

Digital transformation, agile practices, and strategic human resource management: Basis for enhanced human resource management framework

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ISSN: 2243-7770
Online ISSN: 2243-7789

OPEN ACCESS

Received: 30 July 2024

Revised: 25 August 2024

Accepted: 28 August 2024

Available Online: 1 September 2024

DOI: 10.5861/ijrsm.2024.1253

Abstract

This study focuses on high vocational colleges in Inner Mongolia, China, with the aim of identifying the dimensions of their digital transformation, agile practices, and strategic Human Resource Management, and enhancing a Human Resource Management framework for high vocational colleges in Inner Mongolia. Through empirical research, descriptive statistics and inferential analysis of questionnaire data from 402 respondents using SPSS 28.0, using weighted mean and rank to determine the current status of evaluating the three dimensions of Digital Transformation, Agile Practices, and Strategic Human Resource Management of high vocational colleges, it was clarified that there is a definite and significant relationship among the three dimensions. Specifically, this study showed that respondents agreed with evaluation metrics related to digital transformation, agile practices, and strategic Human Resource Management. Evaluation metrics related to the level of digital transformation, agile practices and strategic Human Resource Management in high vocational colleges, and the impact of factors such as process design, data analytics, stakeholders experience on the level of digital transformation. The study also revealed the importance of agile practices and strategic Human Resource Management in building a framework for HRM in high vocational colleges. Meanwhile, by conducting correlation validation, it is concluded that there is a significant relationship between digital transformation and agile practices and strategic Human Resource Management, i.e., the higher the level of digital transformation, the better the effect of agile practices, and the smoother the strategic Human Resource Management. This paper also establishes a framework for human resource management in Inner Mongolian higher vocational institutions to improve the level of digital HR transformation, agile HR practices, and strategic HR management in Min Inner Mongolian high vocational colleges. Finally, on this basis, the researcher puts forward relevant suggestions, which have certain empirical reference significance and experience for human resource management in higher vocational colleges in Inner Mongolia.

Keywords: digital transformation, agile practices, strategic human resource management, human resource management framework, higher vocational colleges

Digital transformation, agile practices, and strategic human resource management: Basis for enhanced human resource management framework

1. Introduction

Today, as the wide application of Internet technology in various industries has become increasingly mature, the digital transformation in the field of higher education has also become an inevitable trend, which has received more and more attention from scholars at home and abroad. As the main place of talent cultivation, the digital transformation of human resource management, which is responsible for recruiting, selecting, cultivating and managing talents, is imperative for universities. In developed coastal cities, many universities have already transformed their on-campus personnel management to human resource management to a large extent, and have also achieved certain results. However, Inner Mongolia is located in an economically underdeveloped region in northwestern China, and its level of higher education is in the middle and lower reaches of the country, it has not yet formed a more mature human resource management system, and its level of digital discourse is also low. Among them, higher vocational colleges are different from undergraduate universities. Due to various constraints such as the quality of student sources, the level and level of schooling, and government investment, higher vocational colleges are lagging behind undergraduate universities, and are still in the initial stage of digital transformation. Therefore, it is essential to enhance the foundation of the HR framework in higher vocational colleges. Sharma (2023) pointed out that human resource management is often used to refer to the concepts, policies, procedures, and practices related to personnel management within an organization. Any organization is composed of individuals, and from this perspective, human resource management is centered around 'people', aiming to obtain their services, develop their skills, motivate them to achieve higher performance levels, and ensure their sustained commitment to the organization, which is crucial for achieving organizational goals. This statement not only gives a conceptual definition of human resources, but also emphasizes that people are the most important core of HR, which sets the stage for the research that follows.

HRM in Chinese colleges is an important management work in the field of Chinese higher education, and has received extensive attention from scholars in recent years. Wang (2024) has explored the innovative HRM in universities in the era of digital economy. The study points out that the advent of the digital economy has brought new challenges to human resource management in universities. The structure of talent demand has changed, the speed of talent mobility has accelerated, and the requirements for management information technology have been increasing. How to innovate HRM strategies in universities in the context of digital economy has become an urgent issue. It can be seen that innovative HRM strategies for colleges and universities have gained the attention of scholars. In his study, Fu (2024) stated that HRM is crucial in higher education. However, from the point of view of practical needs, there are still many problems in human resource management in colleges, such as recruitment and selection difficulties, management system is not perfect, the allocation of talent resources is unreasonable as well as the pay system is not standardized. This shows that there is an urgent need to build a framework for HRM in colleges.

