

## The concept of HPWS-Performance relationship: Framework for Education Industry

Osman Sadiq Paracha<sup>1</sup>, Wan Khairuzzaman Wan Ismail<sup>2</sup>, Salmiah Mohamad Amin<sup>3</sup>

<sup>1</sup>*Comsats Institute of Information Technology (Pakistan)*

<sup>2</sup>*Jazan University (Saudi Arabia)*

<sup>3</sup>*Universiti Teknologi Malaysia (Malaysia)*

[osman.paracha@yahoo.com](mailto:osman.paracha@yahoo.com), [mwkhair@ibs.utm.my](mailto:mwkhair@ibs.utm.my), [salmiah@utm.my](mailto:salmiah@utm.my)

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### Abstract

**Purpose:** The purpose of this paper is to enhance the knowledge of High Performance Work Systems (HPWS)-Performance relationship by presenting a review of existing literature and suggesting a comprehensive framework for schools in education industry.

**Design/methodology/approach:** A review of existing literature is presented followed by its critical assessment. A conceptual framework is then provided in order to determine the HPWS-Performance relationship in schools in education industry.

**Findings:** Existing HPWS-Performance literature has mostly focused on manufacturing sector ignoring the service sector especially the education industry, the authors suggest that this relationship be determined in this neglected sector while considering the "industry-specific" mediating and contingent factors which may have an effect on this relationship. The authors provide an integrated framework to measure the effect of HPWS on performance.

**Research limitations/implications:** The provided framework is yet to be tested empirically but can be used as a model for future research.

**Originality/value:** The paper provides an overview of HPWS-Performance literature and provides a framework based on “industry-specific” factors for education industry for empirical testing.

**Keywords:** HPWS, Organizational Performance, Education industry, Organizational commitment, Human capital, Location, Student-Teacher ratio

**Jel Codes:** M10, I20, M12, M52, M53

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## **1. Introduction**

In the past two decades, Strategic Human Resource Management (SHRM) field has taken a pivotal role in Human Resource Management (HRM) literature by effectively illuminating the significant role of Human Resource (HR) in organizations. SHRM takes a holistic approach and postulates the notion that the groups or systems of HRM practices that are being observed in any organization make a significant impact to the organization’s performance (Huselid, Jackson & Schuler, 1997). These systems have been titled High Performance Work Systems (HPWS) (Huselid, 1995). Researchers have made same approaches towards HRM systems under different labels like high involvement or high commitment work systems etc. (Boxall, 2012; Wall & Wood, 2005; Kim, Wright & Su, 2010). However, the main concept behind all these researches point to the same conclusion that most important strengths of any organization are its individuals and the proper utilization of these individuals can lead to outstanding outcomes (Becker & Huselid, 2006; Evans & Davis, 2005). Based on this extensive concept HPWS can be used to denote such systems (Wei & Lau, 2010).

In SHRM domain, numerous research studies have stated a statistically significant relationship between HPWS and firm performance (MacDuffie, 1995; Appelbaum, Bailey, Berg & Kalleberg, 2000; Batt, 2002; Bae & Lawler, 2000; Collings, Demirbag, Mellahi & Tatoglu, 2010; Huselid, 1995; Collins & Smith, 2006; Datta, Guthrie & Wright, 2005; Guthrie, 2001; Sun, Aryee & Law, 2007; Youndt, Snell, Dean & Lepak, 1996; Delery & Doty, 1996; Delaney & Huselid, 1996; Way, 2002; Armstrong, Flood, Guthrie, Liu, Maccurtain & Mkamwa, 2010; Kim & Wright, 2011; Lee, Lee & Kang, 2012). In 2006, meta analysis conducted by Combs, Lui, Hall and Ketchen analyzed 92 contemporary research studies on the HPWS-Performance relationship. Their analysis proved that when the standard deviation in the use of HPWS is raised by one, it results in a subsequent raise by 4.6% in return on resources. It also leads to a reduction in the turnover by 4.4% points. In the light of their analysis Combs et al. (2006, pp. 518) implied that “High performance work practices (HPWPs) impact on organizational performance is not only statistically significant, but managerially relevant”.

