Information Management graduates' accounts of their employability

Introduction

In the context of an economic downturn and the planned rise in tuition fees in England in 2012, the question of graduate employability is an even more vital issue for the Government, employers, educators, students and potential students. Precisely how a degree makes a graduate employable has been the centre of a complex debate for several decades [1]. Much of the literature has attempted to produce listings of the skills, understandings and personal qualities graduates need to develop in their studies to meet employers' requirements. Yet critics see this approach as reductive, and question the meaning, measurability and transferability of attributes in such checklists [9, 14]. Commentators have pointed to the lack of literature from the graduates' own perspective on the transition from study to work [17, 11, 14]. This has led some writers to elaborate a more complex concept of "graduate identity" [14], which focuses less on simple listings of attributes and more on how graduates produce a performance of employability that works in a particular context.

A strong *prima facie* justification for taking a first degree in Information Management (IM) would be its contribution to one's employability. Yet it is important to discover precisely what aspects of IM contribute to such employability, both for students and educators, to strengthen their case with employers. It may be quite easy to imagine an answer from the theory of IM. However, it is argued in this article that it is also instructive to investigate how graduates themselves articulate the value of their degree, and the concept of IM in particular, especially if they do not go into roles directly in the Knowledge and Information Management (KIM) area [1], which is probably a fairly common phenomenon. This would help us to understand the value of the degree in practice much better. It would also help us understand better how to support students during their course to articulate what they know, in ways that are effective in likely work contexts.

The research reported in this article, therefore, sets out to collect qualitative interview data from recent graduates of the Sheffield BSc in IM, to see what careers they had entered and examine their accounts of their own employability. The article is laid out as follows: the next section sets the scene by reviewing the literature on employability, with some reference to employment patterns in information technology (IT) and IM. The method for the study is then explained, including an overview of the content of the degree as background, combined with a comparative analysis of the learning outcomes. The findings of the study are then explained, followed by a discussion of their wider significance.

Graduate employability

Employability has been defined by Yorke [24, p.7] as a "set of achievements - skills, understandings and personal attributes - that make graduates more likely to gain employment and be successful in their chosen occupations". Many attempts have been made to explain what makes a graduate employable (see discussions in [20, 19, 14] often with an intention to investigate the claimed gap between what employers want and what universities produce. Such listings generally combine skills, understandings and personal attributes. A recent list [23] is reproduced in column 1 of Table 2

below. This particular checklist emphasises a foundation in a can-do attitude. Column 3 reproduces the Sheffield Graduate concept (http://www.sheffield.ac.uk/sheffieldgraduate), a locally developed articulation of graduate competencies (not all of which are intended to relate to employability), by way of comparison.

While many such listings appear to be essentially variations on the same familiar themes, the field is replete with alternative terminologies (e.g. key, core, transferable or employability skills). Some listings are relatively narrow; others are more complex and inclusive [28]. For example, career management skills are increasingly included in the list; thus Dacre Pool and Sewell's CareerEDGE model [10] includes "career development learning", alongside degree subject knowledge, understanding and skills, generic skills and experience – but also emotional intelligence. In addition, efficacy beliefs (self-efficacy, self confidence and self-esteem) and the capacity for reflection and self-regulation are seen as essential components of employability. Rather than focusing quite narrowly on skills, the importance to employability of "the ability to articulate learning and raising confidence, self-esteem and aspirations" [28, p. 9] seems to be increasingly understood.

Academic critics of the cruder checklist exercises see graduate characteristics as difficult to define, measure, develop or transfer [9, 4]. How the terms listed are interpreted by both those responding to surveys and researchers reusing other lists may be quite different [14]. Different employers prioritise different elements [19]. The skills are not really separate, but inter-related: e.g. greater technical understanding can increase one's ability to communicate technical findings [21]. How, if at all, the relevant learning can be achieved and "transferred" to employment is much more complex than the listings imply [9]. Critically, the checklist of skills and attributes serves also to mask the way that actual employment success is shaped strongly by positional factors [14]: class, race, gender will impact on the relative success of individuals with the same set of skills and attributes.

It may be significant that much of the literature to date has been based on generalised surveys of graduates across sectors, with little focus on the graduates' experience of transition. Rather than a checklist of factors it may be more useful to think in terms of "graduate identity" [13, 14]. Replacing a simple list of discrete elements which objectively define a graduate, in this approach it is recognised that there is a tenuous, complex process of negotiation between the individual and workplace expectations to accomplish an appropriate performance of employability. The checklist material is effectively a set of discursive resources that can be drawn on to warrant one's employability, if deployed in ways appropriate to the context. Therefore "students should seek to articulate what they can claim to do in terms that relate to the occupational settings they wish to enter" [14, p. 117]. This approach would see the transition from university to work as one step in a complex, on-going process and as a trajectory between two communities of practice. Moving into work is a transition from fitting into ways of being a student appropriately, itself negotiated in relation to the values and assumptions of the discipline/institution, towards an appropriate identity in a workplace, negotiated in relation to local values and expectations [7, 11, 16, 24, 25]. The degree of alignment between these two identities shapes whether it is a smooth or rather discontinuous experience of change on entering employment [11]. The graduate identity approach would imply a greater focus on the graduate experience than is typical of employability literature; a perceived gap in the literature [17, 11, 14]. It would also point to the importance of understanding what make convincing performances of employability in particular contexts [14]. It is not simply what skills you

have; it is about quite subtle aspects of how they are articulated that achieves employability in a particular context.

