

# The HRIS Specialist: Resourcing the ‘Right Kind’ of Human Capital.

Hazel Williams, The Nottingham Trent University, UK  
hazel.williams@ntu.ac.uk

**Abstract.** *The role of human resource information systems has evolved over the last twenty years such that sophisticated software is now available to organisations regardless of their size. Whilst there is a growing scholarly interest in the ways in which technology has begun to have a significant impact on the way in which HR work is undertaken, there is still a limited understanding of the human capital necessary to undertake this work. Initially this paper considers the limited literature pertaining to the human capital of the HRIS specialist to date. Using NVivo 8 to facilitate analysis, the paper continues by offering a descriptive overview of 41 advertisements placed on one web board over a fifteen month period. The paper concludes by offering a generic framework for developing human capital for a HRIS specialist and suggestions as to how this can be applied in practice, offering suggestions for further study.*

**Keywords:** HRIS; Human Capital; Resourcing; NVivo; Language.

## 1 Introduction

What is the balance of skills and knowledge organisations are seeking for human resource information system (HRIS) specific roles in the twenty-first century? In order to begin to address this question it is appropriate to consider how the development of HRIS in the last twenty years. Although it can be argued that the introduction of information systems into many work areas has had an impact on the work done, here it is suggested that the introduction of human resource information systems (hereafter, HRIS) has caused a paradigm shift in the work of the human resourcing professional, requiring individuals to acquire and utilise new knowledge and skills – human capital – that are not historically associated with an HR body of specialist knowledge. Ongoing work has defined *individual human capital* as the ‘innate attributes (formal education, skills and experience) owned, developed and created tacitly by an individual that are productive in an economic context and taken with that individual when they leave the firm’ [1] and it is this that is referred to in this paper

The historical human capital of HR professionals enables a range of HR activity including resourcing, selection, performance management, training and development, leading to the development of specialist human capital in these areas. Given the current economic climate, this human capital is receiving greater attention in current

Strohmeier, S.; Diederichsen, A. (Eds.), Evidence-Based e-HRM? On the way to rigorous and relevant research, Proceedings of the Third European Academic Workshop on electronic Human Resource Management, Bamberg, Germany, May 20-21, 2010, CEUR-WS.org, ISSN 1613-0073, Vol. 570, online: CEUR-WS.org/Vol-570/, pp. 53-71.

© 2010 for the individual papers by the papers’ authors. Copying permitted only for private and academic purposes. This volume is published and copyrighted by its editors.

practitioner literature, with particular attention paid to that which enables talent management, where the focus is on retaining and developing individuals that are likely to be able to contribute to the long-term advantage of an organisation. The technological developments in recent years have added another opportunity for HR specialists highlighting the potential for a new remit within the HR role, highlighting the debate as to whether HRIS work should be placed within the HR or the information systems function and explore the impact on the human capital of HR and information systems roles. However the concern of this paper is whether the HR professional has the requisite human capital to rise to the technological challenges thus presented.

The historical evolution of HRIS is succinctly documented in other places [2-5]. Although there is a growing body of HRIS literature [for example 2, for example 6], there is limited discussion of the human capital associated with HRIS; to date the literature has mainly focused on the infrastructure and applications for HRIS. Therefore it is apposite to give a short historical review here with particular reference to how the human capital of the HR professional has developed.

The emergence of human resource information systems 1960s, 1970s and 1980s was concerned with the automation of transactional HR activities [7]. These tended to be information systems capable of producing a minimal number of basic reports. Initially there was a payroll focus and often HRIS were not user-friendly as most were located and managed from within information systems functions, where information systems specialists prepared any ad-hoc reports, often taking several weeks to produce. During the 1980s smaller 'stand alone' systems were introduced and located within HR departments, however their data capture, manipulation and reporting capabilities were still limited. Emerging HRIS did not have an immediate impact on the human capital of HR professionals and delays did lead to some frustration, particularly concerning the need for timely reporting. The main focus of the HR role with regard to HRIS during this period was one of caretaker and administrator and as such did not develop the HR professionals' human capital in any noticeable way. It was not easy to make changes to these physically distant systems, therefore the capability of HRIS was often not exploited as much as it could have been; this was particularly true where the HRIS was 'owned' by the information systems function.

Early work from Hall and Torrington [8] identified four categories of HRIS users. The few 'Stars' "made full & imaginative use of the computer's potential to enhance the role and effectiveness of the personnel function" [8], however the majority were characterised as 'Plodders', who made some use of the 'electronic filing cabinet', and the 'Beginners', who at least had a system, but any usage was in its very early stages. Although subsequent work from Ball [9], who focused on smaller organisations, and the Chartered Institute of Personnel and Development [10, 11] suggest increased attention is being paid to how HRIS are used, there is still minimal scholarly consideration of the necessary HRIS human capital requirements.

During the 1990s the transactional capabilities of HRIS became more reliable and the introduction of transformational systems is noted [2-5], with particular reference to strategic activities such as human resource planning and talent management – activities that require different human capital, and are part of the HR professional qualification programmes in the UK. These professional qualification programmes also offer a limited grounding in some statistical and financial techniques, and in recent years this has incorporated learning around human resource information systems; for many providers and students, this is a challenging element of the qualification programme.

There is a limited and somewhat dated literature that specifically discusses the human capital of HR professionals within an HRIS context. Yeung and Berman (1997) state that, unlike other functions, there is a natural reluctance for the HR function to try and quantify its impact on the business. Perhaps this is because they do not have the human capital to design, specify and implement strategic HRIS [12], perhaps there are other reasons that need to be considered as well?

Historically HR have had some challenges which are brought into sharp focus when negotiating for capital projects such as new or upgrading the HRIS. Early HRIS were owned and managed by information systems professionals. This was understandable given that most were large, centralised, main frame systems that required some knowledge of code to design suitable applications and manage project implementations. This resulted in a focus on the virtues of information systems and underestimated the importance of creating an easy-to-use applications that will work with people rather than against them [13, 14]. Often information systems specialists fail to appreciate importance of human dynamics, the potential impact on the *way* in which is done, and the perspective of those who use the systems, such that these factors are overlooked or only partially solved due to financial constraints or competitive imperatives [15, 16] or simply that the process is mismanaged [17, 18]. Perhaps because of line managers' perceptions that HR specialists did not need (or want) to get involved in what is likely to be considered information systems policy making [19]; in approximately fifty percent of organisations, decisions to introduce new applications are taken without reference to HR [10].

