

Human resource management structure of communication enterprise based on microprocessor system and embedded network

Ying He ^{a,*}, Ming Li ^b

^a College of Business, Anhui University of Technology, Maanshan, Anhui 243000, China

^b Department of International Cooperation, General Administration of Customs, Beijing 100730, China

ARTICLE INFO

Keywords:

Information systems
Human resource management
HRISHR professionals

ABSTRACT

In the past few years, human resource management (HRM) has undergone significant changes. The focus from administrative tasks to become strategic partners into the organization's overall strategy, mainly in the field of development of information technology, has given strong support. The technology support using Microprocessor System and Embedded Network to help handle the HRM knowledge process. Long-term use of information systems today have a significant impact on how to manage HRM. The Human Resources (HR) processes and practices within the organization; in other words, the collection of information, storage, use, and sharing method have changed completely. The Microprocessor System using to store the condition base data and then communicate with internet support. Part of the HRM process becomes more efficient; due to these improved service levels, it can now be more participation. Human resources of this new business strategy in business strategy have a significant impact on the human resources function and its experts. This chapter reviews the existing literature on this topic and considers the advantages and benefits of HRM information systems. It also outlines some of the technical applications in the functional areas of HRM in the organization.

1. Introduction

Quick evolving markets, ventures, and administrations require hierarchical conditions equipped for steady variation with brilliant, groundbreaking thoughts and diminished chance to advertise. Under this serious reality, HRM has a more basic function than any time in recent memory because new business types require better approaches for including people. HR experts must examine social, monetary, political-lawful, and mechanical climate occasions to upgrade HRM cycles and practices key achievement variables to the association mission and destinations.

To address these difficulties, HRM is compelled to embrace new rationale; most human asset directors need to fail to remember the obsolete propensities, mentalities and conduct. Then again, to assist associations with building up a procedure and plan to advance human resources. For this situation, the data framework through more effective enlistment techniques, authoritative correspondence, representative interest, and improved human asset director aptitudes, improves human asset executives' productivity. HR divisions need their human resources systems and the most proper innovation arrangements connected. This implies making an EHR association zeroed in on interfacing individuals

with business systems to adjust to individuals and organizations' evolving needs rapidly. These equivalent necessities started to request EHR.

Numerous individuals are, as yet under tension, understand that the time spent on routine assignments. To take out or possibly lessen the authoritative weight to improve time and commitment to the association is significant. This section adds to the meaning of the job and the function of HRIS Human Resource Management Human Resource Professionals in this cycle.

As of late, data innovation influences practically all parts of society, not simply the authoritative cycles, including HR the board cycles and practices [3]. From the perspective identified with the administration, data innovation has become a strong accomplice association. Predominantly for the utilization of innovation.

"Constant developments in innovation will essentially change how HR work is refined." Data frameworks deeply affect HRM. It changed HR cycles and practices, basically regarding how associations gather, store, use, and disperse data.

Quality human asset the board is a significant factor in the achievement of the association. HR experts need to examine and consider ecological, social, monetary, political, legitimate and

* Corresponding author.

E-mail address: sx16fruit@126.com (Y. He).

