

Factors influencing Use of Human Resource Information System in Nepali Organizations¹

Bhawana Tamrakar* & Arjun Kumar Shrestha
School of Management, Kathmandu University, Lalitpur, Nepal

Abstract

Adoption of Human Resource Information System (HRIS) could be instrumental in gaining competitive advantage to organizations across all sectors. However, the adoption of HRIS is scanty in many organizations, especially in the developing countries. This study attempted to investigate application of Unified Technology Acceptance and Use of Technology (UTAUT) model in the context of adoption of Human Resource Information System (HRIS) in Nepali organizations. It also examined the mediating role of Behavioral Intention for actual use of HRIS. The study further investigated the moderating role of prior exposure for generating actual use of HRIS when behavioral intention already existed. One hundred thirty employees from the Human Resource Unit of different organizations participated in the study. The results showed that three factors - facilitating condition, performance expectancy, and hedonic motivation, generate behavioral intention for adoption of HRIS. The influence of these factors on actual use of HRIS was partially mediated by behavioral intention for adoption. Prior exposure of employees moderated the positive influence of three factors on actual use of HRIS. The implications of the study are discussed and limitations of the study are highlighted.

Keywords: Human Resource Information System, Behavioral Intention, Nepali Organizations, UTAUT.

Introduction

In recent years, adoption of Human Resource Information System (HRIS) by organizations has increased remarkably (Troshani, Jerram, & Gerrard, 2010). The increased adoption of the system can be attributed to its role in performance improvement of the organization. Many researchers (Ngai & Wat, 2006; Bamel, Bamel, Sahay & Thite, 2014; Mahapa & Chirasha, 2012) have demonstrated that organizations are experiencing positive impacts from effective adoption of HRIS in terms of quick response and accurate access to information, improved employee services, communication; and reduced paperwork etc. Use of HRIS releases HR staff from regular transactional duties while enabling them to focus on strategic duties (Ferdous, Chowdhury & Bhuiyan, 2015). Automation of HR processes has a direct impact on employee performance (Al-Dmour, 2022) as well as turnover intention of employees (Maier, Laumer, Eckhardt & Weitzel, 2012) and job satisfaction (Maamari & Osta, 2021) because of increased efficiency in HR processes. Studies (e.g., Alwis 2010) also indicate

¹ Earlier version of this paper was presented at the sixth biennial conference of the Indian Academy of Management held at the Indian Institute of Management Tiruchirappalli, India on 2-4 January, 2020

* author email: bhawana@kusom.edu.np

that the role of HR has been shifting from the traditional role of administrator to the role of strategic partner and change agent after the adoption of HRIS in organizations. Despite these positive outcomes of adoption of HRIS and changing role of HR, the issues and challenges related to acceptance of HRIS among organization members in the context of developing countries have not yet been fully explored. Bondarouk, Parry and Furtmueller (2017) have opined that most of the studies related to HRIS explored challenges and advantages of implementing HRIS, thus a need for studies testing relationships among various aspects related to HRIS is evident.

Despite the fact that organizational members have a strong positive impression about HRIS and its importance for effectiveness, efficiency and transparency in organization, many organizations have not been able to realize optimum benefits from the implementation of HRIS. Researchers have identified several factors hindering the implementation of HRIS, especially in the context of developing countries. For example, Ngai and Wai (2006) identified lack of financial support as the major factor while Bamel et al. (2014) identified huge initial installation investment, lack of commitment from top management, inadequate knowledge, and lack of expertise in using HRIS as major factors constraining its implementation. Similarly, Alam, Masum, Beh and Hong (2016) demonstrated that IT infrastructure, top management support, IT capabilities of staff, perceived cost, and competitive pressure have determined the successful adoption of HRIS in hospitals. Likewise, Ferdous et al. (2015) in a study of organizations in Bangladesh found that reluctance of top management is the strongest barrier, followed by the internal resistance from employees in implementing HRIS. In addition, lack of clear vision about use of HRIS, lack of proper change management approaches in implementation, and ignorance of employees are also major factors limiting the use of HRIS (Krishnan & Singh, 2007).

Ojha (2018) and Gautam (2011) have found increasing use of IT for HR purposes in Nepali organizations. However, only 34 percent of organizations in Gautam's (2011) study have HRIS. The intensity of adoption, according to the study, ranges from simple attendance tracking systems to complicated systems covering many HR processes. Among the organizations studied by Gautam (2011) that has adopted HRIS, almost all used payroll systems. Kandel (2018) found an increasing trend of HRIS adoption by Nepali organizations with a parallel manual system. Ojha (2018) in a study of HRIS practices in Nepali organizations identified many issues related to use of HRIS in the organizations. The study found that individuals' expression of affinity towards HRIS were not reflected in their behavior in using the system; organizations did not use HRIS in decision making; problem related unstable power and internet supply were demotivating users in using the system. Thus, in the context of Nepali organizations, the studies indicated that although adoption of HRIS by organizations was increasing, only a few organizations had implemented the system with clear understanding of its value. In many, introduction of HRIS is a matter of peer pressure or regulatory requirements enforced by regulatory bodies like the central bank in the case of commercial banks.