There is considerable concern regarding the information-systems-orientated human capital of HR professionals [20-22], which does not seem to have changed in the last 20 years, despite a number of practitioner [23] and academic [11] calls for this to be addressed. Indeed early studies found HR managers to be technophobic, short-sighted, and complacent about the need to use information systems [22, 24-26]. Recent research from the CIPD suggests that this is still the case, with one respondent commenting, 'I don't have the expertise in the operational area under discussion so I would not have anything positive to contribute' [10: 17]. This implies that the integration of human resource information systems within the UK HR professional qualification programme during the last decade has not increased levels of confidence of HR specialists. There are commercial organisations in the UK that offer specialist generic human resource information systems training. Some of these organisations are associated with particular HR applications. Although some of these organisations offer assessed programmes, these assessments have yet to be ratified and accepted as generic professional qualifications across the HR profession.

Critical thinking and analytical skills have a long association with roles in information systems. There have been periodic calls for these skills, but there is a recognition that these are not generally associated with the human resourcing profession [1, 11, 23, 27-30]. These critical thinking and analytical skills can be acquired to some extent and with increasing numbers entering the HR profession having completed a first degree, many of whom are 'information systems literate', it is reasonable to assume that these are likely to be present for those qualified individuals appointed to HR roles. In as much as these skills are present, they are often not associated with an information systems perspective, but tend to be associated with human capital that centres on office-based applications. The most challenging module of the UK HR professional qualification programme for many students is the one that combines numerical, financial and, for the purposes of this paper, human resource information systems. As recently as 2007

Barron comments that “HR lacks the number-crunching skills” and that “what HR needs to do is to tell people what the data means” [31]. This situation is reinforced within roles whereby there are financial pressures over which there is limited control [32], a tension that is highlighted in the current economic situation.

Other literature promotes the view that HR needs to be more strategic in its endeavours and act as a ‘change agent’ [33, 34]. HR specialists are increasing likely to be in positions that provide opportunities to act as particularly effective ‘new technology change agents’ due to a cross-organisational brief [35]. HRIS can be a “driving force in the transformation of the HR function” (Ruël 2009) utilising technology to transform data into strategically valuable information [36]. Studies continue to identify technological expertise as a core HR competence [37-39] and suggest that this can have a transformatory impact on the human capital of successful HR professionals [40] and a recent study from the CIPD [11: 36] in the UK states that “the movement of HR practitioners into this advisory or consultancy role not only requires consultancy skills but also requires a certain degree of data analysis skills so that they can read and interpret HR data effectively”.

Another recent development in larger organisations utilising a HR shared service centre (SSC) is a growing trend towards dedicated HR information specialists who have human capital associated with both a HR specialism and information systems specialism [1]; these examples are still rare. For smaller organisations, where HR professionals are likely to be characterised as ‘generalists’, this human capital set is less likely to be apparent. In the same way that there is a critical number of employees prior to employing an HR specialist, it is likely that this is equally true for an HRIS specialist.

With the shift towards specialist roles within human resourcing and a developing literature on talent management [41], it is timely to consider the search for the ‘right kind’ of human capital required for an HRIS specialist role or part of the generalist HR role; this premise is supported by the professional institutes in the UK [11] and the USA [42]. This historical review illustrates the fragmentary and dated state of the literature on the human capital of HR professionals as it pertains to HRIS work in the last twenty years. The literature implies that those undertaking HRIS work can be described as ‘hybrids’; they have developed and now require human capital from several disciplines in order function at both operational and strategic levels.

For this researcher, the original interest in the human capital of the HRIS specialist is the result of a number of years working in corporate roles, teaching on the UK and international CIPD HR professional qualification programmes, and a long-term research interest which invites scholarly curiosity in HRIS [1, 27, 43-46] where it is clear that HR specialists do not demonstrate significant levels of HRIS human capital. This paper seeks to describe the human capital of the HR specialist sort by organisations and offer a contribution to the search for the ‘right kind’ of HRIS human capital by addressing the question: What is the balance of skills and knowledge organisations are seeking for HRIS specific roles?

Having considered the literature pertaining to the human capital of the HRIS specialist to date, this paper continues by offering a descriptive overview of forty-one job advertisements placed on one UK-based web-board over a fifteen month period. The paper offers a generic framework for developing human capital for a HRIS specialist and suggestions as to how this can be applied in practice. In addition the paper seeks to promote other scholarly interest in this under-researched area.

## 2 The Study

Many research studies seek to identify the appropriate human capital of particular professions by conducting large scale postal or more recently electronic surveys. Alternatively researchers may chose to interview individuals or small focus groups of individuals. In these instances researchers are often seeking the 'ideal' or 'desirable' human capital. These approaches are based on collective, sometime subjective perceptions and they reflect what is perceived to be desirable. It is also possible that these studies indicate what respondents perceive is the response that the researcher is seeking, thus bias is embedded. Therefore rather than rely on potentially subjective data, it is useful to examine what is 'actually' sought by organisations recruiting for specific human capital using descriptive data drawn directly from organisational job advertisements to determine the degree to which this is likely to be achievable.

The empirical basis for this paper is located within job advertisements posted on a UK-based recruitment website resourcing HR professionals between June 2008 and September 2009. This website was chosen as it is well-known within the profession and this geography and specifically advertises direct to those in the HR profession. In the preceding years there have been a number of such advertisements and although these were noted in terms of scholarly curiosity, no action was taken June 2008 when the first advertisements were captured for future study.

The advertisements were placed by different sources, primarily recruitment agencies and occasionally one or two large organisations. In the first instance a key word search was made for any advertisement with 'HRIS' or 'human resource information system' in its details, either in the job title or in the descriptive elements of the text. An 'alert' was set up such that jobs that fit the criteria were automatically emailed to the researcher so that notification and data collection was not reliant on active interaction with the recruitment website: the aim was to reduce researcher bias and to ensure that advertisements were not missed. In total forty-one discrete jobs were advertised during the fifteen months. It is noted that some jobs were advertised more than once during this period, however each job is only counted once for the purpose of this paper and details of jobs that were re-advertised are noted, along with any jobs that were readvertised with some changes in the new advertisement. As this paper is using secondary data that is publically available at the time of collection, there is no restriction in terms of sample size, as is sometime the case with survey-based research and interview-based research.

