Using Q methodology to understand the perspectives of degree apprentices

Abstract

In the UK, degree apprenticeships enable people to study for a degree, while in full-time employment. Apprentices study modules at university and also gain credits through work-based learning. This study uses Q methodology to explore the experiences of second year degree apprentices, especially their perceptions of the relationship between their paid work and university study. Participants (degree apprentices) were asked to sort cards containing texts about their experiences of the degree apprenticeship (work and study) in a special grid, according to how strongly they agreed or disagreed with the statements. Analysis of their ratings identified three sets of shared outlooks (factors), which were designated *Work-Based Students*, *Upskillers*, and *New Workers*. Personas (fictional characters) were created from these factors. These can be used to take account of the diverse contexts and needs of the apprentices within the evolving implementation (e.g., modules, support, communication) of these new degrees.

Paper

Introduction

In the last few years, degree apprenticeships have been introduced in the UK, offering new routes to degrees. Partnerships between employers and Higher Education Institutions (HEIs) support apprentices to study for degrees, where study is integrated with full-time, paid employment (Powell & Walsh, 2018). Apprentices' fees are paid from a levy of UK employers (DBEIS). In this way, degree apprenticeships have the potential to provide degrees, combined with work experience, but without student debt (UCAS, 2017). In Scotland, where this study is took place, degree apprenticeships are called graduate apprenticeships (SDS, 2019). While there are differences in the national context and implementation, the term "degree apprenticeship" (DA) is used here, as the research is of interest beyond the Scottish context. Apprentices spend at least 20% of their work time studying away from their workplace, implemented as one day a week at university for the computing apprentices in this study. At university, they study modules via lectures, practicals, courseworks, and tests. A Professional Practice module supports and credits their work-based learning, acknowledging the skills they gain in the workplace, facilitated by a workplace mentor. Thus, DAs require collaboration between the HEI, the employers, and the apprentices, with the apprentices at the centre: "the student becomes a process owner, responsible for the 'integration' part of the learning process" (CWIHE 2016, 29).

While work-based learning is presented as a combination of experience, learning, theory, and practice (e.g., Helyer, 2015), it can be experienced as a black box to everyone beyond the learner (Johnston, Angerilli, & Gajdamaschko, 2003). This study aims to open this black box, in the DA context, by exploring the experience of a cohort of computing apprentices, as they start their second year. The cohort is diverse in terms of age, education, and skills. Most were with their employer when they started the DA, though some were recruited directly into a DA role. Their employment contexts vary greatly according to the size and culture of their organisations and the apprentices' skills and responsibilities. This influences their available time and support for university study, beyond their university day.

The challenge for the researcher is to gather student perspectives and experience of *their* DA, along with the information to contextualise and understand them. This is summarised in the research questions:

- How do the individual apprentices understand and experience the degree apprenticeship?
- Especially, how do they perceive the relationship between their professional and student roles?

Methodology

The study uses Q methodology, following on from Johnston et al.'s 2003 investigation of co-op learning.
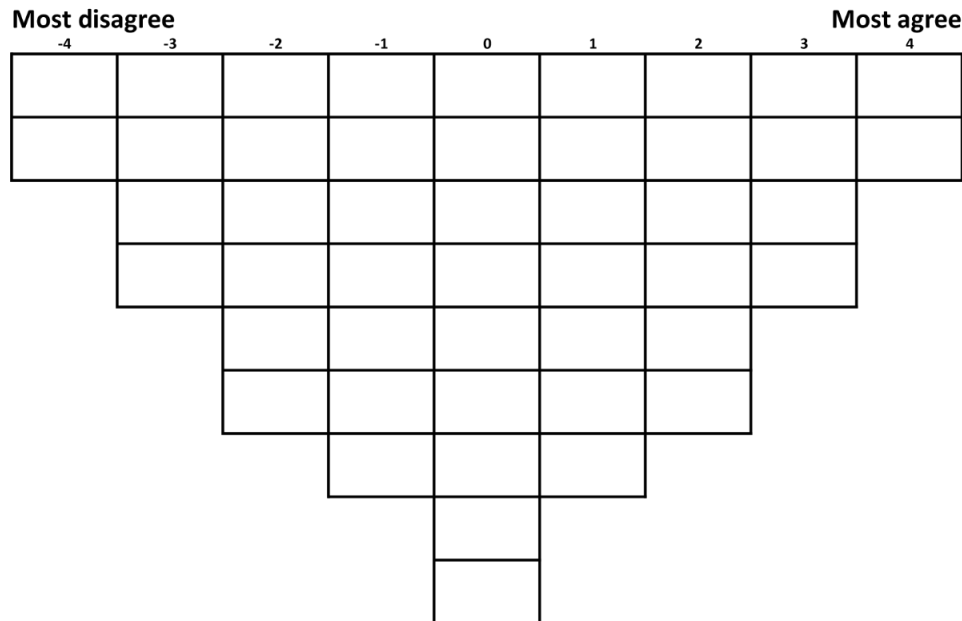

Figure 1: Q sort grid

A *concourse* (collation of information) was gathered (de Jonge et al., 2017) via: an inclusive literature review (Booth et al., 2018); previous Q methodology research on work-based learning (Forister & Chlup, 2017; Johnston et al., 2003); primary data gathered from stakeholders through workshops and research, such as interviews with apprentices (Taylor-Smith, Smith, & Smith, 2019). Forty-six short statements (1-3 sentences) were derived from the concourse to describe potential experiences or perspectives of the DA. For example:

- The things taught in the classroom are applicable to work;
- Work commitments are more important than study commitments;
- I think of myself as a part-time student.