With the development of science and technology and social progress, HRM is also evolving and upgrading. With the further development of the Internet, digital transformation has become the current hot spot of concern in the field of HR, which brings many opportunities for HR. The study by Zhang et al. (2024) points out that the digital HRM process refers to the use of the most advanced digital technology to carry out selection, training, development, and performance evaluation within an organization. Analyzed the essence of digital transformation of HRM and explored how to achieve digital transformation of HRM in the context of digital economy. It should be emphasized that although digital transformation has brought benefits to company development, the transformation of old and new HRM systems, as well as the negative impacts brought by the new system, cannot be ignored. Through the introduction of new technological tools and information systems, digital transformation

brings greater efficiency and accuracy to HR. Traditional HRM often requires a large amount of manpower and paper documents to complete a variety of affairs, while digital transformation can automate most of the processes, reducing manpower and time costs at the same time, digital transformation can also help HR departments, through data analysis and predictive models, to better understand the performance and needs of employees, collect, process and analyze employee data more efficiently, so as to gain a deeper understanding of the needs and potential of employees, and thus formulate more accurate and effective HR strategies, and carry out organizational manpower planning and talent management more effectively. In addition, digital transformation allows for more self-service and online communication channels, increasing employee engagement satisfaction.

Zeng et al. (2024) start from the necessity of digital transformation of HRM in private universities, analyze the key technologies required for digital transformation of HRM in private universities, and then point out that HRM in private universities suffers from the lack of professional human resource talents, the limitations of the traditional management mode, and the insufficient application of information systems. It also puts forward a targeted implementation path from three aspects: cultivating professional HRM talents, planning and designing digital transformation of HRM, and continuous optimization and innovation of digital transformation. This has implications for the digital transformation of HRM in colleges. However, digital transformation has created new challenges for HR. Firstly, there is the issue of technology and security. Digital transformation requires HR departments to have a certain level of technical competence and information security awareness to ensure data security and privacy protection. Secondly, the organizational culture and staff adaptation issues, digital transformation requires employees to accept new technologies and ways of working, for some of the traditional thinking and operating habits of stubborn employees, may face some resistance and adaptation problems.

As a result, HR digital transformation requires redesigning progress, leveraging the benefits of digital analytics to enhance stakeholder perceptions, and thus enabling new ways of working for effective digital transformation. Agile practices are receiving a lot of attention in current research. In the research of scholars at home and abroad, agile human resource practices are considered as an important part of corporate strategy, which can be centered around corporate strategy, formulate corresponding systems according to the personality of the company, fully give the team and individuals the opportunity to exercise their power, flexibility and innovation, so that they can develop an agile working mindset and working style, which in turn will lead to the smooth operation of the company's internal operation, better adapt to the market changes and challenges, and rapidly improve the overall efficiency. Heilmann et al. (2020) studied the agile and innovative HRM practices of 100 Finnish SMEs. The study points out the importance of focusing on more agile, innovative and efficient HRM practices to promote profitability and growth of SMEs. Therefore, this study explores the identification of Agile practices in terms of customer centricity, flexibility and adaptability, collaboration and continuous improvement to aid HR development and education system reform in universities.

Strategic HRM is a management philosophy and practice that integrates HRM with organizational strategy. It emphasizes the close alignment between HRM and organizational strategy, aligns with business strategy alignment, views HR as an important resource for achieving the organization's strategic objectives, focuses on the workforce, maintains organizational flexibility and adaptability through the use of effective data and analytics, and contributes to the organization's growth and competitive advantage. Yang (2019) pointed out that the essence of strategic HRM is to manage people, and to achieve the growth of the economic interests of the company by paying attention to the role of people, for example, the employee security system, training system, incentive system and so on are all centered on this essence. The successful experience of strategic HRM in companies is applied to the introduction of talents in colleges, which can fully improve the teaching level and comprehensive quality of teachers, optimize the human resource management mechanism of colleges, enhance the competitiveness of colleges and promote the deep-level change of the education system of colleges. Shi (2023) reveals the importance and role of strategic HRM by analyzing HR planning, recruitment and selection, training and development, and performance management in colleges. The study has a certain guiding significance for the construction and improvement of the personnel management system in colleges.

