	Total	Ratio of variance (in percent)	Cumulative percentage	Total	Ratio of variance (in percent)	Cumulative percentage
24	0.364	0.522	95.678						
25	0.353	0.493	96.171						
26	0.319	0.435	96.607						
27	0.293	0.428	97.034						
28	0.287	0.379	97.413						
29	0.240	0.359	97.772						
30	0.227	0.342	98.114						
31	0.200	0.279	98.393						
32	0.197	0.258	98.650						
33	0.174	0.217	98.867						
34	0.165	0.207	99.074						
35	0.157	0.187	99.261						
36	0.128	0.173	99.434						
37	0.118	0.149	99.582						
38	0.100	0.138	99.721						
39	0.095	0.108	99.829						
40	0.086	0.088	99.917						
41	0.79	0.021	99.938						
42	0.068	0.017	99.955						
43	0.064	0.014	99.969						
44	0.050	0.012	99.981						
45	0.041	0.010	99.991						
46	0.038	0.009	100.000						

Source: Research findings

The total explained variance table shows that these components form 4 dimensions and these dimensions explain about 72.175% of the variance of human resources improvement.

Table 4. Confirmatory factor analysis

Components	Dimensions			
	Educational improvement	Organizational improvement	Personal improvement	Professional development
Q1	0.658			
Q2	0.729			
Q3	0.781			
Q4	0.763			
Q5	0.689			
Q6	0.775			
Q7	0.720			
Q8	0.742			
Q9	0.737			
Q10	0.674			
Q11	0.732			
Q12	0.654			
Q13		0.791		
Q14		0.633		
Q15		0.740		
Q16		0.789		
Q17		0.650		
Q18		0.540		
Q19		0.592		
Q20		0.746		
Q21		0.599		
Q22		0.718		
Q23		0.703		
Q24		0.765		
Q25		0.665		

Components	Dimensions			
	Educational improvement	Organizational improvement	Personal improvement	Professional development
Q26			0.735	
Q27			0.722	
Q28			0.619	
Q29			0.686	
Q30			0.771	
Q31			0.627	
Q32			0.792	
Q33			0.782	
Q34			0.804	
Q35			0.684	
Q36			0.696	
Q37			0.531	
Q38			0.565	
Q39				0.788
Q40				0.773
Q41				0.816
Q42				0.853
Q43				0.841
Q44				0.814
Q45				0.684
Q46				0.736

Source: Research findings

Table 5. Reliability of variables

Dimensions	Cronbach's alpha	CR
Educational improvement	0.917	0.929
Professional development	0.913	0.930
Organizational improvement	0.908	0.922
Personal improvement	0.910	0.924
Improving human resources based on cloud computing	0.792	0.867

Source: Research findings

Considering that acceptable values for Cronbach's alpha coefficient and composite reliability are 0.7. According to Table 5, the reliability is confirmed.

Table 6. Convergent validity

Dimensions	AVE
Educational improvement	0.522
Professional development	0.624
Organizational improvement	0.580
Personal improvement	0.588
Improving human resources based on cloud computing	0.764

Source: Research findings

Also considering that the acceptable value for AVE is 0.5. According to Table 6, the convergent validity is confirmed.

Table 7. Divergent validity

Dimensions	Educational improvement	Professional development	Organizational improvement	Personal improvement	Improving human resources based on cloud computing
Educational improvement	0.722				
Professional development	0.708	0.790			
Organizational improvement	0.660	0.694	0.762		
Personal improvement	0.638	0.780	0.639	0.767	
Improving human resources based on cloud computing	0.664	0.571	0.701	0.622	0.874

Source: Research findings

Considering that according to Table 7, the numbers listed in the main diameter are greater than their underlying values. Therefore, divergent validity is acceptable.

Table 8. Fitness of the model

Dimensions	R^2 Index	Q^2 Index	*GoF*
Educational improvement	0.746	0.423	
Professional development	0.327	0.498	
Organizational improvement	0.492	0.376	0.548
Personal improvement	0.387	0.393	
Improving human resources based on cloud computing	-	0.377	

Source: Research findings

According to the numbers listed in Table 8, all the fit criteria are accepted in the range, so the fit of the model is good. After confirming the model, two indicators of path coefficient and t-value have been used to test the significance of paths. At the 95% confidence level, if the t-statistic values are higher than 1.96, the path is approved, and if it is less, the path is rejected. In Figures 1 and 2, two modes of path and significance coefficients are shown.