The Information and IT job markets

Generalised concepts of graduate employability reflect the evidence that a large percentage of graduate jobs in the UK are open to people with any degree [10]. Clearly, however, what constitutes employability in a particular sector will have its specific aspects; this is relatively neglected in the wider debate, but could be particularly important outside the context of well established professions [7].

Yet away from well established professional areas such as librarianship, our knowledge of the graduate employment experience in the IM sector is limited. Our best information is through a series of studies by TFPL [1, 2]. These suggest the continuing existence of a distinct body of information professional roles in the area of knowledge and information management (KIM), in managing e-information: "all activities that contribute to the effective creation, research, acquisition, organisation, flow, use and protection of knowledge and information, internal and external, within an organisation" [1, p. 7]. Despite recognition that managing information is increasingly an aspect of many people's roles, and that managing information has many organisational stakeholders [2], the 2011 TFPL survey suggests these functions are distinct and stable and increasingly integrated within one team in organisations [1].

Given their role as information recruiters, TFPL's positive view of the existence of a distinct information sector is perhaps not surprising. Gartner Group ha~~sve~~ championed corporate Information Management in the last few years, but see this as an aspect of IT. It is likely that the "ownership" of information activities will continue to be contested in organisations. Although there is potential for a unique information perspective, the critical mass of IM professionals, compared to those who see themselves working in IT or marketing, is likely to be absent. Understanding how to explain IM in the workplace and particularly how to differentiate it from IT remains a priority for the discipline.

We know a lot more about the IT industry than the information sector as such, though the complexity of the industry makes it hard to generalise about the skills required [7]. IT workers are usually graduates, but not necessarily in computer science or engineering [3]. Although professional bodies have sought to credentialise skills in IT, the speed of change in IT has prevented them achieving occupational closure. Thus the culture of IT places great stress on "self-learning and informal learning" in the context of rapid ongoing change [3, p. 357] or "self re-education" [12, p. 161]. This can be experienced as either an attraction of the job or perceived as onerous.

Koppi et al.[18] have looked at the gap between what IT workers said they needed to know and what university had taught them. Graduates tended to see themselves as well prepared in technical terms, but under-prepared in terms of personal, interpersonal and business skills. This mirrors persistent critiques of IT workers [31]. Nagarajan and Edwards [22] have also explored the nature of non-technical skills needed in IT jobs, and where people gained these skills from, including those which had been acquired through university.

Research aim and questions

In this context, the research reported in this article investigated the ways graduates of the Sheffield BSc in IM talk about the degree, and IM as such, as making them employable.

To achieve this understanding a number of specific research questions were posed:

1. What skills, understandings and personal attributes do graduates consider they need to carry out their current job, i.e. make them employable?
2. Which aspects of the degree contribute to them meeting these needs?
3. Within this, how specifically do they define IM and how does their concept of IM contribute to their employability?
4. What gaps in the curriculum do they identify or are implicit in the account of their needs?
5. With knowledge of the content of the degree, which points of learning are not being exploited as fully as they could be in their accounts of their employability?

The study

A suitable form of data collection to explore these questions was in-depth interviews with graduates, because the questions focus on the detailed personal experience of graduates and how in their own context they use and explain IM. Accordingly a semi-structured interview schedule with questions about the experience of the course, post graduation experience, current role and their conceptions of IM was drafted. The research was approved within the University of Sheffield ethics procedures. A total of 13 interviews were then conducted, each lasting between 40 and 70 minutes. Primarily for reasons of practicality (two interviewees were working abroad; it was also found inconvenient to conduct the interviews in interviewees' working hours), half of the interviews were conducted by telephone; one was email based. Conducting interviews by telephone did not seem to affect the quality of the data collected, confirming some previous studies that indicate this mode of interview is acceptable for semi-structured interviewing [32,15].

Interviewees were graduates from the BSc IM ~~BSc~~ between 2006 and 2010; the interviews were conducted between two and four years after graduation. This is a small sample group with ~~-~~ only a total of around 150 graduates awarded this degree in this time period. The sample is not claimed to be a representative sample of graduates of the programme, although the interviewees did represent a range of experiences: those who had gone directly on to further study as well as those going into work. We know from Destination of Leaver from Higher Education data that these are the main directions our graduates take. Comments on the frequency of particular responses relate purely to the sample group and are not claims about how likely they would be to be expressed by graduates as a whole. Since the focus of analysis is on uncovering particular, quite complex ways of articulating graduateness, whether all graduates need or achieve this is secondary to identifying what these constructions are like.