Objectives of the Study - This study explored the causal relationship of Digital Transformation, Agile Practices, and Strategic Human Resources Management: for Enhanced Human Resources Management Framework. Specifically, determined the level of Digital Transformation of higher vocational college in terms of process design, data analytics and stakeholders experience; determined agile practices in terms of customer-centricity, flexibility and adaptability, collaboration and continuous improvement; described strategic human resources management in terms of business strategy alignment, employee focus, data analytics and adaptability; test the significant relationship among digital transformation, agile practices, and strategic human resources management; and developed an enhanced HRM framework that supports the higher vocational college overall business strategy alignment.

2. Methods

Research Design - Descriptive research methods are essential in scientific research, and both domestic and foreign scholars have defined and explained them. Descriptive study is an approach collecting material, analyzing material and describing rules, features and the development of the object to obtain the ultimate descriptive result. The main aim of descriptive study is to answer the questions of “what” or “how” instead of “why”. Descriptive study is generally carried out through certain forms such as case study, comparative study, correlative study and development study. Descriptive research design is a relatively formal research method that typically collects and organizes data through observation, investigation, measurement, statistical analysis, and other means. Its main purpose is to objectively describe the characteristics, patterns, and relationships of phenomena, situations, or events. This research design is typically used to gain a preliminary understanding of a field or phenomenon, providing a foundation or guidance for subsequent research. In order to enable researchers to effectively collect information from respondents through the design and distribution of survey questionnaires, and to provide sufficient and accurate explanations of research results, this study intends to use a descriptive research method. Specifically, this study employs quantitative descriptive methods to clarify the relationship between the digital transformation level of HR in vocational colleges, agile practices, and strategic HRM frameworks.

Participants of the Study - The survey object of this paper is the teachers from six higher vocational colleges in the east, middle and west of Inner Mongolia respectively, including full-time teachers, counselors and administrators, who have different experiences and feelings about the quality of human resource management in colleges, and the breadth of the survey object will help this study to get more scientific and accurate feedback results from all perspectives, and ensure the objectivity and authenticity of the questionnaire survey data and the reliability of the questionnaire survey data to the greatest extent possible. In order to identify respondents from higher vocational colleges, the researcher sent a request letter in advance to the human resource management department of each college asking about the total number of employees and demographic variables of the college. The data for the study was collected in collaboration with the human resource management departments of the surveyed colleges. In this study, the questionnaires were completed and returned through the WJX applet, and the number of respondent copies involved in each college was higher than 40. A total of 402 questionnaires were distributed through sampling using electronic questionnaires and 400 valid questionnaires were collected. The research still has limitations due to limited sample sources and cannot fully cover all vocational colleges in Inner Mongolia. However, researchers will do my best to cover the appropriate scope in order to continuously improve their research.

Instruments of the Study - According to the purpose of this study, the researcher will conduct a predictive study on some vocational colleges in Inner Mongolia. The effective items of the questionnaire were designed through literature analysis and questionnaire survey methods. This study presents in the form of descriptive statements and is designed based on Likert's four point scale, where higher scores indicate higher levels of consistency. The respondents were informed of the frequency of application of each statement on a four point scale. Conversely, the lower the score, the lower the degree of consistency: "4" represents strong consistency (SA), "3" represents consistency (A); "2" indicates disagreement (d); "1" indicates strong opposition (SD).

The first part of the questionnaire is a brief understanding of the demographic variables of the participants, including 11 aspects: sex, age, employment status, highest educational attainment, length of service, job position, professional title grade, positions level, salary level, dual identity, and major background. The second part conducts investigation, analysis, and statistics from three aspects: Digital Transformation, Agile Practices and Strategic Human Resource Management. The questionnaire clarifies the level of digital transformation from three aspects: process design, data analysis and stakeholders experience. A description of Agile practices is provided from four aspects: customer centric, flexibility and adaptability, collaboration and continuous improvement. The strategic Human Resource Management is described from four aspects: business strategy alignment, employee focus, data analytics, and adaptability.