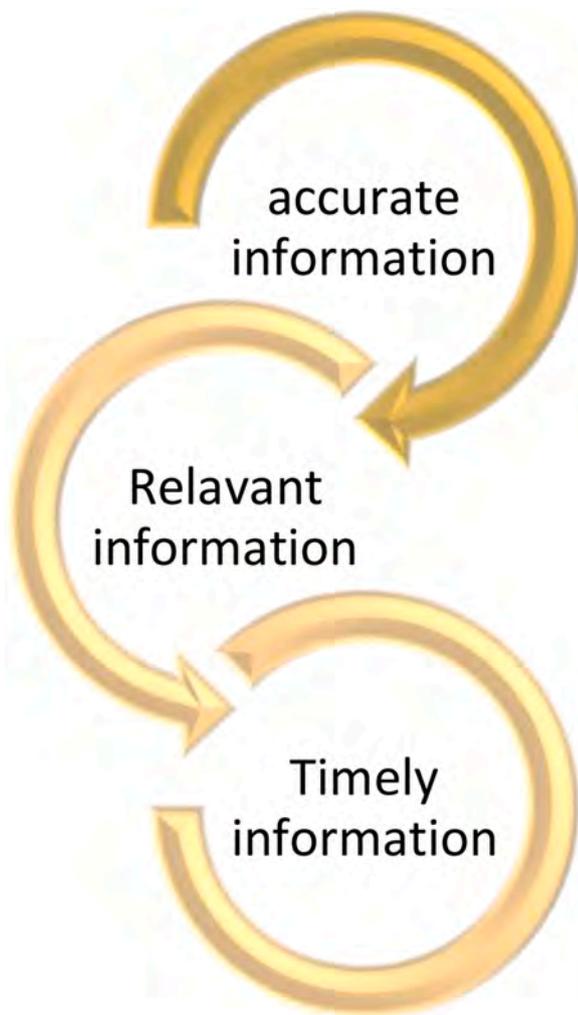


Fig. 1. HRIS goals.

specialized. To address these difficulties, HRM is compelled to embrace new rationale and the greater part of the HR. Supervisors need to fail to remember the good old propensities, considerations and conduct, yet then again, assistance associations characterize and build up a necessary arrangement to create human resources. HR's fundamental goal in the association is to pull in, select, propel and hold capable workers.

The framework program information identified with HR data frameworks (HRIS) definitions needed for the assortment, stockpiling, support, and recovery and confirmation association. Tanned Baum is characterized as a framework based innovation for recovery, stockpiling, control, investigation and recovery. HRIS establish coordinated HRM and data innovation. HRIS is intended to give data to the head to settle on choices HR the board frameworks. This is a framework that can follow all representatives. It is generally run in the information base, regularly run in a bunch of information base interrelated.

In such a manner, the data framework through more effective enlistment techniques, hierarchical correspondence, worker investment, and improved human asset director aptitudes, improves the productivity of human asset executives. From that point, the field of HR the board should be key human resources and the most proper innovation arrangements connected. This implies making an eHR association that will

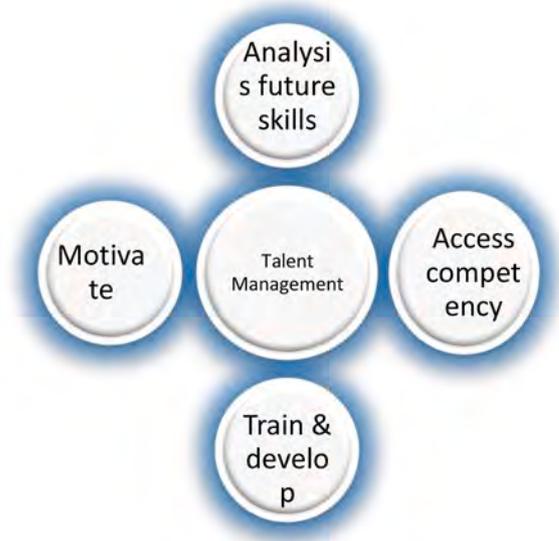


Fig. 2. The talent management process has four main stages.

zero in on business technique and staff contact to adjust to business collaborators and evolving needs rapidly. These equivalent necessities will start to require EHR. RIS comprises coordinated HRM and data innovation. Subsequently, HRIS essential reason delineated (Fig. 1): to give exact data on HR and their capacities and related ecological components.

Associations need data on HR and capacities; additionally, they need data from the extreme climate. This permits the HRIS might be gathered from the interior and external conditions, stockpiling, control, investigation, and recovery and circulation data.

2. The role of strategy in human resource

"Digital advertising skills needed is changing," Human resources management business strategy Remley said the strategy includes recruiting and retaining the right talent and to provide moral and cultural leadership. Need to think strategically necessary talent. Today and tomorrow, to win important contracts in the competitive job market. The main company's human resources manager will be involved in strategic decision-making and strategic organizations actively involved in the team; most people think strategic planning is an important part of its role. The main organization itself (SMEs) can achieve goals. To consider to adapt to modern models.