Authors experienced paucity of research related to HRIS in Nepali context. Limited previous studies have indicated noticeable increase in adoption of HRIS in quantitative terms only. Nepali organizations are yet to realize due benefit from HRIS. Many Nepali organizations have started automating their HR processes like attendance tracing, recruitment and selection, payroll, thus reaping benefits in terms of reduced paperwork, reduced hassle of manual processes, effective monitoring and so on (Sharma & Gautam, 2018). However, many are still struggling to initiate, limiting the scope of the system within the HR team. The possible reasons for this variation in adoption of HRIS are not properly investigated in the context of Nepali organizations. Systematic studies related to HRIS in Nepali organizations are very limited. Questions like, "Why some organizations are successful in making the system appealing across different departments in the organization and while others are not,

“What factors motivate organizational members to use the system,” “How organizations generate intention among organizational members to use the system,” are some of the questions that are still unexplored in the context of Nepali organizations.

This study focused on examining the effect of four factors - facilitating condition (FC), internal social influence (ISI), perceived performance expectancy (PE), and employee’s hedonic motivation (HM) on behavioral intention of organization members to use HRIS, also referred to as adoption intention of organizational member to use HRIS (AI). It also examined whether the behavioral intention thus generated leads to actual use of HRIS and whether prior experience of employees in a similar environment (PEX) and IT training (TR) can help in increasing actual use of the system.

Literature Review and Hypothesis Development

This section introduces Unified Theory of Acceptance and Use of Technology (UTAUT) as a model to understand factors leading to acceptance of HRIS among users in organizations. The section considers various factors affecting behavioral intention to use the system as described by the model.

Major literature in the early 1990s has dealt with HRIS implementation and its strategic importance in developed countries (Troshani et al. 2010). From last decade, HRIS literature has started to shift its focus on developing countries like India (Bamel et al 2014), Hongkong (Nagi & Wat, 2004), Bangladesh, Pakistan, Jordan (Altarawneh & Al-Shqairat, 2010). Most of the studies (e.g Bamel et al 2014) on HRIS in developing countries are focused on experiences and outcomes of adoption of HRIS as well as on barriers of implementation of HRIS. Organizations introduce HRIS to enhance their performance. The information stored and organized in the system ensures access to relevant and accurate information at appropriate time. This in turn supports effective decision making, leading to enhanced performance of overall organization (Kavanagh, Thite & Johnson, 2015). However the system itself cannot ensure expected results unless organizational members are committed to use the system properly in their daily work processes (Kavanagh et al, 2015). Anitha and Aruna (2015) have suggested technological factors followed by psychological factors play a major role in the acceptance of HRIS by organizational members. On the other hand, Kavanagh et al (2015) noted that behavioral aspects are more crucial than technical aspects while dealing with challenges in successful implementation of HRIS. Likewise, Alwis (2010) suggested that the most critical factor in successful implementation of HRIS is employee attitude. Thus, different studies have attributed different factors for use of HRIS by organizational members.

Shifting from manual HR processes to computerized systems is a major behavioral change for organizational members. According to the theory of planned behavior (Ajzen, 1985), every behavior of an individual is preceded by a behavioral intention. Thus, it is necessary for organizations to study the factors that develop behavioral intention among organizational members to use the system, prior to actual implementation or adoption of the system. To understand the factors that help individuals accept such IT based systems, Venkatesh, Morris, Davis and Davis (2003) developed UTAUT as a unified model integrating eight prominent models used in technology acceptance. The models are theory of reasoned action, technology acceptance model, motivational model, model combining technology acceptance and theory of planned behavior, model of PC utilization, innovation diffusion theory, and social cognitive theory as technology acceptance models (Venkatesh et al, 2003). UTAUT and its extension UTAUT2 (Venkatesh, Thong & Xu, 2012) identified core determinants of technology acceptance and usage.

The determinants according to UTAUT are Facilitating Conditions (FC), Internal Social Influence (ISI), Performance Expectancy (PE), and Effort Expectancy (EE). The extended model UTAUT2, which added three factors Hedonic Motivation (HM), Price Value (PV) and Habit is believed to be more comprehensive and believed to capture the phenomena of technology acceptance better than the mentioned eight models. Venkatesh et al (2003) validated the UTAUT model in the context of introducing new technology and Venkatesh et al (2012) further validated the UTAUT2 model among users of mobile internet services.

Wang and Wang (2010) validated the UTAUT model among mobile internet devices users and found that PE, EE, and ISI have significant positive influence on behavioral intention of users to use the system. Similar results were found for users of internet banking in Jordan (AbuShanab & Pearson, 2007). Chao, (2019) used this model to identify factors affecting behavioral intention of students in using mobile technology for e-learning. Being a technology-based system, HRIS users are likely to behave in a similar manner as users of other technology-based systems like mobile learning, internet banking etc.

The applicability of the UTAUT model for HRIS users has been investigated by researchers in different countries like Cameroon (Noutsu et al, 2007), Bangladesh (Rahman, Qi & Jinnah, 2016; Askoy & Sallam, 2018) and have found slight variation in results in terms of factors affecting behavioral intention to use the HRIS system. Additionally, Oshlyansky, Cairns and Thimbleby (2007) have investigated UTAUT in different cultural contexts and demonstrated that the effect of different UTAUT factors on the intention to use varies in different cultural contexts. Thus, the study intends to act on the lack of certainty in the literature; investigating the relationship between different factors of UTAUT i.e. FC, PE, HM, and ISI and user's behavioral intention (AI) for HRIS among Nepali organizations.

Facilitating Condition and Behavioral Intention to HRIS

Supportive environmental factors like physical infrastructure (e.g., availability of connectivity, personal computers, mobile devices etc.) and technical support (e.g., assistance for problem solving) develop confidence in individuals on technical systems. These factors can be called facilitating conditions leading to positive intention towards the technical system (Warren, 2004).

