Understanding the head of department role: leading Design and Technology

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ABSTRACT

In the secondary school curriculum, in England, Design and Technology is to some extent regarded as less beneficial and it is becoming more unpopular with pupils. Therefore, Design and Technology heads of departments find themselves leading a curriculum subject that is in an uncertain situation. The purpose of this study is to consider the perceptions of Design and Technology heads of departments about their practice in monitoring teaching and learning in their departments. This study uses cultural historical activity theory (CHAT) (Engeström, 2001) as a lens to view interview data from six case studies. CHAT is often employed in analyses of activities in workplaces, for example, to uncover how people use both material and conceptual tools and what aspects of tasks they prioritise (Edwards, 2011). Data were collected through field visits that included observations and interviews. The analysis of data reveals how tools were appropriated differently or similarly in Design and Technology department leadership activity systems. The findings identify tools which mediate the work of Design and Technology heads of departments in secondary school. How the heads of departments perceive these tools is analysed to suggest the object of the Design and Technology department leadership activity system. This paper proposes that the contextual settings of subject departments influence department head leadership in forming their own conceptions about their practice.

Key Words: Secondary Design and Technology, school curriculum, heads of departments, cultural historical activity theory, subject department.

1. INTRODUCTION

This paper is derived from doctoral research that explores the perceptions of subject leaders about their practices. The research focuses on subject leaders of Design and Technology in secondary schools for 11-18-year-old pupils. The introduction of the National Curriculum for England and Wales in 1988, define subject areas that establish boundaries around the work of subject leaders and emphasise subject-based teaching (Bennett, Woods, Wise & Newton, 2007). This type of teaching is organised around a subject department, for example, Mathematics, English and Design and Technology. Therefore, it is difficult to separate the work of a head of department from the subject department in which they work (Turner, 2003). For the purposes of this paper heads of department are defined as those specialist teachers who are responsible for a curriculum area. In

the educational leadership literature, they are also referred to as curriculum leads, subject leaders, faculty heads, subject coordinators and have a responsibility for one or more teachers that teach an aspect of the academic subject. Heads of departments are influenced by their department's settings, which partly explains the differences in the interpretations and meanings they hold about their leadership practice.

2. LITERATURE REVIEW

2.1. Previous research on subject departments and subject leaders

The subject department are a feature in the organisation of teaching and learning in schools; they are seen to provide the most common organisational vehicle for school subject knowledge (Goodson and Marsh, 1996) and a reference for heads of departments and department teachers' distinctiveness. In most schools in England, a Design and Technology department is a large multi-subject department composed of several independent subjects including and not limited to resistant materials, product design, graphics, systems and electronics, textiles, cooking and nutrition, and hospitality and catering. Therefore, Design and Technology is a confederate department in which a group of subjects share some aspects of teaching and learning; where the head of department is not sufficiently powerful to ensure that the staff members of the department work together on key decisions (Busher & Harris,1999). In some schools, the Design and Technology department is merged with Arts and Design or Information Technology, thus making a larger department.

The importance of heads of departments lies in leading teaching and learning to improve pupils' experiences (Leithwood, 2016). This makes heads of departments responsible for much if not all their colleagues' teaching hence increasing responsibilities in schools and their influence on other teachers (De Nobile, 2018). They aim to support, persuade, and guide subject department staff to achieve the agreed personal, department or whole-school level objectives to support pupil progress. This paper adds to the knowledge base of the practice of heads of departments by considering their interactions in departmental settings. The research also contributes to the understanding of how heads of departments think about their work and why they choose to do what they do.

### 2.2. Design and Technology in the National Curriculum for England

Design and Technology is a complex curriculum subject that has undergone numerous structural modifications. As a distinct curriculum area, Design and Technology was introduced by the Education Reform Act 1988. However, despite the novelty that was intended in introducing a new subject called Design and Technology, unusually the previous technical areas remained as subject specialisms but were in a common design framework (Miller, 2011). The different cultures of various subjects that form Design and Technology, its marginalisation, and the struggle to be seen as an academic subject create distinctive contexts for understanding leadership practice. In this regard, cultural historical activity theory (CHAT) offers a perspective for analysing diverse practices of subject leaders in socio-cultural contexts of departments and across multiple contexts.