In today's academic field, Cronbach α Analysis is widely used by scholars for reliability testing and has considerable authority. To ensure the reliability, stability, and consistency of the questionnaire and scale, Cronbach's internal consistency and reliability of the questionnaire sample were used α Analysis and testing. The higher the reliability coefficient, the higher the reliability of the measurement. The value of its coefficient is between 0 and 1. Generally speaking, if α When the coefficient is less than 0.6, it indicates insufficient reliability of internal consistency; When $0.7 \leq \alpha \leq 0.8$, it indicates that the scale has considerable reliability; When $0.8 \leq \alpha \leq 0.9$, it indicates that the reliability of the scale is very good.

This is a 11 item questionnaire containing three factors. The survey questionnaire will obtain data through online surveys and conduct reliability tests. Digital Transformation is a three-factor model consisting of process design aspect (5 items), data analytics aspect (5 items) and Shareholders Experience aspect (5 items) , having a total of 15 items. Agile practice is a four factor model that includes a customer centric approach (5 items), in terms of flexibility and adaptability (5 items), in terms of collaboration (5 items), in terms of continuous improvement (5 items), with a total of 20 items. Strategic HRM is a four factor model that includes business strategy alignment aspects (5 items), employee focus aspects (5 items), data analysis (5 items), in terms of adaptability (5 items), with a total of 20 items.

Data Gathering Procedure - The researchers of this study used published papers, journals, and reliable books as sources for collecting data or information. In addition, relevant information about vocational colleges in Inner Mongolia will be collected through a survey questionnaire. Due to the wide and scattered distribution of survey subjects, all survey questionnaires will be conducted online. Data collection is supported by www.wjx.cn. "Wjx" is a comprehensive data collection, analysis, and management platform that integrates online surveys, exams, evaluations, and voting, currently ranking first in the domestic survey industry. It is widely used by researchers to distribute and collect questionnaire surveys, and its results have high accuracy and reliability. Due to its vast territory, Inner Mongolia is roughly divided into three main regions: central, eastern, and western regions, with varying levels of economic, cultural, and higher education development.

In order to obtain the content of the questionnaire more scientifically and effectively, a survey was conducted on the digital transformation, Agile Practices, and strategic HRM in Inner Mongolia vocational colleges. Therefore, Baotou Vocational & Technical College, Baotou Light Industry Vocational Technical College, Inner Mongolia Technical College of Mechanical & Electrical, Hohhot Vocational College, Hulunbuir Vocational Technical College Six representative vocational colleges located in the central, eastern, and western regions of Inner Mongolia, including Tongliao Vocational College, were selected. At each surveyed vocational college, researchers will contact the person in charge of the corresponding HR management department of the university, who will distribute the survey questionnaire and make informed consent applications before the survey. The respondents will complete the questionnaire survey voluntarily. The survey questionnaire will be personally managed by researchers to ensure the validity and secrecy of the results. From January 20, 2024 to April 2, 2024, a total of 402 questionnaires were distributed and 400 questionnaires were collected, of which 400 were valid questionnaires, with a validity rate of 100 %, and the number of valid questionnaires met the requirements of the study.

Data Analysis - Based on the research purpose of exploring digital transformation, Agile Practices, and strategic HRM, this study plans to use different statistical analysis tools to statistically analyze and interpret the data, such as WM, Composite Mean, Case Processing Summary, Descriptives, Tests of Normality, Nonparametric Correlations, Correlations and Std. Deviation, which was utilized based on the objectives of the study. Weighted mean and rank were used to determine the level of digital transformation of higher vocational college in terms of process design, data analytics and stakeholders experience; to determine Agile practices in terms of Customer-centricity, Flexibility and adaptability, Collaboration and Continuous improvement; and to describe strategic human resource management in terms of business strategy alignment, employee focus, data analytics and adaptability. SPSS 28.0 was used to analyse the data in this study. According to the Shapiro-Wilk test, the p-value of all the variables was less than 0.05, indicating that the data set did not obey a normal distribution. Therefore, in order to assess the significant relationship, we used Spearman rho analysis in non-parametric tests. Generally speaking, "frequency distribution" is used to generate visual representations or illustrations of the collected data, making it easier for researchers to observe the level and concentration of the research data, and to browse through all the data. "Weighted average" is used to determine the impact and/or degree of consistency on identified variables and indicators. Establish correlations between variables, and guide the development of digital transformation, Agile Practices, and strategic HRM frameworks. In addition, all data were processed using SPSS 28.0 statistical tools to further explain and understand the research results. SPSS is a software tool for data management and statistical analysis, widely used in the research. It can be used for data input, editing, statistical analysis, reporting, and graphic production. It has the advantages of convenient programming and powerful functions, and is widely used by researchers around the world. Its scientific and reliable nature has been fully demonstrated.