Venkatesh et al (2003) have defined FC as the perception of individuals on organizational, physical, technical and knowledge infrastructure that influences AI for technical systems in organizations. Researchers Lu, Liu, Yu and Yao (2003) and Venkatesh, Brown, Maruping and Bala (2008) have also demonstrated the positive effect of FC on acceptance of mobile technology by individuals.

HRIS being a technology-based system, FC is likely to have a similar effect on its AI. Quaasar (2018) has found a positive effect of FC on AI of HRIS. However, the study by Noutsu et al. (2017) conducted in Cameroon demonstrated an insignificant contribution of FC on AI of HRIS. To clarify this inconsistency, this study proposed the following hypothesis.

H1: Facilitating conditions have a significant positive relationship with behavioral intention for HRIS.

Internal Social Influence and Behavioral Intention for HRIS

According to the theory of planned behavior (TPB), individuals develop positive intentions towards any behavior if some important people expect the person to perform that behavior (Bhattacharjee, 2012). Warren (2004) investigated the application of the theory of reasoned action through the intensity of use of Information Technology among UK farmers. Positive experience with IT based systems among UK farmers motivated fellow farmers to use similar IT based systems. Troshani et al. (2010) suggested that influential members of organizations positively motivate other members to use technology-based systems.

Projection of positive self-image in organization is important for individuals. Hence, organizational members prefer to be involved in activities that portray their positive image. Kwon and Chon (2009) investigated the use of satellite services by employees to enhance their positive self-image at the workplace. Likewise, the view of influential fellow members is also valued by individuals. Displaying positive self-image and following influential people can be termed as ISI that leads to using technology based systems in organization (Venkatesh et al., 2003).

The effect of ISI on behavioral intention to adopt (AI) has been studied across different sectors. Venkatesh et al. (2012) found that there is a significant relationship between ISI and intent to use mobile technology. Further, Lewis, Fretwell, Ryan and Parhan (2013) found that social influence is one of the most important antecedents for use of technology by instructors in the classroom. Eckhardt, Laumer, and Weitzel (2009) also demonstrated significant impacts of social influence on acceptance of IT based systems. Many other studies also found significant influence of ISI on AI to use of HRIS (e.g. Quaasar, 2018; Nautsa et al, 2017). Thus, the current study proposed that:

H2: Internal Social Influence has a significant positive relationship with behavioral intention to use HRIS.

Performance Expectancy and Behavioral Intention for HRIS

Organizational members are likely to be involved in behaviors that they believe will help them in performance in a positive way (Al-Suqri & Al-Kharusi, 2015). According to innovation diffusion theory, individuals are likely to use a new system if they perceive the relative benefit of using the system and believe that the system is compatible with their current work behavior (Bhattacharjee, 2012). Venkatesh et al (2003) claimed that PE is the strongest predictor of AI which is developed by perceived usefulness, extrinsic motivation, job fit, relative advantage, and outcome expectations. Similar effects are reported by different researchers across different fields.

Venkatesh et al. (2012) demonstrated the positive impact of PE on acceptance of mobile technology. Similarly, Lewis et al. (2013) found that PE is one of the most important antecedents for use of technology by instructors in the classroom. Nagdev and Rajesh (2018) demonstrated a significant effect of perceived usefulness of Indian consumers on behavioral intention to use internet banking. Quaasar (2018) and Noutsa et al. (2017) found the positive effect of PE in acceptance of HRIS by organizational members. In the same line, employees will have positive feelings towards using HRIS, if they perceive HRIS will assist them to perform better in their job. Thus the study proposed the following hypothesis.

H3: Performance expectancy has a significant positive relationship with behavioral intention for use of HRIS.

Hedonic Motivation and Behavioral Intention for HRIS

Hwang and Yi (2002) demonstrated that perceived enjoyment at work has a positive effect on application specific self-efficacy that leads to positive behavioral intention to perform that work. Venkatesh et al. (2012) defined the fun or pleasure derived from using technology as HM and demonstrated that it is a predictor of consumers' behavioral intention to use the technology. Similarly, Alalwan, Dwivedi, Rana, Lal, and Williams (2015) confirmed that HM has significant influence on behavioral intention to use the internet banking in Jordanian banking customers. Likewise, Sharif and Ali (2017) demonstrated a significant positive relationship between HM and behavioral intentions to use internet banking in Pakistan. Being an IT based system HM is likely to have a similar positive influence on behavioral intention of users to use HRIS as well. Thus the study proposed the following hypothesis:

H4: Hedonic motivation has a significant positive relationship with behavioral intention to use HRIS.

Behavioral Intention for Use of HRIS

Ajzen (1985), in the theory of planned behavior (TPB), suggested that behavioral intention is an immediate predictor of behavior. TPB states that individual's behavior is based on one's intention towards that behavior (Bhattacharjee, 2012). Behavioral intention of employees to use the system will ultimately be converted into actual use of the system (Hwang & Yi, 2002). Thus the following hypothesis is proposed:

H5: Behavioral Intention for use of HRIS has significant positive relationship with the use of HRIS.

Mediating Role of Behavioral Intention for use of HRIS

Ajzen (1985) in TPB postulated that every human behavior is controlled by behavioral intention which may be reflected in the form of formal or informal planning in the mind of a person. This theory suggests that attitude forms behavioral intention which leads to actual behavior. Bagozzi, Baumgartner and Yi (1989) found that behavioral intention mediates the relationship between attitude for behavior and actual behavior. Similar mediating effects of behavioral intention can be expected for acceptance of technological systems. Different factors such as FC, PE, ISI, and HM help generate intention to use the system, which in turn leads to actual use (Venkatesh et al, 2003). In the absence of behavioral intention, these factors might not be able to develop use as expected. Hence, the following hypotheses are proposed:

H6a: Behavioral intention mediates the relationship between facilitating conditions and use of HRIS.