2.3. Cultural Historical Activity Theory (CHAT)

In understanding the approaches in which heads of departments go about their work, CHAT shines a light on the varying and complex forms of human practices, both at the individual and social levels (O'Donoghue and Harford, 2020). These practices are mediated rather than directly affected and regulated by interactions with other people and the world (Lee, 2011). This means CHAT can offer a rich analysis of collective human interactions in context, such as in leading an aspect of teaching and learning in a subject department. The theoretical tradition of CHAT has evolved through three generations of research (Engeström, 1999). The first generation of activity theory, as fronted by Vygotsky is centred on the idea of mediation (Engeström, 1999; 2001). These mediators are how individuals act on and are acted on by the social situation (Douglas, 2015). Vygotsky's greatest contribution to activity theory was that human interactions with the environment cannot be direct but are instead mediated using *tools* and *signs* (Vygotsky, 1980). Vygotsky's mediated action consists of a *subject* or actor, an *object* (either an entity or a goal) and mediational *tools* (Foot, 2014). A contemporary representation of Vygotsky's idea of cultural mediation of actions is commonly expressed as the triad of subject, object, and a mediating artefact (tool), as represented in Figure 1.

Figure1:
Vygotsky's model and its reformulation by contemporary CHAT scholars. (Engeström, 2001, p. 134)
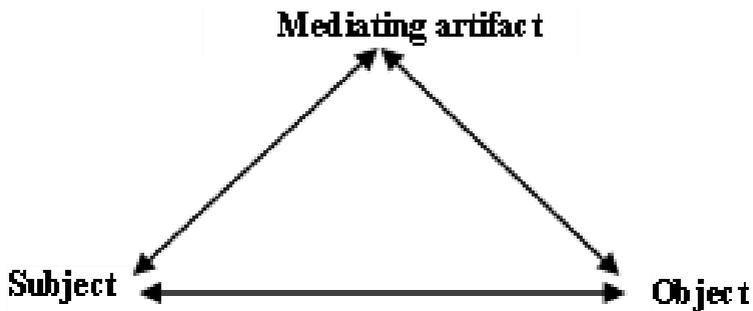
Vygotsky's model of mediated action has been extended to include community, rules, and division of labour, which broadens his idea of mediation (Engeström, 1987). This is referred to as Engeström's second generation of activity theory (Figure 2 below).

Figure 2
The structure of a human activity system (Engeström, 2001: 135)
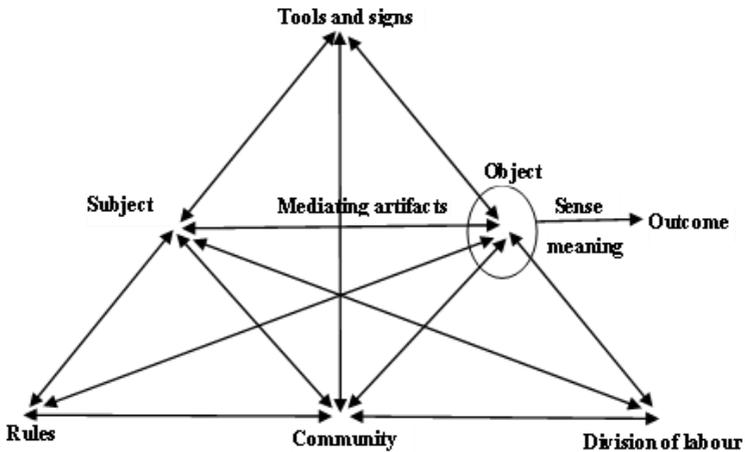
The activity system model forms a useful bridge between school department structures and the actions of heads of departments (Gronn, 2000). The human activity system is multi-voiced in that it models collective activity undertaken by actors with differing roles, positions and perspectives and is multi-layered; that is, composed of conscious actions and unconscious, routinised operations (Foot, 2014). Through CHAT, the work of heads of departments can be analysed by considering their use of *tools* in the social settings of departments.

A Design and Technology department leadership activity system is created from the perspective of the head of department working in it, others in the department, pupils, parents, and the school community. The head of department, as a *subject* in the activity system, by using *tools* will act on the *object* to produce their desired outcomes. The *subject* constructs the *object* of an identified activity, for example the activity of developing Design and Technology in the secondary school curriculum. There are other activities in a Design and Technology department leadership activity system such as working with parents. This means that an activity occurs through a process that changes the *subject*, the *object,* and the connection between them. *Tool* appropriation is the process of adopting a tool when working on an object (Douglas, 2012). This means that when the subject adopts a *tool* to use, the tool specifies the way the *subject* carries out the action.

