**Supporting student transitions to placement:**

**developing a new self-identity**

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| Sally Smith, Colin Smith |
| School of Computing |
| Edinburgh Napier University |
| Edinburgh, Scotland |
| United Kingdom |
| s.smith@napier.ac.uk, cf.smith@napier.ac.uk |

**ABSTRACT**: Employer expectations of graduates, as evidenced by the job descriptions of graduate vacancies, often include relevant work experience; however meeting student demand for placements remains a challenge for universities. In practice there is generally substantially more student demand than employer supply. Through e-Placement Scotland we are increasing the number of available placements in the IT sector to ensure that computing students maximise their chances of securing a computing placement and ultimately a graduate job. In this paper we explore whether professional identity is constructed through student engagement with the project. The paper outlines how e-Placement Scotland has implemented a programme of outreach designed to stimulate the emergence of professional identity amongst computing students, in the hope that we can capture the benefits of placement to all students (placed and unplaced) and facilitate transitions to the workplace.

Keywords: Placement, Professional Identity, Employability, Computing

1. Introduction

Recently there has been an interest in pedagogical research focused on the development of graduate or employability attributes (for example, Green et al., 2009, Penttinen et al., 2013). Studies on student perspectives have explored whether the development of these attributes effects a transformation for the student (for example, Daniels & Brooker, 2014). In terms of graduate attributes, experiencing a placement enables students to discuss examples of the challenges they faced while on placement, highlighting their professional capabilities and underlying work ethic on graduation.

Making a smooth transition into the workplace by drawing on existing skills and experience is one important aspect of placement, and this transition can also be eased by self-verification as a professional (for example, Costello, 2005). But what about the students who do not gain a placement? Can the experience of reading placement adverts, writing their CVs, attending networking events and interviews affect the way they view themselves, i.e. their self-identity? The construction of professional identity has been the subject of recent research, based on identity theory. Identity theory recognises multiple identities which, in turn, leads to theories of identity salience with previous studies exploring, for example, how multiple identities are resolved (Serpe & Stryker, 2011). The construction of professional identity, one of these multiple identities, is considered to be the process by which a combination of technical skills, capabilities, status and roles merge with work and life experiences into a ‘coherent image of self’ (Cascio & Gasker, 2011). Theories of adaptation of identity suggest that individuals undertake identity work to ease transition (for example, Ibbara, 1999; Higgins & Kram, 2001; Dobrow & Higgins, 2005)). This paper describes interventions, introduced via e-Placement Scotland, designed to challenge students’ identity construction through a series of placement promotion and preparation interactions. These interventions are designed to add value in two ways: to prepare students for the placement application process, and in the longer term to provide insights to the graduate application process and also into professional working life. Building upon initial work in this area by Smith, et al. (2014), the existing identity and professional identity literature is reviewed to provide a theoretical framework for the exploration of the experience of students in terms of identity construction during their experience of the e-Placement Scotland project. The interventions are then described and students’ experiences considered in light of the literature.

1. Context

After a sustained period, the decline in the number of students studying computer science (CS) appears to have halted, however numbers in the UK, USA and Canada have not yet returned to the peak levels seen in 2004 (National Science Board, 2012). In Scotland, the outlook for computing jobs is positive with strong growth anticipated (ScotlandIS, 2013). The trends being reported suggests that we need more highly skilled CS graduates. Recognising the need for these skilled graduates, the Scottish Funding Council (SFC) is supporting a Scotland-wide student placement project, e-Placement Scotland, to create over 2000 new paid placements across Scotland. The project is employer-led, with an infrastructure designed to maximise applications for roles from students while minimising employer recruitment overheads. The project is run on behalf of the SFC by a project team based at Edinburgh Napier University working with ScotlandIS, the trade body for the digital technology industry in Scotland. Through employer demand a wide range of placement models have emerged, including the traditional one year placement, shorter placements and, increasingly, part-time placements undertaken alongside university study (Smith & Smith, 2014). Students gain employability skills while on placement and deploy these skills when they return to study, graduating with academic and professional skills (the term ‘cooperative program’ describes a similar model in North America). The benefit of a period of employment during study is rarely disputed, indeed the case has been made for relevant work experience being one of the main contributory factors in gaining graduate employment (Hall et al, 2009; Mason, 2006), and it has been cited as the number one criteria recruiters are looking for when recruiting to graduate roles (High Fliers, 2013). Experience in the UK suggests that the numbers of students having the opportunity of a traditional one year placement have declined because of reduced employer and student demand (Wilson, 2012). In order to maximise students’ chances of gaining a relevant work placement during their course a number of project resources and activities were designed and implemented.