H6b: Behavioral intention mediates the relationship between internal social influence and use of HRIS.

H6c: Behavioral intention mediates the relationship between performance expectancy and use of HRIS.

H6d: Behavioral intention mediates the relationship between hedonic motivation and use of HRIS.

Moderating Role of Prior Experience and Training

Warren (2004), in his study of UK farmers, found that the use of IT based agriculture support is positively influenced by their prior exposure to similar computerized systems in the form of sending

emails, editing pictures in computer etc. Similar effects can be expected in use of HRIS as well. Prior Experience (PEX) of users in similar IT based systems or training in the form of IT related academic degree or major IT related training is likely to have a positive impact on enhancing current use of HRIS. PEX and/or Training would make the user familiar with the system and help in reducing possible resistance in using them. User satisfaction with the system increases with extended involvement with the system, which in turn increases the extent of use of the system (Baroudi, Olson & Ives, 1986, as cited in Jain & Aeron, 2015). According to Kavanagh et al. (2015), one of the factors that accounts for IT system failure is lack of proper training. On the other hand, Jain and Aeron (2015) demonstrated that there is no significant effect of training on utilization of HRIS. Thus, the effects of PEX and Training need to be investigated. The hypotheses are proposed as:

H7: Prior experience moderates the relationship between behavioral intention and use of HRIS.

H8: Training moderates the relationship between behavioral intention and use of HRIS.

The framework for investigation is depicted in Figure 1. It shows that FC, ISI, PE, and HM build behavioral intentions for use of HRIS. The intention is converted to actual use of HRIS, which is moderated by Prior Training of users in the area and Prior Experience of users in similar systems.

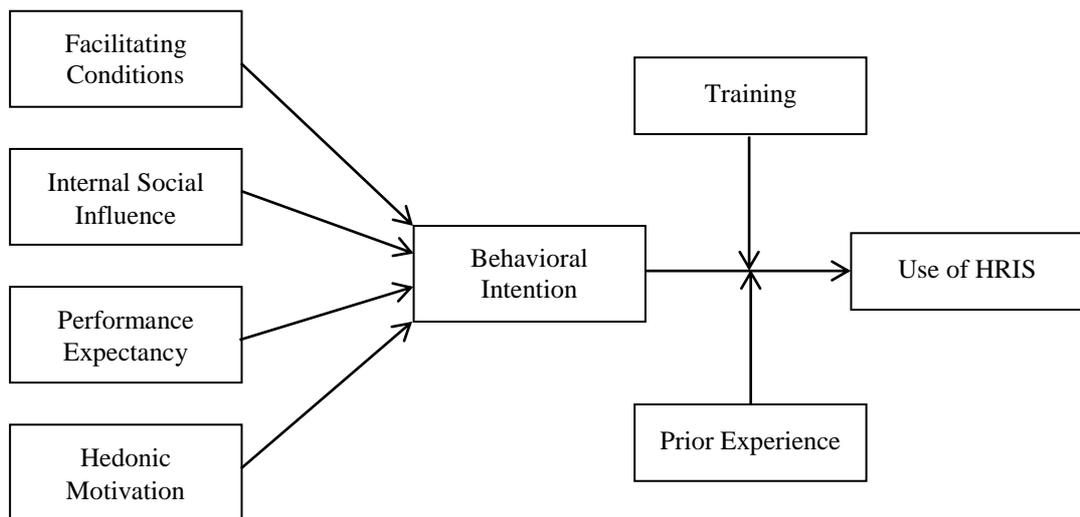


Figure 1. Research Model

Methods

Research Design

The study was a quantitative study. The study used a self-reported questionnaire survey technique. The study used non-experimental and cross-sectional design. The unit of analysis was individual.

Population and Sample

The population of this study included members of the human resource department of all organizations within Kathmandu Valley that are using some form of computerized HRIS. The study used a convenient sampling method. Participants were approached through personal contact of the researchers. The questionnaires were distributed to the employees working in the HR department of organizations from eight different sectors - government, banking, construction, Airlines, IT, manufacturing, hospital, and security agency. Altogether 130 responses were usable for analysis. Highest percentage of respondents was from banking sector (32%), followed by respondents from government sector (12%) and manufacturing sector (11%).

Among the respondents, 53 percent were male and the remaining were female. Most of the respondents hold Master's degrees (61 percent). Regarding their position in the organization, the study captures a fairly good combination of Officer level (38 percent), Managerial level (35 percent), Support level (20 percent), and Top Management (3 percent).

Measures

Questionnaire items of UTAUT developed by Venkatesh et al. (2003) were used to measure study variables of the current study. UTAUT includes 10 items for FC, six items for ISI, 12 items for PE, 13 items for HM, four items for AI, and three items for USE. A sample item of FC includes "I have resources necessary to use HRIS". A sample item of ISI is "People who are important to me think that I should use HRIS". Similarly a sample item of PE includes "Using HRIS helps me improve my job performance." The sample items of HM and AI are "Using HRIS is enjoyable." and "I intend to continue using HRIS in future "In my organization, HRIS is used for HR processes" is one of the sample items for measuring USE. Responses for the items were captured in a 5-point Likert Scale (1 being Strongly Disagree to 5 being Strongly Agree). Prior experience and Training were dichotomous variables.