According to Figures 1 and 2 and the values in Table 10, the path coefficients are in the range (1 and -1) and the t-values are outside the range (1.96 and -1.96), so at the 95% confidence level The relationships between the variables have been confirmed and significant.
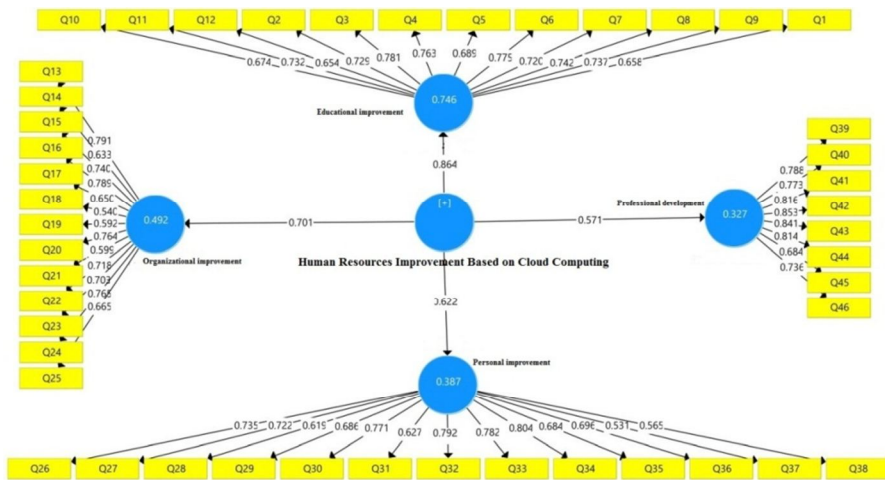
Fig 1. Path coefficients

Source: Research findings
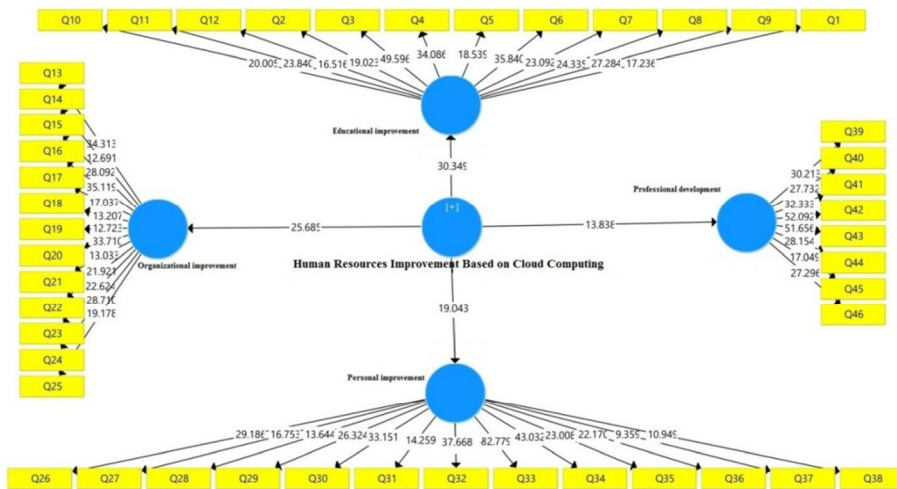
Fig 2. Coefficients of t-value statistic

Source: Research findings

Table 9. The results of path analysis findings

Structure	Dimensions	Coefficient	T-Value	Result
Improving human resources based on cloud computing	Educational improvement	0.864	30.884	Confirmed
	Professional development	0.571	13.090	Confirmed
	Organizational improvement	0.701	25.032	Confirmed
	Personal improvement	0.622	17.649	Confirmed

Source: Research findings

5. Conclusion

In today's era, rapid and increasing changes have caused extensive changes in the organizational structure and the way organizations function, these changes have doubled the need to use and take advantage of information technology and the tools derived from it in organizations. In the meantime, cloud computing, as one of the information technologies, has been able to increase the speed and reduce costs, paving the way for the development of internal operations such as improving human resources and increasing the organization's ability to quickly respond to environmental needs and demands. Therefore, the purpose of this research was to design a human resource improvement model based on cloud computing in Tejarat Bank. In the first stage, the components were identified according to the opinions of experts using the Delphi method. The findings of this stage showed that the human resources improvement model based on cloud computing in Tejarat Bank includes 46 components and 4 dimensions (educational improvement, organizational improvement, individual improvement and professional improvement). Then, in the second step, in order to design the model, structural equation modeling has been used. Based on the results of structural equation modeling, it can be said that the dimensions of educational improvement, professional improvement, organizational

improvement, and individual improvement have a positive effect on the improvement of human resources in Tejarat Bank in the amount of 0.864, 0.571, 0.701, and 0.622, respectively. They are significant and according to the path coefficients, in the human resources improvement model based on cloud computing, they have the greatest effect after educational improvement and the least effect after professional improvement. In the following, in line with the results of the research, the following suggestions are presented:

-In line with the participation of human resources in the improvement programs, it is suggested that a diverse list of these programs based on needs assessment should be compiled and made available to people so that these people can participate in these programs according to their needs and interest.