Over the years works enfolding the notion related to the HPWS-Performance link research stream have been a source of arguments. Various research works have initiated the procedure of laying down the foundation of SHRM on the basis of various theories, such as resource-based theory (Barney, 1991; Ulrich, 1991; Schuler & MacMillan, 1984; Wright, McMahan & McWilliams, 1994), behavioral perspective (Schuler & Jackson, 1987; Jackson, Schuler & Rivero, 1989), institutional perspective (Jackson & Schuler, 1995; Jackson et al., 1989). Three distinct methods have also been utilized by the scholars in their quest to associate HR practices with organizational outcomes. The first of these methods is known as a universalistic or “best practices” approach. This approach suggests that preferred organizational achievements can be obtained through certain HR “best practices”. The second in the aforementioned methods is the contingency approach. The contingency approach or “best fit” approach posits that progressive organizational outcomes will be achieved when organization’s key external factors are associated with its HR practices. This approach asserts that the worth of HR practices is dependent on the attributes of an organization. The third is configurational approach which is derived from the contingency approach. The configurational approach asserts that for HR practices to make an influence on the organization’s performance, it is imperative that these practices are arranged in a standardized configuration or in an array of practices and these practices should exhibit both the external (i.e. vertical) fit and the internal (horizontal) fit (Delery, 1998; Delery & Doty, 1996; MacDuffie, 1995).

Though there has been considerable research conducted on the HPWS-Performance link, some crucial theoretical and methodological issues still remain unresolved (Wright, McMahan, Snell & Gerhart, 2001a; Becker & Gerhart, 1996; Delery, 1998; Cappelli & Neumark, 2001; Guest, Michie, Conway & Sheehan, 2003; Gerhart, 1999; Wall & Wood, 2005; Gerhart, Wright, McMahan & Snell, 2000; Wright, Gardner, Moynihan & Allen, 2005; Boxall, 2012). Boxall (2012, pp. 170) admitted that HPWS “is a not a settled body of theory but an area of theoretical ferment”. One of the important gap in this case is that despite the fact that the service sector has come out as a main supplier of the gross domestic product (GDP) in various developed and developing economies with seventy five percent of global workforce employed (Batt, 2002) and accounting for nearly sixty percent of economic activity in the whole world (Irons, 1994), majority of the literature sources basically outline the HPWS-Performance link research in manufacturing firms and neglect service sector (Bowen & Schneider, 1988; Sun et al., 2007; Chand & Katou, 2007; Chuang & Liao, 2010). Much dissimilarity was observed between manufacturing and service sector in research study by Batt (2002) causing the author to conclude that findings in manufacturing sector can be generalized to a very limited extent to service sector. Contrary to the belief that the HPWPs are not as successful in the service sector, the study by Batt (2002) proved that the HPWPs enhance the organizational achievements. Datta et al. (2005) study also reported that HPWS-Performance relationship was higher in low

capital intensive manufacturing industries as compared to high capital intensive ones. Many researchers (e.g., Arthur, 1994; Guest et al., 2003; Chand & Katou, 2007; Datta et al., 2005; Ottenbacher, Gnoth & Jones, 2006) have concluded that HR-Performance link must be tested in service industries which are more labor intensive and that such studies may result in stronger HPWS-Performance relationship. As a result of this constant argument in the past there is now growing interest among SHRM researchers to know how HPWS can be used by firms in service sector to achieve competitive advantage (Boxall, 2012).

In the service sector, education industry has been largely ignored by the SHRM scholars (Arthur, 1994; Scribner, Smylie & Mosley, 2008). In a rare attempt in the past, the significance of this sector in HR research has been appreciated by few researchers (e.g., Bassi & McMurrer, 2007, 2008; Young, 2008; Webb & Norton, 2009) who laid stress on the utilization of HR practices to enhance the achievements of the education industry. However, there is lack of an integrated SHRM conceptual framework for education industry (Scribner et al., 2008). Bassi and McMurrer (2006) argued that education industry is like any other business industry and emphasized that the schools in the education industry face enormous competitive stress like any other business venture. Schools face new pressures from the administration to deliver by enhancing pupil achievement and grooming their pupils to survive and flourish in the world. These researchers argued that schools are also accountable to the public the same way as other businesses confront strain from stockholders to be responsible for their performances. Local citizens scrutinize the school performance assessing the revenue on the tax money they provide to the public education. According to Bassi and McMurrer (2006), with increasing attention of the residents towards accountability, there are more pressures on the education industry to show performance and to close the achievement gap. As a result school performance has been the focus of policy makers and researchers in education industry and they have always tried to seek the reasons behind the difference between good and poor performing school units (Rumberger & Thomas, 2000). Due to the lack of any research in this area it is vital that the contribution of HPWS in this important labor intensive industry be critically assessed.