Results

The study used validated instruments. However, prior to testing the proposed hypotheses, internal consistency reliability of the instruments was assessed using Cronbach Alpha. Cronbach Alpha values of the scales measuring FC, PE, and HM were .81, .88 and .71 respectively. Similarly, the values of Cronbach Alpha for ISI, AI, and Use were .58, .33 and .65 respectively, which are below acceptable value .70 indicating the problem of internal consistency among the items of the scales. Upon deletion of one item each from these scales, the Cronbach Alpha values of the three scales - ISI, AI and Use increased to .83, .83 and .81 respectively. The items dropped for improving Cronbach α were reverse coded items.

Table 1 shows the mean, standard deviation and correlations among different study variables. The values of correlation coefficients indicate that all study variables are significantly positively correlated to each other at $p < .01$ except the correlation between PE and ISI which is significant at $p < .05$.

Table 1
Correlation Matrix

	Mean	SD	FC	ISI	PE	HM	AI	USE
FC	3.78	0.54	1					
ISI	3.80	0.61	.50**	1				
PE	3.77	0.63	.44**	.24*	1			
HM	3.57	0.45	.52**	.37**	.78**	1		
AI	3.89	0.59	.49**	.38**	.59**	.64**	1	
USE	3.37	0.97	.48**	.28**	.28**	.38**	.38**	1

Notes: * $p < .05$, ** $p < .01$

Regression Analyses were used to test the hypothesized relationships between the different study variables. Demographic variables age, gender, education, marital status and position in organization were used as control variables as previous studies (e.g. Venkatesh et al., 2003) have indicated moderating effect of these demographic variables. Hypothesis H1 to H4 were tested using multiple regression analysis. The results of regression analyses with control variables age, gender, education, marital status and position in organization are presented in Table 2. The regression results indicate that FC ($\beta = .19$; $p < .05$), PE ($\beta = .24$; $p < .05$) and HM ($\beta = .32$; $p < .01$) positively influence behavioral intention to use the system. Thus hypotheses H1, H3 and H4 are supported, indicating that behavioral intention to use HRIS among members of HR team is significantly influenced by FC, PE, and HM. On the other hand, the second hypothesis H2 which proposed positive influence of ISI on behavioral intention to use the system was not supported.

Table 2
Regression analysis results for testing direct hypotheses (H1 to H4)

	Model 1	Model 2
Age	.21	.10
Gender	-.06	-.04
Marital Status	.06	.04
Education	-.05	.10
Position	.04	-.1
FC		.19*
ISI		.09
PE		.24*
HM		.32**
R ²	.05	.47

Notes: * $p < .05$; ** $p < .01$;

Hypothesis 5 proposed that behavioral intention to use the system positively influences the actual use of HRIS. Regression result ($\beta = .382, p < .01$) shows that behavioral intention of users to use the system leads to actual use of HRIS.

Hypotheses 6a, 6b, 6c, and 6d proposed that AI mediates the relationship between FC, ISI, PE, and HM and use respectively. To test these hypotheses, Baron and Kenny's (1986) four step approach for testing mediating effects was used. The first step is that there should be a significant relationship between independent and dependent variables. In the second step, the relationship between independent variables and the mediator is examined, which also needs to be significant. The third step requires that the effect of the mediator on the dependent variable is significant while controlling for the independent variable. When these conditions are fulfilled, in the fourth step whether the effect of independent variable on dependent variable is insignificant or not while controlling for the mediator is checked. If this condition is fulfilled, there is complete mediation otherwise the mediation is partial.

Analysis (see Table 3) shows that independent variables FC, PE and HM are significantly related to dependent variable Use of HRIS (FC = .86, $p < .0001$; PE = .42, $p < .05$; HM = .83, $p < .001$). The independent variables FC, PE and HM are significantly related to mediator behavioral intention to use HRIS (FC = .54, $p < .001$; PE = .56, $p < .001$; HM = .85, $p < .001$). However, when mediator Behavioral Intention is controlled, the relationship of these independent variables with dependent variable Use of HRIS is weakened showing partial mediating role of Behavioral Intention to use HRIS (FC = .68, $p < .001$; PE = .1, $p < .1$; HM = .48, $p < .01$).

Since direct relationship between ISI and behavioral intention to use the system was not established, mediating role of behavioral intention for ISI-USE relationship was not investigated. Thus hypothesis H6a, H6c and H6d found partial support.

Table 3
Regression Results of Testing Mediating Effects

Dependent Variable→	AI		USE		
	β	β	β	β	β
<i>Step 1</i>					
FC	.86***	.54***	.86***		
PE	.42*	.56***		.42*	
HM	.83***	.85***			.83***
<i>Step 2</i>					
FC			.68***		
PE				.09 $\hat{0}$	
HM					.48**
AI			.35**	.58*	.41**
R ²	.25	.52	.22	.07	.14

Note: $\hat{0} p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Moderated Multiple Regression (MMR) analysis was used to test the moderating effect of training and previous experience on the relationship between behavioral intention and USE. Two interaction terms AI×PEX and AI×TR were also created. MMR was conducted by entering control variables in the first step, the independent and moderating variables in the second step and the interaction term in the third step. The MMR results are shown in Table 4 and Table 5. The results did not find support for both the moderating hypotheses (H7 and H8). Regression results reveal that prior IT based training does not have any influence on the relationship between AI and use of HRIS. However, prior exposure on similar system has marginal effect on the relationship between AI and use of HRIS ($p < .1$)