1. Literature Review

Our literature review builds upon earlier published work on the construction of professional identity in students by Smith et al. (2014) to conceptualise the potential for identity construction through our student-focused value-adding activities. Identity is considered to be ‘parts of a self composed of the meanings that persons attach to the multiple roles they typically play' (Stryker & Burke, 2000). Individuals are considered to comprise multiple selves or identities (for example, Ashforth & Mael, 1989; Korte, 2007; Miner, 2002) which leads to considerations of identity commitment and salience and consequent studies exploring how individuals resolve multiple identities (for examples see Serpe & Stryker, 2011). Role identity proponents suggest that the core of an identity, for example in the role of student or professional, is the categorisation of self as a role holder (for example, McCall & Simmons, 1978). According to role theorists, people behave in a somewhat predictable way based on the roles that they carry out. Studies focus on role enactment, such as the role of student, with typical behaviour as a role holder observed. Studies suggest that everyday activity consists of the acting out of socially defined categories and each social role is a set of rights and responsibilities, of norms and behaviours (Heise, 2002).

According to Ibarra, professional identity may be considered to be 'the constellation of attributes, beliefs, values, motives, and experiences in terms of which people define themselves in a professional role' (1999). Studies have found that professional identities were related to subject skills and perceived capability (Bejaard et al., 2000). The process by which professional identity is constructed has been linked to role models (Higgins & Kram, 2001; Singh et al.,2006; Wright & Wright, 1987), developmental networks (Sweitzer, 2009) and experimenting with possible selves (Markus & Nurius, 1986; Ronfeldt & Grossman, 2008) and is recognisably dynamic, resulting in adaptation (or reconstruction). Identity work has been defined to be the construction of identity through interaction with others, in particular ‘forming, repairing, maintaining, strengthening or revising the constructions that are productive of a sense of coherence or distinctiveness’ (Sveningsson & Alvesson, 2003). According to Ibarra & Petriglieri (2010) the ‘primary function of identity work is compliance with role requirements and their display rules’, where display rules constitute the external signifiers of professional identity. In their study they were concerned with professional identity however student identity has its own display rules. Ibarra (1999) found that prior to developing a new professional identity an inauthentic identity or ‘act’ is used until an individual can identity role models, experiment with provisional selves and evaluate the effectiveness of these to finally develop an authentic adapted professional identity. Beech et al (2008) explored how organisational change impacted an individuals’ self-narrative and suggested that identity work was reliant on resources or risk and opportunity. Resources included staff development and status, while opportunity referred to situational influences that facilitated identity work. In the absence of opportunity, Beech et al. found identity work motivated by risk associated with current self-identification. For this study, students approaching placement may have identified a risk to their student identity associated with graduation.

To explore how students experienced their identities as emerging professionals, Costello (2005) categorized the following common stages: initial status, followed by initiation events leading to a transitional status, redefinition, leading to a new status. In a study of student teachers, Ronfeldt and Grossman (2008) found that students approximations of workplace practice useful in the academic setting and explored how students enacted ‘alternative visions of professional identity’, finding that new teachers need opportunities for enactment that help their professional identities become embedded (p54). Pierrakos et al.’s (2009) study of attrition amongst engineering students found that classroom-based experiences had to be meaningful in order to develop identity as an engineer. Engineering students have been found to construct professional identities through consideration of the values and behaviours of the profession (Loui, 2005). The classroom as a simulated workplace can be considered to lack authenticity; however steps can be taken to ‘complicate curricular materials’ as a means of mitigating these limitations (Dannels, 2000).

Based on the literature review, the following questions emerge: Can placement preparation sessions affect students’ self-identification? Where identity work is undertaken, what factors lead to an adaptation of identity?

1. Value Added Activity through e-Placement Scotland

During the first four years of e-Placement Scotland the project focused upon maximising placement numbers and developing effective working practices. Placements are facilitated through a recruitment website, e-placementscotland.com. Students register interest in applying for a paid placement by providing course and personal details for example year of study, age, gender and university. The site advertises all current placement roles and students can search by location, type of role or specific skillset. When they see a role they would like to apply for they upload their CV, complete a covering letter and apply through the website. The website provides sample cover letters and CVs, and hints, tips and FAQs. In a study designed to explore motivations, students most valued a placement as a route to a graduate job indeed ‘students have an instrumental view of placement as a tool towards optimising their employability on graduation’ (Smith et al., 2015). To promote the project an ongoing series of outreach events is held, with project staff delivering in-lecture presentations. This was observed to be the most efficient way to increase student registrations. Once students are registered placements can be directly promoted through a search of preferences, however further interventions have been introduced in recognition that students undertake a significant journey between registering and applying. The project has developed a series of value-added interventions which include speed networking sessions, tech talks and project presentations. These interventions, primarily designed to prepare students to apply for placement roles, also afford students valuable opportunities to interact with e-Placement Scotland and potentially affect the way students view their capabilities. Student participation in events brings exposure to (and engagement with) a narrative about opportunities and skills which is refreshingly positive about the contribution that students can make in the workplace. This narrative is reinforced by employer participation (for example at speed networking events) where employers make efforts to engage with students in small groups, explain the scope for them to contribute in their organisations, and ‘endorse’ the existing skills and abilities of students that students themselves may up till then have regarded as emergent, lacking or inadequate. We therefore posit that such events are capable of influencing identity work at the intersections of student identity and professional identity.