Details of the jobs advertised were emailed directly as part of a slightly wider ranging list. This was not requested, but presumably activated by the web site in case the reader was interested in other associated jobs. This means that on most occasions a decision was made as to whether to include a particular job advertisement within this data set. Job advertisements excluded at this point include those whose primary role comprised a significant focus on generalist HR activities, compensation, payroll and benefits, or data input and thus included a small element of (mainly administrative) HRIS work. Only roles where the substantive focus comprised HRIS work are considered here.

The details of an included advertisement were copied into a word document and saved. It is not possible to use data directly from the source link as once the application deadline was passed, or the job was filled, the advertisement was (automatically) removed from the website, making it impossible to return for retrospective clarification or further study. However, extreme care was taken when copying the data across such that even minor errors in the advertisement (for example spelling errors) were saved, as are details of the data source link. It is the *actual* words and phrases that are of interest

here and the strength of this approach is that the copies of the advertisements provide a description of what organisations actually state they are seeking and these constitute the data set for this paper. The advertisements are subsequently described as ‘source’ files in this paper; each source contains one job advertisement. Although the advertisements were not presented in the same format, there are some similarities in that most advertisements share some common features, for example: contract details; elements of the job description and person specification; general sector and/or organisational information, which assisted the initial analytical process.

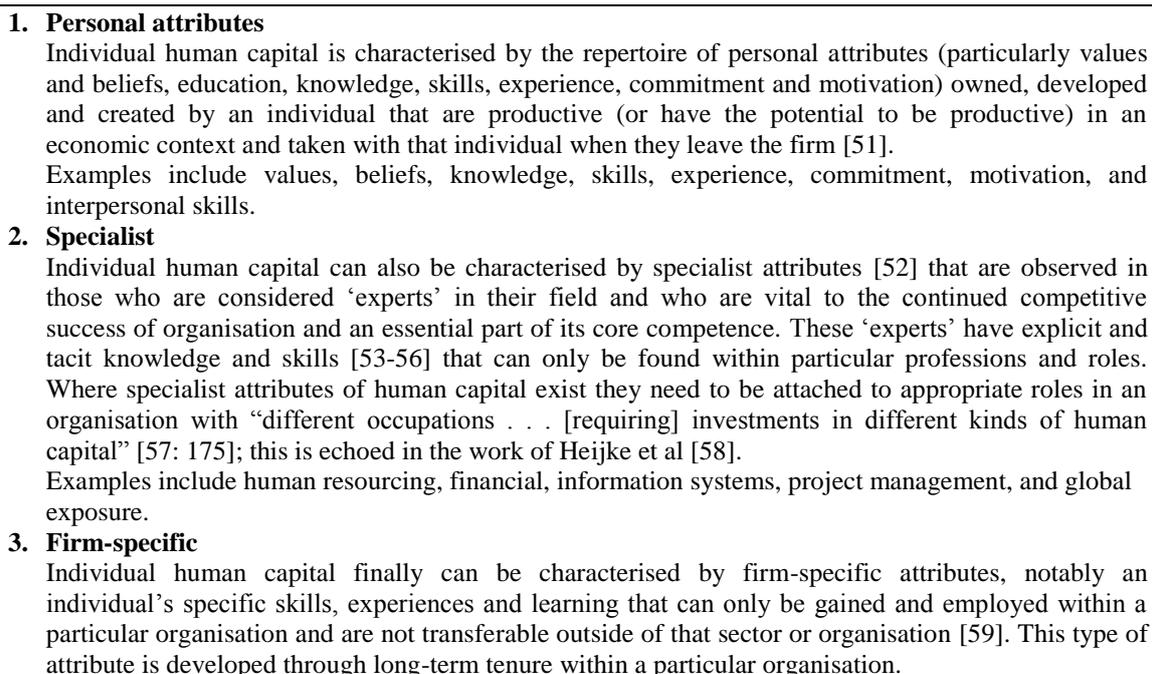
Although attempts were made to contact some of the agencies advertising on the recruitment site, none replied, therefore it is impossible to track the length of time to fill a particular position, whether the role was filled at some point, readvertised in a different place or concurrently with the web board. For almost all the positions, applications needed to be sent via the website, usually by attaching curriculum vitae such that telephone contact was discouraged in the first instance.

In order to facilitate analysis, NVivo 8 (hereafter referred to as NVivo), a computer assisted qualitative data analysis software (CAQDAS) is used. CAQDAS are designed to assist qualitative researchers at various stages of a research project, including the initial design, data collection and data management, initial and on-going analysis, model building and visual representation of the research. CAQDAS is enabling technology, so that the researcher can manage complex data in such a way as to make sense of the data and promote interpretation – it does not interpret the data or make any decisions about the data – its strength is that it makes these processes more straightforward and efficient for the researcher. This researcher is familiar with NVivo, therefore it made sense to continue to use it as a sense-making tool. An NVivo project was set up in the week of the first advertisement being identified.

The first task within the project was to set up a research journal, referred to here as a ‘project journal’ and is described as a ‘memo’ within the Source’ section of NVivo: the contents of a memo can be linked to source data as well as other aspects of NVivo. The use of such a journal is recommended by many researchers [47-49, for example 50] and acts as a diary in the guise of a reflective journal, helping to track future tasks as well as those completed. It also acts as a place to record thoughts and questions (such as why there is an interest in this subject) that may be helpful later in the analytical process. Necessarily there is little structure to this diary apart from date notations, however the journal proved an exceedingly useful reflective tool for related study and analysis’s. Coding is often seen as a central process within qualitative research methods. Coding is a process whereby parts of the data are identified as relating to a specific idea or example pertinent to the research themes.

Data can be reviewed by reference to specific codes so that any thematic patterns are made visible. Previous work by Williams *et al* [1] offers an initial coding structure for analysis. This research was located in a multi-national organisation implementing and maintaining the HR ‘pillar’ of an SAP global, enterprise-wide, information systems on their UK, Germany, Canada and the USA sites. Three constituent elements of individual human capital were identified in this research: *personal* human capital; *specialist* human capital; and *firm-specific* human capital – various attributes are associated with each of the three types of human capital (see Figure 1). In NVivo the three constituent elements are described as different types of ‘codes’: ‘tree codes’ or ‘free codes’ in the ‘Nodes’ section. This paper focuses on the attributes located at the node for ‘*specialist*’ human

capital elements: human resourcing; financial; information systems; project management; and global exposure (see Figure 1 No.2 ).