Table 4

MMR results of moderating effect of TR on AI-USE relationship

	Model 1	Model 2	Model 3
Position	-.06	-.13	-.13
AI		.39	.16
TR		-.08	-.47
AI×TR			.44
R ²	.00	.14	.14

Note: ϕ $p < .1$; AI –Adoption Intention; PE-Prior Exposure; TR-Training Experience

Table 5

MMR results of moderating effect of PEX on AI-USE relationship

	Model 1	Model 2	Model 3
Position	-.06	-.13	-.13
AI		.38	.08
PEX		-.12	-.66
AI×PEX			.05 ϕ
R ²	.19	.17	.19

Note: ϕ $p < .1$; AI –Adoption Intention; PE-Prior Exposure; TR-Training Experience

Discussion

This study examined the direct influence of FC, ISI, PE, and HM on behavioral intention to use HRIS among members of the HR team in Nepali organizations. It also assessed the mediating effect of behavioral intention to use the system on the relationships between FC, ISI, PE, and HM and use of HRIS and the moderating effects of prior training and prior experience on the relationship between behavioral intention to use and actual use of the system. The findings demonstrated that FC, PE, and HM have significant positive relationships with behavioral intention which are consistent with the finding of previous studies (e.g., Venkatesh et al., 2012; Quaosar, 2018). However, unlike the findings of previous studies by Quaosar (2018) and Rahman et al. (2016) and in line with the findings of Nousta et al. (2017), Internal Social Influence does not have significant effect on developing behavioral intention to use HRIS.

This can partially be attributed to cultural difference among the studies and partly to the sample of respondents chosen. The study is based only on the perception of staff members in the HR department. Being a member of the HR team, respondents are likely to be more knowledgeable about HRIS. They might have a natural affiliation towards HRIS as it is directly related to their daily work processes. Thus acceptance and use of HRIS among HR teams can be expected to be voluntary rather than result of any kind of influence from other members of the organization. Moreover, the model was developed for the context of general IT systems and was validated for use of mobile technology (Venkatesh et al, 2012) and internet banking. The effect on the HR system can be expected to be slightly different owing to the complexity and importance of the HR processes that the system is automating (Kavanagh et al., 2015).

Martin and Reddington (2010, as cited in Bondarouk, Parry, and Furtmueller, 2017) and Panayotonpoulou (2017) demonstrated the positive effect of training HR professionals on use of the system. Further, Askoy and Sallam (2018) demonstrated a significant positive effect of training on acceptance and use of HRIS, but in the current study IT based training did not moderate the relationship between behavioral intention to use HRIS on actual use of HRIS. However, the moderating effect of prior experience with similar systems was marginal. Thus those with prior experience in the similar system are to some extent more likely to use the system than those who do not have any experience when both have the same level of intention to use HRIS.

HRIS is an evolving concept in Nepali organizations. Many organizations are in the very nascent stage of implementation of HRIS. Moreover, in many cases the respondents were themselves the key person responsible for the inception of HRIS in the organization and were actively involved in the process of design and implementation of the system. Hence, factors like prior IT related training and prior experience do not matter to the large extent in the generation of behavioral intention for using HRIS in these organizations. The moderating variables might demonstrate significant effect for acceptance and use of the system if investigated among staff members across other departments in the organization. Thus, further study investigating the moderating effect including all employees of the organization is warranted.

This study establishes a partial mediating effect of behavioral intention to use HRIS on the relationship between FC, PE, HI and actual use of HRIS. PE and HM, FC, PE and HM, can lead to use of HRIS. However, proper use cannot be ensured in the absence of Behavioral Intention to use the system. These factors can help in generating behavioral intention which in turn leads to actual use of the system. As the mediating effect was only partial, generation of HRIS usage due to FC, PE, and HM in absence of Behavioral Intention cannot be completely neglected.

The context of Nepali organizations that the study relates to is in the initial stage of adoption of HRIS. The users, despite being members of the HR unit, have not internalized the real value of HRIS for the organization. Thus proper orientation of users in this aspect can help in generating hedonic motivation which results in higher adoption intention leading to better use of the system. Further, the users might not have experienced proper training related to the system, which might have led to minimal effect of training on generating behavioral intention. Thus proper training of users is important.

Implications

Kavanagh et al. (2015) have highlighted HRIS as an important tool for organizations to boost performance of employees resulting in enhanced performance of the organizations. This study tried to find out the factors as well as the mechanisms – both mediating and moderating – through which these factors influence the AI and use of HRIS in organizations. This study found FC, PE, and HM as factors that influence behavioral intention, which in turn leads to actual use of the system. Thus, organizations can enhance use of HRIS by generating AI among its users, which can be done by (i) providing necessary facilitating conditions; (ii) increasing perceived performance expectancy among its users, and (iii) generating hedonic motivation among target users.

The study also found a moderating role of prior experience at marginal level. Thus organizations can gain additional support in successful implementation if they can utilize learning of users from prior experience.

Limitation and Directions for Future Research

The data for this study was collected through the questionnaire survey and therefore the possibility of self-reported bias cannot be ruled out. The respondents of the survey were the member of HR team in the organizations. Hence the respondents might be positively biased in their perception towards the use of HRIS, as the system is directly related to the work process they are involved in their day to day life in the organization. The results might be different if employees from other departments were also included as respondents. This indicates a need to replicate this study including non-HR employees as respondents.