The purpose of this study is to contribute towards a better understanding of HPWS-Performance link by focusing on its possible application in schools in education industry. The paper provides an overview of the current HRM-Performance research along with the potential gaps identified by notable researchers and based on that propose a framework (as shown in Figure 1) for conducting future studies on the HRM- Performance link in schools in education industry by taking into account the specific mediating and contingency factors relative to this industry.

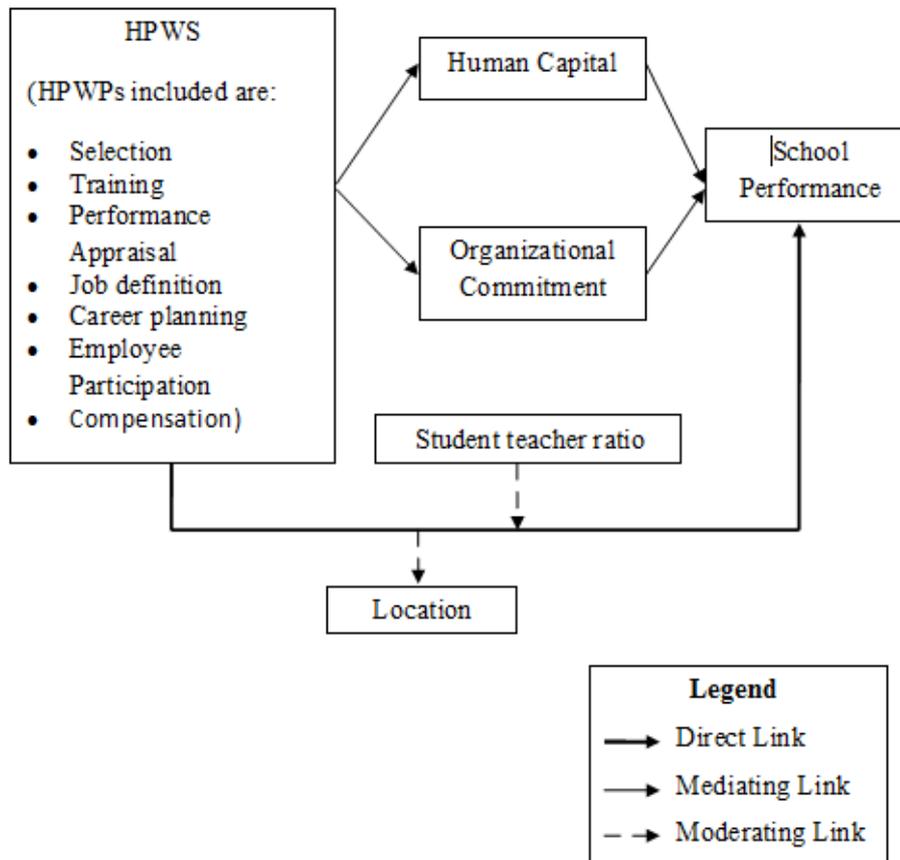


Figure 1. Conceptual Framework for Education Industry

Section 2 gives a brief overview of the relationship between HPWS and organizational performance followed by Section 3 which is focused on the framework for measuring HPWS-Performance relationship in schools in education sector. Resource Based View (RBV) is made the theoretical foundation for the framework presented in this study. Its major assumption is that firms' resources can be the source of their competitive advantage (Barney, 1991). HRM practices play a vital role in developing human capital of the organization which is considered to be an important source of competitive advantage (Huselid et al., 1997). This development of human capital further leads to increased firm performance. These HRM practices also trigger positive employee attitude which is another potential source of competitive advantage as argued by Fulmer, Gerhart and Scott (2003), thus leading to superior outcome. RBV contingency notion (Datta et al., 2005) additionally explains the potential impact of external factors on HPWS-Performance link. Section 4 comprises of the notable methodological controversies and their solutions as recommended by researchers in previous literature which should be considered while conducting the empirical testing of this framework. Section 5 provides the conclusion of the study.

## **2. HPWS-Performance Link**

HPWS include HR practices combinations which have a very positive effect on knowledge, skills, commitment and productivity of workforce in a firm (McMahan, Bell & Virick, 1998; Datta et al., 2005). HPWS sees employees as the ones causing the organizations to attain competitive advantage and not as a typical source of expenditure (Becker & Huselid, 1998). These systems stress on extensive engagement and empowerment of employees (Tamkin, 2004). In addition they contribute to problem solving and teamwork among employees (Youndt et al., 1996). There is growing consensus that conceptually HPWS should enhance employees Knowledge, Skill, Abilities (KSAs) (Huselid, 1995) thus increasing their motivation and commitment (Tamkin, 2004) resulting in greater individual and organizational performance (Delery & Doty, 1996; Becker, Huselid, Pickus & Spratt, 1997; Appelbaum et al., 2000; MacDuffie, 1995).