**Figure 1: Constituent Elements of Individual Human Capital [1]**

Different approaches to coding are noted by various scholars for example [60-65]. NVivo facilitates an inductive approach to coding. Given that initially data was collected without reference to a specific outcome, but as a result of long-term scholarly curiosity in HRIS and recent research [1, 43, 51], descriptive codes were used initially as they are based on predefined areas of interest resulting from this prior research [1].

As these initial codes were drawn from previous research, the constituent elements were allocated as ‘tree codes’ within a ‘human capital’ code and provided the initial coding structure. Descriptive notes are associated with each NVivo code such that a more detailed understanding is gained overtime. These codes are not considered ‘fixed’ and some were changed, deleted or merged with others. During the fifteen months each source data file was ‘coded’ according to the three types of constituent elements of individual human capital using the details noted in Figure 1. As the number of sources data files increased and new material and codes were added, it became necessary to revisit previously coded source files and recode as necessary. This is an important iterative process and contributes to the depth of analysis during the study period.

Each data source file was imported into NVivo within two to three days of the being received. In the first instance each source is set up as a ‘case’ within the ‘Node’ section. Within NVivo this term does not imply a case study approach [as described by 66] to the research, rather a ‘case’ is a way of expressing a unit of analysis. This means that ‘attribute data’ such as salary, location, and qualifications for each job advertisement, can be attached to a particular ‘case’. In this way data collected about various data sources can be gathered together, given values, and later used for analytical purposes.

Subsequent to coding, various ‘queries’ were performed on the source data, using the cases to interrogate the data. The NVivo ‘query’ facility permits segments of data to be located that meet the criteria identified along with additional data depending on how the

query is structured. Examples of simple queries located all those roles that identified the associated geographical base, more complex queries compared the global reach of a role with the associated salary for that position. Queries, and their results, can be saved for future use or abandoned as the data builds, enabling reflection as the study progresses.

### **3 Findings and Discussion**

This paper proceeds by concurrently presenting and critiquing the data focusing on ‘specialist’ aspects of the constituent elements of individual human capital. Previous work [1] identified these as comprising human resourcing, information systems, project management financial, and global ingredients. It is the blend of these constituent elements that is interesting here. In addition attention is paid to the combination of words and phrases that make up the main text of the job advertisements in order to foreground the complexities of the hybrid nature of the HRIS role. Bold and italic highlighting is used for imperative and definite words and phrases, and underlining is used for subjective words and phrases.

Each job advertisement source data summarised the essential features of the job being offered: the permanency of the position; its location; the required hours; the sector, and the salary range. Figure 2 summarises these features, noting the number of advertisements from which the data is drawn: not all the job advertisements are complete in terms of these essential features so direct comparisons for all the data sources are challenging. An initial overview suggests the majority of advertisements are for permanent, full time jobs, located in London within various sectors, with a salary mean average of £38,000 per annum with the highest remuneration being awarded in three independent positions with global reach. The majority of roles however are paid between £20-39,000 per annum, implying an operational rather than strategic remit; this is also reflected within the responsibilities sections of the advertisements, particularly at the lower end of the salary scale. Given the permanent nature of the contract offered, the majority of organisations seem keen to appoint someone who will potential add value in the long term and can make an immediate impact.

It is interesting that these positions are considered to be full time in nature as a more detailed consideration of the data reveals a strong emphasis on discrete projects, which may have the potential to attract individuals seeking more flexible work patterns. What is not clear, however, is whether these positions have a recognised career path within a talent pool (either as part of the human resourcing pillar or the information systems pillar) or whether the roles are perceived as specialist positions within discrete unconnected specialist silos. Previous work [1] suggests that opportunities for career enhancement may be limited dependent on the context, culture and perceptions of the role of HRIS within the organisation, and there is no indication in the advertisements as to how these positions ‘fit’ within the hierarchal structure of the organisation; this presents an interesting opportunity for future research.

Over forty percent of the roles are located within the London area. Although it is not clear from the source data, it is possible that these positions are based in organisations’ head offices, even though there has been a noticeable shift of physical location in the last decade. Given the location of the majority of the roles, the salary range seems surprising low for (niche) specialists living and working in the London area. Further research is needed to investigate how these roles compare with the remuneration of other specialists in HR and information systems.

Category	No of adverts	Details			
Contract permanency &	24	Permenant	19		
		Interim	2		
		Temporary	3		
Contract type	38	Full time	35		
		Part time	3		
Geographical distribution	39	London/City	17	One each in ...	
		Manchester	5	Berkshire, Birmingham,	
		Birmingham	2	Bracknell, Edinburgh, Epsom,	
		Luxumbourg	2	Leeds, Leicestershire, Liverpool,	
		Northamptonshire	2	Luxembourg, Manchester, Northamptonshire, Nottingham, Reading, Sussex, Yorkshire	
Salary distribution	32	<u>£000's</u>	<u>No</u>	Mean average	£38,000
		20-29	10	Min	£21,000
		30-39	8	Max	£75,000
		40-49	6		
		50-59	5	<u>Note:</u>	
		60-69	0	Only sources stating annual salaries were counted as it is unknown how many days work is required in roles that state a day rate only.	
		70-79	3		
Sector distribution	16	<u>Sector</u>	<u>No</u>	<u>Sector</u>	<u>No</u>
		Charities	1	Law	1
		Construction	1	Manufacturing	1
		Energy	2	Natural resources	2
		Engineering	1	Public sector	3
		Health	1	Technology	3

**Figure 2: Overview of data from 41 job advertisements**

### 3.1 Human resourcing

Previous research [1] identifies human resourcing as a relevant domain of human capital for these roles. Given that this recruitment web site is specifically aimed at HR professionals it is somewhat surprising to note that only eight of the job advertisements specifically sought previous experience within an HR role or function. Only one advertisement asked for applications from individuals with a CIPD qualification; five asked for applications from individuals with a first degree.