Nine of the interviews were conducted in 2010 by level two students on the BSc itself, as part of a University of Sheffield scheme to involve students in research, the Sheffield Undergraduate Research Experience (SURE, http://www.shef.ac.uk/sure). They are the second and third named co-authors of this paper~~article~~. Although conducting the interviews proved to be a challenging exercise for them, e.g. in fully understanding the requirements of semi-structured interviewing, the two student

authors of the paperarticle brought a lively and questioning energy to the project. Talking to the students about their experience was a strong motivator for graduates to participate. A further four interviews were conducted by the first author at the end of 2011.

In addition to thematic analysis of the data, attention was also paid to discursive strategies used by interviewees. Such an approach recognises the importance of how available interpretative repertoires are employed strategically to negotiate identity positions [30, 33]. This aligns well with the perspective of graduate identity [11, 14]. A focus on discourse recognises the constitutive power of language [30], but does not imply that a viable professional identity is "all talk" or that it can be constructed only through talk; it is about material ways of behaving, presenting the self (e.g. dress) and thinking too. Given the paper's focus on how graduates articulate their employability, a focus on discourse is appropriate.

In the context of agreeing to be interviewed about their degree by the Information School itself, respondentses were likely to tend towards stressing positive aspects. Naturally, it was made clear at the beginning of each interview that the purpose was for an honest exchange and, indeed, negative experiences were freely reported. While disposed no doubt to be agreeable, the interviewees did not have a strong interest to misrepresent their experience. The loss of objectivity implied by the pre-existing relationship, was counterbalanced by the depth of analysis made possible by the extent of inside knowledge of the course itself, e.g. in recognising gaps between what students said they were doing and how the course prepared them.

Although the concept of IM is probably well understood by the readers of this journal, it is useful context to supply Table 2 as a summary of the core modules of the course. It should be noted that although entitled IM it does contain some strong elements of information systems (IS). Table 2 maps the degree learning outcomes to both a recent generic statement of employability and the Sheffield Graduate concept.

{insert Table 1}

Table 1 Core modules of the BSc in Information Management

{insert Table 2}

Table 2 Mapping of BSc Learning outcomes, NUS/CBI Employability attribute set and Sheffield Graduate concept

Findings

The graduates interviewed had gone into a wide range of roles such as database administrator, research analyst, user requirements analyst, web site project manager, IT security and support worker and consultant. They were mostly in jobs at the "softer" end of IT, rather than in IM itself. Of these most were in the private sector, two were on graduate traineeships, two were working outside the UK. Only one had gone into an explicitly information management role, in a corporate library. Two had diverged onto different career paths, markedly away from IM. Two were at the time of the interview studying or had just completed Post-Graduate Taught (PGT) courses.

The presentation of findings is organised as follows. The first section examines the value of the degree, but also recognises that its limitations become apparent through graduates' description of it as "broad." The impression is of many opportunities but also of a lack of sufficient reflective integration. The next section looks specifically at how interviewees dealt with a lack of understanding of IM by others. A few could powerfully articulate IM as related to personal information management, information sharing or learning; this is explored in the next section. The strong links interviewees made between information skills and communication is explored in the final section of the findings. In presenting the results,fictitious names have been ascribed to all respondents.

A broad range of skills

A commonly used word in the interviews to describe the degree was "broad", meant in both positive and negative senses. Thus Graham[1] saw the variety of the course as making it interesting and keeping the door open to many possible careers, even if there was a sense that it did not give him a depth of specialism in any one area to say he was qualified to do it professionally. The degree was perceived by several interviewees to be a taster for a range of different career paths, steering one away from things one had not enjoyed and steering one positively towards things one did have an aptitude for. However, it did not achieve a depth of knowledge in any one area or socialisation into any particular technical community. Thus it played the role of offering pointers in a transition to employment in a wide range of sectors and roles, rather than neatly placing one in a particular job sector (e.g. in IM).

Most interviewees mentioned skills derived from the degree as useful to their current job, indeed Eve described it as a "skills based degree." Of those working in the broad IT area only one interviewee saw the degree as simply a credential: a necessary piece of paper to get him through the door, where the content of the degree was, or had turned out to be, largely irrelevant. Even he, however, acknowledged significant value from some of the modules. His main argument, though, was that there were quite a lot of other degrees that would have given him just as much of a start in terms of relevant skills. Many particular modules were mentioned during the interviews as providing useful skills for work. Indeed a surprising number of interviewees either had notes from the course in the workplace or had recently referred to them for learning about their job. Clearly, some of the skills and understanding learned on the course were transferred fairly directly into the work setting. Almost all modules were mentioned at least once. All the modules had value to someone, yet this could be seen as simply reflecting the range of career directions they had taken. The IS-orientated modules were mentioned more often than others, perhaps because more interviewees were often operating in a quite technical environment.