2.1. Planning and forecasting as a critical function of HRM

Scope organization suitable labor force has never been more significant and troublesome as it is currently. Implies that the organization accelerates innovation, correspondence and the speed of progress, and its workforce division needs to open, coordinated and all set. The World Economic Forum's "ability Stability Report" predicts that 33% of the work will require the aptitudes of today following three years isn't significant. Thus, how to anticipate the tentative arrangements for it simultaneously stay serious, effective usage of the methodology needs to foresee dependent on the audit, to comprehend the future will be what sort of pretending.

2.2. Talent management

The advancement of HR, the executives, has also brought new sub-rehearses: vital human resources needed for the board's ability, anticipating. The executives' ability is by understanding future aptitudes needs, competency appraisal, staff preparing and staff advancement, and long haul maintenance of ability engaged with exceptionally specific and profoundly gifted and remain propelled. "Perhaps the greatest test is to hold headhunters may confront. Cash is consistently incredible, yet up until now, just individuals can utilize," Remley said.

When individuals are searching for a more Handcrafted bundle, adaptable, to appreciate the advantages of marking rewards, adaptable or additional occasions, the capacity to telecommute and rest days.

Individuals attempt to learn new abilities. Possesses a readiness to pay for preparing and speculation organizations exceptionally appealing, "Remley said an away from of the organization's work and objectives. Individuals need the motivation to accept, to understand w. If you don't unmistakably There is no motivation to leave.

HR must have the option to put together and keep up the capacity to quicken the methodology's execution through the foundation. This job can't be robotized, redistributed or seaward. This comes from inside information on the organization's corporate procedure and existing capacities. This incorporates the organization's vital targets, current and long haul needs to do to plan and tune in, and react to staff perspectives. It might likewise incorporate the overhaul of hierarchical cycles. All procedures are via prepared help workforce and hardware to perform to meet the organization's necessities as show you in Fig. 2.

3. Related works

There are some significant human assets the board rehearses: work examination and occupation configuration, to draw in expected representatives (occupations), determination of staff (choice), how to instruct workers to accomplish the work and plan for what's to come. (Preparing and advancement), execution assessment [1] (execution) the board), representative pay (reward), establish a positive workplace (Employee Relations), to help the association's system (faculty arranging and change the executives)

Human asset the executive's approach is important. For example, recruiting, installing pay rates, preparing and assessing representative execution, and different workers chose to offer clients esteem power items and administrations [2]. When these individuals work, HRM will add to the central achievement measures, for example, quality, productivity and consumer loyalty. Guarantee that workers consent to the exercises and aftereffects of the cycle of hierarchical objectives. Execution of the board exercises, including the association's assignment, adds to the errand's achievement and the outcomes. At that point, utilizing the ideal exhibition in the different measurements, a timeframe represents.

Representatives get rewards and benefits assume a significant part in inspiring workers at the point when, for example, rewards and impetuses like individual or group execution related, specifically [3]. Workers need retirement plans and other data about their wellbeing plan benefits. Track including countless records and report to the board, representatives, government and soon. HR staff needed to address inquiries concerning advantages and friends strategies. On the off chance that workers feel segregated, discovered that security issues or different issues are not happy with the chief, look for help from the HR office.

HR the executives has changed from human asset chiefs with strategy as a go-between for the joining of human asset the board. Numerous associations have HR, yet non-HR administrators should be acquainted with HRM's nuts and bolts and its function in human asset the executives

[4]. As a rule, accountable for significant duties. For all HR capacities: responsible for the meaning of work, anticipated interest for HR, preparing, interviews with competitors, assess execution, it is suggested raise and an advancement, correspondence strategy and pay, advantages, backing and inspiration to help different impetuses. Chief also assumes a significant part in the relationship with representatives since he consistently speaks to the organization for workers.