-Due to the importance of the role of organizational culture in the success of improvement programs, it is suggested to strengthen the culture of education and lifelong learning through raising awareness about the role of learning in improving activities.

-The positive and optimistic view of the senior managers of the organization towards human resources and its determining role in the success of Tejarat Bank.

Funding
This study received no financial support from any organization.

Authors' contributions
All authors had contribution in preparing this paper.

Conflicts of interest
The authors declare no conflict of interest

References

Abedini, H., Rahnavard, F., Ghahremani Gelozan, A. (2022). Designing the Professional Competencies Model of Knowledge Workers in the Public Sector Knowledge-Based Organizations. *Journal of Human Resource Management*, 11(4), 1-24. (In Persian)

Al-Rawahi, M. (2022). A Research Study on the Impact of Training and Development on Employee Performance during Covid-19 Pandemic. *International Journal of Managerial Studies and Resear*, 10(7), 1-10.

Andrianto, T., Herlina, E., Tukiran, M. (2022). A Review of Strategic Human *Resources Management in Organization. Budapest* International Research and Critics Institute Journal, 5(2), 14422-14429.

Apascaritei, P., Elvira, M. (2022). Dynamizing human resources: An integrative review of SHRM and dynamic capabilities research. *Journal of Human Resource Management Review*, 32(4), 1-14.

Bubenik, P., Capek, J., Rakyta, M., Binasova, V., Staffenova, K. (2022). Impact of Strategy Change on Business Process Management. *International Journal of Sustainability*, 14(9), 108-121.

Cahyadi, A., Marwa, T., Hagen, I., Siraj, M., Santati, P. (2022). Leadership Styles, High-Involvement Human Resource Management Practices, and Individual Employee Performance in Small and Medium Enterprises in the Digital Era. *International Journal of Economies*, 10(162), 51-69.

De Alwis, A., Andrli, B., Sostar, M. (2022). The Influence of E-HRM on Modernizing the Role of HRM Context. *Journal of Economies*, 10(181), 16-30.

Gholamian, M., Hakimpour, H., Kafashpour, A., Mahmoudzadeh, M. (2021). Barriers to the Implementation and Use of Internet Banking in the Keshavarzi Bank. *Journal of System Management*, 7(4), 49-67. (In Persian)

Hafit, N. I. A., Anis, A., Johan, Z. J., Othman, N. A., & Munir, Z. (2022). Examining the Role of Organisational Learning Theory and Learning Organisations in the Era of Digitalization: A Literature Review. *International Journal of Academic Research in Business and Social Sciences*, 12(5), 740-752.

Han, W., Nguyen, M., Hua, M., Pham, H. (2022). Organizational learning through training effectiveness: evidence from the hospitality industry in Vietnam. *The Learning Organization*, 16(4), 414-426.

Hanson, J., Niqab, M., Bangert, A. (2021). Determination and Validation of the 'Organizational Learning Capabilities' Scale in a New Context of Educational Institutes in Pakistan. *Journal of Education and Educational Development*, 8(2), 270-295.

Hazarika, I. (2021). Health workforce governance: key to the delivery of people-centred care. *International Journal Health Management*, 14(2), 358-372.

Imani, M., Rezaei, S., Sharifi, A. (2020). Developing a Return on Investment (ROI) Model in Training and Improving Human Resources (Case study: Tehran Municipality). *Career and Organizational Counseling*, 12(42), 179-198.