Furthermore, there was little sense that specific skills were missing. The interviewees did not identify explicitly a pressing need for other skills to be in the degree. Nevertheless, implicitly, the interviewees' descriptions of their current roles and the challenges they faced did imply some potential gaps in the curriculum. One was project management, which almost every interviewee mentioned, yet is not addressed in the course. Numeracy, both in terms of statistics and financial information, was not something interviewees mentioned, but as an analyst it was logical to think Kate needed it, for example. Interestingly, explicit mention of application of numeracy is a gap in

[1] Apart from the two student interviewers, as co-authors, the participants have been pseudonymised.

both the BSc and Sheffield Graduate concept. Since most interviewees had gone into IT, it might be expected that they wanted deeper IT knowledge from their studies. Yet the interviewees did not explicitly say this. They accepted that the learning had to take place after one got a job, because the knowledge was quite specialist. Anthony thought the degree could not really have gone into the depth of particular technologies. The grounding was a starting point when combined with a willingness to learn. Thus there was not a strong indication of any missing content; the content included was valued and central to interviewees' accounts of their employability.

If interviewees did identify explicitly an aspect of the course that should be changed, it was less about widening the range or depth of skills learnt and more about making clear the workplace value of skills learnt on particular modules. They had themselves made such connections when established in the workplace, but felt the course had not done it enough for them. Yet equally they were realistic that the idea of a student keeping a record of learning during the course (i.e. Personal Development Planning (PDP)) was fine in theory, but they would not have done it. Even conscientious students were resistant. This was even though they were often undertaking a very similar formal process of tracking their own development in their current job.

This reflectivity related to the negative side of the "breadth" of the degree. There was a sense that the degree in its breadth did not fit together well; each module was completely different. Frances called it "disjointed". There was a danger of picking elective modules that made the degree a mish-mash, Kate thought.

It was significant in this regard that there were relatively few mentions of the final year project, given that it was intended to be a capstone activity. Anthony was the one exception, when he said:

> *And the third year, while I was doing my dissertation that was very important. I learnt a lot through doing that, in terms of the research, theory behind it all, and obviously it's like your own project so you are researching it and you've got a tutor at the university to help you. [...] My coursework writing improved as well, in the way I presented things in coursework. And just everything, I think just clicked together and I became more independent in terms of my writing approach and my commitment to actually doing the coursework.*

Thus for Anthony the third year project was not only about learning more theory; it was also about a change in attitudes. It required developing an independent approach and a stronger commitment to work, that seems to carry forward into his current role. This is further linked through to more effective written communication. Yet how rarely these potentially profound effects were commented on by other interviewees is suggestive that either this capstone activity had not worked as intended, or at least that they had not realised its significance.

Interestingly, Beatrice described the strength of the degree as being a "broad" introduction to IT, in contrast to the overly specialist colleagues with an IT background:

> *A really good knowledge base and a really good grounding in IT.*

Here the distinctive quality of an information perspective is not very apparent. This is despite the fact that Beatrice's role did contain a large element of information-related activities. These were in the area of compliance, which would fall under Abell et al.'s [1] "information governance" category of KIM, as well as roles within the "communication and publication" area. She defined herself as an

IT project manager. Though she was enthusiastic about the degree, she did not really identify herself as an information professional. It is telling that even though the degree was accredited by CILIP, the professional association was mentioned only once in all the interviews, and in that case the interviewee could not remember the acronym correctly and saw it as something too specialist that he did not want to be associated with.

Thus although the skills gained from the degree were valued, the subject of the degree seemed very broad and many interviewees did not seem to strongly identify with IM as a subject, nor think that this identity was as powerful as a claim to IT knowledge.

Defining Information Management

Eve: - I still don't understand it, I don't think. [...] Sometimes I fob the degree off and I say, "Yes, it was just like business and computers". [...]

Steph (Interviewer): I try to explain it, but it always works when you try and explain it.

Eve: Yes, once you start, but you know, other people when they've just done straight degrees like history, no one asks them anything else, because it's just what it is [...]

Steph: Ok, well, I think the fact that no one knows it, that's a bit cool for me.

A sub-text of the interviews was that IM was felt not to be a known subject, either to other students while one was studying, or to employers. The quotation above illustrates that Eve had not successfully worked out a "story" about what IM is; though she recognised its unfamiliarity was an opportunity to open up interesting conversations in contexts such as job interviews. The student interviewer is more positive: an explanation does emerge when you start to speak and the fact that it is unknown gives one some power to actively define it in a way useful in a particular context.

Indeed, most of the interviewees defined IM fairly clearly, when asked directly. Yet they thought their organisations did not understand IM; most were not working directly in that area. The most extreme example of this was Dan who said that he told others he had a degree in "Google studies" which he saw as academically interesting but not useful in work. Partly this seemed to him to be because to be effective IM was about sharing information across an organisation, whereas a junior member of staff would only ever have a local remit. To him IS was more useful at the level of immediate local processes that he might be involved in. This resonated with Anthony's awareness of organisational initiatives in IM (business intelligence), but he seemed vague about the details. A lack of entry-level roles in IM might also partly explain why graduates had gone into more IT areas.

Charles was more positive in seeing IM as increasingly recognised to be of importance.