The extracts drawn from job advertisements in Figure 3 are quite general in character, the sources from which they are drawn do not specify the level or depth of experience preferred. Words and phrases in these extracts such as ‘worked in’, ‘understanding’, ‘passion’, ‘ideally’ and ‘exposed’ are surprising in their vagueness and imply a general appreciation of the HR remit. However, some words and phrases, such as those in bold italics, illustrate that for these eight roles there is a definite requirement for experience or exposure in the HR arena, implying that this type of human capital is valued and required within these organisations. There is almost a contradiction of meaning when the definite requirements and the seemingly vague phrases are combined. How is the potential applicant to interpret here?

<p>... <b><i>will have</i></b> previously <u>worked in</u> resourcing ...</p> <p>... <b><i>have</i></b> a solid <u>understanding</u> of the HR space ...</p> <p>... <b><i>must</i></b> also have been <u>exposed</u> to HR or have a <u>passion</u> for HR ...</p> <p>... <b><i>have</i></b> solid experience of working within an HR and/or Payroll environment ...</p> <p>... Knowledge of HR practices, <u>ideally</u> gained through <u>working in</u> an HR generalist role</p> <p>... <b><i>will also have</i></b> worked within a similar role within an HR or Shared Service Centre capacity</p>
--

**Figure 3: Extracts from job advertisements seeking previous HR experience**

The complexity of the work discussed elsewhere in the advertisements suggests that although most of the roles are functionally and physically located within the human resourcing remit reporting to HR line management, the focus of the actual role relating to HRIS does not appear to require significant levels of HR knowledge and expertise. It is possible therefore that recruitment web sites aimed at the HR specialist may not be the most appropriate media to produce high levels of applications; further research comparing differing web sources may inform this question.

Twenty-nine of the advertisements asked for knowledge of specific HRIS applications (see Figure 4); a range of solutions are noted and twenty-three of the advertisements seeking experience working with the market leaders (Oracle, PeopleSoft and SAP). Thirteen of the advertisements state that a core element of the roles is involvement in upgrading current systems, migrating from an existing system to a new system, or investing in new solutions. It is not entirely transparent from the advertisements whether the implementation of a 'new' information system suggests replacement of current technologies where there was not system in place previously or whether the role is around the migration from one system to that offered by a different provider. Although the other advertisements are centred on provision of HRIS solutions, the vagueness and brevity of some other content continues to surprise.

However there are clear indications that organisations are seeking to appoint experienced HRIS specialists who can have an immediate impact in the workplace. Figure 5 illustrates extracts from different source data; nevertheless some of the words used are very subjective. What does 'considerable' experience mean? How is a 'sound knowledge' measured? What is a 'sound' or 'good' knowledge of HR systems? What does 'a strong awareness' mean? What does 'exposure' mean? How are 'competency' and a 'proven track record' being assessed? Once again there are some imperatives (indicated by words and phrases in bold italics) that when combined with the subjective (underlined) words and phrases may lead to confusion for the applicant. The implication is that the resourcing decision is likely to be equally subjective and given the overall vagueness of many of the advertisements, there is some concern regarding the knowledge of those making the resourcing decision.

Category	No of adverts	Details		
HRIS applications	29	Applications specifically mentioned ...	<u>Applications</u>	<u>No</u>
			Oracle	8
			SAP	8
			Peoplesoft	7
			Northgate Arinso	2
			Resourcelink	2
			Snowdrop	1
			Trent	1
Core element of the role	13	<u>Element</u>	<u>No</u>	
		Upgrading	2	
		New system/module	10	
		Migration	1	

**Figure 4: Overview of data from 41 job advertisements requiring previous experience of HRIS**

<p>... <u>considerable</u> experience of HRIS ...</p> <p>... <u>sound</u> knowledge of HRIS systems ...</p> <p>... with a <u>good</u> knowledge of HR systems ...</p> <p>... <b>will be</b> an experienced HR MI professional ...</p> <p>... be an experienced HR systems [...] operator ...</p> <p>... <u>strong awareness</u> of HR Systems is essential ...</p> <p>... an experienced HR &amp; Payroll systems professional ...</p> <p>... project/programme management of HRIS system integration ...</p> <p>... HR systems experience gained within a professional services organisation ...</p> <p>... <b>will have</b> a <u>proven track record</u> delivering [...] the introduction and roll out of HR IT Systems</p> <p>... <u>be competent</u> across a range of IT systems/HRIS and management information reporting</p> <p>... <u>exposure</u> to HR or Payroll related technology, ideally with some HR MI Reporting experience</p> <p>... <b>will be</b> an experienced HR &amp; Payroll Systems/Software Project Manager with a client facing and relationship management background ...</p>
--

**Figure 5: Extracts from job advertisements seeking previous HRIS experienceInformation systems**

A second body of human capital identified in previous research [1] for these roles centres on information systems. Essentially HRIS are specialised information systems, therefore it is logical to suggest that knowledge and experience of information systems represent a significant contribution to the human capital of a HRIS specialist. However not one of the job advertisements required any form of information systems qualification or technical qualification. Again, examples of extracts from the job descriptions (see Figure 6) focus on previous experiences and are subjective in character; these continue to prompt questions about the precise nature of the individual human capital required. One job advertisement does state that the individual appointed “will be the nominated SQL server 'expert'”, but there is no indication as to the relevant previous experience or qualification that is likely to support this responsibility. It is possible that this individual would have responsibility, but limited or no technical underpinning ‘know-how’ [67].

The extracts from the job advertisements offered in Figure 6 constitute all the specific references made to previous work experience of ‘information systems’. Again the language used is very general and subjective in construction, for example ‘keen’ and ‘understanding’, combined with the imperatives of ‘you must’ and ‘will have’. One advertisement indicates that the position is suitable for someone interested in moving

into HRIS systems role, but does not indicate any particular knowledge set that would be drawn on.

... <i>you must</i> have a background in MI ... ... for someone who is <u>keen</u> on moving into the field of management information systems ... ... The ideal candidate <i>will have</i> a thorough <u>understanding</u> of IT systems and processes and functions ...
--

**Figure 6: Extracts from job advertisements seeking previous information systems experience**

### 3.2 Project management

A third body of knowledge identified in previous research [1] centres on project management. Twenty-two sources refer specifically to this body of knowledge – more than any aspect of specialist human capital (see Figure 7). These extracts have been further sub-divided: management/leadership skills; client relationships; technical acumen; specific HRIS applications; and qualifications. These advertisements recognise the differing elements within a HRIS project and appear to associate these aspects with different levels of human capital at different hierarchal levels.