In most of the Nepali organizations, the size of the HR department is relatively small as compared to other departments. As the size of the population under consideration was relatively small, the study was completed with a relatively small sample size. Further, response was collected through convenience sampling, which restricts the generalizability of the findings. More clear and true picture of the phenomenon can be expected if sample is properly randomized and increased in size. Further, the study might not have captured the real picture of Nepali organizations as all the organizations selected were based in Kathmandu, the capital city. Moreover, balanced mix of organizations in terms of their sector of operation was not maintained while selecting organization for response. Many studies in other parts of the world are done on a specific industry (like Banking sector, Education sector, Health sector etc.). Such industry specific study can generate clear picture of the phenomenon. Further, comparison of relationship across different sector can be more meaningful from application point of view.

References

- AbuShanab, E., & Pearson, J. M. (2007). Internet banking in Jordan: The unified theory of acceptance and use of technology (UTAUT) perspective. *Journal of Systems and Information Technology*, 9(1), 78-97. <https://doi.org/10.1108/13287260710817700>
- Aeron, P., & Jain, S. (2015). The Extent of Adoption of HRIS: An empirical investigation with mediators & moderators. A paper presented at Twenty-first Americas Conference on Information Systems, Puerto Rico, 2015

- Ajzen, I. (1985). *From intentions to actions: A theory of planned behavior*. In Action control (pp. 11-39). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-69746-3_2
- Aksoy, A., & Sallam, S. (2018). Factors affecting human resources information systems in developing countries. *Electronic Business*, 17(10), 33-40.
- Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., Lal, B., & Williams, M. D. (2015). Consumer adoption of internet banking in Jordan: Examining the role of hedonic motivation, habit, self-efficacy and trust. *Journal of Financial Services Marketing*, 20(2), 145-157.
- Alam, M. G. R., Masum, A. K. M., Beh, L. S., & Hong, C. S. (2016). Critical factors influencing decision to adopt human resource information system (HRIS) in hospitals. *PloS one*, 11(8), e0160366. <https://doi.org/10.1371/journal.pone.0160366>
- Al-Dmour, R. H. (2022). The Influence of HRIS usage on employee performance and mediating effects of employee engagement in five stars hotels in Jordan. *Research Anthology on Human Resource Practices for the Modern Workforce* (pp. 1468-1489). IGI Global. <https://doi.org/10.4018/IJISS.2020070101>
- Al-Suqri, M. N. (Ed.). (2015). *Information Seeking Behavior and Technology Adoption: Theories and Trends: Theories and Trends*. IGI Global.
- Anitha J., Aruna M. (2015). Transformation towards human resource information systems. *Journal of Management and Development Studies*, 26, 30-50.
- Boozy, R. P., Baumgartner, J., & Yi, Y. (1989). An investigation into the role of intentions as mediators of the attitude-behavior relationship. *Journal of Economic Psychology*, 10(1), 35-62.
- Bamel, N., Kumar Bamel, U., Sahay, V., & Thite, M. (2014). Usage, benefits and barriers of human resource information system in universities. *VINE: The Journal of Information and Knowledge Management Systems*, 44(4), 519-536. <https://doi.org/10.1108/VINE-04-2013-0024>
- Bondarouk, T., Parry, E., & Furtmueller, E. (2017). Electronic HRM: four decades of research on adoption and consequences. *The International Journal of Human Resource Management*, 28(1), 98-131. <https://doi.org/10.1080/09585192.2016.1245672>
- Baroudi, J. J., Olson, M. H., & Ives, B. (1986). An empirical study of the impact of user involvement on system usage and information satisfaction. *Communications of the ACM*, 29(3), 232-238. <https://doi.org/10.1145/5666.5669>
- Beadles, I. I., Nicholas Aston, Christopher M. Lowery, and Kim Johns. The impact of human resource information systems: An exploratory study in the public sector. *Communications of the IIMA* 5(4), 6.
- Bhattacharjee A. (2nd Ed). 2012. *Social Science Research: Principles, Methods, and Practices*. Textbooks Collection. Book 3. http://scholarcommons.usf.edu/oa_textbooks/3.
- Bhattarai, N. (2017). *Human resource development in government organizations of Nepal* (Doctoral dissertation).
- Chao, C. M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in Psychology*, 10, 1652. <https://doi.org/10.3389/fpsyg.2019.01652>
- De Alwis, A. C. (2010). The impact of electronic human resource management on the role of human resource managers. *E+ M Ekonomie a Management*. <http://hdl.handle.net/11025/17365>
- Dery, K., Grant, D., & Wiblen, S. (2009, August). Human resource information systems (HRIS): Replacing or enhancing HRM. In Proceedings of the 15th World Congress of the International Industrial Relations Association IIRA (pp. 24-27).