We have observed the following value-added activities to be most appreciated by students and employers. Each is described and discussed in turn.

* 1. In-lecture presentations

Having an opportunity to present during a normal computing class is a useful way of raising awareness of the project and the placements available, but also presenting case studies. The presentation of role models can facilitate identity construction, leading to consideration of alternative (or ‘possible’) selves. In computing there are few high profile role models, such as exist in other subject disciplines. Through analysing the questions raised, it is possible to observe some students thinking through the possibilities for them as placed students. During some of the e-Placement sessions the students were encouraged to start developing professional networks, through creating LinkedIn accounts and linking to the e-Placement Scotland account. With its emphasis on gaining a placement, the presentation could be viewed as a type of initiation event (Costello, 2005), affording students an opportunity to experience the start of a transition.

4.2 Speed networking:

The format of the speed networking is to arrange a number of employer tables and invite students to register for the event. Students are formed into groups and each group is positioned at one of the employer tables. Each table has 10 minutes to find out about each other before the whistle blows and the groups of students move around the room. The employers value the chance to raise awareness of their companies and current placement roles in this intensive way. For the students it is a chance to hear about the company, ask questions, hear other students’ questions and hear all the answers. For many students this is their first opportunity to witness networking in action. Some students are well prepared and have copies of their CVs ready to leave with employers, for others early insights into the nature of work are significant in providing resources to draw upon in placement applications. Developmental networks have been found to affect identity construction and consolidate professional identities. These networking events provide a mechanism for this experience, through recognition that the employers are interested in them, their course and subjects studied, and in facilitating further contact through business cards and printed material distributed.

4.3 Tech talks hosted by a company

Technical presentations have been organised within companies. These offer the company a chance to promote some of the latest technology there are designing or using, while students gain insights into the company, learn about the specific technology and experience a working environment. In feedback, students mentioned these session as ways of meeting people in the industry and hearing directly about the workplace from current practitioners. Seeing inside the workplace offers students the opportunity to imagine themselves as a professional. Modern technology-based workplaces are significantly different from classrooms at school and university and from most student casual job environments. The presenter has the potential to be a role model for students attending and they are briefed to include their backgrounds and routes in to the industry. A self-narrative includes experiences and students have new narratives to draw upon.

Further mechanisms to support students in their approaches to placement include the web resources and signposting to careers services within their university for CV advice and mock interviews. In a study of professional identity amongst creative computing students ‘the mock interview was an opportunity to experiment with a provisional self, exploring a new identity through facing an interviewer from the careers service, previously unknown to them.’ (Smith et al., 2014).

1. Conclusion

Considering the range of project interventions in the context of existing literature, has uncovered emerging themes. While we have not yet had a chance to gather empirical data about how students envisage their professional lives and how well prepared they feel in terms of skills and capabilities for their next steps, feedback from events highlights that students have viewed events as useful experiences in developing their own thinking about the feasibility of putting themselves forward for placement applications. This sense of preparedness is an indicator that students are recognising what are essentially resources for identity work.

As with most vocational courses at university, computing students in their final year face the challenge of bridging between university and the workplace. This paper explored the nature of the construction of their identity in preparation for transition into a workplace through interventions designed to support placement applications.

Only approximately 20% of registered students get placed and these students return to study after their placement with new insights into the world of work and a new self-narrative as a computing practitioner. On e-Placement Scotland the ease of the application process helps students gain direct access to recruiting companies and facilitates their applications. If students are successful, their work experience helps secure a job on graduation. If they are unsuccessful then the process may still be beneficial in terms of their self-conceptualisation. Two overarching themes have emerged: the degree of identity fluidity especially during a transition (for example from student to placed student), and the extent to which an individual constructs their identity or acquires an identity as the product of discourse and institutional learning. The interventions were designed to support students in successfully applying for placement and in turn support the development of a new self-narrative as a professional. Returning to the definition of professional identity construction: i.e. the process by which a combination of technical skills, capabilities, status and roles merge with work and life experiences into ‘a coherent image of self’ (Cascio & Gasker, 2011), these interventions gave students time to rehearse narratives about themselves as professionals. Identity work included working with the careers service imagining possible professional selves – then enacting their new identity in mock interviews. Students also developed a more contingent view of the structure or landscape of employment and the part that networking can play in positioning themselves.

Taken together with previous studies highlighting how students can start to construct a professional identity while at university, the findings of this study may be generalisable in other areas of engineering and computing and in particular to work-based learning modules. Enhancing skills and capabilities related to the recruitment process, while providing an opportunity to develop self-narratives that are consistent with a coherent professional identity, can prepare students for life beyond placement.

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