There is a noticeable shift within some of the advertisements from the loose and subjective tone of the language noted in previous sections of this paper to more precise terminology where the focus is on project management. There are more examples seeking specific experiences, for instance: ‘gained from client facing projects’; ‘change management and relationship management skills are absolutely key’; ‘proven track record in HR systems project delivery’. The roles require individuals to be able to liaise with different professional functions, external and internal clients. Within some advertisements HR specialists are positioned as the ‘client’ which may suggest the role is located outside of the HR function; in others the ‘clients’ are line management and other areas of the organisation, possibly implying the HRIS role is located within the HR function: this is not clear from the data sources. Overall organisations may construe HRIS within a project framework and then associate with HR and information systems bodies of knowledge; this requires further research.

As in previous discussions in this paper there is a distinct absence of the need for any form of qualification, with one notable exception where on advertisement specifically mentions that ‘ideally’ they are seeking an application from an individual with PRINCE2 certification.

### 3.3 Financial

Although previous research [1] identifies financial human capital as relevant to the role of HRIS specialists, this data set does not make any specific reference to appropriate experiences or qualifications required in these organisations. However it is likely that they would be useful in some of the roles which are either located within the financial sector or that require significant liaison with internal financial functions (see Figure 8). It is worth noting that an important element of managing successful HRIS projects is financial key performance indicators. Therefore this element is implicit within the project management elements of HRIS human capital.

#### Management/leadership

... project management skills ...  
... project co-ordination skills ...  
... effective project leadership [...] skills  
... project lead for HR process review and redesign project ...  
... project management experience gained on client facing projects?  
... **requires** an individual with strong project management experience ...  
... **proven experience** as a project manager, ideally from a HR consultancy ...  
... **will be** a HR technical visionary, with outstanding project management skills ...  
... **to lead** implementation teams  
... you **have to have** proven project management experience and exposure to implementing HR / talent management systems would be advantageous ...

#### Client relationships

... candidates **will have** a track record of delivery in a customer facing role  
... an experienced [...] project manager with a client facing and relationship management background [...] with the ability to set targets and delegate within a project environment.  
... lead [...] successful client facing transformation ...  
... change management and relationship management skills are absolutely key

#### Technical acumen

... functional team member of the [...] upgrade project - responsible for analysis, design, implementation & support of designated products within the project.  
... seeking an enthusiastic professional with a keen interest in HR systems and project support ...

#### Specific HRIS applications

... [transformation of] HR & payroll software technology  
... [support] the successful implementation of the e-self service module  
... experience of project managing in an HR & payroll environment  
... **will have** a proven track record delivering HR projects including the introduction and roll out of HR IT Systems

#### Qualifications

... Ideally PRINCE2 certified, you'll be a proven track record in HR systems project delivery ...

**Figure 7: Extracts from job advertisements seeking previous project management experience.**

#### Financial sector

... our client in the financial services sector is seeking [...] to join their team ...  
... an excellent opportunity has arisen [...] at a leading financial services organisation  
... the client, an international financial services organisation, has a requirement for ...  
... This global finance business is at the forefront of ...  
... Considerable experience of HRIS, preferably within financial services or similar environment ...  
... Leading financial services client ...

#### Internal liaison

... liaise with local finance team ...  
... liaison with finance ...  
... the role will offer support to the [...] finance teams [...] building strong relationships with both teams and acting as the link to ...  
... partner with [...] finance etc, as required

**Figure 8: Extracts from job advertisements seeking previous financial experience.**

### 3.4 Global exposure

The final area noted in previous research [1] focuses on the global nature of specialist human capital. Ten of the job advertisements specifically note the global nature of the HRIS role. Five of the ten roles that require global experience commanded a salary of over £45,000 per annum, and include the more strategic roles [33, 34] at £75,000 per annum. The language employed in these advertisements suggests global experience is a significant element of the role and that very particular human capital is required.

... it is <u>likely</u> experience will have been developed within global organisations and candidates <i>will be</i> used to working in complex matrix organisations ...
... <u>keen</u> to invest and develop in an individual who is looking [for] a position that involves taking ownership of global projects.
... work on HR [IS] projects [...] across the global operation, for both internal and external clients ...
... <u>Proven</u> experience of managing successful implementation and delivery of global [HRIS] projects ...

Figure 9: Extracts from job advertisements seeking previous global experience

## 4 Some concluding observations

This paper began by asking a question: what is the balance of skills and knowledge organisations are seeking for human resource information system (HRIS) specific roles in the twenty-first century? The paper acknowledges the significant impact HRIS is having on the human resourcing work in the first decade of the twenty-first century, suggesting that it is now appropriate to consider the impact on the human capital appropriate for the role of HRIS specialist given the limited scholarly interest to date. Using NVivo as the primary tool for analysis, an overview of forty-one job advertisements placed on a recruitment web board over a fifteen month period is examined to identify the blend of constituent elements of individual human capital for the HRIS specialist.

The literature presents a mixed view of the constituent elements of the HRIS human capital to date, however recent work [1] offers a useful framework for further study. The framework comprises five constituent elements consisting of human resourcing, information systems, project management, financial and global reach. Although the constituent elements of individual human capital with regard to the HRIS role have been recognised in this previous work, this analysis of advertisements for HRIS roles suggests that organisations are not placing an equal emphasis on these elements. The data for this study is drawn from one web board in one county. Further research is needed to identify whether these five constituent elements are a useful framework for constructing the specialist human capital elements for HRIS roles in other geographies.

The analysis in this paper suggests that currently organisations are seeking experienced as opposed to academically qualified individuals. Although some organisations are seeking degree-level qualifications, there does not appear to be a particular disciplinary focus to the degree required. Given the lack of attention to specific qualifications, does this suggest that organisations do not know what qualification is appropriate, or that there is not appropriate qualification? Thus one implication of this study is that there is an opportunity for academic institutions, as opposed to institutions which have a commercial imperative, to address this gap.

Some organisations are looking for applicants looking to move cross-functionally into the HRIS role and appear willing to invest in their training and development; their focus is on finding early careerists who are interested and have a passion for this type of work.

However, the majority of organisations in this study seek experienced candidates who have undertaken HRIS work in the recent past. This suggests organisations need talented individuals that can make an immediate impact on the workplace, but leaves unanswered the question as to how individuals can access these experiences in the first instance as organisations do not appear to seek applications for a ‘learning’ role, or ‘first position’ role.