Ethical Considerations - For ethical reasons, this study will obtain permission from the college before initiation to ensure that the target respondents truthfully answer necessary research questions, and each respondent will anonymously and voluntarily fill out the questionnaire. Clearly state to the respondents in a prominent position in the questionnaire that all collected information is only used for academic research purposes in this paper and is confidential to eliminate their concerns and ensure the quality and completeness of questionnaire responses. In the end, we will ensure that respect and privacy of the target interviewees are maintained. All information provided in the survey questionnaire will be strictly kept confidential to protect the privacy of the respondents from infringement.

1. RESULTS AND DISCUSSION

Table 1

Summary Table on Level of Digital Transformation

Key Result Areas	Composite Mean	VI	Rank
process design	2.96	Agree	3
data analytics	2.95	Agree	4
stakeholders experience	2.97	Agree	1.5
Grand Composite Mean	2.96	Agree	

Legend:3.50-4.00=Strongly Agree;2.50-3.49=Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Table 1 shows the summary results for the level of HR digital transformation. The study found that the weighted average of the level of digital transformation of HRs is 2.96, and the weighted averages of the three influencing factors are all very close to each other, ranging from 2.95 to 2.97, which is a relatively average performance.

Among these, the stakeholders experience with an average score of 2.97, ranking first place. This suggests that HEIs are doing a better job of focusing on the stakeholder experience, and may have taken steps to improve the experience of their staff and other stakeholders. The average scores for process design is 2.96, this suggests that colleges have also made some efforts and improvements in redesigning their processes and may have begun to optimize and streamline some of their processes to improve efficiency and effectiveness. The average score of

2.95 for data analytics ranked last, indicating that there is still some room for improvement in data analytics in higher education institutions, and that there may be a need to strengthen data analytics capabilities and technology applications to better support human resource decision-making and strategic planning.

Taken together, while HEIs are performing moderately well overall in HR digital transformation, they are performing better in stakeholders experience, and process design, and need to continue to work on improving their data analytics capabilities in order to drive the process of digital transformation and improve the efficiency and quality of HR management.

Table 2

Summary Table on Agile practices

Key Result Areas	Composite Mean	VI	Rank
Customer-centricity	2.95	Agree	2.5
Flexibility and Adaptability	2.96	Agree	1
Collaboration	2.93	Agree	4
Continuous Improvement	2.95	Agree	2.5
Grand Composite Mean	2.95	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 2 presents the summary results of the respondents' Agile practices. Among the indicators presented, the level of practice received the most recognition in terms of flexibility and adaptability, ranking first with an overall average score of 2.96. This shows that colleges are able to respond flexibly to changes and challenges, are adaptable and resilient, and are able to make timely adjustments to their human resource management strategies and measures in order to adapt to changes in the external environment. It is followed closely by Customer-Centricity and Continuous Improvement, which tied for second place, with an overall average score of 2.95. This shows that colleges have made some efforts and achievements in focusing on employee needs, enhancing service quality and continuous improvement, and are able to continuously improve the level and effectiveness of HRM. Collaboration has a lower average score of 2.93 and ranks last. This may imply that there are some shortcomings in the promotion of inter-departmental collaboration and teamwork in HEIs, and that communication and collaboration mechanisms need to be strengthened in order to improve the overall effect of collaboration.

Overall, respondents' perceptions of the six HEIs in East, Central and West Inner Mongolia where they are located are good in the areas of flexibility and adaptability, Customer-centricity and continuous improvement, but need to be strengthened in the area of collaboration. By further strengthening collaboration mechanisms and promoting teamwork and communication, overall HRM can be improved to better support the development of the HEIs and the achievement of their strategic goals.