Jaafari, A., Daneshfard. K., & Mehrara, A. (2021). Identifying Indicators and Components of Knowledge Capital and Human Resource Strategies in the Iranian Higher Education System. *Journal of System Management*, 7(3), 263-281. (In Persian)

Jebelli, A., Seyed Javadin, R., Haj Karimi, A., Taban, M. (2022). Provision of an Organizational Trust Model Based on the Assumptions of Human Resources in Service-Oriented Organizations. *Scientific Journal of Rescue Relief*, 14(3), 211-221. (In Persian)

Kutieshat, R., Farmanesh, P. (2022). The Impact of New Human Resource Management Practices on Innovation Performance during the COVID 19 Crisis: A New Perception on Enhancing the Educational Sector. *International Journal of Sustainability*, 14(9), 1-18. (In Persian)

Mahdavi, M., Sheikh al-Islami, N., Hasanmoradi, N., & Shokri, N. (2022). Designing a People Capability Maturity Model among Faculty Members (Case study: Islamic Azad University of Fars Province. *Journal of System Management*, 8(1), 111-126. (In Persian)

Martineau, T., Ozano, K., Raven, J., Mansour, W., Bay, F. (2022). Improving health workforce governance: the role of multi-stakeholder coordination mechanisms and human resources for health units in ministries of health. *Journal of Human Resources for Health*, (47), 346-364.

Misko, D., Vagas, M., Birknerova, Z., Tej, J., Benkova, E. (2021). Organizational Commitment of Human Resources in the Context of Leadership Styles in the Organization. *TEM Journal*. 10(3), 1058-1063.

Moafimadani, K., Kazempour, E., Khalkhali, A., Rahimaghaee, F. (2021). Designing an Organizational Learning Management Model for Nurses. *Journal of Military Caring Sciences Journal*, 7(4), 381-393. (In Persian)

Nazeri, M., Salajeghe, S., & Fatehirad, N. (2021). Designing the role model of evolution, requirements, quality dimensions and principles of total quality management in the implementation of insurance policies (Case study: General Department of Social Security of Kerman province). *Journal of Training and Improvement of Human Resources*, 1(1), 1-10. (In Persian)

Norouzi, D., Bafandeh zendeh, A., & Honarmand azimi, M. (2022). Modeling of Overdue Receivables in the City Bank Using Factor-based Simulation (Northwestern Provinces of the Country). *Journal of System Management*, 8(2), 1-18. (In Persian)

Nugroho, S. (2022). The role of human resources management in organizational perspective. *Global Journal of Engineering and Technology Advances*, 10(3), 12-28.

Oktaviayu, G., Said, M. (2022). The Role of Human Resources Development Management in Improving Creative Entrepreneurs at Overloops Photography, Yogyakarta, Indonesia. *East Asian Journal of Multidisciplinary Research*, 1(2), 67-86.

Patrick, P. (2021). Core Functions of Human Resource Management and its Effectiveness on Organization: A Study. *International Journal of Social Economics*. 9(5), 257-266.

Phiri, K. (2022). Strategic Human Resource Management Practices and Organisational Performance: A Case of the National Assembly of Zambia. *Journal of Business and Management*, 26(10), 2461-2483.

Sabet, S., Goodarzvand Chegini, M., Rezaei Klidbari, H., & Rezaei Dizgah, M. (2021). Designing a Model of Human Resource Mentoring System Based on a Mixed Approach, With the Aim of Increasing Productivity. *Journal of System Management*, 7(2), 205-229. (In Persian)

Sepahvand, R., agherzadeh Khodashahri, R. (2021). Strategic Human Resource Management Practices and Employee Retention: A Study of the Moderating Role of Job Engagement. *Iranian Journal of Management Studies*, 14(2), 437-468. (In Persian)

Sirafi Nafis, H., Taherikia, F., & Khoshtinat, B. (2022). The Impact of Organizational Entrepreneurship on Improving Competitive Advantage with Mediating Role of Innovation in Start-up Digital Industries. *Journal of System Management*, 8(4), 97-107. (In Persian)

Tadayon, A., Ebrahimzade Dastgerdi, R., Gheitani, A., Sadeghi, M. (2021). Determining the Dimensions of Electronic Customer *Relationship Management (E-CRM) in Gharzolhasaneh Mehr Iran Bank. Journal* of System Management, 7(4), 93-112. (In Persian)

Torabi Alamuti, M., Babalhavaeji, F., Matlabi, D., & Hariri, N. (2023). Presenting A Model For Distributing Books in Iran Based on Structural Equation Models. *International Journal of Information Science and Management*, 21(1), 321-345. (In Persian)

Tortia, E., Sacchetti, S., Lopez-Arceiz, F. (2022). A Human Growth Perspective on Sustainable HRM Practices, Worker Well-Being and Organizational Performance. *International Journal of Sustainability*, 14(8), 217- 230.

Yuan, A., Chayanuvat, A. (2021). Analysis of Organizational learning Obstacles and How to Make Organizations Learn. *International Journal of Arts and Social Science*, 4(4), 147-158.