Tools can be classified either as material (practical) or conceptual (Foot, 2014). Material *tools* are tangible and could include learning walks, proformas and computer systems used to analyse pupils' data. Conceptual *tools* could include a head of department's knowledge in a Design and Technology specialist subject. When a *tool* is adopted in an activity system it reveals something about the relationship between the *subject* and their *object* at the point at which the tool was appropriated. CHAT recognises that each head of department's professional and personal

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experiences and their positions in society, work and family influence their construction of the object of the activity (Foot, 2014). Using CHAT offers an analytical lens that can describe, analyse, and facilitate heads of departments' perceptions of practice in a school department and can aid in understanding leadership.

3. CASE STUDY METHODOLOGY

This study's design combined the CHAT framework as a lens to view data and a multiple case study, which allowed the understanding of practice in natural settings (Yin, 2009). The research took a multiple case study design for two reasons. First, it involved professionals in schools with distinctive boundaries. Second, a multiple case design enabled a more in-depth understanding of the cases through a comparison of their similarities and differences. The six participating heads of departments were working in departments that varied in size, culture, location, and context.

Research question: How are tools used and appropriated by heads of departments in Design and Technology department leadership activity systems?

Data collection during field visits involved semi-structured interviews, the taking of field notes (about the settings of the department: department tea-room/office, department corridors, displays around the departments) and the analysis of documents such as minutes of department meetings, learning walks proformas and computer room booking spreadsheets. The range of fieldwork is illustrated on Table 1 below.

Table 1.
A summary of fieldwork from six heads of departments (HoD1, HoD2, HoD3, HoD4, HoD5 and HoD6)

Type of fieldwork	HoD1	HoD2	HoD3	HoD4	HoD5	HoD6
Field visits	1	2	2	1	1	2
Interviews	1	2	2	1	1	2
Duration of interview 1 (in minutes)	65	42	38	43	33	25
Duration of interview 2 (in minutes)	n/a	29	28	n/a	n/a	20
Count of documents shared by the subject leader	2	3	2	4	5	0
Collection of information on Design and Technology department from the schools' website						
Field notes on department classroom walls						
Field notes on display boards on the school corridors.						
Field notes on department tearoom/office						

Following the initial coding and categorising items the research data were subjected to thematic analysis to identify recurring themes (Braun and Clarke, 2006). The data was further viewed from the analytical lens of CHAT (Engeström, 1987; 1999; 2001) which provided a stronger theoretical input than would be possible using thematic analysis alone (Douglas, 2015). The design was a systematic way of understanding leadership practice and CHAT helped to explain why the leadership of these departments was the way it was.

4. RESULTS

The results below are extract from semi-structured interview data from some of the participants about their monitoring tasks in leading teaching and learning.

4.1. Learning walks

The terms 'learning walks', 'walkthroughs', 'informal walks' and 'pop into lessons' were used by participants to refer to the short visits to colleagues' classrooms. Participants revealed that they used learning walks to monitor their colleagues. For example, a judgmental outcome from learning walks demonstrated HoD1's checks on his colleagues.

> I am looking to pick up weaknesses and work out strategies to improve those. (HoD1, interview)

This statement illustrates the judgemental aspect of learning walks. This is supported by HoD1's claim that 'I look through books during learning walks to support decision-making'. HoD1 appeared to use learning walks as a way of identifying areas of professional development for the department staff. HoD2 explained that lesson visits were enabled by the department's open-door policy, a social-cultural practice that facilitated interactions between colleagues in the department. This suggests that HoD2 saw this as a practice that supported monitoring work. This is reinforced by HoD2's view that 'I just walk in and pretend I am making tea' (HoD2, interview 1), which suggests that the purpose of such visits was to monitor colleagues, even though she was reluctant to say to them that she was doing a learning walk. HoD2 thought that this was a less intrusive method (Hammersley-Fletcher, 2002) of monitoring teachers' work. This approach differed from one other participant who purposed and informed colleagues of learning walks.

4.2. Work scrutiny

Participants referred to 'work scrutiny', 'book looks', 'book review' and 'book check' as a task that involved judging the quality of evidence of learning produced by pupils in written, verbal and/or in an artefact form. Subject leaders expressed views that demonstrated their monitoring task in ensuring that pupils' books had teacher's feedback:

> …on-going things like…book check…we share books…just to see what is going on and to see what feedback that has been given (HoD1, interview)

HoD1 explained that book checks were judged based on the evidence that was presented during the exercise. Even though the book check exercise was meant to monitor teaching and learning, HoD2 disliked the idea of ensuring that pupils books were 'up-to-date' for the senior school leaders to check them. HoD2 appears to defend the department staff from the excessive workload that was being imposed by senior leaders. Both HoD1 and HoD2 were of the view that book checks were a routine task, and it was their responsibility to check for evidence of teachers' feedback in pupils' books.