Table 3

Summary Table on Strategic Human Resource Management

Key Result Areas	Composite Mean	VI	Rank
Business Strategy Alignment	2.95	Agree	2.5
Employee Focus	2.95	Agree	2.5
Data Analytics	2.95	Agree	2.5
Adaptability	2.95	Agree	2.5
Grand Composite Mean	2.95	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 3 summarizes the respondents' level of assessment of strategic HRM. The composite mean of 2.95 shows that the respondents' strategic HRM are moderately evident. It's worth noting that the combined average of all four indicators - business strategy alignment, Employee Focus, Data Analytics, and Adaptability - also balanced at 2.95. This indicates that the respondents assessed the indicators in the strategic HR process in the same way and that the indicators have the same influence on the level of the strategic HR process.

Overall, the results of this study yielded moderate evidence based on the respondents' assessments, taking into account the strategic HRM in Inner Mongolia's higher vocational colleges. These initiatives contribute to the effectiveness and contribution of human resources management to the realization of the strategic objectives and sustainable development of colleges.

Table 4*Relationship Between Digital Transformation and Agile Practices*

Variables	rho	p-value	Interpretation
Process Design			
Customer-centricity	0.719**	< .001	Highly Significant
Flexibility and Adaptability	0.735**	< .001	Highly Significant
Collaboration	0.677**	< .001	Highly Significant
Continuous Improvement	0.705**	< .001	Highly Significant
Data Analytics			
Customer-centricity	0.707**	< .001	Highly Significant
Flexibility and Adaptability	0.705**	< .001	Highly Significant
Collaboration	0.702**	< .001	Highly Significant
Continuous Improvement	0.737**	< .001	Highly Significant
Stakeholders Experience			
Customer-centricity	0.703**	< .001	Highly Significant
Flexibility and Adaptability	0.721**	< .001	Highly Significant
Collaboration	0.645**	< .001	Highly Significant
Continuous Improvement	0.706**	< .001	Highly Significant

***. Correlation is significant at the 0.01 level*

As shown in Table 4, the calculated rho values range from 0.645 to 0.735, indicating a strong direct relationship between the sub-variables of Digital Transformation and Agile practices. Also, the p-value obtained is less than 0.01, indicating a statistically significant relationship between Digital Transformation and Agile practices. This means that the higher the level of digital transformation, the better respondents assessed Agile practices. This means that the progress and achievements in digital transformation in HEIs will help to promote the development and application of Agile practices, which will in turn improve the effectiveness and contribution of HRM and contribute to the achievement of strategic objectives and sustainable development of HEIs.

Digital transformation of HR in colleges is the process of standardizing and digitizing the work of colleges as well as the activities of faculty and staff, thus building into a new digital ecosystem. Digital technology has fully universalized the operations of human resources management, increasing the efficiency of administrative work as well as the efficiency of teachers and improving competitiveness. Wei et al. (2023) Scholars showed that the digital transformation of human resource management is the future development trend, which not only improves the efficiency and reduces the management cost, but also brings great convenience to the company management. Therefore, many companies have actively carried out digital transformation, human resource management in universities must also follow the trend of popularizing digital technology to ensure that higher education is carried out properly. Wu et al. (2023) suggest that digital transformation has become the main direction of current organizational change. The change of human resource management in universities should focus on digital technology means and platforms, and bring into full play to the effectiveness of digital applications in management practices and processes, so as to highlight the strategic value of digital HRM in the management decisions of colleges. Al Jafa et al. (2022) claim that applying agile methods to human resource practices in recruitment, career planning, compensation, and performance management can help improve employee engagement and retention rates. The views of these scholars corroborate the findings of this paper.

As shown in Table 5, the calculated rho values range from 0.676 to 0.743, indicating that there is a strong direct relationship between the sub variables of digital transformation and strategic HRM. This is because the p-value obtained is less than 0.01, indicating a statistically significant relationship between digital transformation and strategic HRM. This means that the higher the level of digital transformation, the higher the level of strategic HRM. The relationship between digital transformation and strategic HRM is mutually reinforcing, with a high

level of digital transformation contributing to the upgrading of strategic HRM, leading to more effective HR management and better organizational performance. Thus, Strategic HRM is essentially an integrated process that aims to achieve ‘strategic fit’, contributing to the business planning process as it happens.