### **2.1. Black Box between HRM and Performance**

Despite the previously-introduced theoretical approaches on the HPWS-Performance link, and relevant empirical studies; researchers have been inconclusive to specify the process involved in linking HPWS to performance (Gerhart, 1999; Becker & Gerhart, 1996; Guest, 1997; Boudreau & Ramstad, 1999; Dyer & Reeves, 1995; Delery, 1998; Cappelli & Neumark, 2001; Gerhart et al., 2000; Guest et al., 2003; Wall & Wood, 2005; Wright et al., 2001a; Wright et al., 2005; Wright & Gardner, 2003; Shore et al., 2004; Wright, Dunford & Snell, 2001c). Researchers have termed this gap as “black box” between HPWS and performance (Dyer & Shafer, 1999; Sun et al., 2007; Kim et al., 2010). Extant research, focusing on examination of some mediating factors that can be the content of this “black box” (e.g., Guest, 1997; Becker et al., 1997; Wright & Nishii, 2006; Purcell, Hutchinson, Kinnie, Rayton & Swart, 2003; Camps & Luna-Arocas, 2012) did try to provide certain evidence for the existence of such a relationship. However need for more research to explore this mechanism has been strongly advocated (Guest, 1997; Bowen & Ostroff, 2004; Delery & Shaw, 2001; Paauwe, 2009; Savaneviciene & Stankeviciute, 2010; Wei & Lau, 2010) and need to make this issue a priority in SHRM research have been highlighted by notable researchers (Ferris, Hochwater, Buckley, Harrell-Cook & Frink, 1999).

## **2.2. Contingent view of HRM Performance relationship**

Contemporary research suggests that the association between the HPWS and organizational outcomes is facilitated by extrinsic contextual factors (Kim et al., 2010) e.g., strategic orientation (Delery & Doty, 1996), historical context (Appelbaum & Batt, 1994) and industry characteristics (Datta et al., 2005). Besides the commonly argued contingent role of strategy (Huselid, 1995; Bird & Beechler, 1995; Martell, Gupta & Carroll, 1996; Delery & Doty, 1996), country origin, firm size, organizational culture have also been examined for moderation in the HPWS-Performance link (Panayotopoulou, Bourantas & Papalexandris, 2003; Bae, Chen, Wan, Lawler & Walurnbwa, 2003; Chan, Shaffer & Snape, 2004). However with the exception of the few research studies, the remaining literature related to this area does not highlight contingency variables effect like technology, size, age, location and unionization of firms which can have influence on HPWS-Performance relationship based on institutional perspective (Paauwe, 2004). Though some of these variables are occasionally incorporated into the model, the authors usually disregard their importance (Paauwe, 2004).

The previous review of literature demonstrates that the strategic emphasis placed upon human resource management has been shown to have beneficial consequences for organizations. However there are still concerns with respect to HPWS-Performance link and its growing body of research. These concerns stem from the theoretical and underdeveloped nature of this relationship as well as the equivocal findings demonstrated in the literature and may serve to continue to impair the growth of a theoretically strong body of research. In order to address these concerns a conceptual model for schools in education industry underlying this research is proposed. RBV has been used as theoretical framework for this model. RBV has been extensively used in SHRM. Based on RBV human capital and employee attitudes are termed to be potential source of competitive advantage (Huselid et al., 1997; Fulmer et al., 2003). These internal sources are positively driven by HRM practices thus leading to increased profits for organizations. This makes the basis for inclusion of potential mediating factors i.e., human capital and organizational commitment in HPWS-Performance link in schools in education industry. Additionally RBV contingency prospect has been utilized in this study to explain the moderating effects of "industry-specific" external factors on HPWS-Performance link in schools. According to this perspective, resources of the firm cannot be the means of competitive advantage until they make it possible for the firm to stand out in its specific competitive surroundings (Datta et al., 2005). As Barney (1995, pp. 52) stated, "Firm resources are not valuable in a vacuum, but rather are valuable only when they exploit opportunities and/or neutralize threats". This perspective has been used in the study to explain the effects of potential education industry related moderators on HPWS-Performance link.