The practices needed to oversee a variety well address the representatives' issues, yet also decrease workforce turnover costs and guarantee that clients get the best assistance. For instance, [5], Molina Healthcare works facilities, and its clients are basically. Live close to the center and need to recruit staff who can communicate in the patient's language. This responsibility to variety improves the nature of the organization's correspondence and medical services [6].

A key part of human assets the board from going about as the executive's capacities into a more focal situation in the corporate system [7]. The system is an approach to endure and thrive, is opposition for the substance of serious difficulties and to accomplish the organization's objectives cycle. The fundamental target, approaches and activity successions technique is to coordinate the association's overall example or plan. Vital issues remember worries for the nature of dynamic just as for development and productivity [8].

Current ways to deal with arrange the HR practices, people and spotlights on reinforcing its human resources, the perfect individual's choice, for example, preparing an individual preparing [9]. For instance, researchers and HR rehearses, aptitudes, inspiration, and representative HR practices to improve the occasion to boost the exhibition of, venture and backing association HR rehearses that shows the acknowledgment of its commitment to singular workers, to guarantee the high caliber of the human resources pool, human resources level even in considers that depend on speculation and practice [10] multi at the point of convergence of the enlistment to expand the consistency standard of representatives, the "presence of individual human resources "to have zeroed in on whether to make the human resources of the unit or association [11].

Financial and serious conditions are getting progressively interconnected, requiring another perspective about workforce rehearses by representatives who think about their musings and sentiments just as their conduct in the work environment undermine the conventional core interest [12].

Their organization of Valuable connections. Some current work highlight the association among individuals and informal organizations. Workforce practices to supplement relations by reinforcing coordination, advance and finance representative relations organization. Improve resident conduct and relational climate. Increment trust and importance. Give openings, inspiration and the capacity to trade social funding to manufacture new connections and renewal existing connections. It influences the size, variety and quality of the administration of the organization [13].

Researchers additionally have a formal authoritative structure (detailing structure and other sans nonrelations) and a fixed arrangement of rules, methodology and structures (intentional and required age) to organize exercises and casual organizations. It additionally features the connection between the two. Companionship, trust) and intuitive comprise such standards, qualities and convictions [14].

For example, minor changes and so forth to a total upgrade of the organization's difference in authentic associations characterized by the human asset exercises will generally be optional, and non-optional relationship relations sway.

Furthermore, it will make new work process designs dispose of obsolete association work. Regarding examples of conduct repeating communication, casual organizations across applicable and geographic