Table 5

Relationship Between Digital Transformation and Strategic Human Resource Management

Variables	rho	p-value	Interpretation
Process Design			
Business Strategy Alignment	0.707**	< .001	Highly Significant
Employee Focus	0.694**	< .001	Highly Significant
Data Analytics	0.714**	< .001	Highly Significant
Adaptability	0.720**	< .001	Highly Significant
Data Analytics			
Business Strategy Alignment	0.722**	< .001	Highly Significant
Employee Focus	0.701**	< .001	Highly Significant
Data Analytics	0.743**	< .001	Highly Significant
Adaptability	0.714**	< .001	Highly Significant
Stakeholders Experience			
Business Strategy Alignment	0.714**	< .001	Highly Significant
Employee Focus	0.676**	< .001	Highly Significant
Data Analytics	0.708**	< .001	Highly Significant
Adaptability	0.731**	< .001	Highly Significant

** . Correlation is significant at the 0.01 level

Ma et al. (2022) pointed out that, in the context of digital transformation, higher education bears the important responsibility of cultivating high-level composite talents and meeting the needs of human resources development, which puts forward higher requirements for human resources management in higher education institutions, forcing the management of information technology to the digitalization of management to ensure that the management of colleges is smarter, the data is more integrated, the system is more interconnected, the decision-making is more scientific, and the business capacity is stronger, thus truly realizing the “data and information” as a management “asset”.

Table 6

Relationship Between Agile practices and Strategic Human Resource Management

Variables	rho	p-value	Interpretation
Customer-centricity			
Business Strategy Alignment	0.719**	< .001	Highly Significant
Employee Focus	0.689**	< .001	Highly Significant
Data Analytics	0.723**	< .001	Highly Significant
Adaptability	0.697**	< .001	Highly Significant
Flexibility and Adaptability			
Business Strategy Alignment	0.697**	< .001	Highly Significant
Employee Focus	0.685**	< .001	Highly Significant
Data Analytics	0.745**	< .001	Highly Significant
Adaptability	0.691**	< .001	Highly Significant
Collaboration			
Business Strategy Alignment	0.699**	< .001	Highly Significant
Employee Focus	0.707**	< .001	Highly Significant
Data Analytics	0.665**	< .001	Highly Significant
Adaptability	0.707**	< .001	Highly Significant
Continuous Improvement			
Business Strategy Alignment	0.717**	< .001	Highly Significant
Employee Focus	0.724**	< .001	Highly Significant
Data Analytics	0.722**	< .001	Highly Significant
Adaptability	0.701**	< .001	Highly Significant

** . Correlation is significant at the 0.01 level

As shown in Table 6, the calculated rho values range from 0.689 to 0.745, indicating a strong direct relationship between the sub-variables of Agile practices and Strategic HRM. This is because the p-value

obtained is less than 0.01, indicating that there is a statistically significant relationship between Agile practices and strategic HRM. This means that the increased effectiveness of Agile practices can contribute to the improvement and enhancement of strategic HRM, which in turn will promote the modernization and strategic development of HR management in colleges. The relationship between the effectiveness of Agile practices and strategic HR processes is mutually reinforcing, with efficient Agile practices helping to improve the smoothness of strategic HRM, leading to more effective HR management and better organizational performance.

HRM practices play an important role in supporting the implementation of an organization's strategy by helping the organization to judge the soundness of strategic decisions, aligning HR practices with the organization's overall plans and objectives, and thus contributing to the development of the organization's long-term strategic goals. The author argues that HEIs should see the HR department as key in determining the overall strategic goals and needs of the organization, enabling HRM to set dynamic organizational strategic goals. At the same time, in order to be sustainable, agile performance management needs to set transparent performance standards, provide direct ongoing feedback, and assess the effectiveness of practices.