### **3. HPWS-Performance Framework for Education Industry**

Based on previous literature, a comprehensive framework is laid in this section to evaluate HRM-Performance link in schools in education sector by taking into account all the important aspects in this relationship i.e., we recommend the inclusion of HPWS (independent variable), performance measures (dependent variable), set of mediators, contextual variables related to the education industry. The basis for this concept is to highlight the impact of these variables on performance through their size and level of significance. The framework is based on RBV theory which advocates that internal resources of an organization can be the means of competitive advantage. In order to explain the proposed framework, HPWPs included in HPWS, relative performance measures, possible mediators and contextual factors are discussed accordingly.

#### **3.1. HPWS Practices**

In this framework for schools in education sector, we propose that HPWS include HPWPs like selection, training, performance appraisal, job definition, career planning, employee participation and compensation. In an analysis conducted by Boselie, Dietz and Boon (2005), these HPWPs have also been among the top 10 HR practices, which have been most consistently conceptualized as part of HPWS in previous 104 empirical research articles. Similarly these HPWPs were also listed among the most prominent HR practices based on analysis conducted on 25 most notable HPWS research studies by Wall and Wood (2005). In a meta analysis of previous 92 HPWS-Performance link research studies, Combs et al. (2006) also highlighted frequent use of these HPWPs. A brief review of these HPWPs is given below.

##### *3.1.1. Selection*

Recruitment and selection comprises of process of attracting and placing the right individual for the right job and these practices help in increasing productivity (Huselid, 1995). Selection practices have also been found to be positively affiliated with “labor productivity” (Koch & McGrath, 1996), “perceived profit”, “market share” (Verburg, 1998), “perceived market performance” (Delaney & Huselid, 1996) and negatively associated with “employee turnover” (Huselid, 1995; Verburg, 1998). Attracting good teachers and their placement to the right place according to their qualification and expertise has also been termed vital for success of schools in education industry (Dove, 1982).

### *3.1.2. Training*

Training has been typically defined as attainment of knowledge and skills to perform different types of works in organization (Fitzgerald, 1992). The role of training in organizational effectiveness is two-fold. First, training programs enhance employee skills and abilities such that they become more productive workers, and the firm in turn becomes more productive (Goldstein, 1990). Second, training also serves a latent function of disseminating the worthiness of the employees in front of the organization (Moreland & Levine, 2001). These employees, in turn, show a greater commitment to the organization. In context of education industry training of teachers has been found to be a very important factor in enhancing pupil achievement scores in a school unit (Dove, 1982).

### *3.1.3. Performance Appraisal*

In HR literature performance appraisal has been described as “a process of systematically evaluating performance and providing feedback on which performance adjustments can be made” (Dransfield, 2000, pp. 71). Previously Delery and Doty (1996) demonstrated that results-oriented appraisals were positively related to firm performance. While no other studies have confirmed these specific results, work in the area of performance management has confirmed that the introduction of feedback systems (appraisals from multiple sources, or upward feedback from subordinates) is related to enhanced individual performance (e.g., Walker & Smither, 1999; Johnson & Ferstl, 1999; Smither, London, Vasilopoulos, Reilly, Millsap & Salvemini, 1995) especially by those who were initially the lowest performers. In education industry performance appraisal of teachers is termed to be of considerable significance towards the school performance and has been termed as one of the motivating factors among school employees (Middlewood & Cardno, 2001).

### *3.1.4. Job Definition*

According to Delery and Doty (1996), job definition plays a very important role in effective working of employees. They state that a clearly elaborated job description generates duties of job which are clearly known to the employees and helps them in performing their tasks well in the organization. Also by ensuring employee involvement in deciding about the nature of work they will be performing, their motivation can be enhanced (Lado & Wilson, 1994; Milgrom & Roberts, 1992). Furthermore Miles and Darling-Hammond (1998) argued that effective job definition of employees is also one of the key characteristics of a high performing school in education sector.

### *3.1.5. Career Planning*

Career Planning in organizations helps the workforce not only to improve their abilities and skills vital for the organization but also motivate them to contribute towards their own development (Doyle, 1997). Firm performance is positively affected by career planning through enhanced motivation in employees (Osterman, 1987). In schools units of education sector, career planning practice has been termed extremely important for personal growth of teachers and for retaining them in schools (Margolis, 2008).

### *3.1.6. Employee Participation*

Participation has been defined as “taking part” in HR literature (Vroom & Jago, 1988). Participation affects the productivity of organization in various forms e.g., team participation has proved to affect quality and labor productivity of organization (Banker, Field, Schroeder & Sinha, 1996). Other research studies have also proved the positive relationship between employee participation and satisfaction, performance and productivity of employee (Wagner, 1994; Pfeffer, 1994; Verma, 1995). It also enhances the performance of teachers in schools in education industry thus ultimately leading to improved school performance (Conley, 1991).

