Using activity theory and Q methodology to model activity and subjectivity in enterprise education

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How can we model the way in which enterprise education is done? How can we model how we feel about the way we do enterprise education? What can we learn from the modelling process? This article addresses these questions by looking at activity and subjectivity in enterprise education, reporting on recent research commissioned by the West Yorkshire Lifelong Learning Network (WYLLN) into entrepreneurial skills development for arts and media students in colleges and universities in the region.

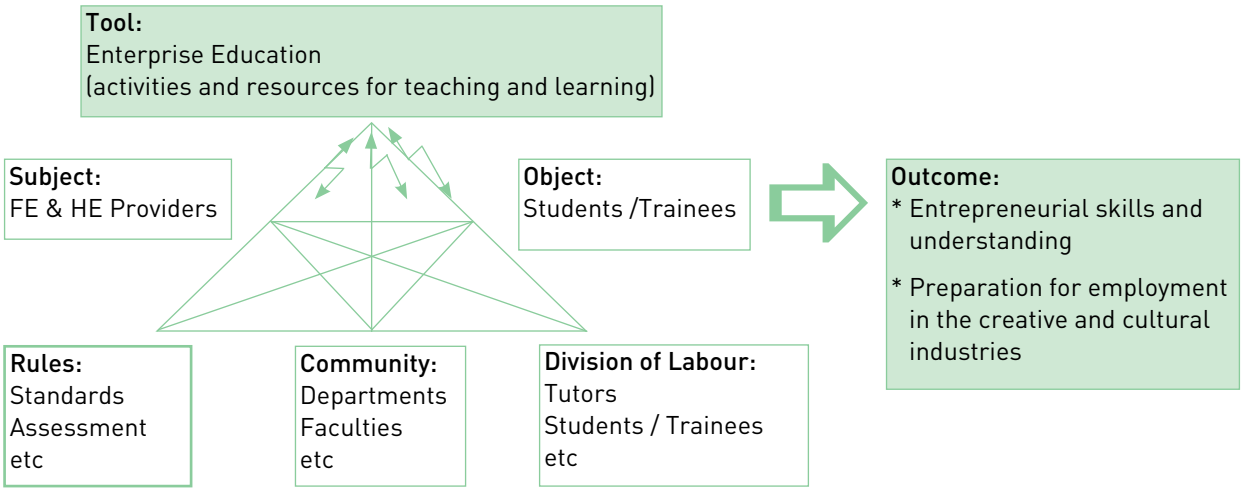
The study (Deignan, 2009a) used activity theory (e.g. Engeström, 1993) and Q methodology (Stephenson, 1935, 1953; Brown, 1980) to investigate the views of college and university staff in relation to enterprise education activity. The participants (N=32) were recruited from five institutional members of WYLLN. Four distinct perspectives were interpreted, based on their respective values and the relative emphasis they placed on different aspects of enterprise education. Key differences in emphasis between these four perspectives are headlined below (see Deignan 2009a for details).

Viewpoint 1	Just do it! Students need our help and encouragement
Viewpoint 2	Enterprise education has got to be inclusive, tailor-made, and strategically driven
Viewpoint 3	Authentic input helps, but there are no guaranteed outcomes
Viewpoint 4	Enterprise education benefits everyone, but it needs staff awareness and understanding

The conceptual framework for the study treated teaching and learning as activity that is socially situated (Engeström, 1999) and explored the perspectives of the study participants in relation to their communities of practice (Wenger, 1998). The study findings are considered using an activity theory framework, which is grounded in the notion that human beings use tools to work on an object, or problem space, in order to achieve a desired outcome (e.g. Engeström, 1993). Engeström (2000, p. 964) describes how "a collective activity system is driven by deeply communal motives. The motive is embedded in the object of the activity". Engeström (2003, p. 29) also emphasises the central role of mediation in activity theory.

Using an activity theory framework, in Figure 1 below, further and higher education providers are shown as a *subject* which uses enterprise education as an educational *tool* (or mediating artefact) to work on an *object*, here the students/trainees, with the intended *outcome* being the development of entrepreneurial skills and understanding, and preparation for employment in the creative and cultural industries. This object-oriented activity, in whichever institution it occurs, involves a *community* with *rules* and a *division of labour* among the various participants.

Figure 1: Object-oriented activity with contradictions, illustrated by lightning bolts, in the activity system (after Engeström, 1993)

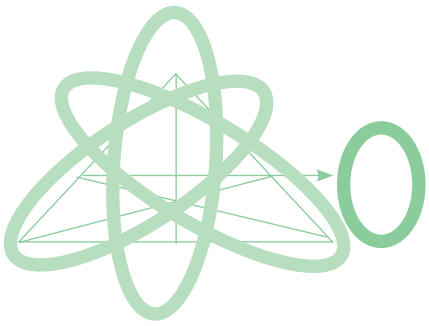


The lightning bolts in Figure 1 above indicate potential 'contradictions' between the tool and other elements of the system. Engeström (1999) emphasises the importance of analysing internal contradictions within an activity system. Kangasoja (2002, p. 200) describes such contradictions as "the driving force of development. They are manifest in the daily practices as breakdowns, tensions, ruptures and innovations. They call for reworking, both conceptually and very concretely, the objects and motives that sustain the activity, and for re-mediating the activity system by way of improving and inventing new tools".