Steph (Interviewer): Because, when you do a degree and people ask you what you're doing, and then you say 'information management'-

Charles: No one knows what it is. But that's changing though, without a doubt. More people will know what information management is, especially on a senior level, if they're people that are welcome to change, if they're dynamic, if they adapt to change, they will be thinking about managing information. [...] now it's a fundamental part and there's jobs out there that that's what they do. You're not a techie person, you're there to deliver high-level solutions or ideas on how we can manage information, what tools we can use, why are we going to use them. [...]I guess my view of IT changed as well.

Thus his perception was that there was increasing understanding of the importance of information. It had affected his view of IT as basically a different means to deliver information. Yet his own role was more in the area of choosing IT as an infrastructure for information, rather than in what TFPL would classify as within the KIM area.

In general, IM did not seem to be well understood in organisations. Since an identity is relational between the individual and the context, this would have a powerful effect in often inhibiting the development of a strong performance of an IM identity. Yet there were several exceptions to this, where individuals had developed persuasive accounts of the value of IM.

IM as Personal Information Management

Perhaps the most interesting and passionate expressions of the value of IM were about how it influenced Personal Information Management (PIM) practices, that in turn had a powerful potential impact on the organisation.

> *So I think [the degree has] helped me, although I might not be as good as them with sort of the technical side, I'm definitely better at organising the information, talking and liaising with the clients; trying to structure things. Because most of the people that create folders of information all over our network, there's no logical order to anything, so at the moment if anyone else looks at our project they wouldn't be able to find anything anywhere. So I'm quite good at organising everything. [...] and when I'm talking to the client I've got everything in front of me structured, if I'm not clear on something I can create a spreadsheet and send it to the client and say "look, can you fill this in? I'm a bit unclear, and send it back to me". I think, the degree helped a lot in making sure that it's not just something you know and keep it to yourself; you have to share...Definitely the sharing of information that's drilled into you in the course, that definitely hits home when you start work and realise no one actually talks to anyone else; you don't know what other people's jobs are, or how they fit in the business. [...] So I'm probably the annoying person that goes "look, this needs to be updated". [...] I find that's probably the worst thing that goes on in the company: people not talking to each other and not keeping [...] what I would call useful pieces of information up to date.*

Kate brings a unique perspective to an organisation chiefly staffed by people from an IT background: she is the one that worries about documenting things, keeping documentation up to date and transparent file naming. Simple disciplines of personal information organisation make material much easier to share and in turn do something to overcome important problems of the business such as covering for people who are absent. Kate is empowered by this sense of bringing unique value to the organisation, developing an identity position which is not simply socialisation into local ways of doing things; thus being part of an identity differentiated from other employees with an IT background.

Anthony made similar, but even more complex kinds of links between personal information management and organisational knowledge sharing, and with learning.

> *And also my willingness to learn and try and get the knowledge from people in the team, because it's a very specialist job role and they weren't used to having a graduate come and join the company. And one key thing I also use is - [have] you've heard of something called Microsoft OneNote? Basically it's a very quick way of documenting information and knowledge that you're learning from your job. And I found that very, very useful for learning very quickly, and also documenting what I'm doing. Because obviously you can document formally using Word but it's probably easier using that approach, because you've got access to information very quickly. So that's one way I've improved my own learning, and shared information within the team as*

well, where I've just said "I've got a note on how I've done this, I'll send it out to you via email very quickly". And once you've got it, it's there to send out.

In his account there is a stress on a "willingness to learn and get information from people" as something he specifically brings to the organisation. Learning is a much used term in his account, reflecting his basic orientation to the job, coming in as a graduate recruit with limited technical knowledge to a highly technical context. However, it is itself not a generic, but a very specific concept of learning, heavily influenced by the terminology of information and knowledge management. The story about OneNote is quite specific. Its use is about quickly picking up ideas from busy others, making informal notes, having these to refer to and share when appropriate. Learning is closely associated with documenting and then sharing information – rather than an internal cognitive process. It is a view explicitly influenced by the language of IM and KM. The account also stresses informality and speed. Thus OneNote in some way allows more informal records to be kept. The repeated stress on quickness, on speed, suggests adjustment to the urgency of the corporate IT context. His idea of learning is inflected by IM but also by IT culture/organisational culture. His personal discovery and appropriation of OneNote also asserts a relevant claim to a mastery of technology. Given the centrality of continuous, self-directed and informal learning to the culture of computing (Guzman *et al.,* 2009; Adams and Demaiter, 2008), this is a powerful discourse asserting the value of information management as a way of performing the self re-education valued in the IT industry.

Thus the meaning of IM for both Kate and Anthony is very much bound up with personal information management practices (Anthony used the term later on) and how documenting and sharing information and learning are woven together. Both accounts seem also to be partly related to dealing with having a relatively non-technical background in a workplace dominated by IT workers. They can be seen as successful attempts to renegotiate an IM identity developed at university into an account that works in an IT workplace.