### *3.1.7. Compensation*

Organizational performance has been associated with performance-based compensation in a variety of industries (Gerhart & Milkovich, 1990; Banker, Lee, Potter & Srinivasan, 1996; Milkovich & Boudreau, 1998; Gómez-Mejía, Balkin & Cardy, 1998). The pay level of employees’ greatly influences the HPWS-Performance link (Becker & Huselid, 1998). Increased pay level of the employees motivates them to more actively apply their skills and use their abilities to achieve organizational goals, which in turn increase organizational performance (Way, 2002). In education sector also, researchers have argued that high compensation for teachers can have a very positive effect on academic performance of students especially if it is linked with the performance of the teachers (Aslam, 2003).

### **3.2. School Performance Measures**

In most HPWS-Performance link research studies organizational performance factors have been related to typical manufacturing sector variables based on “financial outcomes” (e.g., worker’s compensation, shrinkage, profitability, productivity) (Paauwe, 2009; Singh, Darwish, Costa & Anderson, 2012). Becker and Gerhart (1996) and Paauwe (2009) argued that the dependent variable in SHRM studies will differ among levels and industries however they should be appropriate to the particular context. For the education industry, unit of analysis is school. Different performance measures can be utilized in the proposed framework. Literature related to school performance (e.g., Good & Brophy, 1986; Cameron, 1978, 1981; Schneider, Glasheen & Hadley, 1979; Reynolds, 1985; Keefe, Kelley & Miller, 1985; MacKenzie, 1983; Ostroff, 1992) identifies number of school performance measures. The most notable are student behavior, academic achievement, teacher turnover, student satisfaction and administrative performance which can be used in the framework.

Based on the above mentioned discussion it is proposed that

- Proposition 1: HPWS will be positively related to School Performance

### **3.3. Mediating Factors between HPWS and Performance**

Although previous literature has established a positive HPWS-Performance relationship (Delery & Doty 1996; MacDuffie, 1995; Wright & McMahan 1992; Huselid 1995; Arthur 1992, 1994), most of the studies have been unable to give any clue of the mechanism behind this link (Boselie et al., 2005). Many SHRM reviewers argue that HPWS-performance link is much more complex than the common perception (Wright & Gardner, 2003). Though it has been established that the employees are vital asset of an organization, there is a scarcity of research that highlights the influence/ effect of multiple HR practices or systems on an individual (Wright & Boswell, 2002). Kozlowski and Klein (2000) argued that performance is not exhibited by an organization; in fact it is the performance of the employees working there that enables the organization to acquire the required outcomes. Based on this argument, Lepak, Liao, Chung and Harden (2006) suggested that the HPWS actually augment cumulative employees’ achievements thereby improving the organization’s performance. Further explaining this process, Lepak et al. (2006) propositioned that firstly HPWS influence the employees’ Knowledge, Skills and Abilities (KSAs) thus resulting in their increased performance and secondly HPWS motivates the employees’ in a direct or indirect manner causing them to perform. Many notable researchers have endorsed this concept which is based on two factors i.e., collective human capital and collective attitudes, behaviors of the workforce of organization

(Huselid, 1995; Wright & Snell, 1991; Chang & Chen, 2011). MacDuffie (1995, pp. 199) while explaining this concept posited that “skilled and knowledgeable workers who are not motivated are unlikely to contribute any discretionary effort. Motivated workers who lack skills or knowledge may contribute discretionary effort with little impact on performance” Hence, there are two methods by which HPWS can influence the organizational outcomes i.e., firstly, by increasing the employees commitment to the organization and secondly, by enhancing their KSAs. Consistent with this logic we propose two important mediators in this framework. The rationale of the two mediators is discussed below.

### *3.3.1. Organizational Commitment*

Though there have been some studies which tried to explain mediating role of some factors in HPWS-Performance link, it's very seldom that the empirical research studies explore the mediation impacts of the attitudes of the workforce (Chow, 2003). As the attitudes comprise of both behavioral along with intuitive and intellectual components (Fishbein & Ajzen, 1972), they are vital for determining the employee involvement and their demeanor in the workplace. Employee attitudes have also been found to be positively related to numerous organizational outcomes, as depicted by a meta-analysis (Harter, Schmidt & Hayes, 2002). Organizational commitment is defined to be a key employee attitude which deals with their involvement in their organization (Porter, Steers, Mowday & Boulin, 1974). Wright, Gardner and Moynihan (2003) posited that HR practices cause a “positive work environment” by enhancing employee commitment. They further argued that organizations having fully committed employees will be more productive.