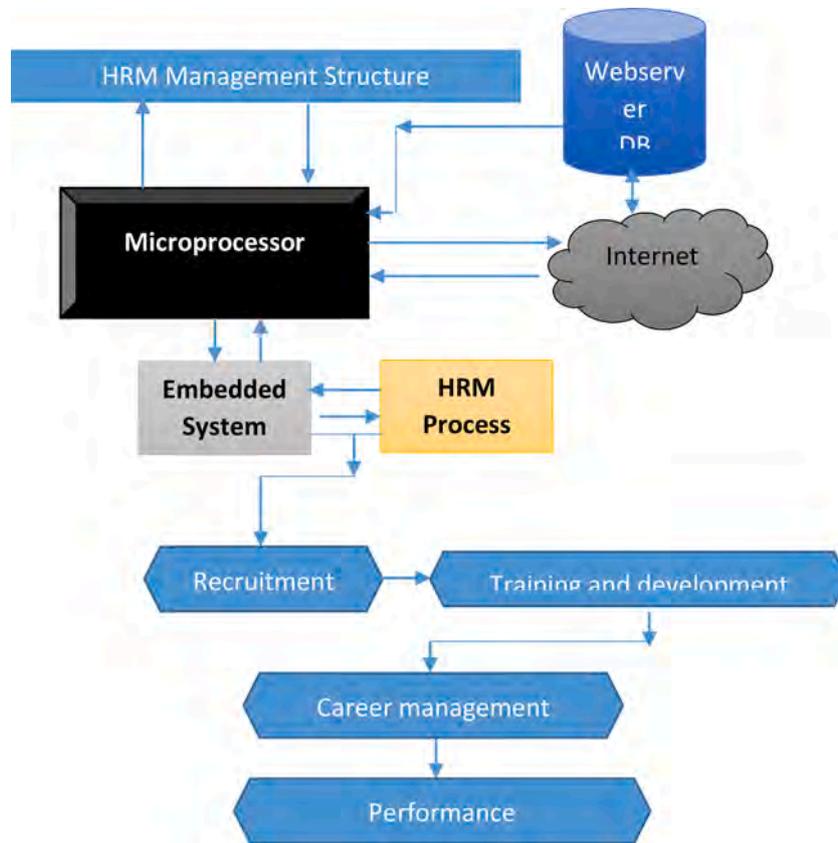


Fig. 3. The proposed system of HRM process.

limits will be created [15]. This view focused on that human asset practices may effects affect the casual organization structure.

In particular, change the organization design of the HR practices will change the organization properties [16], for example, homogeneity and size of the organization. For instance, separation and specific recruiting practices can add to the organization’s homogeneity. This can improve the segment or authoritative units, and along these lines can improve individual workers’ nature. By empowering current representatives and workers into a comparable excusal and to support various workers, the organization is comparative or bound together [17]. Interestingly, upholding for ladies’ associations and underestimated bunches spoke to a minority variety and consideration practices will expand the individual heterogeneity by furnishing more occasions to interface with others’ very own organization [18].

Relationship ID alludes to the job tenants (e.g., chief - subordinates

and associates) to play out their parts between them and set intellectual pecking order from expansive to explicit engineering [19]. Some relationship ID is remarkable, and to particulars and desires. Relations related to a specific individual job. At the point when people regularly decide their job relationship will exist summed up the character.

Accordingly, it is conceivable to encounter a relationship status [20] as a unique relationship with a specific job or a more extensive impression of the part of the relationship continuum.

4. Proposed methodology

Organizations need information on human resources and its features but also need information from the external environment. This allows the HRIS may be collected from the internal and external environments, storage, manipulation, analysis, and retrieval and distribution

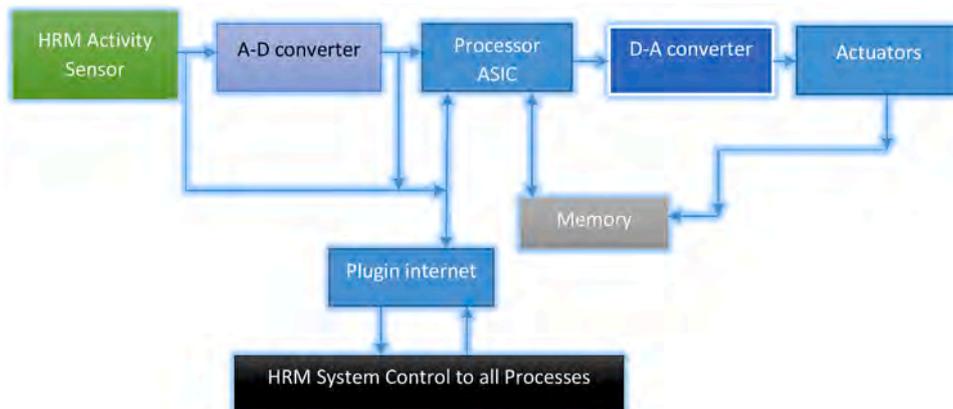


Fig. 4. The following illustration shows an embedded.

information. Built-in functions and methods microprocessor systems support the organization of self-management of human resources in the Figures .3 & 4.

4.1. Embedded system

Implanted frameworks can be considered as a PC equipment framework that worked in programming. Implanted frameworks, even in an independent framework, or very well, maybe important for a bigger framework. The installed framework is a chip or a microchip-based framework planned. For instance, the alarm is an inherent framework for detecting the main smoke. Observing the application programming and an ongoing working framework (RTOS) to give an instrument to have the option to perform measures on processor arranged. RTOS characterizes how to run the application, set the principles. For little implanted frameworks, there are times when there is no RTOS as show you in Fig. 3.