However, most interviewees did not articulate these connections. For example, Laura was in a very similar context to Anthony; she described very similar processes of needing to learn from notes, colleagues, Google. She also stressed the degree's enhancement of a general ability of learning to learn, closely linked to the ability to operate independently:

I think university education, and the degree that I did help with that: you are able to learn. It is part of this willingness to learn and actually teach yourself stuff and go out and find out if there's something that you didn't know about and looking after your work independently and not just waiting to be told to do things.

Yet she did not make the further connection to seeing learning as itself IM and using that language. This suggests ~~points to~~ a potential opportunity to help students see the organisational power of simple PIM practices.

IM as communication

In both Kate's and Anthony's account information management and communication are closely articulated together.

Organising the information, talking and liaising with the clients; trying to structure things.

It seems that organising things is the basis of good communication: with clients and through knowledge sharing with colleagues.

For Anthony, from the beginning of the interview he talked about IM practices not just in personally reorganising his work group's SharePoint, but also organising and responding to email, this is complex because he is part of a small global support team that supports customers across time zones and deals with many urgent customer questions.

> *I get lots of email a day, probably over 50 to 100 emails a day, so certainly managing that in folders and making sure I respond to people via email is very important. So it's information searching and also responding to people, via email, that's vitally important in this kind of job role.*

Organising correspondence, re-finding information and responding systematically is seen as an aspect of IM. He also saw a concise form of bullet point communication as something he had learned on the degree.

Other interviewees also tended to connect what they had learned from the course to communication.

> *The communication side of it: how information gets transferred and shared within an organisation. I think a lot of people just don't really think about it, and it seems that information gets passed on to the correct people at the right time. But I know that that's not necessarily the case, so I think I quite often will share that kind of knowledge and information with other people myself, and try and get them to understand the benefits of them being more proactive in sharing information and building their own networks.*

Frances also articulates the importance of communication because again information sharing is central for her.

Furthermore, it was interesting the range of specific communication challenges that were referenced by different interviewees, and how communication is often linked to IM. Charles stressed the value of questioning skills to get to the bottom of what the internal clients he was interviewing needed from technology. He remembered specific interviewing techniques practised on the course as relevant. He also mentioned a range of other communication skills such as in expectation management. Much of his work was about giving presentations; again something he had gained experience of through his degree. Beatrice also talked about the problems of managing expectations, especially the impatience of marketing people who did not understand the complexities of the IT and issues of quality control in web projects. Thus, for Beatrice, there was an implicit sense of managing communication across professional boundaries. One of the main things she had taken from the course was a deeper understanding of how she orientated to groups; her desire to control. Perhaps not surprisingly, interviewees acknowledged that group work was very beneficial in retrospect, perhaps especially when teamed with people they did not know well. Graham stressed skills in report writing learned on the course. Further, when asked about key challenges of their current job, communication often came up again. Jackie talked about needing to have the confidence to get people to listen to one's message and communicate with each other as part of a project she was leading. Dan talked about the need to stand up for your point, even if it is a bitter pill for those receiving the message.

What is interesting is the diversity of specific communication and interpersonal challenges alluded to by interviewees; and the frequent sense in which IM has a specific contribution. On a curriculum level this vindicates the variety of assessment tools used in the degree, as mirroring the range of communication challenges graduates face (not just essays and exams, but reports, presentations and practical challenges). It also vindicates the emphasis placed on choosing appropriate channels for communication that is in the learning outcome (row 6 in Table 2). There was evidence here that the IM identity as implying a focus on effective communication in many forms did provide an explanation of the value of the degree, particularly in the context of computing's failure to develop these skills in its own graduates [18]. It also points to the difficulty on the ground of truly differentiating degree subject skills from generic skills.

Yet it is interesting to note that the new forms of communication implied by Web2.0 did not seem very important to interviewees. One of the initial hypotheses behind the research was that graduates might be an agency of change in their organisations through their enthusiastic use of new social media such as Facebook, blogs and wikis. This idea was totally disconfirmed. Interviewees reported that the dominant forms of mediated communication in their organisation was email, and to a lesser extent Instant Messenger. They had conformed to that pattern of communication. Mostly their use of social networking was very much curtailed. They had some awareness of Linkedin, but had only just begun to use it, mostly to keep in touch with colleagues in their new workplace. Although increasingly credible talk of Enterprise 2.0 means that this probably will change, it points to the relative slowness of change. Certainly there was no sense that their grasp of such new technologies was a key aspect of their employability.

It was noticeable also that interviewees did not perceive graduates from their cohort as a strong reference group, though they were in touch with a few as friends. Because they had gone in such different career directions, they lacked the cohesion of a group -graduating into a specific social world, such as librarianship. Class colleagues were not seen as an immediately useful social network.

Discussion

Interviewees had gone into a range of careers, often ones with a strong IT flavour. Even though they had not gone into IM as such, they had a lot to say about the value of specific things learned in their studies; they did not see the degree as a mere credential. The skills and understandings learned in particular modules were valued and a surprising number of interviewees still had notes from their course on their desk at work or had used them to do their current job. There seemed to be few gaps in the content of the course, although there probably was a lack of teaching of project management given how commonly interviewees talked about it as part of their job. This suggests that a package of IM/IS competencies such as exist in degrees like the BSc is a highly employable package for working in IT. For graduates who took this path, life after graduation did not seem to have been a "very uncomfortable world" [29], a "swamp" [26] or "shocking" [7]. The few graduates that had gone in other directions were less convinced that IM made them employable.