### *3.3.2. Human Capital*

Human capital is typically defined as “individual employee’s knowledge, skills, and expertise” (Salamon, 1991; Youndt & Snell, 2004). Human capital plays an important role in facilitation of HPWS in improving performance of firms (Huselid, 1995; Hsu, Lin, Lawler & Hwawu, 2007). For example organizations practicing HPWS focus on rigorous selection and extensive learning opportunities, thereby enhancing KSAs of employees leading to improvement in their human capital (Way, 2002; Huselid, 1995). SHRM literature has strongly supported the effect of human capital on an organization’s performance positing that it is the human capital of an organization which basically determines the impact of the employees’ inherent contributions to the firm (Wright & Snell, 1991; Pennings, Lee & Van Witteloostuijin, 1998; Hatch & Dyer, 2004; Coff, 1999; Barney, 1991; Carpenter, Sanders & Gregersen, 2001).

It is thus proposed that:

- Proposition 2a: Organizational commitment will mediate the relationship between HPWS and school performance
- Proposition 2b: Human capital will mediate the relationship between HPWS and school performance

### **3.4. Contingent Factors in HPWS-Performance Link**

Contingency theory states that the relationship between the relevant independent variables (HPWS) and the dependent variable (organizational performance) will change according to influences such as industry/sector ownership, location, degree of unionization, company size, capital intensity and age and technology (Paauwe, 2004). In this context, resource based view (RBV) has been integrated with contingency prospect in literature. According to this perspective, resources of the firm cannot be the means of competitive advantage until they make it possible for the firm to stand out in its specific competitive surroundings. As Barney (1995, pp. 52) stated, "Firm resources are not valuable in a vacuum, but rather are valuable only when they exploit opportunities and/or neutralize threats". RBV supports the "fit" concept based on the fact that the worth provided by the firm resources can fluctuate from high and low values provisional to an organization's competitive environment. Nevertheless, all the existing research has not yet investigated the soundness of this concept (Datta et al., 2005). Based on the concept two important contingent factors which may influence HPWS-Performance link in schools in education sector are discussed below.

#### *3.4.1. Student/Teacher Ratio*

Student/teacher ratio also termed as class size (Alspaugh, 1994) is one of the important factors commonly considered while assessing the performance of schools in education industry as it influences quality of the school (Behrman, Khan, Ross & Sabot, 1997). Student-teacher ratio depicts the workload on teacher and the extent to which teacher is available to students (Smith, 2001). Decrease in student-teacher ratio increases teacher availability along with higher instructional flexibility (Ellis, 1984) and more learning for students (Lee, Smith & Croninger, 1997; Lee, Bryk & Smith, 1993; Bryk, Lee & Holland, 1993; Lee & Smith, 1993, 1995, 1996) thus contributing positively towards their achievement scores (Suryadarma, Suryahadi, Sumarto & Rogers, 2006). Many previous research studies have endorsed the negative relationship between student teacher ratio and student achievement scores

(Akerhielm, 1995; Sander, 1999; Boozer & Rouse, 2001; Mosteller, 1995; Krueger & Whitmore, 2001; Alderman Behrman, Khan, Ross & Sabot, 1995; Darling-Hammond, 2000; Lee & Smith, 1997; Krueger, 1999; Case & Deaton, 1999; Angrist & Lavy, 1999; Behrman et al., 1997). From the above discussion it is evident that there is strong need to assess the contingent role of student/teacher ratio in HPWS and organizational performance relationship.

### *3.4.2. Location*

Location of the industry can also be one of the potential contingency factors in HPWS-Performance link (Paauwe, 2009). Location plays an important role in determining school performance (Rumberger & Thomas, 2000). The difference in urban and rural schools performance has been observed in both developing and developed countries (Dove, 1982; Fan & Chen, 1999). In many previous research studies related to education industry urban school units have been found to perform better than rural school units (e.g. Lindberg, Nelson & Nelson, 1985; Greenberg & Teixeira, 1995; Edington & Koehler, 1987; Coe, Howley & Hughes, 1989a, b; Young, 1998; Saeed, Gondal & Bushra, 2005; Haque, Kalhoro & Saeed, 2000; Alderman et al., 1995; Stockhausen & Soyibo, 2004). Factors that has been observed to be responsible for the dissimilar performance of urban-rural school units include teaching quality, teachers' training (Young, 1998; Cross & Schwertzbaun, 1969), teaching facilities (Soyibo & Johnson, 1998), parental and community support (Young, 1998); socio economic status (Von Secker, 2004; Coladarci & Cobb, 1996), students perception of school safety (Williams, 1996; McCombs & Bansberg, 1997; Caplan, 1995), class and school size (Howely & Gunn, 2003), students self-concept, teaching strategies, teachers qualification, school condition and availability of academic resources (Herzog & Pittman, 1995), school conditions, facilities and population education (Coleman, 1966). The important role of location in education industry evident from above arguments drives the need to consider location as a contingent factor while assessing HPWS-Performance link in education industry.