In relation to modelling different perspectives, Engeström (1999, p. 20) argues for a multi-voiced theory of activity in which internal 'contradictions' and debates are an essential focus of analysis. Consistent with this multi-voiced theory, Q methodology was used in the study to model the subjectivities of the participants. Q methodology (Stephenson, 1935, 1953; Brown, 1980) was chosen for this purpose as it offers a theoretical basis for understanding the diversity of views on enterprise education found within the participants' communities of practice.

As Brown (1980, p. 5) explains, "Q technique and its methodology ... was designed to assist in the orderly examination of human subjectivity". Brown (1997, p. 14) describes the purpose of Q as being "to enable the person to represent his or her vantage point...for inspection and comparison". The blend of activity theory and Q methodology (Deignan, 2006, 2009b) is depicted graphically in Figure 2 below. The triangle and oval shape represent an activity system and its object, while the elliptical shapes represent the subjectively shared viewpoints within the activity system.

Figure 2: Activity and subjectivity



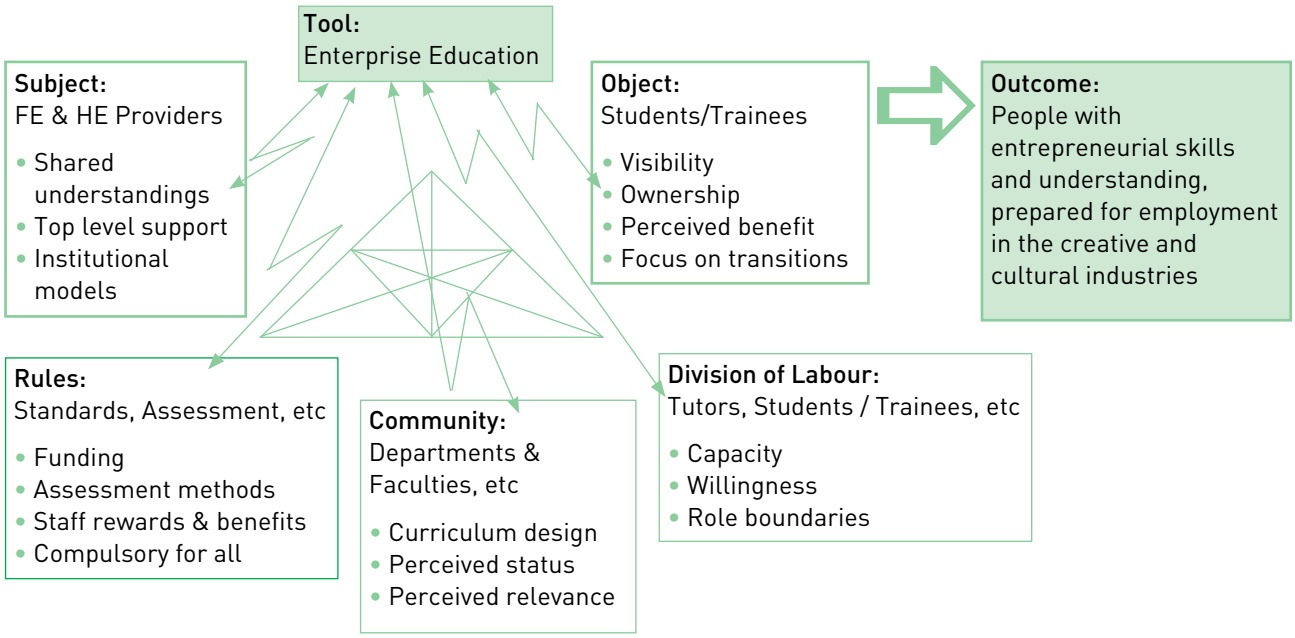
Q methodology involves Q-sorting, which is a data collection technique, and Q-factor analysis, a procedure for statistical analysis. Procedurally, the research study participants represented their viewpoints by rank ordering (or 'sorting') a set of 48 statements (or 'Q-sample') on enterprise education, using a seven-point scale from 'strongly agree' to 'strongly disagree'. The Q-sample itself was developed from an initial 'concourse' of diverse views drawn from a range of sources. These included the academic literature; 'grey literature' (i.e. various documentary material not published commercially, such as reports and conference proceedings); and local fieldwork data from interviews, focus groups, and email communications with college and university staff from a range of backgrounds with personal experience of enterprise education. Below are some examples of the final 48 statements which were sorted by the 32 participants in the Q study:

- Enterprise education is a vague concept
- The benefits of enterprise education are obvious
- Conventional teaching and learning methods are not suitable for entrepreneurial skills development
- A competency framework for entrepreneurial skills would really help to develop enterprise education for arts and media students
- Enterprise education can alienate arts and media students
- Entrepreneurs are born, not made.