Each statement was printed on a small card and a set of cards was created for each participant. Participants (n=17) were asked to sort the cards on a special grid (Figure 1, Figure 2), according to how strongly they agreed or disagreed with the statements (a Q sort). Their responses were analysed, using Banasick's (2018) online application, to identify *factors* –groups of participants who shared a perspective on the situation.
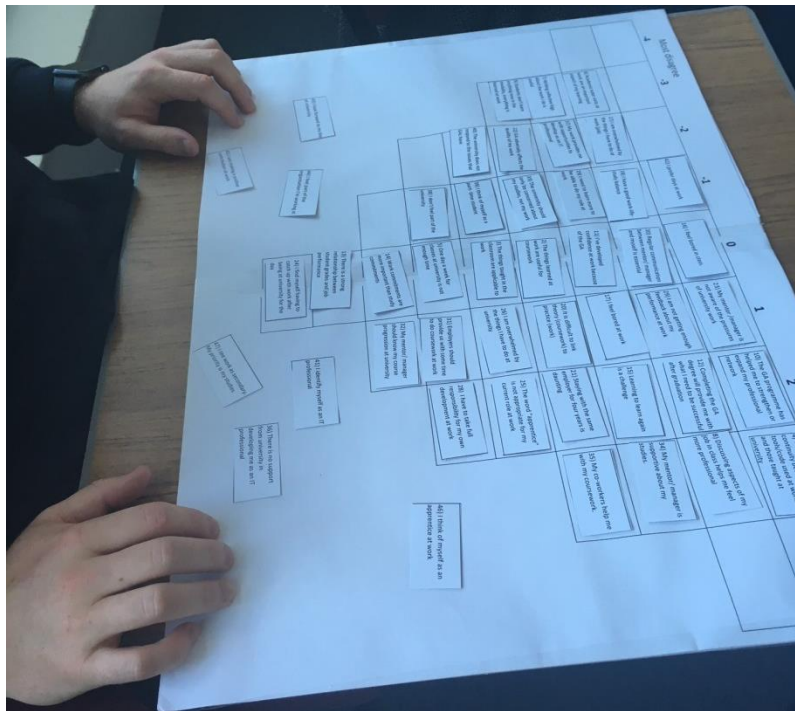
Figure 2: An apprentice sorts the statements

Findings

Three profiles of apprentices (factors) were revealed following a principal component analysis. We named these *Work-Based Students*, *Upskillers*, and *New Workers*.

- *Work-based students* (encompassing seven Q sorts) identified as both IT professionals and students. They understood the degree apprenticeship as a continuous stream, expecting support from both their employer and the university: they agreed that the university should be concerned about their work and their employers should provide time for coursework. They saw work as secondary to their study commitments.

- For *Upskillers* (four Q sorts), work was more important than study and they felt they needed to catch up with work after their university day, but enjoyed the DA experience. They found the work-life-study balance challenging.

- *New Workers* (two Q sorts) had joined their companies to do the apprenticeship and had slightly ambiguous identities: thinking of themselves as students, but not feeling part of the university; feeling part of their companies, but lacking the skills to fulfil their roles; recognising that their work provided opportunities to develop as IT professionals. They recognised the importance of support from their mentors and the university.

Impact and discussion

Personas were then created from these factors: Alex, Blake, and Charlie (respectively). Personas are fictional characters, designed to hold characteristics (e.g. views, goals, contexts) of users in design (Madsen et al, 2014). For example, the Upskiller persona, Blake, "had been with the company for four years, and had an established role and

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growing responsibilities, when she started the degree apprenticeship". The three personas were shared with staff working on the DAs, to be considered in decision-making around the course. This is more comprehensive and less intrusive than using named apprentices as examples. The personas will also be shared in workshops with employer-mentors to introduce anonymised apprentice perspectives.

In this study, Q methodology enabled us to explore the perspectives of computing degree apprentices, starting their second year, especially with reference to their identities as employees and students and the relationship between their paid work and university study. By deriving statements from the concourse, this exploration was situated in the political and academic discourse around DAs and work-based learning, while also encompassing perspectives we had previously gathered from the apprentices, their employers, and university staff. The creative step from factors to personas has provided engaging and usable research outputs to support the continuous improvement of these new degrees.

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