4.2. Structure of an embedded system

Sensor: It measures the physical quantity and converts it to an electrical signal

A-D Converter: An analog-to-digital converter converts the analog signal sent by the Sensor into a digital signal.

Processor & ASICs: Processors process the data to measure the output and store it in the memory

D-A Converter: A digital-to-analog converter converts the digital data fed by the processor to analog data

Actuator: An actuator compares the D-A Converter's output to the actual (expected) output stored in it and stores the approved output as show you in Fig. 4.

4.3. Processors in a system

CU includes extracting means for extracting an instruction from memory. EU has performed data transfer operation and data conversion from one form to another form of instructions related circuit. Extraction cycle processor to perform and execute instructions in the same order.

4.4. HRM system

The maintenance feature allows to update and add new data to the database. To produce valuable output, need to use HRIS to perform the necessary calculations and formatting data for understanding.

4.4.1. Recruitment

Provide data to support decision-making related to resource allocation. For example, to attract more human capital in the growth period of hiring practices and respond to tissue atrophy and reduce the practice's size.

4.4.2. Training and development

Staff rehearses (for example, work configuration, preparing and improvement, remuneration arranging and advancement) efficiently allot and reassign faculty getting down to business. Employment revolution and broadly educating and intercession firmly related.

4.4.3. Career management

Examination of work, vocation improvement, profession advancement plan, and sketched out an objective acknowledgment of. Furthermore, singular representatives, self-administration, choice of advantages, vocation arranging, preparing, and advancement, will be an assortment of end-client uses of HRIS. The boat has caused a great deal

Table 1
HRM strategy is highlighted.

Codification	Personalization
HRM	Alignment with the codification and organizational strategies
Recruitment and selection	Highly qualified "key employees" with demonstrated technical knowledge.
Compensation management	Individual incentives
Training and development	For most, training subjects are limited to procedural knowledge and IT skills.
Performance management	Focus on basic business and IT knowledge
Career management	Limited progress for most employees Rare hierarchal and lateral movements

of concern. The significance of disentangling the arrangement of representatives, utilize the Web-based admittance and self-administration entryway.

4.4.4. Performance

Meaning of execution objectives, assessment metric of the plan, execution assessment, and the outcomes criticism. Prize framework, the nature of the exhibition, contingent upon the character of the estimations of commitment to the advancement of business, and association, it is comprised of partners not significant and the entirety of the significant partners that can be representatives get .. Assessment of companion execution, there is an irresolute relationship and positive relationship. Information the executive's framework to encourage correspondence and data sharing is destructive and effectively related.

5. Result and discussion

Microprocessor-based embedded systems and technology gradually verify the accuracy and reliability of the calculation work. As shown, the reliability of the measurement range is a highly reliable system HRM. As an approach to increase a favorable position on a serious business, information the executives as information and cycle as a resource has been inescapable consideration in the writing of vital administration and key human asset the board. Table 1 shows the substance. As indicated by the examination, from the orthodox perspective on human assets, the executives rehearse dependent on the point of information, consolidates it with information the board and. The following area gives an outline of the idea of these practices.

Fig. 5 microprocessor-based embedded systems and support staff requirements defined accuracy. The human resource management system can easily support staff professional development needs and user support as show you in Table 2 and Table 3.

Fig. 6 shows the recommended accuracy than conventional methods. Such HRM analysis can be improved. It shows the various levels of human capacity that can be performed in association work. With the development of innovative data, it is believed that many organizations can use it to develop their own: service or automation framework. Human resource capacity can make an important commitment to the exhibition association.