After completing the sorting procedure, the participants were asked to comment on the statements with which they had most strongly agreed and disagreed. McKeown & Thomas (1988, p. 17) emphasise the fact that, in Q methodology, "variables are the people performing the Q-sorts, not Q-sample statements". Brown (1980, p. 6) notes that, following statistical analysis, "the resultant factors point to... persons bearing family resemblances in terms of subjectively shared viewpoints". Following the Q-sorts and subsequent factor analysis, four distinct factors, or viewpoints, were interpreted. These four factors were synthetic composites of those Q-sorts which loaded significantly on each respective factor (e.g. Comrey & Lee, 1992; Tabachnick & Fidell, 2001).

The data relating to the four viewpoints thus interpreted, when analysed using an activity theory framework, suggest that there are many potential 'contradictions' or tensions between enterprise education as a tool and other elements of the activity system in a college or university context. Some of these potential tensions, based on an analysis of the study participants' Q-sorts and related comments, are highlighted in the graphic below. They are indicative only, as local practices will apply within specific activity systems, and in any given institutional context the elements will interact dynamically with each other in a way that reflects the unique nature of that system.

Figure 3: Potential tool-related tensions, illustrated by lightning bolts, in an activity system



The study findings, summarised graphically in Figure 3, have implications for those implementing enterprise education initiatives in post-compulsory education and training. The bullet points inside the boxes indicate potential tensions relating to the different interacting elements of the activity system. The ranking of the statements by the participants, together with their comments as to why they ranked the statements in the way they did, suggest that the following issues are likely to impact on the levels of success achieved by enterprise education initiatives in any given college or university context.

First, as concepts, enterprise education and entrepreneurial skills development have different meanings for different stakeholders. Working on *shared understandings* about collective needs should help to reduce conflict in the implementation of initiatives, which are more likely to be successful if there is genuine *top level support* for them. Also at a provider level, the nature of the *institutional models* adopted is likely to impact on the planning and implementation of initiatives across the college or university.

Consideration needs to be given to the extent to which enterprise education is to be made a *compulsory* part of the curriculum for students. Where there is an elective element, the *visibility* of the curriculum offer to students is important, as student uptake will be related to their awareness and perceptions of the offer. The *perceived benefit* of the curriculum offer will impact on student engagement. Students are more likely to engage in enterprise education if there is a sense of *ownership* on their part. This can be developed by consulting students in relation to *curriculum design*. A focus on *transitions* is an important aspect of this, in order to prepare students for work in different contexts within the creative and cultural industries. Attention should also be given to *assessment methods*, as the nature of specific enterprise education activities may be better suited to some forms of assessment than others, depending on the context.

Encouraging engagement is also an issue for staff, for whom the *perceived relevance and status* of enterprise education will impact on their participation and commitment. Enterprise education and entrepreneurial skills development may be seen by some staff as peripheral to their core activity. The *capacity* of the institution to implement enterprise education will therefore depend in part on staff perceptions of their *role boundaries*. The institution may need to consider *staff rewards and benefits* in terms of how these might inhibit or promote the *willingness* of staff to engage with enterprise education. Finally, the *funding* available for enterprise education needs to be considered carefully as this will impact on both engagement and sustainability.

Understanding subjectivity is particularly significant in socio-cultural research. For example, Lave and Wenger (1991, p. 113) describe multiple viewpoints as a characteristic feature of participation in a community of practice. They describe how "objective forms and systems of activity, on the one hand, and agents' subjective and intersubjective understandings of them, on the other, mutually constitute both the world and

its experienced forms" (ibid, p. 51). The enterprise education study described here exemplifies how Q methodology can be used to illuminate different perspectives on issues of interest within college and university activity systems. Van Eeten (2001, pp. 395-396) notes that Q methodology can identify stakeholders' arguments without forcing a specific problem definition upon them, and "is especially suited to the task of uncovering positions really held by participants in a debate rather than accepting decision-makers', analysts', or even the participants' predefined categories".

Understanding the diversity of perspectives is important in enterprise education, to respect the complexity of the issues involved and to listen to distinct viewpoints in an inclusive way. Actively incorporating multiple voices in the research process increases the potential for improved collaboration through a better understanding of different perspectives and shared values. Additionally, as van Eeten (2001, p. 392) suggests, "an in-depth analysis of the stakeholders' arguments and their relations, applying Q-methodology, can be used to come to an action-forcing reconception of a controversy". The final report (Deignan, 2009a) on which this article is based suggests that future research should focus more closely on understanding and developing student transitions from college and university to the workplace, and that greater triangulation of employers', learners', and educators' perspectives would further illuminate common values and concerns, and provide useful evidence to inform the future development of enterprise education provision.

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