Proposed HR Management Framework

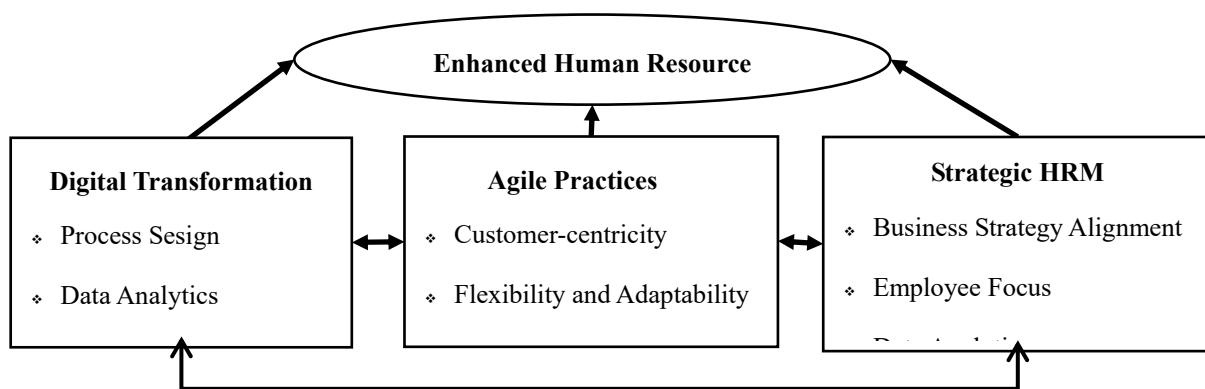


Figure 1. Human Resource Management Framework for Higher Vocational College

A proposed HRM framework is created to improve the productivity of faculty and staff in colleges in the digital era, optimize the flexibility of HR decision-making, enhance employee engagement, satisfaction and development opportunities, and strengthen performance management and incentives. At the same time, this will help to ensure that the development and utilization of HR is in line with the overall development direction of the college, attract and retain high-quality staff, provide talent support for the further development of the college, improve the innovation ability and competitiveness of the college, and promote the sustainable development of higher vocational colleges. As seen in Figure 1, effective HRM requires digital transformation, Agile practices and Strategic HRM. Digital transformation has implications for both Agile practices and strategic HRM. Agile practices can also have an impact on an organization's strategic HRM. In this literature study, the organization that is the subject of the framework explanation consisted of six higher vocational institutions in East, Middle, and West Inner Mongolia.

3. Conclusions and recommendations

Based on the research findings, the researcher has come to the following conclusions. The respondents moderately agreed with the terms of the digital transformation for process design, data analytics and stakeholders experience. Respondents expressed moderate agreement on the practice with the Customer-centricity, Flexibility and Adaptability, Collaboration, and Continuous Improvement. Respondents expressed moderate agreement on the process with the business strategy alignment, employee focus, data analytics and adaptability. There is a highly significant relationship among the level of digital transformation, Agile practices and Strategic HRM. A proposed framework for effective HRM is presented to enhance the HRM of the higher vocational colleges.

According to the research conclusions, the researcher has proposed the following recommendations. The researcher recommends that digital transformation be improved through further changes to the digitization of the induction process and the adoption of multiple ways of collecting and analyzing teachers' data, while providing managers with more accurate data and analytical reports. The lowest rank for Agile Practice is 'Knowledge and experience is shared across departments, enabling collaboration across different subject areas'. The researcher recommends that human resources departments should collaborate and communicate with other departments, and facilitate the sharing of knowledge and experience among departments through the organization of cross-departmental projects and collaborations in order to enhance overall competencies. The lowest rank for Strategic Human Resource Management is 'colleges have open and transparent communication channels and are able to respond to and address the needs and opinions of faculty and staff in a timely manner'. The researcher recommends that college administrators should pay attention to the needs and opinions of teachers, establish open and transparent communication channels, listen to opinions and suggestions, involve staff in the operation and decision-making process of the college, and respond to and address the needs of staff in a timely manner in order to further increase staff satisfaction and loyalty. The HRM department and college administrators in Inner Mongolia Higher Vocational Colleges can utilize the proposed human resources framework to continue focusing on digital human resource transformation, agile human resource practices, and strategic HRM to achieve the college's mission, goals and vision. Future researchers may specify the variables to be used in vocational colleges.

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