6. Conclusions

The impact of technology on HRM is more important. With the development of technology, HRM is forced to draw a new profile in the process and practice. HRIS appears to make this change most fruitfully. This is to improve the accuracy, quick access to information, increase competitiveness and efficiency, and human resource capacity of the redesign. The real purpose of its response to the HRIS on actual demand,

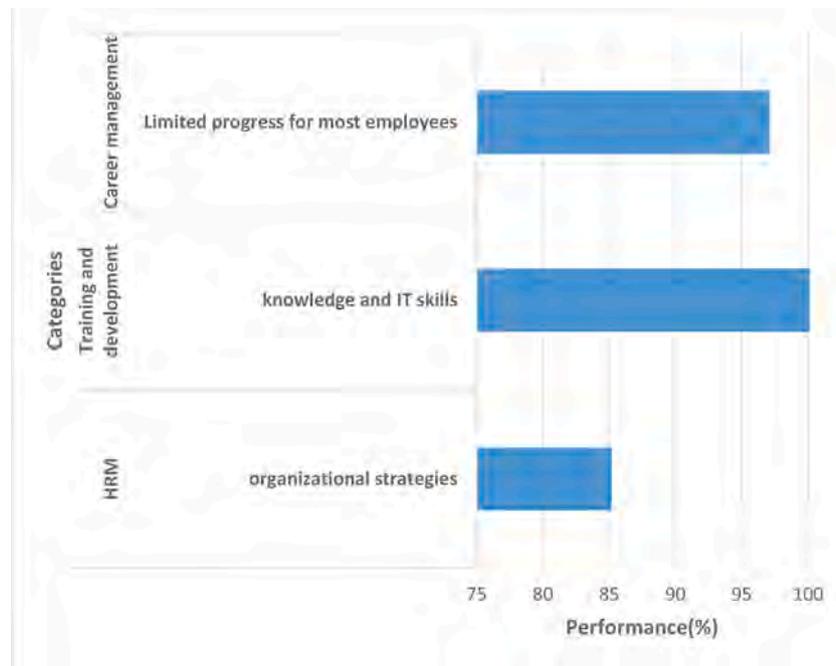


Fig. 5. Accuracy analysis on HRM.

Table 2
Five service categories of embedded system and Microprocessor.

Categories	Services	Ratio
HRM	organizational strategies	85.2
Training and development	knowledge and IT skills	96.2
Career management	Limited progress for most employees	97.1

there are still many problems. Human Resource Management. Although its use and the results of the existence of certain limitations, but its role in human resource management, it can respond more quickly to demand and human resource management changes. Assessment, feedback, human resource planning, succession planning, monitoring skills, training needs analysis, global analysis. HRIS is one of the biggest allies of HRM, has been adopted to make the organization more efficient and accurate.

Declaration of Competing Interest

We declare that we have no financial and personal relationships with other people or organizations that can inappropriately influence our work, there is no professional or other personal interest of any nature or kind in any product, service and/or company that could be construed as influencing the position presented in, or the review of the manuscript.

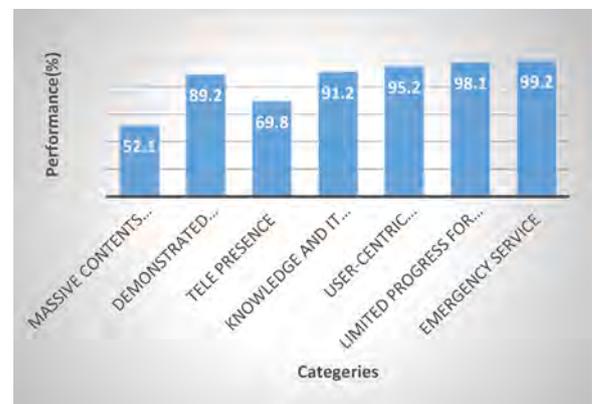


Fig. 6. Accuracy analysis based on embedded system and Microprocessor.