Seventy percent of the advertisements seek experience with specific HRIS applications. These are complex applications supporting different pillars of HR work. There is a lack of clarity in most advertisements concerning the specific modules that need supporting. An applicant may have experience with one module but not with another. This lack of clarity within the advertisement may lead to delays and time being wasted in the recruitment and selection process. This is particularly pertinent where there is a need for individuals to have an immediate impact.

Overall the language used within the advertisements could lead to a variety of interpretations from both the organisations’ and applicants’ perspective. There is a combination of imperative in words and phrases such as ‘you must have’, etc, and vagueness in ‘exposure’, etc. Do applicants actually know what they are applying for? It is disappointing that there is no opportunity within this study to determine whether this lack of clarity has had an impact on response rates and time-to-hire metrics.

For future study it would be useful to investigate how the remuneration offered for HRIS role compares with specialist roles in HR and information systems. If there are difficulties in recruitment for these specialist niche roles, especially for the roles that were re-advertised, are the salary rates part of the reason. Comparative work for roles in other geographies may help to support a deeper understanding of the UK context and work will continue on this project.

The development of the HRIS role as a specialist form of human capital is clearly evident in the forty-one job advertisements discussed here. As HRIS applications become ever more sophisticated it is reasonable to suggest that there is a need for associated human capital. This paper offers a generic framework for examining individual and team HRIS *specialist* elements to determine the ‘right-kind’ of individual human capital. The question of what is the balance of skills and knowledge – the ‘right kind’ of human capital – organisations are seeking for human resource information system (HRIS) specific roles in the twenty-first century is clearly not easily answered, however the analysing framework offered here is a step toward understanding what is it that organisations are actually seeking.

## References

1. Williams, H., Tansley, C., and Foster, C., *HRIS Project Teams Skills and Knowledge: A Human Capital Analysis*, in *Handbook of Research on E-Transformation and Human Resources Management Technologies: Organizational Outcomes and Challenges*, Bondarouk, T., Ruël, H., Guiderdoni-Jourdain, K., and Oiry, E., Editors. 2009, Information Science Reference (an imprint of IGI Global): London. p. 135-152.
2. Kavanagh, M.J. and Thite, M., *Human Resource Information Systems: Basics, Applications & Future Directions*. 2009, Thousand Oakes, CA: Sage Publications.

3. Hendrickson, A.R., *Human Resource Information Systems: Backbone Technology of Contemporary Human Resources*. Journal of Labor Research, 2003. **24**(3): p. 381-394.
4. Hussain, Z., Wallace, J., and Cornelius, N.E., *The use and impact of human resource information systems on human resource management professionals*. Information & Management, 2007. **44**(1): p. 74-89.
5. Kavanagh, M., Gueutal, H., and Tannenbaum, S., *Human Resource Information Systems; Development and Application*. 1990, Boston, MA: PWS-KENT.
6. Bondarouk, T., Ruël, H., Guiderdoni-Jourdain, K., and Oiry, E., *Handbook of Research on E-Transformation and Human Resources Management Technologies: Organizational Outcomes and Challenges*. 2009, London: Information Science Reference (an imprint of IGI Global).
7. Zuboff, S., *In the Age of the Smart Machine*. 1988, New York: Basic Books.
8. Hall, L. and Torrington, D., *How personnel managers come to terms with the computer*. Personnel Review, 1989. **18**(6): p. 26-31.
9. Ball, K.S., *The Use of Human Resource Systems: A Survey*. Personnel Review, 2001. **30**(6): p. 677-693.
10. CIPD, *People Management and Technology: Progress and Potential*. 2005, CIPD: London.
11. CIPD, *HR and Technology: Impact and Advantages, Research into Practice*. 2007, Chartered Institute of Personnel and Development: London.
12. Beaumont, J.R., Kinnie, N.J., Arthurs, A.J., and Weatherall, C.B., *Information technology and personnel management: issues and educational implications*. 1992, Unpublished paper, School of Management, University of Bath.
13. Hurst, B.E., *Facilitating change: The key to success*. CIO, 1991. **3**(4): p. 39-46.
14. Krebs, V., *Planning for information effectiveness*. Personnel Administrator, 1988. **33**(9): p. 34-42.
15. Chong, P.K.C., *Technology transfer and human resource development*. Journal of Technology Management, 1992. **19**: p. 117-131.
16. Seilheimer, S.D., *Importance of the human factor in the information system life cycle*. Journal of Systems Management, 1987. **38**(7): p. 24-27.
17. Clegg, C. and Kemp, N., *Information technology: personnel, where are you?* Personnel Review, 1986. **15**(1): p. 8-15.
18. Martinsons, M.G., *Benchmarking Human Resource Information Systems in Canada and Hong Kong*. Information Management, 1994. **26**: p. 305-316.
19. Templer, A., *Human resource managers and the new technology agenda*. Journal of General Management, 1989(2): p. 73-80.
20. Broderick, R. and Boudreau, J.W., *Human Resource Management, Information Technology, and the Competitive Edge*. Academy of Management Executive, 1992. **6**(2): p. 7-17.
21. Legge, K., *Information technology: Personnel management's lost opportunity?* Personnel Review, 1989. **18**(5): p. 2-61.