4.3. Lesson observations

Lesson observations were either formal or informal. HoD2 used lesson observations to confirm their views on colleagues' quality of teaching. HoD2 stated that, 'observations, I do it once a term…I know how they teach' (HoD2, interview 1). It appears that lesson observations were a tick-box exercise. HoD1 used lesson observations to identify opportunities that would persuade department staff to share good practice.

> …with the other members of the department [that is] something I have seen in their lesson observations. (HoD4, interview).

HoD1's approach is in line with the view that heads of departments use various sources of power and most successfully achieve their target by working with and through colleagues (Busher, 2005). HoD1's emphasis on the importance of staff being able to share their successes confirms that the central task of the effective head of department is to create a culture of trust in their departmental teams that will make it possible to discuss issues of practice (Bennett, 2006).

5. DISCUSSION

This section applies CHAT concepts in discussing subject leaders' tools and considers how they were appropriated by the participants in the Design and Technology department leadership activity system to achieve an object, thus transforming it into an outcome (Kuutti, 1996). Tools or artifacts mediate subject's work on the object (Lee, 2011). Each participant perceived and took up tools according to their importance to the object of the activity. This take-up of tools leads to creating a possible relationship between the object of the activity system and how the tools are used. Each participant perceived and took up tools according to the importance of the object of the activity in their context. Where heads of departments were seen to work with the staff to improve collective classroom practice; for example, on the quality of teaching and learning in their departments, tools were appropriated for sustaining and developing the work of their Design and Technology departments rather than for monitoring and accountability. This uniqueness is seen in Design and Technology department leadership activity systems where the tool that is the book checks (work scrutiny) was appropriated in multiple ways relating to teaching and learning.

HoD1's book checks were used in a way that was specific to the professional development needs of the department staff. HoD1 appeared to reject the book check tool as presented by the school's senior leaders. HoD1 saw book checks as a way of sharing good practice rather than a tick-box exercise to check conformity. Therefore, the reason for HoD1's rejection of the tool as presented

by the school's senior leaders was to emphasise the importance of identifying and sharing good practice amongst the department team. HoD1 saw the book check tool as a way of giving teachers in the department an opportunity to collectively improve their classroom practice. This was achieved through evaluation and discussion of each other's pupils' books. HoD1 used book checks in a developmental way and as an opportunity to encourage teamwork in the department. Although HoD1 was aware of the schools' stipulated use of book checks, they chose to use departmental book checks as a developmental tool to harness the different classroom practices that were exhibited by the staff. HoD1 saw book checks as an opportunity for shared learning between the department colleagues.

Consequently, the appropriation of the tool that is the book check as a means of sharing good practice reveals that HoD1 viewed their role as that of a facilitator of team learning rather than a checker of compliance. By appropriating the tool this way, HoD1 creates an opportunity for sustaining and developing the department. Therefore, the book check tool enabled mediation of the department's work through the head of department. HoD1 was motivated to use this tool this way to refine practice in the department, which contrasts HoD2's view of a similar tool. HoD2 saw the purpose of book-looks as that of checking conformity. HoD2 resisted using book-looks and viewed them as formal, procedural and an unnecessarily inspecting the work of teachers. HoD2 frustration at the lack of flexibility, the numerous occurrences and the approach used in carrying out book-looks could imply that HoD2 saw the book-looks tool as limiting her work in the department rather than as a way of improving the work of the department.

6. CONCLUSIONS

In this paper I have used CHAT as an analytical lens to view data and to illustrate how tools were appropriated in Design and Technology department leadership activity systems. The leadership perceptions that emerged from the interviews with heads of departments were both complex and distinctive in their contextual settings. Heads of departments' view of the object varied depending on the department contexts thus the tools were appropriated differently. The view of the object was different for heads of departments who appropriated tools to monitor and supervise the work of teachers in the department. For example, the tools in such departments were appropriated in a restrictive way; to check compliance and monitor the work of teachers. When appropriated as such, the tools were restrictive in that they acted as rules rather than being used in a developmental way in the activity systems; this is because they were appropriated in a regulatory way (Douglas, 2015). A CHAT analysis of qualitative data has been helpful in gaining an understanding of leadership opportunities in the unique contexts of secondary school Design and Technology departments. Employing CHAT as a lens to view the data enabled an understanding of the different leadership practices that unfold in the social contexts of subject departments.

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