Acknowledgements

This work was supported by the Nature Science Research Project of Anhui province “Research on improvement mechanism of employee innovation ability in a cross-cultural context” (1908085MG238)

References

- [1] P Abell, T. Felin, N. Foss, Building micro-foundations for the routines, capabilities, and performance links, *Manag. Decis. Econ.* 29 (2008) 489–502.
- [2] P.S Adler, S. Kwon, Social capital: prospects for a new concept, *Acad. Manag. Rev.* 27 (2002) 17–40.
- [3] R. Adner, C.E. Helfat, Corporate effects and dynamic managerial capabilities, *Strat. Manag. J.* 24 (2003) 1011–1025.
- [4] G. Ahuja, Collaboration networks, structural holes, and innovation: a longitudinal study, *Adm. Sci. Q.* 45 (2000) 425–455.
- [5] G. Ahuja, G Soda, A. Zaheer, The genesis and dynamics of organizational networks, *Organ. Sci.* 23 (2012) 434–448.
- [6] D.G. Allen, L.M. Shore, R.W. Griffeth, The role of perceived organizational support and supportive human resource practices in the turnover process, *J. Manag.* 29 (2003) 99–118.
- [7] H Arrow, J.E. McGrath, Membership dynamics in groups at work: a theoretical framework, *Res. Organ. Behav.* 17 (1995) 373–411.

Table 3
Five service categories of embedded system and Microprocessor.

Services	Ratio
Massive Contents streaming	52.1
demonstrated technical knowledge	89.2
Tele presence	69.8
knowledge and IT skills	91.2
User-centric Computing	95.2
Limited progress for most employees	98.1
Emergency Service	99.2

- [8] S.J. Ashford, R. Blatt, D. Van de Walle, Reflections on the looking glass: a review of research on feedback-seeking behavior organizations, *J. Manag.* 29 (2003) 773–799.
- [9] B.E. Ashforth, Role transitions in the organizational life: An identity-based perspective, 1989, in: B.E. Ashforth, F. Mael (Eds.), *Social Identity Theory and the Organization*, Routledge, Mahwah, NJ, 2001, pp. 20–39. *Academy of Management Review*, 14.
- [10] B.E. Ashforth, D.M. Sluss, A.M. Saks, Socialization tactics, proactive behavior, and newcomer learning: Integrating socialization models, *J. Vocat. Behav.* 70 (2007) 447–462.
- [11] Baker, W, Cross, R, & Wooten, M. 2003. Positive organizational network analysis and energizing relationships.
- [12] K. Cameron and J. Dutton & R. Quinn (Eds.), *Positive organizational scholarship*. San Francisco: Berrett-Koehler Publishers.
- [13] G.A. Ballinger, R Cross, B.C Holtom, The right friends in the right places: Understanding network structure as a predictor of voluntary turnover, *J. Appl. Psychol.* 101 (2016) 535–548.
- [14] G.A Ballinger, K.W. Rockmann, Chutes versus ladders: Anchoring events and a punctuated-equilibrium perspective on social exchange relationships, *Acad. Manag. Rev.* 35 (2010) 373–391.
- [15] S.R Barley, G. Kunda, Bringing work back in, *Org. Sci.* 12 (2001) 76–95.
- [16] B.E. Becker, M.A. Huselid, High-performance work systems and firm performance: a synthesis of research and managerial implications, *Res. Person. Hum. Resour. Manag.* 16 (1998) 53–101.
- [17] B.E Becker, M.A. Huselid, Strategic human resources management: go from here, *J. Manag.* 32 (2006) 898–925.
- [18] S. Stryker, R.T. Serpe, Identity salience and psychological centrality: equivalent, overlapping or complementary concepts? *Soc. Psychol. Q.* 57 (1994) 16–35.
- [19] Yue Wang, Enterprise human resource management system based on 5G network and internet of things system, *Microprocess. Microsyst.* (2020), 103427. ISSN 0141-9331.
- [20] Ping Liu, Wang Qingqing, Wentao Liu, Enterprise human resource management platform based on FPGA and data mining, *Microprocess. Microsyst.* (2020), 103330. ISSN 0141-9331.



Ying He was born in Wuhu, Anhui, P.R. China, in 1985. She received the Doctoral degree from Nanjing University, P.R. China. Now, She works in College of Business, Anhui University of Technology. Her research interest include human resource management, organizational behavior and big data analysis.



Ming Li was born in Linqing, Shandong, P.R. China, in 1985. She received the Bachelor's degree from University of International Business and Economics, P.R. China. Now, she works in Department of International Cooperation, General Administration of Customs. Her research interests include Environmental science and ecology.