22. Kinnie, N.J. and Arthurs, A.J., *Personnel specialists' advanced use of information technology: evidence and explanations*. *Personnel Review*, 1996. **25**(3): p. 3-19.
23. Roberts, B., *What does it take to develop an HRIS professional*, in *HR Magazine*. 1999. p. 110-114.
24. Bird, J., *Managing information technology: Micro myopia*. *Management Today*, 1992(February): p. 101-102.
25. Torrington, D. and Hall, L., *How personnel managers come to terms with the computer*. *Personnel Review*, 1989. **18** (6): p. 26-31.
26. Kossek, E.E., Young, W., Gash, D.C., and Nichol, V., *Waiting for innovation in the human resource department; Godot implements a human resource information systems*. *Human Resource Management*, 1994. **33**(1): p. 135-159.
27. Williams, H., *Job Analysis and HR Planning*, in *Human Resource Information Systems: Basics, Applications, and Future Directions* Kavanagh, M.J. and Griffith, M.T., Editors. 2009, Sage Publications: London.
28. O'Connell, S.E., *Defining the job and pay of an HRIS manager*. *HR Magazine*, 1995. **40**(1): p. 33-35.
29. Hall, R., *Enterprise resource planning systems: transforming work organisation?* *Strategic Change*, 2002. **11** (5): p. 263-270.
30. Hall, R., *The integrating and disciplining tendencies of ERPs: evidence from Australian organizations*. *Strategic Change*, 2005. **14** (5): p. 245-254.
31. Redford, K. *Deloitte survey finds HR is still failing to gain recognition from company executives*. 2007 [cited 2007 27 June 2007]; Available from: <http://www.personneltoday.com/Articles/2007/06/18/41126/deloitte-survey-finds-hr-is-still-failing-to-gain-recognition-from-company-executives.html>.
32. Legge, K., *The Role of Personnel Specialists: Centrality or Marginalization?*, in *Human Resource management & Technical Change*, Clarke, J., Editor. 1993, Sage London.
33. Storey, J., *Developments in the Management of Human Resources*. 1992, Oxford: Blackwell.
34. Ulrich, D., *Human Resource Champions: The next agenda for adding value and delivering results*. 1997, Boston, Massachusetts: Harvard Business School Press.
35. Preece, D. and Harrison, M., *The Contribution of Personnel Specialists to Technology-Related Organizational Change*. *Personnel Review*, 1988. **17**(1): p. 13-19.
36. Lawler, E.E. and Mohrman, S.A., *HR as a strategic partner: what does it take to make it happen?* *Human Resource Planning* 2003. **26** (3): p. 15-29.
37. Hunter, R.H., *The "new HR" and the new HR consultant: Developing human resource consultants at Anderson consulting*. *Human Resource Management*, 1999. **38**: p. 147-155.
38. Brockbank, W. and Ulrich, D., *Competencies for the new HR*. 2003, Society for Human Resource Management: Alexandria, VA.
39. Schoonover, S.C., *Human resource competencies for the new century*. 2003, Schoonover Associates: Falmouth, MA.

40. Bell, B.S., Lee, S.-W., and Yeung, S.K., *The Impact of eHR on Professional Competence in HRM: Implications for the Development of HR Professionals*. 2006, School of Industrial and Labor Relations & Centre for Advanced Human Resource Studies, Cornell University. p. 1-26.
41. CIPD, *Talent: Strategy, Management, Measurement*. 2007, Chartered Institute of Personnel & Development: London.
42. Schramm, J., *HR Technology Competencies: New Roles for HR Professionals*, in *Research Quarterly*. 2006, Society of Human Resource Management
43. Williams, H., *How Can Human Resource Information Systems Inform and Enable Strategy Making?*, in *Human Resource Management*. 2000, Nottingham Business School, Nottingham Trent University: Nottingham.
44. Williams, H., *Strategic Planning for Human Resources*, in *Human Resources in Organisations*, Leopold, J., Editor. 2002, Pearson Education: Harlow.
45. Tansley, C., Holden, N., and Williams, H. *Knowing in Practice: Inter-cultural Participative Competence in Human Resource Information Systems Project Work*. in *Proceedings of the First European Academic Workshop on Electronic Human Resource Management*. 2006. University of Twente, The Netherlands.
46. Tansley, C., Newell, S., and Williams, H., *Effecting HRM-style practices through an integrated Human Resource information system: an e-greenfield site?* *Personnel Review* (Special Issue: Managing the Employment Relationship in Greenfield sites), 2001. **30**(3): p. 351-370.
47. Bazeley, P., *Qualitative Data Analysis with NVivo*. 2009, London: Sage Publications.
48. Bryman, A., *Social Research Methods*. 3rd ed. 2008, Oxford: Oxford University Press.
49. Lewins, A. and Silver, C., *Using Software in Qualitative Research: A Step-by-Step Guide*. 2007, London: Sage Publications Ltd.
50. Symon, G., *Qualitative Research Diaries*, in *Essential Guide to Qualitative Methods in Organizational Research*, Cassell, C. and Symon, G., Editors. 2004, Sage Publications Ltd: London. p. 98-113.
51. Williams, H., *How do organisations make sense of their talent as valued assets? The Literature*, in *Human Resource Management*. 2008, Nottingham Business School, Nottingham Trent University: Nottingham.
52. Lepak, D.P. and Snell, S.A., *The human resource architecture: toward a theory of human capital allocation and development*. *Academy of Management Review*, 1999. **24** (1): p. 31-48.
53. Polanyi, M., *Personal Knowledge. Towards a Post Critical Philosophy*. 1958, London: Routledge.
54. Polanyi, M., *The Tacit Dimension*. 1966, London: Routledge & Kegan Paul.
55. Polanyi, M., *The Tacit Dimension*. 1967, New York: Doubleday & Co.
56. Polanyi, M., *Knowing and Being*. 1969, Chicago: University of Chicago Press.
57. Polachek, S. and Siebert, W., *The economics of earnings*. 1993, Cambridge, England: Cambridge University Press.

58. Heijke, H., Meng, C., and Ramaekers, G., *An investigation into the role of human capital competences and their pay-off*. International Journal of Manpower, 2003. **24** (7): p. 750-773.
59. Bingley, P. and Westergaard-Nielsen, N., *Returns to Tenure, Firm-specific Human Capital and Worker Heterogeneity*. Journal of Manpower, 2003. **24**(7): p. 774-788.
60. Strauss, A. and Corbin, J., *Basics of Qualitative Research: Techniques and procedures for developing grounded theory*. 2nd ed. 1998, London: Sage.
61. Richards, L., *Handling Qualitative Data: A Practical Guide*. 2005, London: Sage Publications.
62. Layder, D., *Sociological Practice: Linking Theory and Sociological Research*. 1998, London: Sage Publications.
63. Mason, J., *Qualitative Researching*. 2002, London: Sage Publications.
64. Miles, M.B. and Huberman, A.M., *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd ed. 1994, London: Sage.
65. Seidel, J., *The Ethnograph v50: A User's Guide*. 1998, London: Sage Publications.
66. Yin, R.K., *Case Study Research: design and methods*. 3 ed. Vol. 5. 2003, London: Sage.
67. Raub, S.P., *Towards a knowledge-based framework of competence development*, in *Knowledge Management and Organizational Competence*, Sanchez, R., Editor. 2001, Oxford University Press: Oxford. p. 97-113.