It is thus proposed that:

- Proposition 3a: Student/teacher ratio will moderate the relationship between HPWS and school performance
- Proposition 3b: Location will moderate the relationship between HPWS and school performance

#### **4. Methodological issues in HPWS-Performance Framework**

An important concern raised by most SHRM researchers is that majority of the literature on HPWS and performance is cross-sectional (Singh et al., 2012), thus rendering it hard to be certain about the causality of HPWS-Performance link (Guest, 2011). This issue becomes more critical when review of most of limited longitudinal research work done (see, e.g. Wright et al., 2005; Guest et al., 2003) depicts that HPWS cease to stimulate performance, when the past performance is controlled. Wright et al. (2005) and Paauwe and Boselie (2005) have given alternative explanations of these abnormal causality results e.g., according to them one of the reasons can be that high performing organizations at one point in time maybe investing their extra resources on HR practices resulting in improved performance afterwards. In order to determine the reverse causality Wall and Wood (2005) suggested an alternative of longitudinal design study called “quasi-longitudinal” study which is an enhancement of typical cross sectional study pursued in HPWS-Performance research. In this kind of study relationship of HPWS and firm performance can be examined at any point in time while “controlling for past performance” thus determining the reverse causality as well (Wall & Wood, 2005) which longitudinal design is unable to detect (Wright et al., 2005). Thus conflicting results of the very limited and rare research work in “reverse causality” context further indicate the necessity of inclusion of this research design in future empirical research work to comprehend the convoluted notion of causality (Wright et al., 2005; Becker & Huselid, 2006; Guest, 2011; Paauwe, 2009).

An important measurement issue in previous HPWS-Performance link studies concerns the source of data for HPWPs (Arthur & Boyles, 2007; Wall & Wood, 2005; Guest, 2011). Given that most prior studies use a set of HPWPs as the proxy, the data is collected from HR managers/executives. A single respondent is usually adopted. Validity of the construct is then threatened, due to containment of large measurement error. Wright, Gardner, Moynihan, Park, Gerhart and Delery (2001b) provided evidence for emergence of such measurement error by testing on three organizations from different industries at the corporate level, business and job level, respectively. Further suggestions were provided by Gerhart et al. (2000) that the generalizability theory can be used for a better estimates of reliability in HPWS-performance research, suggesting that for dealing with this problem in measurement, multiple raters for HPWPs should be employed in future studies. Wright and Boswell (2002) stressed that it is critical to measure “actual HR practices” being implemented by the organizations instead of the “HR policies” which are the intended practices that should be implemented by the organization. In order to do that Wright and Boswell (2002) pointed out that it is important that employees should be the source of data for HR practices instead of HR managers/executives. Though many SHRM researchers have stressed for multiple raters for measuring HPWPs (e.g, Edgar &

Geare, 2009; Wright, Gardner & Moynihan, 2003; Wright & Gardner, 2003; Arthur & Boyles, 2007; Guest, 2011; Wall & Wood, 2005), very few studies have followed this recommendation (Batt & Banerjee, 2012).

## **5. Conclusion**

HRM-Performance relationship has been the central focus of SHRM research for more than two decades. The contribution of the HRM systems towards organizational performance in various corporate sectors has been recognized by notable researchers and industry gurus. However most of this research has been based on manufacturing sector. Keeping in view the importance of service industry especially schools in education industry in present world economy, it is vital that this relationship be determined in this labor intensive industry by taking into consideration the industry-specific factors as argued by notable SHRM researchers. The conceptual model has been provided in this study to facilitate the determination of HRM-Performance relationship in schools in education sector. The model includes the HRM System, relative mediators and education industry specific contingent factors and performance factors. Methodological issues in this context surrounding the HRM-Performance literature have also been discussed along with the recommendations of the SHRM researchers to counter these issues. The authors believe that this conceptual model will be an important contribution towards HPWS-Performance research and intend to test this model empirically in near future.

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