Graduates did explicitly think, however, that the course did not do enough to articulate the relevance to the workplace of the skills learned in modules. Most felt they had worked out the value of the skills learned only when in employment, and this has been a missed opportunity in the job

search process. Most liked the idea retrospectively of keeping a diary of learning as a student but, realistically, they thought they would never have actually done it. The infrequency of mentions of the final year project was a hint that it did not always work very well as a capstone module integrating learning from across the three years and taking it to a new level. These findings are further support to the notion that a key task for educators is helping students reflect on and articulate what they know. However, the finding is also a reminder of some of the barriers. In particular, it is arguably only at the level of being socialised into a particular job role that these connections are made [9], particularly if it is not clear which type of role students will go into. The complexity of the transition process needs to be recognised.

In seeing the degree as "broad", interviewees pointed to it as preparation for many potential career paths, but not full socialisation into any one type of job role. Perhaps this is something that can be usefully made explicit within such courses themselves. The degree was sometimes seen as a broad introduction to IT; IM itself was understood but not central to the interviewees' remit, even though specific skills were useful. Although the degree was CILIP accredited no interviewee made mention of this professional affiliation in a positive way. Also in discussing IM, there was an undercurrent that it is unknown to others and uncertain, and that organisations still did not see the value of it. Identifying oneself strongly as an IM person, therefore, was problematic. This reinforces the understanding that this is the key issue for IM as a degree subject. While TFPL [1] may be right in identifying a KIM employment sector, it is small and specialist. Interviewees had failed to locate it, rather than the wide range of jobs combining IT with "soft" skills. Clearer signposts for graduates into this specialist job market could be needed. The interviewees had already proved themselves very employable in the larger IT job market, yet they mostly found it hard to develop a strong story about how IM fitted into this.

Nevertheless in some cases an IM approach was part of what they felt they added to the organisation and differentiated them from other people working in IT. The most powerful and interesting articulations of IM were as PIM practices that promoted information sharing. These were identity positions that valued IM skills in ways that also worked in an IT work setting [14]. They successfully address the discontinuity in the transition [11] between an IM course and IT work. These provide potential models of how to explain the value of IM to students; and for them to explain its value to employers. Exploring during the course the complexity of how to explain the degree is certainly underlined.

Furthermore, information and communication were seen as tightly linked. It is probably not very surprising that in a culture very much dominated by a stress on the value of communication [6] and collaboration, and where they are also central themes to much of the rhetoric about employability (see Table 2 above), these aspects came to the fore in interviewees' account of the value of their degree. It is also a perennial theme in critiques of IT that IT people are not effective at communication [31]. IM graduates were likely to position themselves as being better communicators. What was interesting was that in fact a wide range of specific communication challenges were being referenced, and that ways of dealing with them were often linked to specific IM disciplinary practice. Thus the value of the degree was in teaching what appeared to be generic or transferable skills, but these were inflected as disciplinary practices.

Although communication was so important, interviewees had not continued to be heavy users of social media; they had conformed to local organisational practice which was mostly to use email and to a lesser extent Instant Messenger for mediated communication. A potential employability discourse built round the rhetoric of generation X and the "digital native" [5] did not seem to be used. This suggests that as well as teaching social media, a continuing focus on fundamental communication skills remains very important.

Conclusion

Readers of this journal know what Information Management is. We also know that, from the information science perspective, it remains little understood, highly contested and under resourced in many organisations. Discovering how to explain IM in persuasive ways is a priority for the discipline. The underlying proposition in this article is that there is much to learn from recent graduates' own attempts to articulate a convincing account of IM in real contexts, especially outside the specialist KIM context. It can be best explored looking at the process of transition from the graduate identity perspective. Yet this perspective also points to the complexity of transition, since performances of identity make sense only for specific individuals within specific contexts.

For most, although the degree provided them with significant skills that they had transferred directly into work, IM as such did not provide them with a clear or workable graduate identity. However, a few had developed a sophisticated discourse that through the articulation of IM as closely related to PIM, information sharing and learning expressed the widest organisational value of IM, in a context where they were not employed directly in KIM roles. The strong link between IM and a wide range of communication and interpersonal capabilities is also apparent as a compelling argument for IM graduates' employability, particularly in the context of the discourse of failure of IT people to communicate effectively. Given a perceived lack of entry-level KIM roles and the continuing large market for IT work, understanding how to explain IM in this kind of context is important.