- Eckhardt, A., Laumer, S., & Weitzel, T. (2009). Who influences whom? Analyzing workplace referents' social influence on IT adoption and non-adoption. *Journal of Information Technology*, 24(1), 11-24. <https://doi.org/10.1057/jit.2008.31>
- Ferdous, F., Chowdhury, M. M., & Bhuiyan, F. (2015). Barriers to the implementation of human resource information systems. *Asian Journal of Management Sciences & Education*, 4 (1).
- Gautam, D. K. (2011). Changing perspectives of managing human resources in Nepal. *Proceedings of Nepalese Academy of Management*, 1(1), 65-78.
- Gautam, D. K., & Davis, A. J. (2007). Integration and devolvement of human resource practices in Nepal. *Employee Relations*, 29(6), 711-726.
- Hazel Kwon, K., & Soo Chon, B. (2009). Social influences on terrestrial and satellite mobile-TV adoption in Korea: Affiliation, positive self-image, and perceived popularity. *The International Journal on Media Management*, 11(2), 49-60. <https://doi.org/10.1080/14241270902756419>
- House, A. (2011). www.lath.com.
- Hwang, Y., & Yi, M. (2002). Predicting the use of web-based information systems: intrinsic motivation and self-efficacy. *AMCIS 2002 Proceedings*, 149.
- Kandel, B. (2018, March 6). Expert Views on HR Management in Nepal. Retrieved from <http://www.newbusinessage.com/MagazineArticles/view/2051>
- Kavanagh M., Thite M., Johnson R. (3rd Ed). 2015. *Human Resource Information Systems*. Sage Publications, Inc.
- Krishnan, S. K., & Singh, M. (2007). Issues and concerns in the implementation and maintenance of HRIS. *Management and Labour Studies*, 32(4), 522-540. <https://doi.org/10.1177/0258042X0703200407>
- Lewis, C. C., Fretwell, C. E., Ryan, J., & Parham, J. B. (2013). Faculty use of established and emerging technologies in higher education: A unified theory of acceptance and use of technology perspective. *International Journal of Higher Education*, 2(2), 22-34.
- Lu, J., Yu, C. S., Liu, C., & Yao, J. E. (2003). Technology acceptance model for wireless Internet. *Internet Research*, 13(3), 206-222. <https://doi.org/10.1108/10662240310478222>
- Maamari, B. E., & Osta, A. (2021). The effect of HRIS implementation success on job involvement, job satisfaction and work engagement in SMEs. *International Journal of Organizational Analysis*, 29(5), 1269-1286. <https://doi.org/10.1108/IJOA-07-2020-2298>
- Mahapa, M., & Chirasha, V. (2012). An assessment on the uptake level of a fully integrated human resource information system (HRIS): A case study of midlands state university. *Public Administration Research*, 1(1), 121. : <http://dx.doi.org/10.5539/par.v1n1p121>
- Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2013). Analyzing the impact of HRIS implementations on HR personnel's job satisfaction and turnover intention. *The Journal of Strategic Information Systems*, 22(3), 193-207. <https://doi.org/10.1016/j.jsis.2012.09.001>
- Nagdev, K., & Rajesh, A. (2018). Consumers' Intention to Adopt Internet Banking: An Indian Perspective. *Indian Journal of Marketing*, 48(6), 42-56. <https://doi.org/10.17010/ijom/2018/v48/i6/127835>
- Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: a review and empirical analysis. *Personnel review*, 35(3), 297-314. <https://doi.org/10.1108/00483480610656702>
- Noutsas, F. A., Kamdjoug, J. R. K., & Wamba, S. F. (2017). Acceptance and use of HRIS and influence on organizational performance of SMEs in a developing economy: the case of Cameroon. In *World Conference on Information Systems and Technologies* (pp. 563-580). Springer, Cham. 10.1007/978-3-319-56535-4_57
- OJha, M. (2018, March 6). Expert views on HR management in Nepal. Retrieved from <http://www.newbusinessage.com/MagazineArticles/view/2051>

- Oshlyansky, L., Cairns, P., & Thimbleby, H. (2007). Validating the unified theory of acceptance and use of technology (UTAUT) tool cross-culturally. In Proceedings of the 21st British HCI Group Annual Conference on People and Computers: HCI... but not as we know it-Volume 2 (pp. 83-86). BCS Learning & Development Ltd..
- Quaosar, G. M. A. A. (2018). Adoption of human resource information systems in developing countries: An empirical study. *International Business Research*, 11(4), 133-141.
- Rahman, M. A., Qi, X., & Jinnah, M. S. (2016). Factors affecting the adoption of HRIS by the Bangladeshi banking and financial sector. *Cogent Business & Management*, 3(1), 1262107. <https://doi.org/10.1080/23311975.2016.1262107>
- Sharma S. & Gautam N. (2018, February 20). The changing HR dynamics in Nepal. *New Business Age*. Retrieved from <http://www.newbusinessage.com/MagazineArticles/view/2050>
- Simsek, Z., & Heavey, C. (2011). The mediating role of knowledge-based capital for corporate entrepreneurship effects on performance: A study of small-to medium-sized firms. *Strategic Entrepreneurship Journal*, 5(1), 81-100. <https://doi.org/10.1002/sej.108>
- Troshani, I., Jerram, C., & Gerrard, M. (2010). Exploring the organizational adoption of human resources information systems (HRIS) in the Australian public sector. In Proceedings of the 21st Australasian Conference on Information Systems (ACIS2010), Brisbane, Australia, December (pp. 1-3)
- Venkatesh, V., Brown, S. A., Maruping, L. M., & Bala, H. (2008). Predicting different conceptualizations of system use: the competing roles of behavioral intention, facilitating conditions, and behavioral expectation. *MIS quarterly*, 32(3), 483-502. <https://doi.org/10.2307/25148853>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 36(1), 425-478. <https://doi.org/10.2307/30036540>
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 36(1), 157-178. <https://doi.org/10.2307/41410412>
- Wang, H. Y., & Wang, S. H. (2010). User acceptance of mobile internet based on the unified theory of acceptance and use of technology: Investigating the determinants and gender differences. *Social Behavior and Personality: An International Journal*, 38(3), 415-426. <https://doi.org/10.2224/sbp.2010.38.3.415>
- Warren, M. (2004). Farmers online: drivers and impediments in adoption of internet in UK agricultural businesses. *Journal of Small Business and Enterprise Development*, 11(3), 371-381. <https://doi.org/10.1108/14626000410551627>