The article makes no claim that this is a comprehensive view of how to explain IM, even in these kinds of context. A fuller picture would require looking more systematically at different sectors of work, and at how such accounts play out over time. A longitudinal perspective would give us a fuller story of how such accounts are developed and elaborated over time, within the notion of the transition to work as a trajectory between communities of practice [11, 27]. Understanding the transition from university to work as a multifaceted change reflecting the interplay of personal, financial, geographical as well as professional aspects implies setting the graduate transition in the context of wider life experience [25]. Such research should encompass the experience of graduates on a range of courses, e.g. joint honours, or ones taken at other institutions. The research could also be usefully expanded by talking to employers of IM graduates about how they see the transition of particular individuals; and also looking at interactional data to explore the negotiation of workplace identity in action.

However, in the wider context of thinking about how to help students explain more clearly what they know and their employability, the findings are significant. Discussion of choices about how to explain the degree: as credential, generic skills base, IT generalist, IM specialist or effective knowledge sharer/learner, need to be developed in response to the individual's preferences, aptitudes and choice, and understanding of the values of specific work contexts. It could be part of

PDP. It could be part of reflecting on direct experience of work, such as placements. It could be part of capstone modules in IM degrees. Working on elevator speeches is a potential approach in this context [8]. Such discussions can be usefully framed within the graduate identity perspective. Reflecting on the whole research process, the experience of undertaking the research was a rich learning experience. The close engagement between interviewees, the student interviewers and teaching staff offered many insights into students' own perspectives on their education. Setting apart the need to understand employability and how to help students be more employable, maintaining an active link beyond graduation for mutual learning, between teachers, graduates and current students is a valuable but rarely mentioned aspect of engagement.

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Tables

Level 1 Introduction to Information Management Information Literacy Information and Communication Networks in Organisations Inquiry in Information Management
Level 2 Database Design Information Systems Modelling Information Management in Learning Organisations Information Retrieval: Search Engines & Digital Libraries
Level 3 Information Management & Strategy Information Systems & Information Society Project Methods & Preparation Information Management Project

Table 1 Core modules of the BSc in Information Management

	NUS/CBI (2011)	BSc IM programme spec	Sheffield Graduate Attributes	*Comments*
1.	*Key foundation*: A positive attitude, involving a readiness to take part, openness to new activities and ideas and a desire to achieve results		an entrepreneurial problem solver	*Neither BSc nor Sheffield Gaduate has this strong core capability made central*
2.	Self management – readiness to accept responsibility, flexibility, resilience, self-starting, appropriate assertiveness, time management, readiness to improve your own performance based on feedback and reflective learning	Have developed organisational and management skills including time management, project management and leadership in teams Have acquired learning skills that will help them in their studies and in their future life	well rounded, reflective, self aware and self motivated an efficient planner and time manager professional and adaptable an independent learner	*The BSc statement focuses more on specific skills, whereas the emphasis in both NUS/CBI and Sheffield Gaduate statements is broad capabilities*
3.	Team working – respecting others, co-operating, negotiating, persuading, contributing to discussions, your awareness of interdependence with others	Have effective interpersonal skills including negotiating, and working as part of a team Be aware of, and able to reflect on, social and ethical issues concerning the use and flow of information within society and organisations	a flexible team worker an active citizen who respects diversity culturally agile and able to work in multinational settings	*The Sheffield graduate and NUS/CBI statements seem fuller statements of the range of inter-personal skills required*
4.	Business and customer awareness – your basic understanding of the key drivers for business success and the importance of providing customer satisfaction and building customer loyalty	Understand how to create information products and services to meet the needs of defined user populations Understand the organisational context in which information is created, communicated and used		*Perhaps not as explicitly addressed in BSc spec as one would like. Not directly addressed in the Sheffield graduate concept.*
5.	Problem solving – analysing facts and	Be able to apply analytical and problem	a critical, analytical and	

	circumstances to determine the cause of a problem and identifying and selecting appropriate solutions	solving skills, and have developed their creativity	creative thinker	
6.	Communication – your application of literacy, ability to produce clear, structured written work and oral literacy, including listening and questioning skills	Be able to choose an appropriate communication channel (oral, written or electronic) and use it effectively	an accomplished communicator	
7.	Application of numeracy – manipulation of numbers, general mathematical awareness and its application in practical contexts (e.g. estimating, applying formulae and spotting likely rogue figures)			*An interesting gap in both Sheffield graduate and the BSc learning objectives.*
8.	Application of information technology – basic IT skills, including familiarity with commonly used programmes	Be effective users of ICTs Be able to describe the Information Systems and Information & Communication Technologies (ICTs) of core relevance to information management, and understand their practical application Be able to analyse and evaluate information content and information systems	skilled in the use of IT	*BSc statement, not surprisingly, stronger than generic statements which focus on basic competence.*
9.		Be information literate: able to find, evaluate, synthesise and use information effectively	information literate	
10.		Have learnt to apply appropriate research methods to an information management project	a skilled and ethical researcher	
11.		Understand core concepts and theories of	knowledgeable in their subject	

		Information Management Be able to recognise and apply principles of organisation and retrieval of information Demonstrate an understanding of knowledge management and strategy		
12.			competent in applying their skills and knowledge	*Again, implicit in much of our IM spec*

Table 2 Mapping of BSc Learning outcomes, NUS/CBI Employability attribute set and Sheffield Graduate concept